JANUARY 2026 EPA-740-B-26-006

JOINT EPA-HUD CURRICULUM

# Lead Safety for Renovation, Repair and Painting



**Module 1:** Regulations

**Module 2:** Testing for Lead-Based Paint

**Module 3:** Review of Setup Practices

**Module 4:** Review of Prohibited Practices, Personal Protective Equipment and Dust Control

**Module 5:** Cleaning Activities and Checking Your Work

**Module 6:** Recordkeeping

**Module 7:** Training Non-Certified Renovation Workers

**Model Certified Renovator Refresher Training Course**

**STUDENT MANUAL**

# Lead Safety for Renovation, Repair, and Painting

# EPA-HUD Model Certified Renovator REFRESHER Training Course

# Revised January 2026

This course was initially published June 2003 as a joint effort of the U.S. Environmental Protection Agency's Office of Pollution Prevention and Toxics, in partnership with the U.S. Department of Housing and Urban Development's Office of Healthy Homes and Lead Hazard Control. The course was extensively revised in 2008 following issuance of EPA's Renovation, Repair and Painting Rule. The course underwent further revisions in 2011, 2021 and again in 2026 to address regulatory changes and feedback on course content.

# Table of Contents

# Introduction

# Introduction

Lead Safety for Renovation, Repair, and Painting

Refresher Training Course

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Notes:

## Course Overview

- Welcome and Introductions
  - Please tell the class:
    - Your name, the company you work for, and what you do
- Overview:
  - Course agenda
  - Course manual

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Notes:

Why Are You Here?

- The traditional renovation work you do can create significant dust-lead hazards if lead-based paint is disturbed.
- The lead 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 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
- Module 1: Regulations
- Module 2: Testing for Lead-Based Paint
- Module 3: Review of Setup Practices
- *Break*
- Module 4: Review of Prohibited Practices, Personal Protective Equipment and Dust Control
- Module 5: Cleaning Activities and Checking Your Work
- Module 6: Recordkeeping
- Module 7: Training Non-Certified Renovation Workers
- *Test*

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Notes:

In addition to this introduction, there are seven modules in this course:

- Module 1: Regulations
- Module 2: Testing for Lead-Based Paint
- Module 3: Review of Setup Practices
- Module 4: Review of Prohibited Practices, Personal Protective Equipment and Dust Control
- Module 5: Cleaning Activities and Checking Your Work
- Module 6: Recordkeeping
- Module 7: Training Non-Certified Renovators

## Training Manual Overview

- Seven modules
- Key appendices
  - Appendix 2 - Additional Requirements of HUD's Lead Safe Housing Rule
  - Appendix 3 - Lead-Safe Certified Guide to Renovate Right
  - 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 9 - Paint Chip Sample Collection Guide

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Notes:

In addition to the seven modules, this manual has ten appendices that provide extra information that will help contractors.

- Appendix 1 - EPA's Renovation, Repair and Painting Program Final Rule (40 CFR Part 745)
- Appendix 2 - Additional Requirements of U.S. Department of Housing and Urban Development (HUD) Lead Safe Housing Rule for EPA Certified Renovation Firms and Certified Renovators
- Appendix 3 - The Lead-Safe Certified Guide to 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 for Renovator Refresher
- 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 - Paint Chip Sample Collection Guide
- Appendix 10 - 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.

# Module 1: Regulations

# Module 1: Regulations

Lead Safety for Renovation, Repair, and Painting

Refresher Training Course

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Notes:

## The RRP Rule

- Addresses activities that disturb lead-based paint in target housing and child-occupied facilities
- 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
- Firms working in pre-1978 homes and child-occupied facilities must be certified and use lead-safe work practices during renovations
- EPA may authorize Tribes, states and territories to enforce the rule

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Notes:

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).
- 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 under 6 years of age resides or is expected to reside in such housing).
    - Any zero-bedroom dwelling such as studio apartments, hospitals, hotels, dormitories, etc. (unless any child who is under 6 years of age resides or is expected to reside in such housing).
  - 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, childcare facilities, and daycare centers.
- Tribal, State and Territorial Authorization: EPA may authorize Tribes, states and territories to enforce all aspects of the RRP Rule. EPA enforces the Rule in non-authorized Tribes, states and territories.

The RRP Rule Requirements:

- 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.
- Specific work practices must be followed for work covered by the rule.
- Renovators must educate owners/occupants.

## The RRP Rule: Exclusions

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

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Notes:

The RRP 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.
  - Interior work disturbing less than 6 square feet (6 $ft^2$) 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.
  - Exterior work disturbing less than 20 square feet (20 $ft^2$) 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.
  - Minor repair and maintenance activities do not include window replacement, demolition or activities involving prohibited practices.
  - 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: Firm Certification

- All covered renovations must be performed by certified firms, using certified renovators and other trained workers
- To become certified, firms must submit an online application, and pay a fee, to EPA
- Certifications will be good for 5 years
- Certification allows the firm to perform renovations in any non-authorized Tribal area or state

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Notes:

- 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 Tribe, state or territory.
- One EPA renovation firm certification is all that is needed for a renovation firm to work in any non-authorized Tribe/state/territory. Firm certification is not the same as the personal certification attained by each renovator's successful completion of this course.
- Tribes, states and territories may seek authorization from EPA to operate their own programs. Also, Tribes, states and territories, whether authorized by EPA or not, can establish additional requirements for firms working within their jurisdictions. Be sure to determine if your Tribal, state or territorial 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

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Notes:

- 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 ensure 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 RRP 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
  - Cleaning verification records

Note: Recordkeeping is covered in detail in Module 6.

## 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

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Notes:

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.

Tribes, states and territories may establish requirements for individual renovators working within their jurisdictions. Be sure to determine if your Tribal, state or territorial 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).

## The RRP Rule: Certified Renovator Responsibilities

- Perform work and direct lead-safe work practices
- Provide on-the-job training to non-certified workers
- Keep copy of the initial and/or refresher training certificates onsite
- When requested, use EPA-recognized test kits or, alternatively, collect paint chip samples for laboratory lead analysis 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

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Notes:

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:

- Perform work and direct the work of non-certified renovation workers.
- Train all non-certified workers on-the-job in lead-safe work practices.
- Maintain copies of initial and/or refresher training certifications onsite.
- When requested, conduct testing for lead-based paint using EPA-recognized test kits or lead analysis of paint chip samples and report findings.
- Remain onsite during the sign posting, work area setup, and cleanup phases of work.
- When not on site, be available by phone or pager.
- 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.
- Conduct the cleaning verification procedure to make sure that the work is complete and that the work area is ready to reoccupy.
- Prepare a summary of the work, maintain training and certification records, and certify that all work was done in a lead-safe manner.

## Pre-Renovation Education Requirements

- Renovation firms must provide the Renovate Right pamphlet before the renovation starts to the:
  - Owners and occupants of target housing before renovation starts
  - Owner or an adult representative of a child-occupied facilitybefore renovation
- For work in common areas of multifamily housing or child-occupied facilities, firms must notify tenants or parents/guardians of the children, or post informational signs about the renovation or repair
- See the Small Entity Compliance Guide for more information

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Notes:

**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 (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 *Lead-Safe Certified Guide to 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/renovate-right, 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.

## The RRP Rule: Work Practice Standards

- The RRP Rule covers setup of the work area, prohibited work practices, cleanup and cleaning verification procedures
  - Setup practices, such as posting signs and containing the work area, will be covered in Module 3
  - Prohibited practices and dust control suggestions will be covered in Module 4
  - Cleanup practices and cleaning verification procedures will be covered in Module 5
  - Recordkeeping will be covered in Module 6

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Notes:

Work practice standards found in the RRP Rule are required during all renovations in target housing and child-occupied facilities if lead-based paint is disturbed.

HUD has additional work practice requirements. See Slide 1-11.

## 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
- Firms found to be non-compliant may be liable for civil penalties of up to $49,722 (in 2025) for each violation
- Firms who knowingly or willfully violate this regulation may be subject to fines of up to an additional $49,722 per violation in 2025, or imprisonment, or both

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Notes:

Enforcement:

- EPA has the authority to seek substantial civil and criminal fines, in addition to jail time, for a firm that knowingly and willfully violates the RRP Rule requirements. The penalties vary depending on the type and seriousness of the violation, and are adjusted for inflation annually. In 2025, the maximum civil fine was $49,722 per offense, with additional criminal penalties of up to $49,722 per offense (plus jail time).
- EPA can also revoke certification of a certified firm or a certified renovator who violates the RRP 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 target housing that is federally-owned or assisted
- Does not cover child-occupied facilities
- Key differences between the LSHR and the RRP Rule are shown in text boxes with the HUD logo throughout the manual
- See Appendix 2 for additional requirements imposed by LSHR on certified renovators and firms working in federally-assisted target housing

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Notes:

Renovators must determine if a property is federally-assisted by asking the owner or a designated party. When conducting renovation activities in federally-assisted target housing, renovators must follow all requirements of the RRP Rule as well as LSHR. The major differences are as follows:

**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 7).

**Determination that Lead-Based Paint is present:** EPA-recognized test kits may not be used to test for lead-based paint; only a certified lead inspector or risk assessor may determine whether or not lead-based paint 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 foot of electrical outlets; and,
- Use of a volatile stripper in poorly ventilated space.

***De minimis* levels:** In federally-assisted target housing, all areas of deteriorated paint in the work area must be repaired. Work affecting less than "*de minimis*" amounts of lead-based paint is not required to follow the lead-safe work practices and clearance requirements in the LSHR. HUD's "de minimis" limits are smaller than the limits for minor repair and maintenance activities in the EPA's RRP Rule.

**Clearance Examination:** 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 lead dust sampling technician. Some Tribal, state and local authorities have different dust-lead testing 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.

## Tribal, State, Territorial, Local Regulations

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

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Notes:

Tribes, states and territories may seek authorization from EPA to operate their own programs. Also, Tribes, states and territories whether authorized by EPA or not, can establish additional requirements for firms working within their jurisdictions. Be sure to determine if your Tribal, state, territorial or local government has additional regulations that may affect renovation in your community.

## Know the Rules!

- Download the rules and other information from the following websites:
  - www.epa.gov/lead
  - www.epa.gov/lead/lead-renovation-repair-and-painting-program-rules
  - www.hudexchange.info/programs/lead-based-paint/lshr-toolkit/introduction/
- U.S. Occupational Safety and Health Administration (OSHA):
  - Establishes worker protection standards
  - For more information, on the OSHA Lead in Construction Standard, see www.osha.gov/Publications/osha3142.pdf
- Tribal, state, territorial and local regulations:
  - Renovators must follow all applicable Tribal, state, territorial and local regulations during renovations

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Notes:

Individuals and firms performing renovation, repair, and painting in pre-1978 dwellings and child-occupied facilities should understand the EPA RRP Rule.

Individuals performing renovation, remodeling, and rehabilitation in pre-1978 housing that is federally-assisted, need to understand the HUD LSHR. Appendix 2 contains more information on the HUD LSHR.

**HUD's Lead Safe Housing Rule:** 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 additional requirements of HUD's Lead Safe Housing Rule.

**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 www.osha.gov/Publications/osha3142.pdf and the quick card https://www.osha.gov/sites/default/files/publications/OSHA3680.pdf. The OSHA 3252 Construction Pocket Guide available at www.osha.gov/sites/default/files/publications/OSHA2202.pdf addresses general safety and health hazards in construction.

**Tribal, state, territorial and local regulations:** Tribal, state, territorial and local regulations may also apply to the renovation work you do. Tribes, states, territories and localities may have different regulations than EPA and HUD for renovations in target housing.

- Check with your Tribal, state, territorial and local housing and environmental agencies to obtain information about such requirements
- Appendix 7 is reserved for copies or summaries of Tribal, state, territorial and local regulations

# Module 2: Testing for Lead-Based Paint

# Module 2: Testing for Lead-Based Paint

Lead Safety for Renovation, Repair, and Painting
Refresher Training Course

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Notes:

## Overview

In this module you will learn:

- How to test for lead-based paint
- When and how to use EPA-recognized test kits to check for lead-based paint
- Procedure for collecting a paint chip samples for lead analysis at a NLLAP recognized laboratory

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Notes:

Module Overview

- This module teaches how and when to use EPA-recognized test kits to determine if lead-based paint is present in surfaces that would be disturbed by the renovation activities.
- This module also teaches the procedure for collecting paint chip samples for lead analysis at a National Lead Laboratory Accreditation Program (NLLAP) recognized entity (laboratory).

## How to Test for Lead-Based Paint

- 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 trained professional

| Type of Paint Testing for Renovations | Who Can Do the Testing? |
|---|---|
| EPA-recognized test kits | Certified renovators |
| X-Ray Fluorescence (XRF) instruments | Certified inspectors or risk assessors |
| Paint chip sampling | Certified renovators, inspectors or risk assessors |

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Notes:

Lead-based paint can only be identified by testing paint. 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 or 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/lead-test-kits for information on EPA-recognized test kits and how to use them. 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:

- Luxfer Magtech LeadCheck™ - Rhodizonate-based test kit that produces a pink to red color when lead is present.
- ESCA Tech D-Lead® Sulfide-based test kit that produces a dark grey to black color when lead is present.

**X-Ray Fluorescence (XRF) Testing:** Requires a special instrument and a specially-trained certified lead inspector or 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 commonly 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 a National Lead Laboratory Accreditation Program (NLLAP) recognized laboratory where it is analyzed to determine how much lead is present. Paint chips can be collected by certified renovators, inspectors or 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

- Only use EPA-recognized test kits on substrates approved for the kit
- 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

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Notes:

If test kits are used, you must use an EPA-recognized test kit.

- Presently, EPA only requires the use of test kits that determine that lead-based paint is not present on the surfaces tested. Refer to test kit instructions to determine if lead is absent. If lead is not determined to be absent using the test kit the surface must be assumed to be coated with lead-based paint.
- A negative test result will mean that lead-safe work practices are not required.
- Alternatively, a certified renovator may collect a paint chip sample, or 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 are listed on the EPA website at **www.epa.gov/lead/lead-test-kits**.

What should be tested?

- Each building component to be renovated or disturbed by renovation must be tested (including components revealed during the work), 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.

What substrates can be tested?

- Recognized test kits should only be used to test for lead in paint on substrates for which they are approved. Where testing is needed on a non-approved substrate, or a surface coating other than paint, a certified risk assessor or lead inspector would be required to do such sampling.

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: 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

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Notes:

## Paint Chip Sample Collection

- Used to collect samples for the determination of lead on an area basis (milligrams of lead) or concentration basis (mass percent)
- Alternative method for certified renovators to check for lead-based paint
- Once collected, all paint chip samples must be submitted to a lab recognized by NLLAP for lead analysis

5

Notes:

If paint chip sampling is used, you must follow appropriate procedures.

- Paint chip analysis result of lead greater than or equal to 1.0 mg/cm2 or 0.5% by weight indicates a surface containing lead-based paint.
- A paint chip analysis result of <1.0 mg/cm2 or 0.5% by weight will mean that lead safe-work practices are not required for that component.
- Owners may choose to have sampling or XRF testing performed by a certified lead inspector or risk assessor to determine whether or not lead-based paint is present.
- If paint chip samples are taken by certified renovators, they must follow and document appropriate procedures.

What components 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.

What substrates can be tested?

- Paint chip samples may be obtained from all painted substrates. Scrape and collect all paint down to the substrate. Because of their porous nature or texture, sample collection is more difficult from substrates such as brick, concrete, and wood.

Reporting

- When paint chip samples are obtained by a certified renovator, 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, laboratory name, locations of surfaces tested, descriptions of the surfaces tested, and the results of testing must be included in the report to the owner.

If lead is reported below the regulatory level it is still advisable to use lead-safe work practices because lead hazards can be created at those paint lead levels.

## Steps to Obtain Paint Chip Samples

1. Record test location information
2. Mark collection area
3. Set up a paint collection tray
4. Remove the paint
5. Clean all cutting tools
6. Transfer sample to the collection container
7. Check documentation for completeness on the *Paint Chip Sample Collection Form*

6

Notes:

Overview of paint chip sample collection (see Appendix 9 for detailed instructions):

- Step 1: Write required information and observations about the test location on the *Paint Chip Sample Collection Form* and paint chip sample container
- Step 2: Mark the collection area using a template or freehand
- Step 3: Set up a paint collection tray
- Step 4: Remove the paint
- Step 5: Clean all cutting tools used during paint sample collection
- Step 6: Transfer the collected sample to the paint collection container
- Step 7: Check documentation for completeness on the *Paint Chip Sample Collection Form*

## Paint Chip Sample Collection Hands-on

Purpose: Teach certified renovators how to correctly collect paint chip samples from components affected by a renovation

7

Notes:

## Skill Set #1: Using EPA-Recognized Test Kits and Collecting Paint Chip Samples for Laboratory Lead Analysis

**Time:** 25 minutes

**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. In addition, students will learn an alternative method for determining the presence of lead-based paint by collecting paint chip samples that are submitted to a NLLAP-recognized laboratory for analysis.

- *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 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 as well as the collection of paint chip samples for lead analysis. The demonstration should not take longer than 5 minutes for each method including the time needed to hand out materials.

**Evaluating the Students:** Allow students to practice the required steps on the following pages. 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 and sample paint chips 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.

**Materials Needed:** 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.

**Test Kit Supply List**

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

**Paint Chip Collection Supply List**

□ Resealable rigid walled container for use as paint collection containers, e.g. screw-top plastic centrifuge tube.

- Note: Resealable plastic bags are not suitable for holding and transporting dried paint samples due to potential losses of paint chips during laboratory handling.

□ Steel or plastic measuring ruler - metric only with millimeter and centimeter divisions

□ Cloths for cleaning purposes

□ White paper for making paper funnels (paint chip collection trays)

□ Masking, painters and/or duct tape

□ Indelible (permanent) marking pen

□ Personal safety gear

□ Cutting and scraping tools:

- Sharp-edged razor knife
- Single-edged safety razor blades
- Pocket knife with locking blade
- Rigid blade paint scrapper with extra blades
- Flexible putty knife
- Chisels
- Hammer

□ Flashlight

□ Trash bags

□ Plastic gloves, powder-less

□ Painted wood surface with no lead-based paint layer

□ *Paint Chip Sample Collection Form*

□ Facilities and hand soap

## Using EPA-Recognized Test Kits Skills Practice

**Test Kit Procedure**

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 (2 ft 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.* If possible, perform one test where a positive test result can be observed; and 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 how to determine the absence of 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 where lead is not determined to be absent 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.

**Test Kit Documentation Form** Page 1 of ____

## 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: _____/_____/_____

**Test Kit Documentation Form**

Page ____ of ____

Renovation Address: _____ Unit#: _____

City: _____ State: _____ Zip code: _____

Test Location # _____ Test Kit Used (Circle one): Test Kit #1 Test Kit #2 Test Kit #3

Description of component tested, including location: _____

_____

Result: Is lead present? (Circle only one) YES NO Presumed

Date of Test: _____/_____/_____

**Test Location #** _____ Test Kit Used (Circle one): Test Kit #1 Test Kit #2 Test Kit #3

Description of component tested, including location: _____

_____

Result: Is lead present? (Circle only one) YES NO Presumed

Date of Test: _____/_____/_____

**Test Location #** _____ Test Kit Used (Circle one): Test Kit #1 Test Kit #2 Test Kit #3

Description of component tested, including location: _____

_____

Result: Is lead present? (Circle only one) YES NO Presumed

Date of Test: _____/_____/_____

**Test Location #** _____ Test Kit Used (Circle one): Test Kit #1 Test Kit #2 Test Kit #3

Description of component tested, including location: _____

_____

Result: Is lead present? (Circle only one) YES NO Presumed

Date of Test: _____/_____/_____

**Test Location #** _____ Test Kit Used (Circle one): Test Kit #1 Test Kit #2 Test Kit #3

Description of component tested, including location: _____

_____

Result: Is lead present? (Circle only one) YES NO Presumed

Date of Test: _____/_____/_____

**Test Location #** _____ Test Kit Used (Circle one): Test Kit #1 Test Kit #2 Test Kit #3

Description of component tested, including location: _____

_____

Result: Is lead present? (Circle only one) YES NO Presumed

Date of Test: _____/_____/_____

## Collecting Paint Chip Samples Skills Practice

**Paint Chip Collection Procedure**

Step 1: Read the *Paint Chip Sample Collection Guide* (Appendix 9)

Step 2: Write required information and observations about the test location on the Paint Chip Sample Collection Form.

Step 3: Mark the collection area either using a template or freehand.

Step 4: Set up a paint collection tray using a sheet of letter-sized white paper for making a paper funnel for paint sample collection.

Step 5: Remove the paint using a cold scraping method (see step 5-1 below). Wear plastic gloves as appropriate.

> Step 5-1: Cold Scraping Method. Using the appropriate cutting tool, begin removing the paint from the substrate. Carefully scrape away all paint within the marked area down to the substrate and ensure that all the scraped paint lands in or is pushed into the paint collection tray

Step 6: Clean all cutting tools used during paint sample collection.

Step 7: Check documentation for completeness on the Paint Chip Sample Collection Form.

Step 8: Transfer the collected sample to the paint collection container.

Step 9: Label the container with sufficient information to uniquely identify the sample. Be sure to record the dimensions of the sample surface, including the measurement units.

Step 10: Submit the paint chip sample for lead analysis to a NLLAP-recognized laboratory. Record all results reported from the laboratory.

**Documenting Paint Chip Sample Lead Analysis Results:** A report of the findings from the submitted paint chip samples to a NLLAP-recognized entity must be given to the person contracting the work within 30 days following the completion of the renovation work. The certified firm should keep the completed Paint Chip Sample Collection Form for 3 years after the work is completed.

**Paint Chip Sample Collection Form** Page 1 of ____

## Client/Project 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: _____/_____/_____

## Paint Chip Sample Information

**For each sample collected, fill out all of the following information**

Sample Identifier: _____

Sample Collector Name: _____

Sampling Location: _____

Sampling site description: _____ Date of Collection: _____/_____/_____

Sample Dimensions (cm): _____ Calculate Sample Area ($cm^2$): _____

NLLAP-recognized entity and location: _____

Submission date: _____/_____/_____ Results: _____ Result Date: _____/_____/_____

**Paint Chip Sample Collection Form**

Renovation Address: _____ Unit#: _____

City: _____ State: _____ Zip code: _____

**For each sample collected, fill out all of the following information**

Sample Identifier: _____

Sample Collector Name: _____

Sampling Location: _____

Sampling site description: _____ Date of Collection: _____/_____/_____

Sample Dimensions (cm): _____ Calculate Sample Area ($cm^2$): _____

NLLAP-recognized entity and location: _____

Submission date: _____/_____/_____ Results: _____ Result Date: _____/_____/_____

**For each sample collected, fill out all of the following information**

Sample Identifier: _____

Sample Collector Name: _____

Sampling Location: _____

Sampling site description: _____ Date of Collection: _____/_____/_____

Sample Dimensions (cm): _____ Calculate Sample Area ($cm^2$): _____

NLLAP-recognized entity and location: _____

Submission date: _____/_____/_____ Results: _____ Result Date: _____/_____/_____

# Module 3: Review of Setup Practices

## Module 3: Review of Setup Practices

Lead Safety for Renovation, Repair, and Painting

Refresher Training Course

0

Notes:

## Overview

In this module we will discuss containing dust for:

- Interior activities
- Exterior activities

1

Notes:

**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
- Identify containment requirements for exterior renovations.

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.

**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-contained 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.

**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 distance beyond the surfaces being renovated (6 feet for interior jobs and 10 feet for exterior jobs).
- Vertical containment is required for any exterior renovation within 10 feet of the property line.
- Larger areas of disposable plastic sheeting may also be necessary to prevent the spread of dust.
- Smaller areas of containment may be used if additional precautions such as vertical containment are used to stop the spread of dust and minimize the area of cleanup.
- Closing windows and doors, and using plastic sheeting to seal 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.

## Keep Dust Within the Containment

- Containment is required
- You are responsible for making sure dust does not migrate out of containment
- Consider how much dust the renovation will generate
- Plan the size and configuration of containment to keep the generated dust within containment

2

Notes:

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.
- 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 RRP Rule does not require vertical containment except for projects within 10 feet of a property line, these systems may be helpful in limiting the size of the area affected by the work and 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.

## Vertical Containment

- Vertical barrier of plastic sheeting over a rigid frame.
- Required for exterior jobs close to property lines.
- Can be used to minimize floor or ground containment needed.



3

Notes:

What is vertical containment?

Vertical containment means a vertical barrier consisting of plastic sheeting or other impermeable material over scaffolding or a rigid frame, or an equivalent system of containing the work area. Vertical containment is required for some exterior renovations but it may be used on any renovation.

Is vertical containment required for interior jobs?

No. The use of vertical containment is not required for interior jobs, but you can minimize the amount of floor containment needed by making use of vertical containment for interior projects. Floor containment measures may stop at the edge of the vertical barrier when using a vertical containment system consisting of impermeable barriers that extend from the floor to the ceiling and are tightly sealed at joints with the floor, ceiling and walls.

Is vertical containment required for exterior jobs?

Vertical containment, or an equivalent system of containing the work area, is required for exterior jobs where the property line is within 10 feet of the area of paint disturbance. In addition, vertical containment can also be used to minimize the amount of ground containment needed for a project. Ground containment measures may stop at the edge of the vertical barrier when using a vertical containment system.

## 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 windows, close and seal doors and HVAC system
- Construct a work area entry doorway




4

Notes:

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. Remember, if vertical containment is used floor containment measures may stop at the edge of the vertical containment.
- Close windows, close and seal doors
  - Close windows, close and seal doors 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.

## 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
- Erect vertical containment for any exterior renovations within 10 feet of the property line

5

Notes:

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 in which case the firm must erect vertical containment.
- Ensure that dust and debris do not contaminate or migrate to adjacent areas or properties:
  - In other situations, the renovation will require extra precautions for containing the exterior work area to ensure that dust and debris does not contaminate other properties, such as when working on multi-story buildings. 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.

# Module 4: Review of Prohibited Practices, Personal Protective Equipment and Dust Control

## Module 4: Review of Prohibited Practices, Personal Protective Equipment and Dust Control

Lead Safety for Renovation, Repair, and Painting

Refresher Training Course

0

Notes:

## Overview:

In this module we will discuss:

- Prohibited practices
- How to protect yourself
- How to Control the spread of dust

1

Notes:

Upon completion of this module, you will know which:

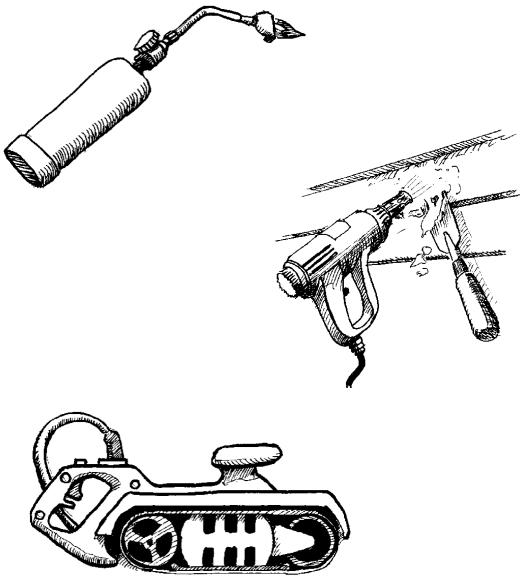
- Work practices are prohibited under the RRP Rule because they create dangerous amounts of dust and paint chips
- Work practices to use to control dust, debris or paint chips
- Tools you will need

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.

## Prohibited Practices

- Open-flame burning or torching
- Heat gun above 1100°F
- Power sanding, power grinding, power planing, needle guns, abrasive blasting and sandblasting, without shroud or containment system equipped with HEPA vacuum



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Notes:

The EPA RRP 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 of painted surfaces.
2. Heat gun above 1100°F (degrees Fahrenheit).
3. The use of machines designed to remove paint or other surface coatings through high-speed operation such as sanding, grinding, power planing, needle gun, abrasive blasting, or sandblasting unless such machines have shrouds or containment systems and are equipped with a HEPA vacuum attachment to collect dust and debris at the point of generation. Machines must be operated so that no visible dust release of air occurs outside the shroud or containment system.

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 1100° F create very fine lead dust particulates ("fume") that are dangerous for workers to breathe. The small lead dust particles created by burning and heating also settle on surrounding surfaces and are very hard to clean up.
- Power sanding, power grinding, power planning, 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.

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. In addition, the HUD Rule prohibits extensive dry scraping and sanding by hand, and paint stripping in a poorly ventilated space using a volatile paint stripper. Tribes, states, territories or localities may also prohibit these practices.

## Dust Reducing Techniques

- Wet scraping and sanding
- Heat gun below 1100°F
- Power tools with shrouds or containment systems equipped with a HEPA vacuum attachment
- Chemical stripping

3

Notes:

**Wet Methods:**

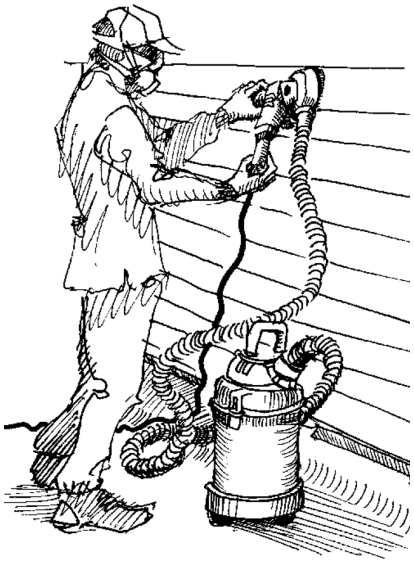
Wet methods are a major part of dust reducing practices under the HUD LSHR. While they are neither prohibited nor required under the EPA RRP Rule, wet methods are a very good work practice and should be considered as a good way to control dust in the work area. Wet methods can also help meet requirements of the OSHA lead in construction standard (29 CFR 1926.62). OSHA also requires the use of ground fault circuit interruption (GFCI) protection on circuits in wet areas to prevent electric shock.

**Also keep in mind:**

- Chemical strippers can be dangerous. Some can cause burns, while others may cause cancer. The spectrum of chemical strippers ranges from citrus-based (safer) to more dangerous caustic strippers. Follow the manufacturer's directions when using any chemical stripper. OSHA requires hazardous materials communications.
- If building components to be stripped can be removed, such as doors, consider having them stripped off-site at a paint stripping facility.
- Negative pressure respirators do not provide sufficient breathing protection when using particularly toxic paint strippers.

## Specialized Tools

- Large jobs may require special considerations to get the job done, like:
  - Power tools designed to remove paint or other coating must have shroud or containment system equipped with HEPA vacuum
  - Pneumatic and battery powered tools to protect against shock hazards
  - Specialized planning and containment



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Notes:

Only power tools designed to remove paint or other surface coatings 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. Such tools must have a shroud or containment system equipped with a HEPA vacuum attachment to contain the dangerous lead 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.

## 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:
  - Helps to reduce hand-to-mouth ingestion of lead dust
- OSHA may require more protection



5

Notes:

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. Remember to use a HEPA vacuum to remove dust and debris from coveralls or other outerwear (a "dry decon") before exiting the work area. 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, and follow OSHA's Respiratory Protection Standard (29 CFR 1910.134) to prevent them from inhaling lead dust. These respirators are particulate-filtering respirators and would not be appropriate as protection from chemical stripping compounds.
- **Wash your hands and face at the end of each shift.** Workers should wash their hands and faces periodically to avoid ingesting lead dust. You should also wash well before eating, drinking or smoking. You should not 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 to avoid taking lead 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 then HEPA vacuum your clothes
  - Remove gloves, if used, and carefully wash your hands and face
- 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 disposable clothing or place dusty work clothes in a plastic bag to wash separately from household laundry
- <u>Don't hug your family until you are clean!</u>
  - Wash your hands and face
  - Shower as soon as you get home

6

Notes:

**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 lead 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.
  - 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.

HUD requires wet scraping and wet sanding to stabilize defective paint surfaces, except within 1 ft. of electrical outlets, or for very small projects (under 2 sq. ft. in a room or 20 sq. ft. on exterior surfaces).

## 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)

7

Notes:

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 lead 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.

# Module 5: Cleaning Activities and Checking Your Work

## Module 5: Cleaning Activities and Checking Your Work

Lead Safety for Renovation, Repair, and Painting

Refresher Training Course

0

Notes:

## Overview

In this module you will learn about:

- Interior & exterior cleaning techniques
- How to check your work
- Cleaning verification procedure
- Dust-lead testing
- Safe disposal practices

1

Notes:

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, lead 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.

## 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
- Use HEPA vacuum with beater bar for carpets and rugs
- HEPA vacuum and wet mop uncarpeted floors with a two-bucket mopping method or wet mopping system

2

Notes:

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 then sealing this material in a heavy-duty plastic 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 plastic 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 (operated following manufacturer’s instructions) 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

Conducted by certified renovator

1. Put on disposable foot covers before entering the work area
2. Make sure there is adequate lighting in the work area
   - Turn-on all of the lights or use a bright, white-light flashlight
3. Systematically look for dust, debris or residue 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
4. If you find visible dust, debris or residue, then re-clean the work area and repeat step 3
5. Once you have carefully looked at all of the surfaces and found no dust, debris or residue proceed to the cleaning verification procedure or clearance below the action levels

3

Notes:

- Visual inspection after cleaning is required by the RRP Rule.
- 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 dust, debris and residue.
- 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, lead 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 dust, debris or residue is 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 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, up to a maximum of 40 $ft^2$ per cloth
- Compare each wipe to the cleaning verification card (CVC), if the cloth matches or is lighter than the CVC, the surface has passed cleaning verification and no further action is required.
- If the cloth is darker than the CVC, re-clean and repeat the cleaning verification process
- If the second wet cloth fails, wait 1 hour or until surfaces are dry, and now wipe with an electrostatically-charged white disposable cleaning cloth designed to be used for cleaning hard surfaces, this completes the cleaning verification

4

Notes:

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 CVC. If the cloth used to wipe each surface section within the work area matches or is lighter than the CVC, that surface section has been adequately cleaned.
- If the cloth is darker than the CVC, 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 CVC, that surface section has been adequately cleaned.
- If the second cloth does not match and is not lighter than the CVC, wait one 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 a conducted by a certified lead inspector, risk assessor, or dust sampling technician
- If the examination fails to clear below the dust-lead action levels, the renovation firm must re-clean the work area until dust standards comply with applicable Tribal, state, territorial, and local standards

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Notes:

Clearance Examination (Post-work Dust-lead Testing) is Optional under the RRP Rule

- Dust-lead testing may be performed to check the effectiveness of the cleaning efforts. Clearance below the action levels is an option under EPA's RRP Rule and required by the HUD Rule in many cases.
- Dust-lead testing is performed to check the effectiveness of cleaning efforts.
- In some cases, dust-lead testing may be required as part of "clearance" (a regulation-defined process to ensure that a work area is not contaminated with lead dust after work is completed).
- Cleaning verification does not have to be performed if dust-lead testing is required at the conclusion of a renovation. In such cases, dust-lead testing must be performed by a certified lead inspector, risk assessor, or dust sampling technician.
- Certified renovation firms are required to re-clean the work area until dust-lead levels in the work area meet the dust-lead action levels. Some Tribal, state, territorial, and local laws may require a clearance examination following renovation and remodeling work, to levels that differ from the federal dust-lead standards. The selection of a cleaning verification or a clearance examination will be based on regulatory requirements or the renovation contract.

HUD requires clearance examinations 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 to clear below the dust-lead action levels, 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 saves both time and money.

## Exterior Cleanup Requirements

- Clean all surfaces in the work area until no visible dust, debris, or residue remains
- Collect all paint chips and debris without dispersal, and seal in heavy-duty 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

6

Notes:

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 should be similar to clean up 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 to prevent spreading dust. However, raking and shoveling the soil is appropriate if it is misted first.

Protective sheeting

- Collect all paint chips and debris and, without dispersing any of it, seal this material in a heavy-duty bag.
- Remove the protective sheeting. Mist the sheeting before folding it, fold the dirty side inward, and either tape shut to seal or seal in heavy-duty bags. Dispose of the sheeting as waste.

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.

## Exterior – Check the Effectiveness of Cleaning

Certified renovators conduct visual inspections after cleaning:

- Determines if any dust, debris or residue is still present on surfaces in and below the work area
  - Including window sills and the ground
- If dust, debris or residue is present, these conditions must be eliminated by re-cleaning
- After re-cleaning, the certified renovator conducts another visual inspection
- When all areas pass, warning signs may be removed

7

Notes:

Checking your work

- A thorough visual inspection by a certified renovator is the main part of checking your cleanup after an exterior job.
- A 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.

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 waste generated on the job ?
- At the work site:
  - Place waste in heavy-duty plastic bags
  - “Gooseneck-seal” the bag
  - HEPA vacuum the exterior of the waste bag before removing it from the work area
  - Store waste in a secure area
  - Carefully dispose of waste in accordance with federal and other regulations
  - Always check local waste requirements



8

Notes:

At the work site

- 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. 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. If a chute is used to remove waste from the work area, it must be covered. 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.
- At the conclusion of each workday and at the conclusion of the renovation, waste that has been collected from renovation activities must be stored under containment, in an enclosure, or behind a barrier that prevents release of dust and debris out of the work area and prevents access to dust and debris.
- When the firm transports waste from renovation activities, the firm must contain the waste to prevent release of dust and debris.

Wastewater

- Water used for cleanup might be able to 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 wastewater 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, Tribal, state, territorial and/or local regulations for more information.
- **Always dispose of wastewater in accordance with federal, Tribal, state, territorial and/or local regulations.**

HUD recommends when building components are recycled or sold that any painted building components should be stripped before re-installation. If components are not stripped, they should never be reinstalled in housing.

## Exercise: Cleaning Verification Procedure

- Work in groups of 2-6
- Assignments:
  - Skill Set #2: Cleaning Verification Procedure
- You have 20 minutes

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Notes:

Exercise: Cleaning Verification Procedure

This exercise gives you a chance to learn the cleaning verification procedure in the RRP Rule. The slide provides basic instruction. Stay in your groups of 2 to 6 students, in your work area.

# Skill Set #2: Cleaning Verification Procedure

**Time:** 15 minutes

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

**Demonstration:** 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.

**Materials Needed:**

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

## Cleaning Verification 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.*

<u>For window sills</u>:

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 CVC. If the first wipe is the same as or whiter (lighter) than the CVC, the window sill is clean and continue to Step 6. If the first cleaning wipe is not the same as or whiter (lighter) than the CVC, 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 CVC. If the second wipe is the same as or whiter (lighter) than the CVC, the window sill is clean and continue to Step 6. If the second cleaning wipe is not the same as and not whiter (not lighter) than the CVC, 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.*

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

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 $ft^2$ per wipe. For countertops wipe the whole surface of the countertop up to 40 $ft^2$ per wipe.*

Step 7: Compare each floor and countertop cleaning wipe to the CVC. If the first wipe is the same as or whiter (lighter) than the CVC, the floor or countertop is clean. If the first cleaning wipe is not the same as and not whiter (not lighter) than the CVC, 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 CVC. If the second wipe is the same as or whiter (lighter) than the CVC, 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 CVC, wait one hour or until the wet surface is dry (for the purposes of this exercise you do not wait). Then reclean 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.

# Module 6: Recordkeeping

# Module 6: Recordkeeping

Lead Safety for Renovation, Repair, and Painting

Refresher Training Course

0

Notes:

## Overview

In this module, you will learn about:

- Records required for each job
- Which records must be retained and made available to EPA, upon request, for 3 years following completion of a renovation

1

Notes:

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 dust-lead testing or abatement reports (24 CFR 35.175).

## On-The-Job Records

- Copies of the certified renovator's initial and most recent refresher course certificates (must be kept on site)
- Lead-based paint testing results when an EPA-recognized test kit is used
- Laboratory results when a paint chip sample is obtained by a certified renovator
- Proof of owner/occupant pre-renovation education
- Non-certified worker training documentation

2

Notes:

**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:

- Copies of the certified renovator's initial and most recent refresher course completion certificates.

Records to be maintained to document the job:

- Copies of the certified renovator's initial and most recent refresher course completion certificates.
- Non-certified worker training documentation.
- Designation of a certified renovator to the job.
- Information on and results of use of EPA-recognized test kits or paint chip samples 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 risk assessor, if applicable.
- Proof of owner/occupant pre-renovation education
- 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.

## Non-Certified Renovator Training Records

- Name and signature of the certified renovator
- 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

3

Notes:

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 exercises 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 found in Appendix 6 that can be adapted for documenting hands-on and topical training for non-certified workers.

## Post-Renovation Reporting

- Following a renovation, firms must document and share the following information:
  - Project information documenting compliance with renovation training, certification, and work practice requirements
  - If performed, documentation of dust-lead sampling
  - This information must be prepared, retained by the firm and shared with owners and occupants of housing and child-occupied facilities

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Notes:

Documentation of project information (compliance with renovation training, certification, and work practice requirements). This can be accomplished by completing the sample form titled “Sample Renovation Recordkeeping Checklist” (found in Appendix 4 and the next page of your manual), or a similar form.

The project information documentation must also be distributed when the final invoice is delivered or within 30 days of the completion, whichever is earlier, to the following:

- The owner of the building; and, if different,
- An adult occupant, or an adult representative of the child-occupied facility.

If dust-lead sampling is performed the firm must provide, when the final invoice for the renovation is delivered or within 30 days of the completion of the renovation, whichever is earlier, a copy of the dust-lead sampling report to:

- The owner of the building; and, if different,
- An adult occupant, or an adult representative of a child-occupied facility.

*Note: When work is done in common areas of multi-unit housing, firms must post project information and dust sampling reports on how interested occupants of the housing being renovated can obtain a copy of the report. This information must be posted in areas where they are likely to be seen by all affected occupants.*

# Sample Renovation Recordkeeping Checklist

Name of Firm: _____

Date and Location of Renovation: _____

Brief Description of Renovation: _____

Name of Assigned Renovator: _____

Name(s) of Trained Worker(s), if used: _____

Name of Dust Sampling Technician, Inspector, or Risk Assessor, if used: _____

___ Copies of renovator and dust sampling technician qualifications (training certificates, certifications) on file.

___ Certified renovator provided training to workers on (check all that apply):

- ___ Posting warning signs
- ___ Setting up plastic containment barriers
- ___ Maintaining containment
- ___ Avoiding spread of dust to adjacent areas
- ___ Waste handling
- ___ Post-renovation cleaning
- ___ Test kit or test results from an EPA-recognized laboratory on collected paint chip sample, used by certified renovator to determine whether lead was present on components affected by renovation (identify method used, type of test kit used (if applicable), laboratory used to conduct paint chip analysis, describe sampling locations and results):

_____

___ Warning signs posted at entrance to work area.

___ Work area contained to prevent spread of dust and debris

- ___ All objects in the work area removed or covered (interiors)
- ___ HVAC ducts in the work area closed and covered (interiors)
- ___ Windows in the work area closed (interiors)
- ___ Windows in and within 20 feet of the work area closed (exteriors)
- ___ Doors in the work area closed and sealed (interiors)
- ___ Doors in and within 20 feet of the work area closed and sealed (exteriors)
- ___ Doors that must be used in the work area covered to allow passage but prevent spread of dust
- ___ Floors in the work area covered with taped-down plastic (interiors)
- ___ Ground covered by plastic extending 10 feet from work area—plastic anchored to building and weighed down by heavy objects (exteriors)
- ___ Vertical containment installed if property line prevents 10 feet of ground covering, or if necessary to prevent migration of dust and debris to adjacent property (exteriors)

___ Waste contained on-site and while being transported off-site.

___ Work site properly cleaned after renovation

- ___ All chips and debris picked up, protective sheeting misted, folded dirty side inward, and taped for removal
- ___ Work area surfaces and objects cleaned using HEPA vacuum and/or wet cloths or mops (interiors)

___ Certified renovator performed post-renovation cleaning verification (describe results, including the number of wet and dry cloths used): _____

_____

- ___ If post-renovation dust-lead testing was performed instead, attach a copy of report

___ I certify under penalty of law that the above information is true and complete.

_____

Name and title Date

# Module 7: Training Non-Certified Renovation Workers

# Module 7: Training Non-Certified Renovation Workers

Lead Safety for Renovation, Repair, and Painting

Refresher Training Course

0

Notes:

## Overview

Certified renovators are responsible for teaching lead-safe work practices to non-certified renovation workers

1

Notes:

The RRP Rule requires that you, the certified renovator, be responsible for instruction of non-certified renovation workers. Note that the non-certified workers must be trained only on the RRP Rule required lead-safe work practices that the workers will be using in performing their assigned tasks. For example, if a worker is hired to only provide clean-up services, that worker would not need to be trained on how to set up a work area.

Note: See *Appendix 2: Additional Requirements of the U.S. Department of Housing and Urban Development's Lead Safe Housing Rule* and HUD regulations for more information on the training required for workers on HUD funded renovations.

## Teaching Lead-Safe Work Practices Means:

- Training workers to properly use signs, dust barriers, dust minimizing work practices, and dust cleanup practices during the course of renovation, repair, and painting activities to prevent and/or reduce dust-lead contamination in the home
- To effectively train workers you need to:
  - Understand lead safety for yourself
  - Show students what you know
  - Review the shopping list in *Steps to LEAD SAFE Renovation, Repair, and Painting* and have appropriate materials on hand

2

Notes:

- You will be teaching non-certified workers the skills you mastered during the Skill Set exercises so they can master them.
- The shopping lists in *Steps to LEAD SAFE Renovation, Repair and Painting* detail all the equipment and supplies you may need to conduct hands-on exercises during on-the-job training of non-certified renovators.
- The information we are going to cover now is presented to help you conduct your own training of non-certified workers.

## The Role of the Certified Renovator

Certified renovators:

- Perform lead-safe work as described in the RRP Rule
- Train all non-certified workers in lead-safe work practices
- Provide onsite and regular direction for all non-certified workers during setup and cleanup
- Are available by phone when not physically present at the work site during work
- Maintain onsite proof of certification as a certified renovator

3

Notes:

What are the responsibilities of a certified renovator?

- Certified renovators are responsible for ensuring overall compliance with the RRP Program requirements for lead-safe work practices at renovations to which they are assigned.

A certified renovator must:

- Use an EPA-recognized lead test kit or alternatively collect a paint chip sample for analysis, when requested by the party contracting for renovation services, to determine whether components to be affected by the renovation contain lead-based paint.
- Provide lead-safe work practices training to non-certified workers so those workers can perform assigned tasks safely. This training can be provided by the certified renovator on-the-job or in the classroom, provided adequate hands-on practice is available. This training could also be conducted by a third party although the instructor must be a certified renovator.
- Be physically present at the work site when warning signs are posted, while the work area containment is being established, and while the work area cleaning is performed. (Note: Use the terms Setup and Cleanup to describe this work).
- Monitor work being performed by non-certified workers to ensure that lead-safe work practices are being followed. This includes maintaining the integrity of the containment barriers and ensuring that no dust or debris migrates from the work area.
- Be available, either on-site or by telephone, at all times during performance of the renovation.
- Perform project cleaning verification.
- Have copies of their initial course completion certificate and their most recent refresher course completion certificate at the work site. Certification as a certified renovator lasts for 5 years. The certified renovator must take a refresher course every 5 years in order to maintain certification.
- Prepare required records.

EPA RRP Rule requirements are found at 40 CFR 745.85 (a) and (b).

## Trained, Non-Certified Renovation Workers

- Persons working on renovation, repair and painting jobs who have had on-the-job training or similar classroom training from a certified renovator to perform tasks in compliance with the RRP Rule
- Must perform lead-safe work practices as described in the RRP Rule:
  - Protect the home by "setting up" the work area.
  - Protect themselves
  - Perform renovation work safely
    - Not use prohibited practices
    - Control dust and debris
  - Clean the work area

4

Notes:

- On-the-job training must be provided for each worker and each job to the extent that each worker is adequately trained in the tasks they will be performing. This training may occur while the worker is engaged in productive work, which provides knowledge and skills essential to the full and adequate performance of the job. However, work conducted during training must be in full compliance with the RRP Rule.
- Your trainees will benefit by seeing the lead-safe work practices steps found in *Steps to LEAD SAFE Renovation, Repair and Painting* (Steps Guide) in Appendix 5. It contains a seven-step primer on lead safety and can be used as a field text to hand out to non-certified worker trainees in the field. In the *Steps Guide*, steps 2 through 6 contain information specific to work performed by non-certified personnel, while step 1 and step 7 contain information on testing painted surfaces and cleaning verification which are the responsibility of the certified renovator. Step 7 also discusses clearance examination which is performed only by certified lead inspectors, risk assessors, and dust sampling technicians.
- The information in the *Steps Guide* can be covered in 5-10 minutes per step and then reinforced by on-the-job practical exercises such as setting up barriers and signs, demonstrations of cleaning procedures, etc. It is recommended that the material in the *Steps Guide* be covered in a toolbox talk (on- site meeting) format with handouts (you create or get from someone else) on the specific information to be covered.
- It is very important that non-certified workers be allowed to participate in hands-on learning as work progresses and that skill sets that are learned by each student are documented. Documentation is required by the RRP Rule to assure that non-certified workers are trained to perform renovation activities to which they are assigned. Remember that the RRP Rule requires all non-certified workers on the job to be given skills training specific to the tasks that they will perform on the job and that each person's training must be documented by topic area covered in the on-the-job training that is performed. The required documentation will be discussed in more detail later.

## Teaching Lead Safety During Renovations

- Use the *Steps Guide* as a basis for your training of non-certified renovation workers
- Training can be:
  - Delivered in one session covering all 7 steps; or
  - Cover the information in a series of "toolbox" meetings over the course of several days
- Spend 5-10 minutes on information in each step and then do on-the-job training to teach the skills needed
- If you offer training in a classroom, you can use slides 7-6 to 7-12
- Give each worker a copy of the *Steps Guide*

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Notes:

- Training for non-certified renovation workers can be delivered in one session covering all 7 steps or the information can be covered in a series of toolbox talks over the course of several days. You should spend about 5-10 minutes on the information contained in each step and then conduct on-the-job training to teach the skills needed to renovate lead safely.
- If this training is offered in the classroom, Slides 7-6 through 7-12 can be used to teach the material found in the *Steps to LEAD SAFE Renovation, Repair, and Painting* found in Appendix 5 of your student manual.
- Use the *Steps Guide* as a student handout for training non-certified renovation workers. Your handout(s) should also include write-ups of demonstrations and practical hands-on exercises, and a checklist of desired skills to reinforce the toolbox talks or classroom training. During either the toolbox talks or classroom instruction make sure your trainees have their copy of the handout so you can reference the training handout and where exactly to find the information while teaching about a particular step or skill.
- Before you train non-certified renovation workers make sure to print enough copies of the *Steps Guide* so you can give one copy to each non-certified renovation worker (trainee) a copy.

The Steps Guide:

- Designed to help plan for and complete a home renovation, repair or painting project using lead-safe work practices that reduce the amount of dust produced during renovation activities.
- Describes the required lead-safe work practices.
- Provides additional helpful recommendations.
- Includes information about lead, lead-based paint and the RRP Rule.
- Discusses the 7 steps for lead-safe RRP projects.

## Step 1: Determine If the Job Involves Lead-Based Paint

- Lead-based paint (LBP) is found in many older homes:
  - 1960-1978 homes – 1 in 4 have LBP
  - 1940-1960 homes – 7 in 10 have LBP
  - Pre-1940 homes – 9 in 10 have LBP
- Renovation, repair or painting that disturbs LBP can create significant LBP hazards in homes
- Just a little lead dust can harm kids, their parents and pets, and cause problems for pregnant women and their unborn children
- A certified renovator will determine if LBP is present on work surfaces
- If information about LBP is not available for a pre-1978 home or child-occupied facility, assume that LBP is present and use lead-safe work practices

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Notes:

During training:

- Review the information on this slide with the non-certified renovation workers as they follow along on pages 9 and 10 of the *Steps Guide*.

Notes to the on-the-job instructor:

- This information is included in the on-the-job training so non-certified renovation workers will understand why they need to use lead-safe work practices. **Non-certified renovation workers are not allowed to determine whether lead-based paint is present**, but they should understand that when it is identified as present, generating dust can cause significant problems if not properly and safely controlled.

*For more information review pages 9 and 10 of Steps Guide.*

## Step 2: Set It Up Safely

- Containment is used to keep dust and debris IN the work area and non-workers OUT
- Signs and barriers (plastic sheeting) are used to limit access
- Inside versus outside jobs
  - Review all procedures and differences in setup

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Notes:

- When you work on a job with lead-based paint, you must contain the work area to prevent the escape of dust and debris. The goal of proper setup of the work area is to keep dust in the work area and non-workers out.
- You 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.
- Place signs, barrier tape, and/or cones to keep all non-workers, especially children, out of the work area. Have residents keep pets out of the work area for their safety and to prevent them from tracking dust and debris throughout the home.
- To keep the dust in, and people out, of your work area, you will need to take slightly different steps to setup for inside versus outside jobs.

Inside jobs

- Place signs, barrier tape, and/or cones to keep all non-workers, especially children, out of the work area. Keep pets out of the work area for their safety and to prevent them from tracking dust and debris throughout the home.
- Remove furniture and belongings from the work area. If an item is too large or too heavy to move, cover it with heavy plastic sheeting and tape the sheeting securely in place.
- Use heavy plastic sheeting to cover floors in the work area to a minimum of 6 feet from the area of paint disturbance. Close and seal doors, close windows.
- Close and cover air vents in the work area. This will keep dust from getting into the system and moving through the home.

Outside jobs

- Keep non-workers away from the work area by marking it off with signs, tape and/or cones. Have owners keep pets out of the work area.
- Cover the ground and plants with heavy plastic sheeting to catch debris. The covering should extend at least 10 feet out from the building, unless a property line prevents 10 feet of such ground cover, in which case the firm must erect vertical containment. Secure the covering to the exterior.
- Close windows and doors within 20 feet of the work area to keep dust and debris from going into the home.
- Move (if possible) or cover play areas and equipment within 20 feet of the work area.

*For more information about Step 2 review pages 11-14 of the Steps Guide.*

## Step 3: Protect Yourself

- Without the right personal protective equipment workers can:
  - Swallow and inhale lead from the job
  - Carry lead on their skin and work clothes home to their families
- Review the shopping list
- Advise workers to:
  - Keep clothes clean or use disposable clothing
  - Wear a respirator, the appropriate respirator keeps lead out of the lungs and stomach
  - Wash-up each time they leave the work area and especially at the end of the day

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Notes:

Wear protective clothing.

- Protective clothing and shoe covers are very important in preventing:
  - Take-home lead;
  - Tracking lead out of the work area; and
  - Contamination of areas that have already been cleaned during final cleanup.
- Keep clothes clean. At the end of the work day, vacuum off dust or change out of dusty clothes. Do not use compressed air to blow dust off clothing. Wash dirty work clothes separately from household laundry.
- Wear a painter's hat to protect your head from dust and debris.

Wear respiratory protection.

- When work creates dust or paint chips, employers should consider respiratory protection, such as a N-100 disposable respirator, to prevent workers from breathing lead dust.

Post warning signs.

- Post a warning sign at each work area entrance.
- Signs should read: "Warning, Lead Work Area, Poison, No Smoking or Eating" to remind workers that eating, drinking and smoking in the work area is prohibited.

Wash up.

- Workers should wash their hands and faces each time they stop work. It is especially important to wash up before eating and at the end of the day.

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

*For more information about Step 3 review pages 15-16 of the Steps Guide.*

## Step 4: Minimize the Dust

- The goal is to minimize and control the spread of dust by:
  - Using the right tools, including disposable heavy-duty plastic sheeting
  - If possible, work wet
  - Keeping the work area closed off
  - Using lead-safe work practices
  - Avoiding prohibited practices
- Review the shopping list

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Notes:

Minimize and control the spread of dust.

- Keep the work area closed off from the rest of the home.
- Don't track dust and debris out of the work area.
  - Vacuum off all workers paying particular attention to shoes when exiting the work area so the dust stays inside containment.
  - Remove disposable shoe covers and make sure your shoes are clean by using tack pads or damp paper towels to wipe off your shoes each time you step off the protective sheeting.
- Stay in the contained work area and on the contained paths.
- Keep components that are being disposed of in the work area until they are wrapped securely in heavy plastic sheeting or bagged in heavy-duty plastic bags. Once wrapped or bagged, HEPA vacuum the exterior and remove them from the work area and store them in a safe area away from residents.
- Launder non-disposable protective clothing separate from family laundry.
- Do not use prohibited practices, including:
  - Open-flame burning or torching
  - Using a heat gun at temperatures greater than 1100°F (to remove paint)
  - Sanding, grinding, planing, needle gunning or blasting with power tools and equipment not equipped with a shroud and HEPA vacuum attachment

*For more information about Step 4 review pages 17-19 of the Steps Guide.*

The HUD Rule also prohibits extensive dry scraping and sanding by hand, use of heat guns that char paint, and paint stripping in a poorly ventilated space using a volatile paint stripper. States, localities or Tribes may prohibit additional work practices.

## Step 5: Leave the Work Area Clean

- The goal is to leave the work area completely free of dust, debris and residue:
  - Clean at the end of every workday
  - Thoroughly clean at the end of the job
- Review the shopping list
- Discuss both daily and end of job cleaning procedures

10

Notes:

On a daily basis, pick up the work area (recommended).

- Pick up as you go. Put trash in heavy-duty plastic bags.
- Vacuum the work area with a HEPA vacuum several times during the day and at the end of the day. Do not clean with a standard household or shop vacuum cleaner. Use only HEPA vacuums.
- Clean your tools at the end of the day.
- Wash your hands each time you leave the work area and especially before you go home.
- Dispose of all disposable personal protective clothing daily.

When the job is complete, clean the work area (required).

- Make sure all paint chips, dust, trash and debris, including building components, are removed from the area to be cleaned and disposed of properly.
- Carefully remove plastic sheeting on the floor, fold it with the dirty side in, tape the edges shut or seal it in a heavy-duty plastic bag, and dispose of it. Keep plastic sheeting in doorways and openings that separate the work area from non-work areas in place until the work area is released as clean.
- HEPA vacuum or wet wipe all wall surfaces. HEPA vacuum all other surfaces in the work area. Use a beater bar attachment on carpets.
- Wet wipe all remaining surfaces in the work area and wet mop all uncarpeted floors until dust, debris and residue are removed.
- Visually inspect your work. Look around the work area and two feet beyond, and on paths where debris was carried. You should see no dust, debris or residue.
- Re-clean the area thoroughly if you find dust, debris or residue.

*For more information about Step 5 review pages 20-21 of the Steps Guide.*

## Step 6: Control the Waste

- Waste from renovation activities must be contained to prevent releases of dust and debris before it is removed from the work area
- Discuss:
  - Waste bagging procedure
  - Temporary storage of waste
  - How to deal with wastewater appropriately
  - Waste disposal rules that apply to the specific job
- Demonstrate how to fold a small section of plastic with the dirty side turned in

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Notes:

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.

Bag or wrap your waste at the work site and in the work area.

- Collect and control all your waste. This includes dust, debris, paint chips, protective sheeting, HEPA filters, dirty water, clothes, mop heads, wipes, protective clothing, respirators, gloves, architectural components, and other waste. Use heavy-duty plastic sheeting or bags to collect waste. Gooseneck seal the bag with duct tape. Consider double bagging waste to prevent tears. Large components should be wrapped in protective sheeting and sealed with tape. Bag and seal all waste before removing it from the work area. HEPA vacuum the exterior of waste bags and bundles before removing them from the work area. Store all waste that has been collected from renovation activities preventing access to and release of dust and debris.

Dispose of wastewater appropriately.

- Water used in the work area to remove paint or clean surfaces should be filtered through a 5 micron filter. Never dump this water down a sink or tub, in a storm drain, or on the ground. It may be dumped in a toilet if local rules allow. If local regulations do not allow this, you may be required to contain and test the water, and contact a waste disposal company to assist with disposal. Check with your local water treatment authority, and federal, Tribal, state, and territorial regulations for more information.

Be aware of waste disposal rules.

- EPA considers most residential renovation, repair and painting activities “routine residential maintenance.” The waste generated by these activities is classified as solid, non-hazardous waste and can be disposed of in an ordinary waste landfill. Some Tribes, states, territories and localities have more stringent waste disposal requirements that must be followed.

*For more information about Step 6 review pages 22-23 of the Steps Guide.*

## Step 7: Verify Work Completion with Cleaning Verification or Dust-Lead Testing

- Cleaning verification:
  - Required by the RRP Rule
  - Must be performed by a certified renovator
- Clearance examination, which includes dust-lead testing:
  - May be requested in place of cleaning verification by the owner
  - Required by HUD for housing receiving federal housing assistance
- Discuss what happens when cleaning verification and/or clearance below the action levels is not passed

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Notes:

- When all the work is complete, and before the space is reoccupied, a cleaning verification or clearance examination must be conducted to make sure lead dust is not left behind.
  - If the HUD Rule applies, a clearance examination is required in place of the cleaning verification procedure.
- The first step for both cleaning verification and a clearance examination is a visual inspection of the work area to determine if dust, debris or residue was left behind.
  - If dust, debris or residue are present in the work area, cleaning must be repeated and the visual inspection repeated until the work area is free of dust, debris and residue.
- Once the visual inspection by the certified renovator is complete, either the cleaning verification or clearance examination can proceed.
  - For exterior projects, when work areas have passed the visual inspection, the project is complete and the area may be turned over to the occupants.
  - For interior projects, when work areas have passed the visual inspection, the certified renovator performs cleaning verification by wiping all dust collection surfaces in the work area with a wet, disposable cleaning cloth and comparing that cloth visually to a cleaning verification card.
  - Clearance examination or dust-lead testing must be performed by a certified lead-based paint inspector, risk assessor or dust sampling technician.

*For more information about Step 7 review pages 24-28 of the Steps Guide.*

# Appendix 1: Renovation, Repair and Painting Program Regulation (40 CFR Part 745)

The Renovation, Repair and Painting Program Regulation (40 CFR Part 745) can be found online at: www.ecfr.gov/current/title-40/chapter-I/subchapter-R/part-745/subpart-E.

# Appendix 2: Additional Requirements of the U.S. Department of Housing and Urban Development's Lead Safe Housing Rule

# Additional Requirements of HUD's Lead Safe Housing Rule for EPA Certified Renovation Firms and Certified Renovators

The U.S. Department of Housing and Urban Development's (HUD) Lead Safe Housing Rule (LSHR), which is found in HUD's regulations at 24 CFR Part 35, Subparts B through R), generally applies to work performed in target housing units receiving HUD housing assistance, such as rehabilitation or acquisition assistance.

Under the LSHR, the program participant (governmental jurisdiction, non-profit, community organization or the property owner who accepts HUD funds) becomes responsible for compliance with the LSHR and is referred to as the designated party (DP). Renovation firms may include, for example, for-profit contractors, non-profit organizations, or a DP using its own employees for renovation. In the spirit of maintaining good customer relations, certified renovation firms should ask their client if:

1. The work involves lead hazard control (including abatement, interim control of lead hazards or ongoing lead-based paint maintenance); and
2. The housing receives financial assistance. If so, the renovator should ask the client to find out if the assistance is federal assistance.

The information below and in the table explain the basic requirements of HUD's regulation for renovators who have not yet had experience with HUD-funded work. The term "rehabilitation" is used by HUD to describe residential renovation work. When HUD funds pay for this work, funding often flows from HUD through cities, states or other program participants, and addressing lead-based painted surfaces becomes a routine part of the job. HUD's specific requirements depend on the amount of Federal rehabilitation assistance the project is receiving:

1. Up to $5,000 per unit: "Do no harm" approach. Lead safety requirements cover only the surfaces being disturbed. Program participants can either test these surfaces to determine if they contain lead-based paint or presume they contain lead-based paint. Work which disturbs painted surfaces known or presumed to contain lead-based paint is done using lead safe work practices, and clearance of the worksite is performed at the end of the job (unless it is a very small de minimis scale project) to ensure that lead dust hazards in the work area are addressed. Training that meets the U.S. Environmental Protection Agency's (EPA) Renovation, Repair and Painting (RRP) Rule requirements is sufficient for this work.
2. Greater than $5,000 and up to $25,000 per unit: Identify and control lead hazards. Identify all lead hazards at the affected units and common areas servicing those units by performing a lead-based paint risk assessment. Control the hazards using interim controls. Participants may skip the risk assessment and presume that all potential lead hazards are present, and then must use standard treatments to address them. In addition to training that meets the EPA's RRP Rule requirements, HUD-approved interim control training (such as the HUD-EPA RRP curriculum) is required for renovators and workers.
3. Greater than $25,000 per unit: Identify and abate lead hazards. Identify all lead hazards at the property by performing a risk assessment and then abate all the hazards. Participants may skip the risk assessment and presume that all potential lead hazards are present and abate them. This approach requires certified abatement contractors to perform the abatement part of the job.

These approaches also include all the basic HUD requirements described in the slides in Module 2 of the EPA-HUD Renovator Initial Training Course and Module 1 of the EPA-HUD Renovator Refresher Training Course. They demonstrate the importance to the renovator of asking the client whether federal housing assistance is provided for the project.

The differences between HUD's LSHR and EPA's RRP Rule, part of EPA's regulations at 40 CFR Part 745, and the charges for HUD LSHR projects, are summarized in the following table and explained in the narrative after the table.

## Differences between HUD LSHR and EPA RRP Rule

| Stage of Job | Requirement | HUD LSHR | EPA RRP | Changes to LSHR Projects to Comply with RRP |
|---|---|---|---|---|
| **Planning and Set-Up** | Determination that lead-based paint (LBP) is present | EPA-recognized test kits cannot be used to say paint is not LBP. Only a certified LBP inspector or risk assessor may determine whether LBP is present. | Certified renovators use an EPA-recognized test kit to determine if the RRP Rule applies or not. | None |
| | Training | HUD does not certify renovators or firms. **HUD does <u>not</u> require that all workers be certified renovators.** All workers and supervisors must complete a HUD-approved curriculum in lead-safe work practices, of which the Renovator Course is one. All workers need this training except they only need on-the-job training for EPA if they are supervised by a certified LBP abatement supervisor who is also a certified renovator. | EPA or EPA-authorized Tribes or states certify renovation firms and accredit training providers that certify renovators. Only the certified renovator is required to have classroom training. Workers must receive on-the-job training from the certified renovator. | Renovation firms must be certified. At least one certified renovator must be at the job or available when work is being done. (The certified renovator may be a certified LBP abatement supervisor who has completed the 4-hour Renovator Refresher course.) |
| | Pre-renovation education | HUD requires conformance with EPA regulations, including EPA's pre-renovation education requirements. | Renovators must hand out the *Lead-Safe Certified Guide to Renovate Right: Important Lead Hazard Information for Families, Child Care Providers and Schools* pamphlet. | None |

| Stage of Job | Requirement | HUD LSHR | EPA RRP | Changes to LSHR Projects to Comply with RRP |
|---|---|---|---|---|
| **During the Job** | Treating LBP hazards | Depending on type and amount of HUD assistance, HUD requires that lead hazards be treated using "interim controls" or "ongoing lead-based paint maintenance." | EPA generally requires that renovations in target housing be performed using lead-safe work practices. | None |
| | Prohibited work practices | HUD's prohibited work practices include EPA's prohibited work practices plus: dry scraping or sanding farther than 1 foot of electrical outlets, and use of a volatile stripper in poorly ventilated space. | EPA prohibits work practices (open flame burning or torching, heat guns above 1100 degrees F, machine removal without HEPA vacuum attachment). | None |
| | Threshold minimum amounts of interior paint disturbance which trigger lead activities | HUD has a lower interior "*de minimis*" threshold (2ft$^2$ per room, or 10% of a small component type) than EPA for lead-safe work practices. HUD also uses this lower threshold for clearance and occupant notification. | EPA's interior threshold (6 ft$^2$ per room) for minor repair and maintenance activities is higher than HUD's "*de minimis"* threshold. | None |

| Stage of Job | Requirement | HUD LSHR | EPA RRP | Changes to LSHR Projects to Comply with RRP |
|---|---|---|---|---|
| **End of Job** | Confirmatory testing | HUD requires a clearance examination done by an independent party. | EPA allows cleaning verification by the renovator or post-renovation dust-lead testing. The cleaning verification does not involve sampling and laboratory analysis of the dust. | None |
| | Notification to occupants (non-owner- occupied housing) | HUD requires the DP to distribute notices to occupants within 15 days after lead hazard evaluation and control activities in their unit (and common areas, if applicable) are completed. | EPA requires that owners receive documentation after the renovation. | Contractor notifies owner as well as occupants. |

## A. Responsibilities Shifted from the Renovator to the DP under HUD's LSHR:

1. Under the LSHR, the DP is generally responsible to either have the paint tested by a certified lead-based paint inspector or risk assessor or presume the presence of lead-based paint. Therefore, when HUD's rule applies, the certified renovator may not use a lead (paint) test kit to determine that the paint is not LBP. **Note:** Some states may have conflict-of-interest regulations prohibiting renovators from testing paint on which they will be working.
2. When the HUD LSHR applies, the DP must have a qualified person, independent of the renovation firm, conduct a lead clearance examination. The certified renovator does not conduct a cleaning verification. See below for more information on dust-lead testing.

## B. Additional HUD Requirements for the Renovator:

1. Training requirements for workers and supervisors performing interim controls. To meet the requirements of both the HUD and EPA Rules:
   a. If the supervisor (in HUD terms) or certified renovator (in EPA terms) is certified as a lead-based paint abatement supervisor or has successfully completed an accredited abatement supervision or abatement worker course, that person must complete a 4-hour Renovator Refresher Course.
   b. For workers who are not themselves supervisors/certified renovators:
      - If their supervisor on this project is a certified lead-based paint abatement supervisor who has completed a 4-hour Renovator Refresher Course, the workers must obtain on-the-job training in lead-safe work practices from the supervisor.
      - Otherwise, the workers must successfully complete either an 8-hour Renovator Course, or another lead-safe work practices course approved by HUD for this purpose after consultation with EPA.

c. Where the work is being done in a Tribal or state jurisdiction that has been authorized by the EPA to operate an RRP training and certification program, the 8-hour Renovator Course and 4-hour Renovator Refresher Course must be accredited by the Tribe or state. HUD will approve all 8-hour Renovator Courses accredited by EPA-authorized states or Tribes.

d. The 4-hour Renovator Refresher Course is not sufficient on its own to meet either the EPA or HUD training requirements.

2. The certified renovation firm and the certified renovator must take additional precautions to protect residents from lead poisoning beyond those in EPA's RRP Rule.

   a. Renovators must use lead-safe work practices in work exempt from the RRP Rule that:

      - Disturbs between 2 and 6 $ft^2$ of paint per room, the LSHR's de minimis threshold and the RRP's minor repair and maintenance activities threshold, respectively. *Note: Window replacement, window sash replacement, and demolition of painted surface areas disturb more paint than the LSHR's de minimis threshold.*
      - Disturbs more than 10% of a component type with a small surface area (such as window sills, baseboards, and trim).

   b. Not using HUD's three additional prohibited work practices:

      - Heat guns that char the paint even if operating below 1100 degrees F.
      - Dry sanding or dry scraping, except dry scraping in conjunction with heat guns or within 1 foot of electrical outlets.
      - Paint stripping using a volatile stripper in a poorly ventilated space.

   c. Taking additional measures to protect occupants during longer interior hazard reduction activities: Temporarily relocating the occupant before and during longer interior hazard reduction activities to a suitable, decent, safe, and similarly accessible dwelling unit that does not have lead-based paint hazards. Temporary relocation is not required for shorter projects, where:

      - The work is contained, completed in one period of 8 daytime hours, and does not create other safety, health or environmental hazards; or
      - The work is completed within 5 calendar days, after each workday, the worksite and the area within 10 feet of the containment area are cleaned of visible dust and debris, and occupants have safe access to sleeping areas, and bathroom and kitchen facilities.

## C. Additional DP Responsibilities that may Affect the Renovator

On jobs covered by the HUD LSHR, the certified renovation firm and the certified renovator should know other requirements for the DP that may affect their role on the project.

1. DP must provide occupants with two notices, if the amount of work is above HUD's de minimis threshold:

   a. NOTICE OF EVALUATION OR PRESUMPTION: This notice informs the occupants that paint has been evaluated to determine if it is LBP or that paint has been presumed to be LBP. The DP must notify the occupants within 15 calendar days of receiving the evaluation report or making the presumption. The renovator should ask the client if he/she has made this notice. The owner may provide a copy of this notice to the renovator so the renovator knows where LBP is located.

   b. NOTICE OF HAZARD REDUCTION ACTIVITY: This notice describes the hazard reduction work that was completed and gives the contact for occupants to get more information. The DP must notify the occupants within 15 calendar days of completion of the hazard reduction work. The renovator may be given a copy of this notice or may be asked to prepare or distribute the notice for the owner as part of the renovator's work for the owner.

2. Depending on the type and amount of housing assistance provided, HUD generally requires that identified LBP hazards be treated. Treatments may include LBP hazard abatement, interim controls or ongoing LBP maintenance. Renovators should inquire if their contract with the owner requires them to perform lead hazard treatment tasks listed below. If so, all workers and supervisors must have the proper training and qualifications. Generally, interim controls include the following activities, which are required

if the amount of work is above HUD's de minimis threshold; for work below the de minimis threshold, any deteriorated paint must be repaired, but the work need not be done using lead-safe work practices, although HUD strongly encourages their use:

a. Deteriorated LBP must be stabilized. This means that physical defects in the substrate of a paint surface or component that are causing the deterioration of the surface or component must also be repaired.

b. Friction surfaces that are abraded must be treated if there are lead dust hazards nearby.

c. Friction points must be either eliminated or treated so the LBP is not subject to abrasion.

d. Impact surfaces must be treated if the paint on an impact surface is damaged or otherwise deteriorated and the damage is caused by impact from a related building component (such as a door knob that knocks the wall or a door that rubs against its door frame).

e. LBP must be protected from impact.

f. Chewable LBP surfaces must be made inaccessible for chewing by children under six years of age if there is evidence that such a child has chewed on the painted surface.

g. Horizontal surfaces that are rough, pitted, or porous must be covered with a smooth, cleanable covering or coating.

3. For certain types of HUD assistance, when a child known to have an elevated blood lead level is present, the DP must take additional steps to assess the situation and respond to potential lead hazards. An elevated blood lead level is a reading in a child under 6 years old of 3.5 micrograms per deciliter of blood (3.5 µg/dL). For certain types of HUD assistance (tenant-based rental assistance, project-based rental assistance, public housing, and HUD-owned multifamily housing), the owner or DP may ask the renovator to perform work in the unit to address specific lead hazards identified by an environmental investigation risk assessment. All persons participating in such work should have appropriate training and qualifications.

4. The DP must arrange for a party independent of the renovator to conduct a clearance examination, if the amount of work is above HUD's de minimis threshold:

   a. A clearance examination includes a visual assessment at the end of the renovation work for deteriorated paint, dust, debris, paint chips or other residue; sampling of dust on interior floors, window sills and window troughs; submitting the dust samples to a laboratory for analysis for lead; interpreting the lab results, and preparing a clearance report. EPA also allows post-renovation dust-lead testing to be used instead of the cleaning verification procedures, if the clearance examination is required by federal, Tribal, state, territorial or local regulations or by the contract. The unit – or, where work is contained, just the work area and an area just outside the containment – must pass clearance. If clearance fails at either the visual assessment step or the dust testing step, cleaning has to be redone in the failed part of the work area. The failed part of the work area is the specific area that was tested, as well as any areas that were not tested, and any other areas that are being represented by the sampled area. For example:

      - Just one bedroom was tested, because it was to represent all bedrooms in the housing unit; it failed. Therefore, all of the bedrooms in the unit have to be re- cleaned and re-cleared.
      - In a large multifamily apartment building, if a percentage of units are tested in accordance with the HUD Guidelines, if any fail, all of the units except those that passed clearance have to be re-cleaned and re-cleared. (If there are patterns of just certain component types failing, just those component types need to be re- cleaned and re-cleared in the failed and untested units.)

b. The person conducting the clearance examination must be:

- A certified lead-based paint inspector, risk assessor, clearance examiner, or lead dust sampling technician, depending on the type of activity being performed. (Either the Tribe, state or EPA certifies this person, depending on whether or not the Tribe or state the housing is in is authorized by EPA to certify people in the lead discipline.)
- Independent of the organization performing hazard reduction or maintenance activities. There is one exception, which is that the DP may use a qualified in-house employee to conduct clearance even if other in-house employees did the renovation work, but an in-house employee may not do both renovation and clearance.

## D. How to Find Out About Lead-Based Paint Requirements that Apply to Planned Work in Properties Receiving HUD Housing Assistance, such as Rehabilitation or Acquisition Assistance:

Finding out whether the work is receiving federal housing assistance is important because failing to meet LBP requirements could affect the continuation of the assistance. For each job, the renovation firm should find out whether:

- The housing receives financial assistance; and
- Any LBP requirements that apply to the work because of the assistance provided.

The renovation firm should take the following steps:

1. Ask the property owner if the property or the family receives any type of housing assistance, including low-interest loans, from a federal, Tribal, state or local agency. If so:
   a. Find out the name of the agency, contact person, address and phone number. (See the list of types of agencies below.)
   b. Get a basic description of the type of assistance the property receives.

   Note: You should be able to explain to the owner that there will be information about the work that you will need, and that you also need to check if there are any special requirements.
2. If you have any questions about the federal, Tribal or state LBP requirements that apply to the work, contact the public agency administering the assistance and discuss the project with the program specialist or rehabilitation specialist working with the property. For example:
   a. Is the project considered lead abatement? If so, what are the agency's abatement requirements?
   b. If the project is not abatement, what are the agency's lead-based paint requirements for the project, and how should they be incorporated into the work write-up?

   Some types of public agencies administering housing assistance, such as rehabilitation or acquisition assistance, include, but are not limited to:
   - State Housing Agency, Corporation or Authority
   - State Community Development Agency, Corporation or Authority
   - State Housing Finance Agency
   - City or County Housing Authority, Corporation or Authority
   - City or County Community Development Agency, Corporation or Authority
   - USDA Service Center - Rural Housing Programs

# Appendix 3: *Lead-Safe Certified Guide to Renovate Right*


THE LEAD-SAFE CERTIFIED GUIDE TO
RENOVATE RIGHT
CAUTION
CAUTION
Important lead hazard information for families, child care providers and schools.
EPA
LEAD-SAFE
EPA
CERTIFIED FIRM

# IT'S THE LAW!

Federal law requires contractors that disturb painted surfaces in homes, child care facilities and schools built before 1978 to be certified and follow specific work practices to prevent lead contamination. Always ask to see your contractor's certification.

Federal law requires that individuals receive certain information before renovating more than six square feet of painted surfaces in a room for interior projects or more than twenty square feet of painted surfaces for exterior projects or window replacement or demolition in housing, child care facilities and schools built before 1978.

- Homeowners and tenants: renovators must give you this pamphlet before starting work.
- Child care facilities, including preschools and kindergarten classrooms, and the families of children under six years of age that attend those facilities: renovators must provide a copy of this pamphlet to child care facilities and general renovation information to families whose children attend those facilities.

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY

# WHO SHOULD READ THIS PAMPHLET?

## This pamphlet is for you if you:

- Reside in a home built before 1978.
- Own or operate a child care facility, including preschools and kindergarten classrooms, built before 1978, or
- Have a child under six years of age who attends a child care facility built before 1978.

## You will learn:

- Basic facts about lead and your health.
- How to choose a contractor, if you are a property owner.
- What tenants, and parents/guardians of a child in a child care facility or school should consider.
- How to prepare for the renovation or repair job.
- What to look for during the job and after the job is done.
- Where to get more information about lead.

## This pamphlet is not for:

- **Abatement projects.** Abatement is a set of activities aimed specifically at eliminating lead or lead hazards. EPA has regulations for certification and training of abatement professionals. If your goal is to eliminate lead or lead hazards, contact the National Lead Information Center at **1-800-424-LEAD (5323)** for more information.
- **"Do-it-yourself"** projects. If you plan to do renovation work yourself, this document is a good start, but you will need more information to complete the work safely. Call the National Lead Information Center at **1-800-424-LEAD (5323)** and ask for more information on how to work safely in a home with lead-based paint.
- **Contractor education.** Contractors who want information about working safely with lead should contact the National Lead Information Center at **1-800-424-LEAD (5323)** for information about courses and resources on lead-safe work practices.



# RENOVATING, REPAIRING, OR PAINTING?



- Is your home, your building, or the child care facility or school your children attend being renovated, repaired, or painted?
- Was your home, your building, or the child care facility or school where your children under six years of age attend built before 1978?

If the answer to these questions is YES, there are a few important things you need to know about lead-based paint.

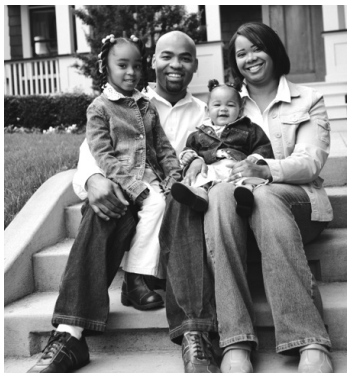
This pamphlet provides basic facts about lead and information about lead safety when work is being done in your home, your building or the child care facility or school your children attend.

## The Facts About Lead

- Lead can affect children's brains and developing nervous systems, causing reduced IQ, learning disabilities, and behavioral problems. Lead is also harmful to adults.
- Lead in dust is the most common way people are exposed to lead. People can also get lead in their bodies from lead in soil or paint chips. Lead dust is often invisible.
- Lead-based paint was used in more than 38 million homes until it was banned for residential use in 1978.
- Projects that disturb painted surfaces can create dust and endanger you and your family. Don't let this happen to you. Follow the practices described in this pamphlet to protect you and your family.

# LEAD AND YOUR HEALTH

## Lead is especially dangerous to children under six years of age.



Lead can affect children's brains and developing nervous systems, causing:

- Reduced IQ and learning disabilities.
- Behavior problems.

**Even children who appear healthy can have dangerous levels of lead in their bodies.**

Lead is also harmful to adults. In adults, low levels of lead can pose many dangers, including:

- High blood pressure and hypertension.
- Pregnant women exposed to lead can transfer lead to their fetuses. Lead gets into the body when it is swallowed or inhaled.
- People, especially children, can swallow lead dust as they eat, play, and do other normal hand-to-mouth activities.
- People may also breathe in lead dust or fumes if they disturb lead-based paint. People who sand, scrape, burn, brush, blast or otherwise disturb lead-based paint risk unsafe exposure to lead.

## What should I do if I am concerned about my family's exposure to lead?

- A blood test is the only way to find out if you or a family member already has lead poisoning. Call your doctor or local health department to arrange for a blood test.
- Call your local health department for advice on reducing and eliminating exposures to lead inside and outside your home, child care facility or school.
- Always use lead-safe work practices when renovation or repair will disturb painted surfaces.
  For more information about the health effects of exposure to lead, visit the EPA lead website at https://www.epa.gov/lead/learn-about-lead or call **1-800-424-LEAD (5323)**.

## There are other things you can do to protect your family every day.

- Regularly clean floors, window sills, and other surfaces.
- Wash children's hands, bottles, pacifiers, and toys often.
- Make sure children eat a healthy, nutritious diet consistent with the USDA's dietary guidelines, that helps protect children from the effects of lead.
- Wipe off shoes before entering the house.

# WHERE DOES THE LEAD COME FROM?

## Dust is the main problem.

The most common way to get lead in the body is from dust. Lead dust comes from deteriorating lead-based paint and lead-contaminated soil that gets tracked into your home. This dust may accumulate to unsafe levels. Then, normal hand to-mouth activities, like playing and eating (especially in young children), move that dust from surfaces like floors and window sills into the body.

## Home renovation creates dust.

Common renovation activities like sanding, cutting, and demolition can create hazardous lead dust and chips.

## Proper work practices protect you from the dust.

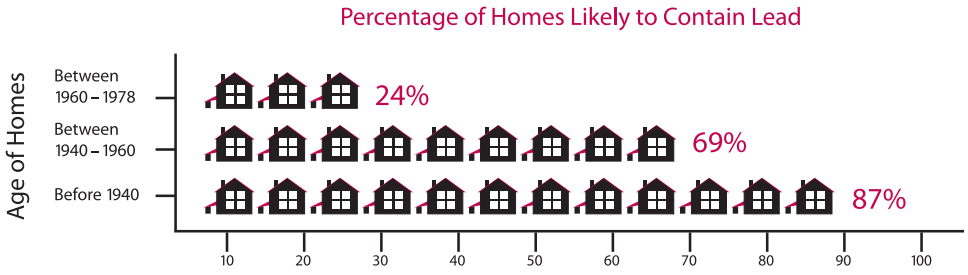
The key to protecting yourself and your family during a renovation, repair or painting job is to use lead-safe work practices such as containing dust inside the work area, using dust-minimizing work methods, and conducting a careful cleanup, as described in this pamphlet.

## Other sources of lead.

Remember, lead can also come from outside soil, your water, or household items (such as lead-glazed pottery and lead crystal). Contact the National Lead Information Center at **1-800-424-LEAD (5323)** for more information on these sources.



# CHECKING YOUR HOME FOR LEAD-BASED PAINT




## Older homes, child care facilities, and schools are more likely to contain lead-based paint.

Homes may be single-family homes or apartments. They may be private, government-assisted, or public housing. Schools are preschools and kindergarten classrooms. They may be urban, suburban, or rural.

## You have the following options:

**You may decide to assume your home, child care facility, or school contains lead.** Especially in older homes and buildings, you may simply want to assume lead-based paint is present and follow the lead-safe work practices described in this brochure during the renovation, repair, or painting job.

**You can hire a certified professional to check for lead-based paint.** These professionals are certified risk assessors or inspectors, and can determine if your home has lead or lead hazards.

- A certified inspector or risk assessor can conduct an inspection telling you whether your home, or a portion of your home, has lead-based paint and where it is located. This will tell you the areas in your home where lead-safe work practices are needed.
- A certified risk assessor can conduct a risk assessment telling you if your home currently has any lead hazards from lead in paint, dust, or soil. The risk assessor can also tell you what actions to take to address any hazards.
- For help finding a certified risk assessor or inspector, call the National Lead Information Center at **1-800-424-LEAD (5323)**.

You may also have a certified renovator test the surfaces or components being disturbed for lead by using a lead test kit or by taking paint chip samples and sending them to an EPA-recognized testing laboratory. Test kits must be EPA-recognized and are available at hardware stores. They include detailed instructions for their use.

# FOR PROPERTY OWNERS

## You have the ultimate responsibility for the safety of your family, tenants, or children in your care.

This means properly preparing for the renovation and keeping persons out of the work area (see p. 8). It also means ensuring the contractor uses lead-safe work practices.

Federal law requires that contractors performing renovation, repair and painting projects that disturb painted surfaces in homes, child care facilities, and schools built before 1978 be certified and follow specific work practices to prevent lead contamination.

**Make sure your contractor is certified, and can explain clearly the details of the job and how the contractor will minimize lead hazards during the work.**

- You can verify that a contractor is certified by checking EPA's website at epa.gov/getleadsafe or by calling the National Lead Information Center at **1-800-424-LEAD (5323)**. You can also ask to see a copy of the contractor's firm certification.
- Ask if the contractor is trained to perform lead-safe work practices and to see a copy of their training certificate.
- Ask them what lead-safe methods they will use to set up and perform the job in your home, child care facility or school.
- Ask for references from at least three recent jobs involving homes built before 1978, and speak to each personally.

**Always make sure the contract is clear about how the work will be set up, performed, and cleaned.**

- Share the results of any previous lead tests with the contractor.
- You should specify in the contract that they follow the work practices described on pages 9 and 10 of this brochure.
- The contract should specify which parts of your home are part of the work area and specify which lead-safe work practices will be used in those areas. Remember, your contractor should confine dust and debris to the work area and should minimize spreading that dust to other areas of the home.
- The contract should also specify that the contractor will clean the work area, verify that it was cleaned adequately, and re-clean it if necessary.

## If you think a worker is not doing what he is supposed to do or is doing something that is unsafe, you should:

- Direct the contractor to comply with regulatory and contract requirements.
- Call your local health or building department, or
- Call EPA's hotline **1-800-424-LEAD (5323)**.

If your property receives housing assistance from HUD (or a state or local agency that uses HUD funds), you must follow the requirements of HUD's Lead-Safe Housing Rule and the ones described in this pamphlet.

# FOR TENANTS AND FAMILIES OF CHILDREN UNDER SIX YEARS OF AGE IN CHILD CARE FACILITIES AND SCHOOLS

## You play an important role ensuring the ultimate safety of your family.



This means properly preparing for the renovation and staying out of the work area (see p. 8).

Federal law requires that contractors performing renovation, repair and painting projects that disturb painted surfaces in homes built before 1978 and in child care facilities and schools built before 1978, that a child under six years of age visits regularly, to be certified and follow specific work practices to prevent lead contamination.

The law requires anyone hired to renovate, repair, or do painting preparation work on a property built before 1978 to follow the steps described on pages 9 and 10 unless the area where the work will be done contains no lead-based paint.

## If you think a worker is not doing what he is supposed to do or is doing something that is unsafe, you should:

- Contact your landlord.
- Call your local health or building department, or
- Call EPA's hotline **1-800-424-LEAD (5323)**.

If you are concerned about lead hazards left behind after the job is over, you can check the work yourself (see page 10).



# PREPARING FOR A RENOVATION

## The work areas should not be accessible to occupants while the work occurs.

The rooms or areas where work is being done may need to be blocked off or sealed with plastic sheeting to contain any dust that is generated. Therefore, the contained area may not be available to you until the work in that room or area is complete, cleaned thoroughly, and the containment has been removed. Because you may not have access to some areas during the renovation, you should plan accordingly.

## You may need:

- Alternative bedroom, bathroom, and kitchen arrangements if work is occurring in those areas of your home.
- A safe place for pets because they too can be poisoned by lead and can track lead dust into other areas of the home.
- A separate pathway for the contractor from the work area to the outside in order to bring materials in and out of the home. Ideally, it should not be through the same entrance that your family uses.
- A place to store your furniture. All furniture and belongings may have to be moved from the work area while the work is being done. Items that can't be moved, such as cabinets, should be wrapped in plastic.
- To turn off forced-air heating and air conditioning systems while the work is being done. This prevents dust from spreading through vents from the work area to the rest of your home. Consider how this may affect your living arrangements.

You may even want to move out of your home temporarily while all or part of the work is being done.

Child care facilities and schools may want to consider alternative accommodations for children and access to necessary facilities.



# DURING THE WORK

Federal law requires contractors that are hired to perform renovation, repair and painting projects in homes, child care facilities, and schools built before 1978 that disturb painted surfaces to be certified and follow specific work practices to prevent lead contamination.

The work practices the contractor must follow include these three simple procedures, described below:

1. **Contain the work area.** The area must be contained so that dust and debris do not escape from that area. Warning signs must be put up and plastic or other impermeable material and tape must be used as appropriate to:
   - Cover the floors and any furniture that cannot be moved.
   - Seal off doors and heating and cooling system vents.
   - For exterior renovations, cover the ground and, in some instances, erect vertical containment or equivalent extra precautions in containing the work area.

These work practices will help prevent dust or debris from getting outside the work area.

2. **Avoid renovation methods that generate large amounts of lead-contaminated dust.** Some methods generate so much lead-contaminated dust that their use is prohibited. They are:
   - Open flame burning or torching.
   - Sanding, grinding, planing, needle gunning, or blasting with power tools and equipment not equipped with a shroud and HEPA vacuum attachment.
   - Using a heat gun at temperatures greater than 1100°F.



There is no way to eliminate dust, but some renovation methods make less dust than others. Contractors may choose to use various methods to minimize dust generation, including using water to mist areas before sanding or scraping; scoring paint before separating components; and prying and pulling apart components instead of breaking them.

3. Clean up thoroughly. The work area should be cleaned up daily to keep it as clean as possible. When all the work is done, the area must be cleaned up using special cleaning methods before taking down any plastic that isolates the work area from the rest of the home. The special cleaning methods should include:
   - Using a HEPA vacuum to clean up dust and debris on all surfaces, followed by
   - Wet wiping and wet mopping with plenty of rinse water.

When the final cleaning is done, look around. There should be no dust, paint chips, or debris in the work area. If you see any dust, paint chips, or debris, the area must be re-cleaned.

# FOR PROPERTY OWNERS: AFTER THE WORK IS DONE

When all the work is finished, you will want to know if your home, child care facility, or school where children under six attend has been cleaned up properly.

## EPA Requires Cleaning Verification.

In addition to using allowable work practices and working in a lead-safe manner, EPA's RRP rule requires contractors to follow a specific cleaning protocol. The protocol requires the contractor to use disposable cleaning cloths to wipe the floor and other surfaces of the work area and compare these cloths to an EPA-provided cleaning verification card to determine if the work area was adequately cleaned. EPA research has shown that following the use of lead-safe work practices with the cleaning verification protocol will effectively reduce lead-dust hazards.

## Lead-Dust Testing.

EPA believes that if you use a certified and trained renovation contractor who follows the LRRP rule by using lead-safe work practices and the cleaning protocol after the job is finished, lead-dust hazards will be effectively reduced. If, however, you are interested in having lead-dust testing done at the completion of your job, outlined below is some helpful information.

**What is a lead-dust test?**

- Lead-dust tests are wipe samples sent to a laboratory for analysis. You will get a report specifying the levels of lead found after your specific job.

**How and when should I ask my contractor about lead-dust testing?**

- Contractors are not required by EPA to conduct lead-dust testing. However, if you want testing, EPA recommends testing be conducted by a lead professional. To locate a lead professional who will perform an evaluation near you, visit EPA's website at cdxapps.epa.gov/leadpro or contact the National Lead Information Center at 1-800-424-LEAD (5323).

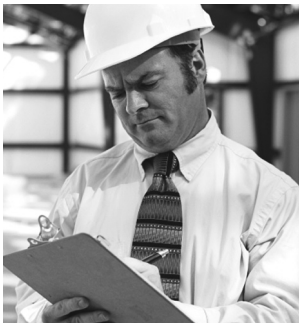


- If you decide that you want lead-dust testing, it is a good idea to specify in your contract, before the start of the job, that a lead-dust test is to be done for your job and who will do the testing, as well as whether re-cleaning will be required based on the results of the test.
- You may do the testing yourself. If you choose to do the testing, some EPA-recognized lead laboratories will send you a kit that allows you to collect samples and send them back to the laboratory for analysis. Contact the National Lead Information Center for lists of EPA-recognized testing laboratories.

# FOR ADDITIONAL INFORMATION

You may need additional information on how to protect yourself and your children while a job is going on in your home, your building, or child care facility.

The National Lead Information Center at **1-800-424-LEAD (5323)** or epa.gov/lead/forms/nlic can tell you how to contact your state, local, and/or tribal programs or get general information about lead poisoning prevention.



- State and tribal lead poisoning prevention or environmental protection programs can provide information about lead regulations and potential sources of financial aid for reducing lead hazards. If your state or local government has requirements more stringent than those described in this pamphlet, you must follow those requirements.
- Local building code officials can tell you the regulations that apply to the renovation work that you are planning.
- State, county, and local health departments can provide information about local programs, including assistance for lead-poisoned children and advice on ways to get your home checked for lead.
- The National Lead Information Center can also provide a variety of resource materials, including the following guides to lead-safe work practices. Many of these materials are also available at epa.gov/lead/outreach
- Steps to Lead Safe Renovation, Repair and Painting.
- Protect Your Family from Lead in Your Home




For the hearing impaired, call the Federal Information Relay Service at 1-800-877-8339 to access any of the phone numbers in this brochure.

# EPA CONTACTS

## EPA Regional Offices

EPA addresses residential lead hazards through several different regulations. EPA requires training and certification for conducting abatement and renovations, education about hazards associated with renovations, disclosure about known lead paint and lead hazards in housing, and sets lead-paint hazard standards.

Your Regional EPA Office can provide further information regarding lead safety and lead protection programs at epa.gov/lead/contacts.

**Region 1**
(Connecticut, Massachusetts, Maine, New Hampshire, Rhode Island, Vermont)
Regional Lead Contact
U.S. EPA Region 1
Suite 1100
One Congress Street
Boston, MA 02114-2023
(888) 372-7341

**Region 2**
(New Jersey, New York, Puerto Rico, Virgin Islands)
Regional Lead Contact
U.S. EPA Region 2
2890 Woodbridge Avenue
Building 205, Mail Stop 225
Edison, NJ 08837-3679
(732) 321-6671

**Region 3**
(Delaware, Maryland, Pennsylvania, Virginia, Washington, DC, West Virginia)
Regional Lead Contact
U.S. EPA Region 3
1650 Arch Street
Philadelphia, PA
19103-2029
(215) 814-5000

**Region 4**
(Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee)
Regional Lead Contact
U.S. EPA Region 4
61 Forsyth Street, SW
Atlanta, GA 30303-8960
(404) 562-9900

**Region 5**
(Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin)
Regional Lead Contact
U.S. EPA Region 5
77 West Jackson Boulevard
Chicago, IL 60604-3507
(312) 886-6003

**Region 6**
(Arkansas, Louisiana, New Mexico, Oklahoma, Texas)
Regional Lead Contact
U.S. EPA Region 6
1445 Ross Avenue,
12th Floor
Dallas, TX 75202-2733
(214) 665-7577

**Region 7**
(Iowa, Kansas, Missouri, Nebraska)
Regional Lead Contact
U.S. EPA Region 7
901 N. 5th Street
Kansas City, KS 66101
(913) 551-7003

**Region 8**
(Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming)
Regional Lead Contact
U.S. EPA Region 8
1595 Wynkoop Street
Denver, CO 80202
(303) 312-6312

**Region 9**
(Arizona, California, Hawaii, Nevada)
Regional Lead Contact
U.S. Region 9
75 Hawthorne Street
San Francisco, CA 94105
(415) 947-8021

**Region 10**
(Alaska, Idaho, Oregon, Washington)
Regional Lead Contact
U.S. EPA Region 10
1200 Sixth Avenue
Seattle, WA 98101-1128
(206) 553-1200

# OTHER FEDERAL AGENCIES

## CPSC

The Consumer Product Safety Commission (CPSC) protects the public from the unreasonable risk of injury or death from 15,000 types of consumer products under the agency's jurisdiction. CPSC warns the public and private sectors to reduce exposure to lead and increase consumer awareness. Contact CPSC for further information regarding regulations and consumer product safety.

**CPSC**
4330 East West Highway
Bethesda, MD 20814
Hotline 1-(800) 638-2772
cpsc.gov

## CDC Childhood Lead Poisoning Prevention Branch

The Centers for Disease Control and Prevention (CDC) assists state and local childhood lead poisoning prevention programs to provide a scientific basis for policy decisions, and to ensure that health issues are addressed in decisions about housing and the environment. Contact CDC Childhood Lead Poisoning Prevention Program for additional materials and links on the topic of lead.

**CDC Childhood Lead Poisoning Prevention Branch**
4770 Buford Highway, MS F-40
Atlanta, GA 30341
(770) 488-3300
cdc.gov/lead-prevention/about/index.html

## HUD Office of Healthy Homes and Lead Hazard Control

The Department of Housing and Urban Development (HUD) provides funds to state and local governments to develop cost-effective ways to reduce lead-based paint hazards in America's privately-owned low-income housing. In addition, the office enforces the rule on disclosure of known lead paint and lead hazards in housing, and HUD's lead safety regulations in HUD-assisted housing, provides public outreach and technical assistance, and conducts technical studies to help protect children and their families from health and safety hazards in the home. Contact the HUD Office of Healthy Homes and Lead Hazard Control for information on lead regulations, outreach efforts, and lead hazard control research and outreach grant programs.

**U.S. Department of Housing and Urban Development**
Office of Healthy Homes and
Lead Hazard Control
451 Seventh Street, SW, Room 8236
Washington, DC 20410-3000
HUD's Lead Regulations Hotline
(202) 402-7698
hud.gov/contactus/healthy-homes






UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY

# SAMPLE PRE-RENOVATION FORM

This sample form may be used by renovation firms to document compliance with the Federal pre-renovation education and renovation, repair, and painting regulations.

## 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.

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 seven days before renovation. Mailing must be documented by a certificate of mailing from the post office.




1-800-424-LEAD (5323)

EPA-740-K-10-001
Revised September 2011

This document may be purchased through the **U.S. Government Printing Office** online at bookstore.gpo.gov or by phone (toll-free): **1-866-512-1800**.

# Appendix 4: *Small Entity Compliance Guide to Renovate Right*

United States
Environmental Protection
Agency

Office of Chemical Safety and
Pollution Prevention
EPA-740-K-26-003
March 2026



# Small Entity Compliance Guide to Renovate Right

## EPA's Lead-Based Paint Renovation, Repair, and Painting Program

A handbook for contractors, property managers and maintenance personnel working in homes and child-occupied facilities built before 1978.






LEAD-SAFE EPA CERTIFIED FIRM

## Who Should Read this Handbook?

- Anyone who owns or manages housing or child-occupied facilities built before 1978.
- Contractors who perform activities that disturb painted surfaces in homes and child-occupied facilities built before 1978 (including certain repairs and maintenance, and painting preparation activities).

## About this Handbook

This handbook summarizes requirements of EPA's 2008 Lead-Based Paint Renovation, Repair and Painting Program Rule (as amended in 2010 and 2011), aimed at protecting against lead-based paint hazards associated with renovation, repair and painting activities. The rule requires workers to be trained to use lead-safe work practices and requires renovation firms to be EPA-certified; these requirements became fully effective April 22, 2010.

To ensure compliance, you should also read the complete rule on which the program is based. While EPA has summarized the provisions of the rule in this guide, the legal requirements that apply to renovation work are governed by EPA's 2008 Lead Rule. A copy of the rule is available on EPA's website at www.epa.gov/lead/lead-renovation-repair-and-painting-program-rules.

A companion pamphlet, entitled *The Lead-Safe Certified Guide to Renovate Right: Important Lead Hazard Information for Families, Child Care Providers, and Schools* (EPA-740-K-10-001), has been prepared in conjunction with the rule for distribution to persons affected by work that disturbs lead-based paint. (See page 17 for information on how to get copies of the rule, the Renovate Right pamphlet, and other related materials.)

Other state or local requirements that are different from or more stringent than the federal requirements may apply in your state. For example, federal law allows EPA to authorize states to administer their own program in lieu of the federal lead program. Even in states without an authorized lead program, a state may promulgate its own rules that may be different or go beyond the federal requirements. For more information on the rules that apply in your state, please contact the National Lead Information Center at 1-800-424-LEAD (5323).

Your feedback is important. Please review this guide and contact the National Lead Information Center at 1-800-424-LEAD (5323) with any comments regarding its usefulness and readability, and improvements you think are needed.

This document is published by the Environmental Protection Agency (EPA) as the official compliance guide for small entities, as required by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA). Before you begin using the guide, you should know that the information in this guide was originally published in June 2008, and was revised in July 2010, September 2011, January 2025 and March 2026 to address regulatory revisions. EPA is continually improving and upgrading its rules, policies, compliance programs, and outreach efforts. To find out if EPA has revised or supplemented the information in this guide call the National Lead Information Center at 1-800-424-LEAD (5323).

## What Is the Lead-Based Paint Renovation, Repair and Painting Program (RRP)?

- The Lead-Based Paint Renovation, Repair and Painting Program is a federal regulatory program affecting contractors, property managers, and others who disturb painted surfaces.
- It applies to residential houses, apartments, and child-occupied facilities such as schools and day-care centers built before 1978.
- It includes pre-renovation education requirements as well as training, certification, and work practice requirements.
  - Pre-renovation education requirements:
    - Contractors, property managers, and others who perform renovations for compensation in residential houses, apartments, and child-occupied facilities built before 1978 are required to distribute a lead pamphlet before starting renovation work.
  - Training, certification, and work practice requirements:
    - Firms are required to be certified, their employees must be trained (either as a certified renovator or on-the-job by a certified renovator) in use of lead-safe work practices, and lead-safe work practices that minimize occupants' exposure to lead hazards must be followed.
  - Renovation is broadly defined as any activity that disturbs painted surfaces and includes most repair, remodeling, and maintenance activities, including window replacement.
  - The program includes requirements implementing both Section 402(c) and 406(b) of the Toxic Substances Control Act (TSCA). (www.epa.gov/lead/lead-based-paint-disclosure-rule-section-1018-title-x)
  - EPA's lead renovation regulations can be found at 40 CFR Part 745, Subpart E.

## How Can this Handbook Help Me?

- Understanding the lead program's requirements can help you protect your customers from the hazards of lead and can, therefore, mean more business for you.
- This handbook presents simple steps to follow to comply with the EPA's lead program. It also lists ways these steps can be easily incorporated into your work.
- Distributing the lead pamphlet and incorporating required work practices into your job site will help protect your customers and occupants from the hazards of lead-based paint.

## Who Must Follow the Renovation, Repair and Painting Rule's Requirements?



In general, anyone who is paid to perform work that disturbs paint in housing and child-occupied facilities built before 1978, this may include, but is not limited to:

- Residential rental property owners/managers
- General contractors
- Special trade contractors, including
  - Painters
  - Plumbers
  - Carpenters
  - Electricians

## What Activities Are Subject to the Lead Renovation, Repair and Painting Program?

In general, any activity that disturbs paint in pre-1978 housing and child-occupied facilities, including:



- Remodeling and repair/maintenance
- Electrical work
- Plumbing
- Painting preparation
- Carpentry
- Window replacement

## What Housing or Activities Are Excluded and Not Subject to the Rule?

- Housing built in 1978 or later.
- Housing for elderly or disabled persons, unless a child under 6 years of age resides or is expected to reside there.
- Zero-bedroom dwellings (studio apartments, dormitories, etc.), unless a child under 6 years of age resides or is expected to reside there.
- Housing or components that have been declared lead-free. Such a declaration can be made by a certified inspector or risk assessor. Also, a certified renovator may declare specific components lead-free using an EPA recognized test kit or by collecting paint chip samples and obtaining test results from an EPA recognized laboratory showing the components do not contain lead-based paint.
- Minor repair and maintenance activities that disturb six square feet or less of paint per room inside, or 20 square feet or less on the exterior of a home or building.
- Note: minor repair and maintenance activities do not include window replacement and projects involving demolition or prohibited practices.

## What Does the Program Require Me To Do?

Pre-renovation education requirements.

- In housing built before 1978, you must:
  - Distribute EPA's lead pamphlet (www.epa.gov/lead/renovate-right) to the owner and occupants before renovation starts.
- In a child-occupied facility, you must:
  - Distribute the lead pamphlet to the owner of the building or an adult representative of the child-occupied facility before the renovation starts.
  - Either distribute renovation notices to parents/guardians of the children attending the child-occupied facility, or post informational signs about the renovation or repair job.
- For work in common areas of multi-family housing, you must:
  - Either distribute renovation notices to tenants or post informational signs about the renovation or repair job.
- Informational signs must:
  - Be posted where they will be seen;
  - Describe the nature, locations, and dates of the renovation; and
  - Be accompanied by the lead pamphlet or by information on how parents and guardians can get a free copy (see page 29 for information on obtaining copies).
- Obtain confirmation of receipt of the lead pamphlet (see page 23) from the owner, adult representative, or occupants (as applicable), or a certificate of mailing from the post office.
- Retain records for three years.
- Note: Pre-renovation education requirements do not apply to emergency renovations. Emergency renovations include interim controls performed in response to a resident child with an elevated blood-lead level.

Training, Certification, and Work Practice Requirements.

- All firms must be certified (even sole-proprietors).
- All renovators must be trained.
- Lead-safe work practices must be followed. Examples of these practices include:
  - Work-area containment to prevent dust and debris from leaving the work area.
  - Prohibition of certain work practices like open-flame burning and the use of power tools without HEPA exhaust control.
  - Thorough clean up followed by a verification procedure to minimize exposure to lead-based paint hazards.

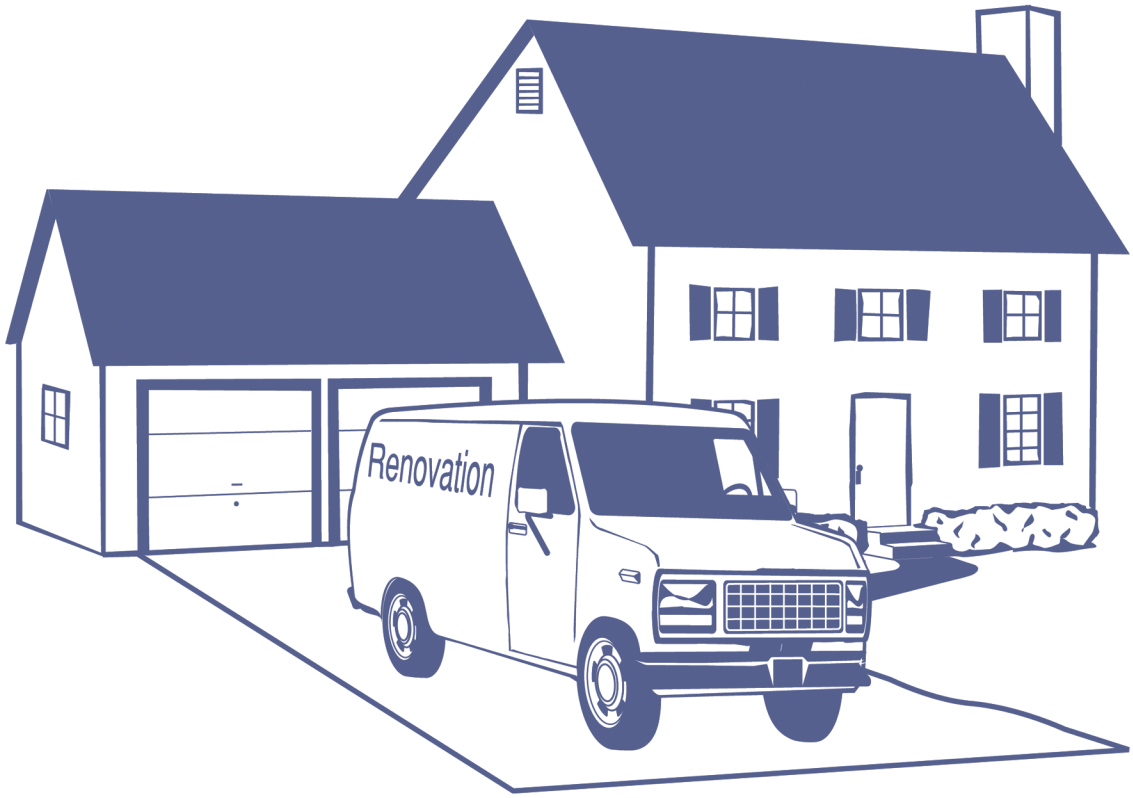
## How Does a Firm Become Certified?

Firms must apply to EPA for certification to perform renovations or dust sampling. To apply, a firm must electronically submit to EPA a completed "Application for Firms," signed by an authorized agent of the firm, and pay the correct amount of fees. To obtain a copy of the "Application for Firms" contact the NLIC at 1-800-424-LEAD (5323) or visit www.epa.gov/getleadsafe.

## What Are the Responsibilities of a Certified Firm?

Firms performing renovations must ensure that:

1. All individuals performing activities that disturb painted surfaces on behalf of the firm are either certified renovators or have been trained by a certified renovator.
2. A certified renovator is assigned to each renovation and performs all of the certified renovator responsibilities.
3. All renovations performed by the firm are performed in accordance with the work practice standards of the Lead-Based Paint Renovation, Repair, and Painting Program (see the flowchart on page 9 for details about the work practice standards).
4. Pre-renovation education and lead pamphlet distribution requirements of the Lead-Based Paint Renovation, Repair, and Painting Program are performed.
5. The program's recordkeeping requirements are met.



## How Does a Renovator Become Certified?

To become a certified renovator an individual must successfully complete an eight-hour initial renovator training course offered by an accredited training provider (training providers are accredited by EPA, or by an authorized Tribal or state program). The course completion certificate serves as proof of certification. To find a trainer in your area contact the NLIC at 1-800-424-LEAD (5323) or visit www.epa.gov/getleadsafe.

## Are There Streamlined Requirements for Contractors with Previous Lead Training?

Yes. Individuals who have successfully completed an accredited lead abatement worker or supervisor course, or individuals who have successfully completed certain EPA, Department of Housing and Urban Development (HUD), or EPA/HUD model renovation training courses before October 4, 2011, need only take a four-hour refresher renovator training course instead of the eight-hour initial renovator training course to become certified. For a list of qualified training courses contact the NLIC at 1-800-424-LEAD (5323) or visit cdxapps.epa.gov/ocspp-oppt-lead/training-search.

## What Are the Responsibilities of a Certified Renovator?

Certified renovators are responsible for ensuring overall compliance with the Lead-Based Paint Renovation, Repair, and Painting Program's requirements for lead-safe work practices at renovations they are assigned (see the flowchart on page 9 for details about the work practice standards). A certified renovator:

1. Must provide on-the-job training to other workers (who have not taken the certified renovator training course) on the lead-safe work practices to be used in performing their assigned tasks.
2. Must be physically present at the work site when warning signs are posted, while the work-area containment is being established, and while the work-area cleaning is performed.
3. Must regularly direct work being performed by other individuals to ensure that the work practices are being followed, including maintaining the integrity of the containment barriers and ensuring that dust or debris does not spread beyond the work area.
4. When requested by the party contracting for renovation services, must use an EPA recognized test kit or must collect paint chip samples, submit them to an EPA-recognized laboratory, and obtain test results from the laboratory to determine whether components affected by the renovation contain lead-based paint. (For more information regarding test kits call the National Lead Information Center at 1-800-424-LEAD (5323), or check our web site at www.epa.gov/lead/testkits). Note: you must assume lead-based paint is present for housing and buildings covered by this rule, unless testing is done that determines the components affected are lead-free.
5. Must be available, either on-site or by telephone, at all times renovations are being conducted.
6. Must perform project cleaning verification.
7. Must have with them at the work site copies of their initial course completion certificate and their most recent refresher course completion certificate.
8. Must prepare required records.

## How Long Do Firm and Renovator Certifications Last?

To maintain their certification, individual renovators and firms must be re-certified by EPA every five years. A firm must electronically submit to EPA a completed "Application for Firms," signed by an authorized agent of the firm, and pay the correct amount of fees. Individual renovators must successfully complete a refresher training course provided by an accredited training provider.

## What Are the Recordkeeping Requirements?

- All documents must be retained for three years following the completion of a renovation.
- Records that must be retained include:
  - Reports certifying that lead-based paint is not present.
  - Records relating to the distribution of the lead pamphlet.
  - Documentation of compliance with the requirements of the Lead-Based Paint Renovation, Repair, and Painting Program. This information must also be given to the owner and, if different, the occupant of the housing or unit that was renovated (EPA has prepared a sample form that is available at www.epa.gov/lead/sample-renovation-recordkeeping-checklist).

## What Are the Required Work Practices?

The flow charts on the following pages will help determine if your project is subject to the Lead-Based Paint Renovation, Repair and Painting Program's requirements and, if so, the specific requirements for your particular project. The flowcharts, and other information included in this guide, are not intended to be a replacement for official training.

# EPA's Lead Program Rule At-A-Glance

## 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 EPA's Lead-Based Paint 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 job involve activities that disturb painted surfaces in a home or child-occupied facility built before 1978?

NO → **EPA Lead-Based Paint Renovation, Repair, and Painting Program requirements do not apply.**

YES ↓

**Are ANY of the following conditions present?**

- The work is a lead abatement project.
- Work consists of only minor repairs or maintenance that disturb six square feet or less of painted surfaces per room for interior activities or 20 square feet or less 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 either an EPA recognized test kit or laboratory analysis of collected paint chip samples.
- Housing is a zero-bedroom dwelling (studio apartments, dormitories, etc.) and no child under 6 resides or is expected to reside there.
- Housing is for the elderly or disabled and no child under 6 resides or is expected to reside there.

YES → **EPA Lead-Based Paint Renovation, Repair, and Painting Program requirements do not apply.**

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.

YES → **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.**

NO ↓

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

## 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**

Deliver lead pamphlet (www.epa.gov/lead/renovate-right) 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 owner using either procedure described in the box at the top of this page.
2. 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**

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.

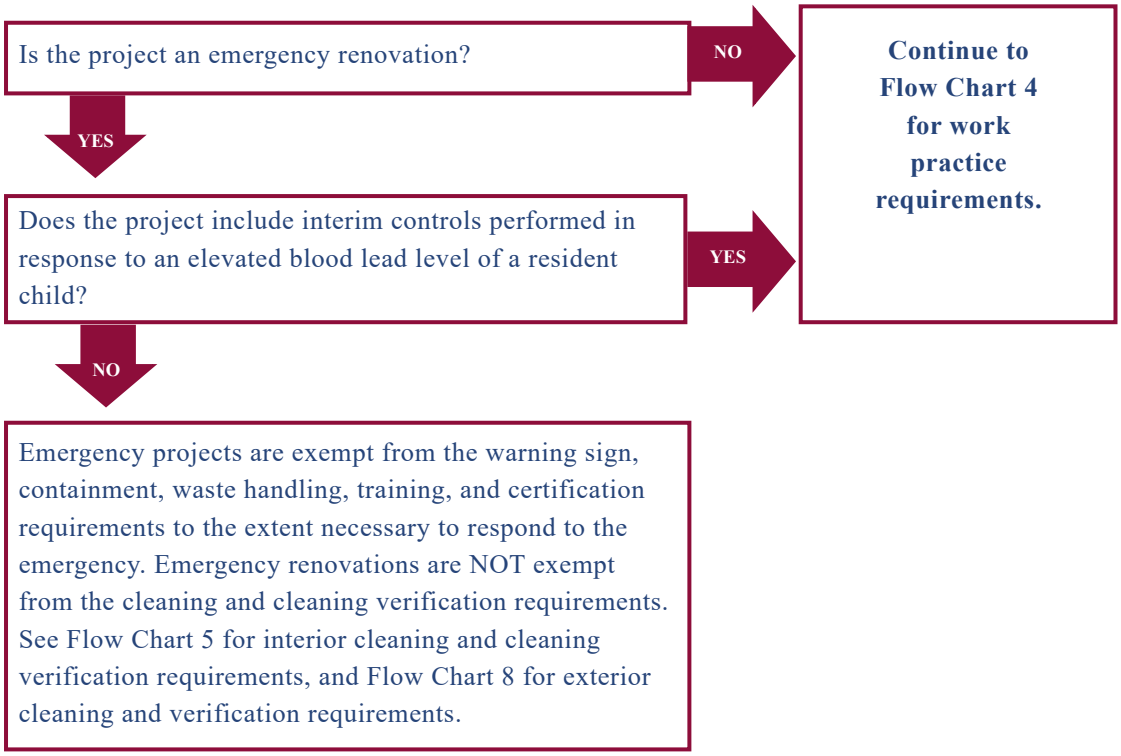
2. Provide the parents or guardians of children using the child-occupied facility with information by either of these methods:
   (a) Mail or hand-deliver the lead pamphlet and renovation information to each parent or guardian.

**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.**

## Do the Renovation Training and Work Practices Apply?



## 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.

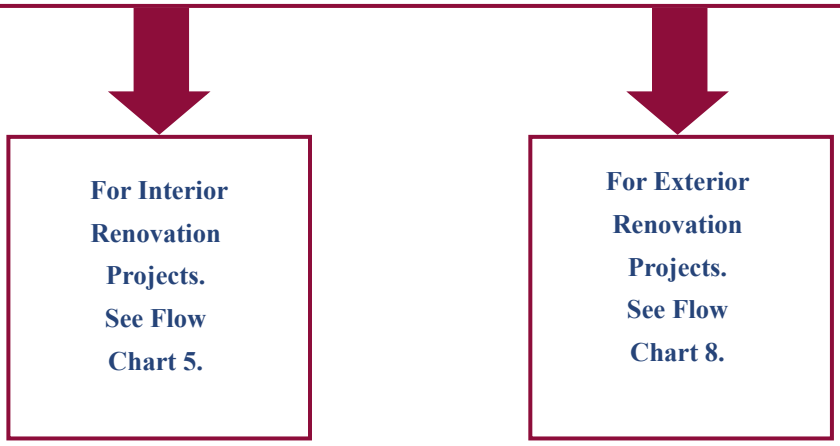
(C) Prior to the renovation, the firm must contain the work area so that no dust or debris leaves the work area while the renovation is being performed.

(D) Work practices listed below are prohibited during a renovation:

1. Open-flame burning or torching of painted surfaces;
2. Use of machines that remove paint or other surface coatings through high speed operation such as sanding, grinding, power planing, needle gun, abrasive blasting, or sandblasting, unless such machines have shrouds or containment systems and are equipped with a HEPA vacuum attachment to collect dust and debris at the point of generation. Machines must be operated so that no visible dust or release of air occurs outside the shroud or containment system; and
3. Operating a heat gun on painted surfaces at temperatures above 1100 degrees Fahrenheit.

(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.



## 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. If a vertical containment system is employed, floor covering may stop at the vertical barrier, providing it is impermeable, extends from floor to ceiling, and is tightly sealed at floors, ceilings, and walls.

(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.

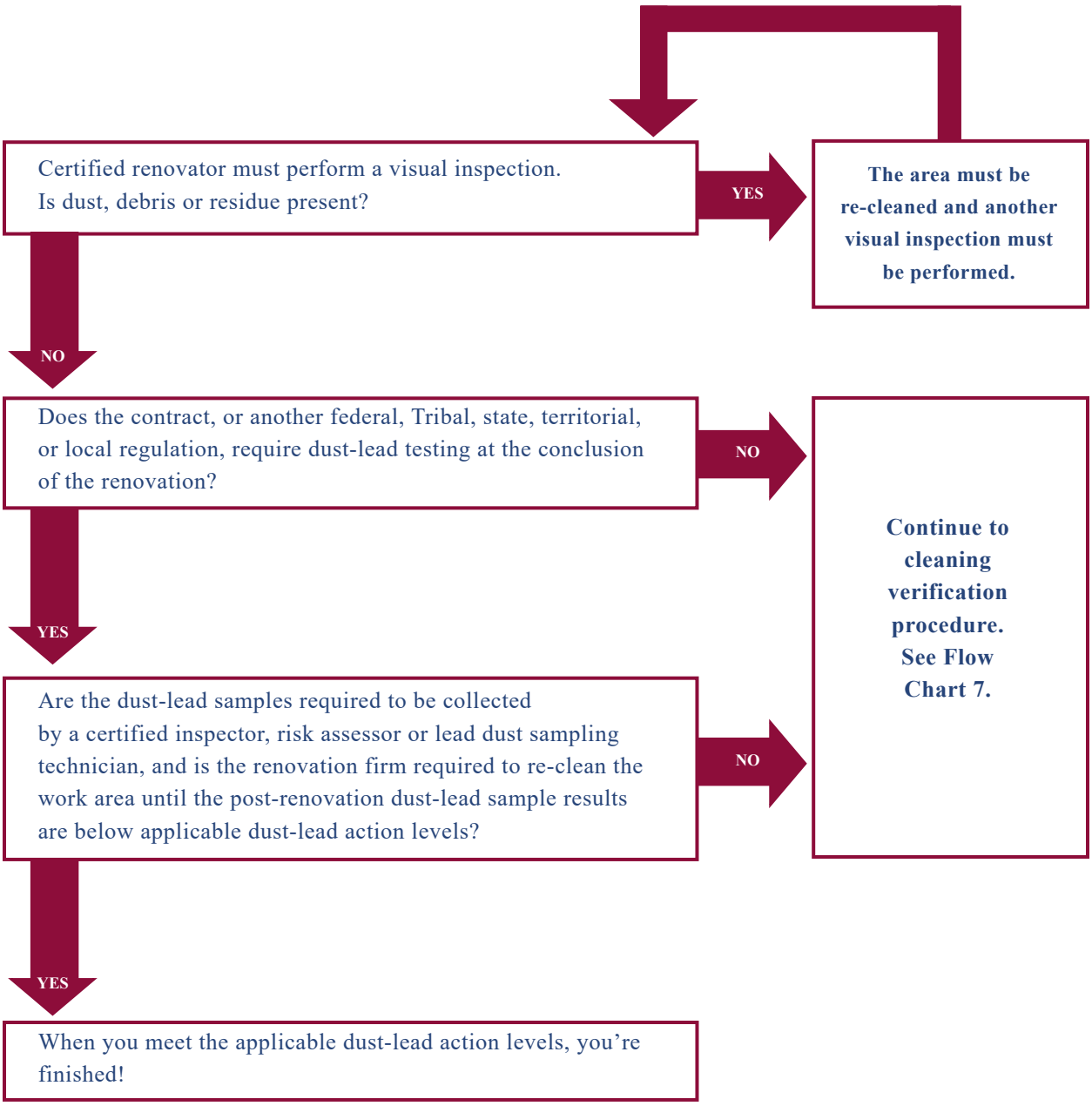
(F) After the renovation has been completed, the firm must clean the work area until no dust, debris or residue remains. The firm must:

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.



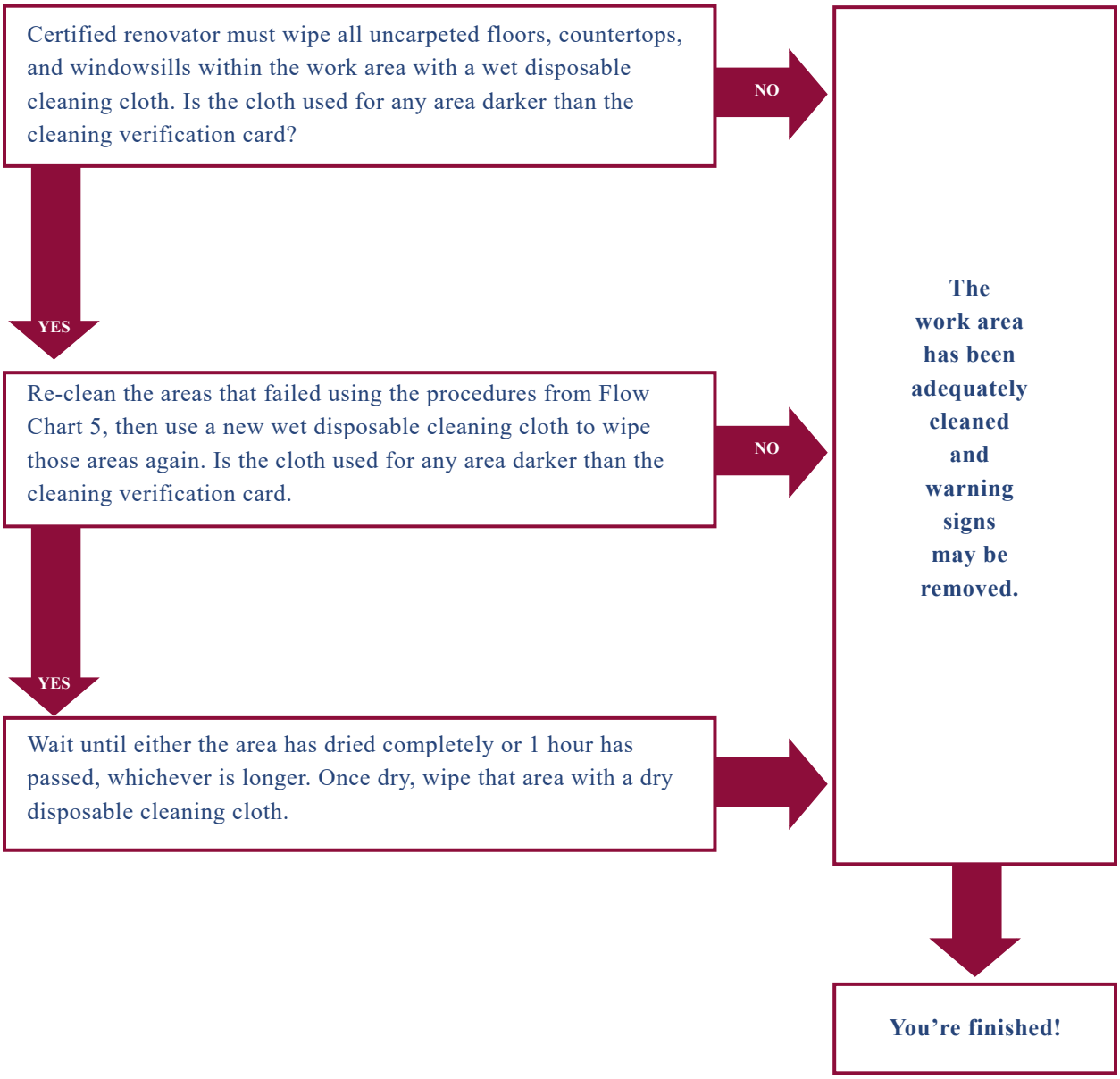
**Cleaning verification is required to ensure the work area is adequately cleaned and ready for re-occupancy.**
**See Flow Chart 6 for instructions on performing cleaning verification for interior projects.**

## Interior Cleaning Verification: Visual Inspection and Optional Post-Renovation Dust-Lead Testing



## 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.



## Work Practice Requirements Specific to Exterior Renovations

The firm must:

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

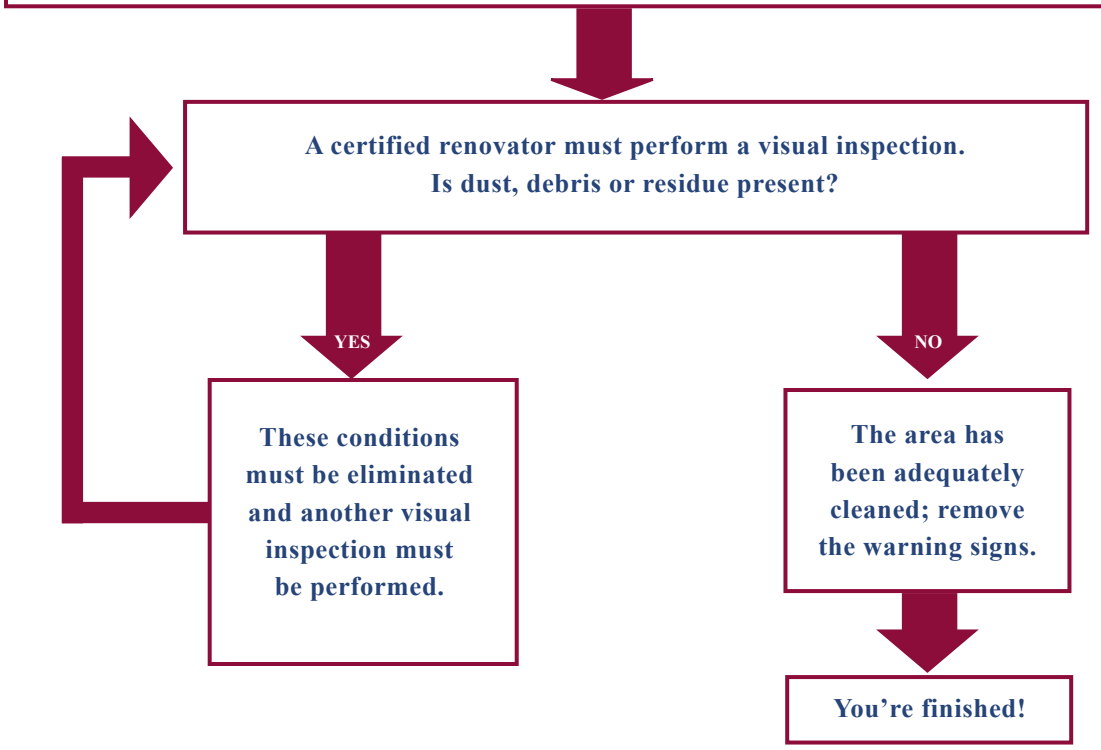
(B) Ensure that doors within the work area that will be used while the job is being performed are covered with plastic sheeting in a manner that allows workers to pass through while confining dust and debris.

(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. If a property line prevents 10 feet of such ground covering, then erect vertical containment or equivalent extra precautions to prevent contamination of adjacent buildings and property.

(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.



## How Is My Compliance Determined, and What Happens if the Agency Discovers a Violation?

To maximize compliance, EPA implements a balanced program of compliance assistance, compliance incentives, and traditional law enforcement. EPA knows that small businesses that must comply with complicated new statutes or rules often want to do the right thing, but may lack the requisite knowledge, resources, or skills. Compliance assistance information and technical advice helps small businesses to understand and meet their environmental obligations. Compliance incentives, such as EPA's Small Business Policy, apply to businesses with 100 or fewer employees and encourage persons to voluntarily discover, disclose, and correct violations before they are identified by the government (more information about EPA's Small Business Policy is available at www.epa.gov/compliance/small-business-compliance). EPA's enforcement program is aimed at protecting the public by targeting persons or entities who neither comply nor cooperate to address their legal obligations.

EPA uses a variety of methods to determine whether businesses are complying, including inspecting work sites, reviewing records and reports, and responding to citizen tips and complaints. Under TSCA, EPA (or a state, if this program has been delegated to it) may file an enforcement action against violators seeking penalties of up to $49,722 per violation, per day as of January 13, 2025. The proposed penalty in a given case will depend on many factors, including the number, length, and severity of the violations, the economic benefit obtained by the violator, and its ability to pay. EPA has policies in place to ensure penalties are calculated fairly. These policies are available to the public. In addition, any company charged with a violation has the right to contest EPA's allegations and proposed penalty before an impartial judge or jury.

EPA encourages small businesses to work with the Agency to discover, disclose, and correct violations. The Agency has developed self-disclosure, small business, and small community policies to modify penalties for small and large entities that cooperate with EPA to address compliance problems. For more information on compliance assistance and other EPA programs for small businesses, please contact EPA's Small Business Ombudsman at 202-566-2075.

## Frequent Questions

### What is the legal status of this guide?

This guide was prepared pursuant to section 212 of SBREFA. EPA has tried to help explain in this guide what you must do to comply with the Toxic Substances Control Act (TSCA) and EPA's lead regulations. However, this guide has no legal effect and does not create any legal rights. Compliance with the procedures described in this guide does not establish compliance with the rule or establish a presumption or inference of compliance. The legal requirements that apply to renovation work are governed by EPA's 2008 Lead Rule, which controls if there is any inconsistency between the rule and the information in this guide.

### Is painting considered renovation if no surface preparation activity occurs?

No. If the surface to be painted is not disturbed by sanding, scraping, or other activities that may cause dust, the work is not considered renovation and EPA's lead program requirements do not apply. However, painting projects that involve surface preparation that disturbs paint, such as sanding and scraping, would be covered.

### What if I renovate my own home?

EPA's lead program rules apply only to renovations performed for compensation; therefore, if you work on your own home, the rules do not apply. EPA encourages homeowners to use lead-safe work practices, nonetheless, in order to protect themselves, their families, and the value of their homes.

### Is a renovation performed by a landlord or employees of a property management firm considered a compensated renovation under EPA's lead program rules?

Yes. The receipt of rent payments or salaries derived from rent payments is considered compensation under EPA's lead program. Therefore, renovation activities performed by landlords or employees of landlords are covered.

### Do I have to give out the lead pamphlet seven days prior to beginning renovation activities?

The 7-day advance delivery requirement applies only when you deliver the lead pamphlet by mail; otherwise, you may deliver the pamphlet anytime before the renovation begins so long as the renovation begins within 60 days of the date that the pamphlet is delivered. For example, if your renovation is to begin May 30, you may deliver the pamphlet in person anytime between April 1 and start of the project on May 30, or you may deliver the pamphlet by mail anytime between April 1 and May 23.

## Tips for Easy Compliance

1. For your convenience the sample form on page 23 of this handbook is included in the *Renovate Right* lead pamphlet (see page 29 for information on how to get copies). Attach the form to the back of your customer renovation or repair contracts. The completed form can be filed along with your regular paperwork.
2. Plan ahead to obtain enough copies of the lead pamphlet (see page 29 for information on how to get copies of the pamphlet).

## Where Can I Get More Information?

Further information is available from the National Lead Information Center at (1-800-424-LEAD(5323)) and online at **www.epa.gov/lead**. Available resources include:

- Full text version of the Lead-Based Paint Renovation, Repair, and Painting Program regulation.
- Frequent Questions which provide more detailed information on the rule's requirements.
- A downloadable version of the lead pamphlet.



## Why Is Lead Paint Dangerous?

Lead gets into the body when it is swallowed or inhaled. People, especially children, can swallow lead dust as they eat, play, and do other normal hand-to-mouth activities. People may also breathe in lead dust or fumes if they disturb lead-based paint. People who sand, scrape, burn, brush, blast or otherwise disturb lead-based paint risk unsafe exposure to lead.

### Lead is especially dangerous to children under 6 years of age.

### Lead can affect children's brains and developing nervous systems, causing:

- Reduced IQ and learning disabilities.
- Behavioral problems.

Even children who appear healthy can have dangerous levels of lead in their bodies.

### Lead is also harmful to adults. In adults, low levels of lead can pose many dangers, including:

- High blood pressure and hypertension.
- Pregnant women exposed to lead can transfer lead to their fetus.



## Other Resources

For additional information on how to protect yourself and your customers from lead paint hazards, visit **www.epa.gov/lead** or call the National Lead Information Center at 1-800-424-LEAD (5323). Available documents include:

- *The Lead-Safe Certified Guide to Renovate Right: Important Lead Hazard Information for Families, Child Care Providers and Schools*
- *Joint EPA-HUD Model Renovator Course: Lead Safety for Remodeling, Repair, and Painting*
- *Steps to Lead Safe Renovation, Repair and Painting*
- *Fight Lead Poisoning with a Healthy Diet*
- *Protect Your Family From Lead in Your Home pamphlet*



# Key Terms

Certificate of Mailing — A written verification from the Postal Service that you mailed the lead pamphlet to an owner or a tenant. This is less expensive than certified mail, which is also acceptable for meeting the Lead-Based Paint Renovation, Repair, and Painting Program requirements. (**Note:** If using this delivery option, you must mail the pamphlet at least seven days prior to the start of renovation.)

Certified Inspector or Risk Assessor — An individual who has been trained and is certified by EPA or an authorized Tribe or state to conduct lead-based paint inspections or risk assessments.

Child-occupied Facility — May include, but is not limited to, childcare centers, pre-schools and kindergarten classrooms. Child-occupied facilities may be located in target housing or in public or commercial buildings. The regulation defines a "child-occupied facility" as a building, or portion of a building, constructed prior to 1978, visited regularly by the same child, under 6 years of age, on at least two different days within any week (Sunday through Saturday period), provided that each day's visit lasts at least three hours and the combined weekly visits last at least six hours, and the combined annual visits last at least 60 hours. With respect to common areas in public or commercial buildings that contain child-occupied facilities, the child-occupied facility encompasses only those common areas that are routinely used by children under age 6, such as restrooms and cafeterias. Common areas that children under age 6 only pass through, such as hallways, stairways, and garages are not included. In addition, with respect to exteriors of public or commercial buildings that contain child-occupied facilities, the child-occupied facility encompasses only the exterior sides of the building that are immediately adjacent to the child-occupied facility or the common areas routinely used by children under age 6.

Cleaning Verification Card — a card developed and distributed by EPA for the purpose of determining, through comparison of wet and dry disposable cleaning cloths with the card, whether post-renovation cleaning has been properly completed.

Common Area — A portion of a building that is generally accessible to all residents or users. Common areas include (but are not limited to) hallways, stairways, laundry rooms, recreational rooms, playgrounds, community centers, and fenced areas. The term applies to both interiors and exteriors of the building.

Component — A specific design or structural element or fixture distinguished by its form, function, and location. A component can be located inside or outside the dwelling. Examples...

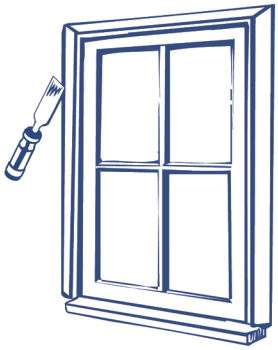
**Interior**

*Ceilings*
*Crown molding*
*Walls*
*Doors and trim*
*Floors*
*Fireplaces*
*Radiators*
*Shelves*
*Stair treads*
*Windows and trim*
*Built-in cabinets*
*Beams*
*Bathroom vanities*
*Counter tops*
*Air conditioners*



**Exterior**

*Painted roofing*
*Chimneys*
*Flashing*
*Gutters and downspouts*
*Ceilings*
*Soffits*
*Doors and trim*
*Fences*
*Floors*
*Joists*
*Handrails*
*Window sills and sashes*
*Air conditioners*



Confirmation of Receipt of Lead Hazard Information Pamphlet — A form that is signed by the owner or tenant of the housing confirming that they received a copy of the lead pamphlet before the renovation began. (See sample on page 23.)

Emergency Renovation — Unplanned renovation activities done in response to a sudden, unexpected event which, if not immediately attended to, presents a safety or public health hazard or threatens property with significant damage.

**Examples**

- *Renovation to repair damage from a tree that fell on a house.*
- *Renovation to repair a burst water pipe in an apartment complex.*
- *Interim controls performed in response to an elevated blood lead level in a resident child.*

Firm — A company, partnership, corporation, sole proprietorship or individual doing business, association, or other business entity; a federal, Tribal, state, territorial, or local government agency; or a nonprofit organization.

General Contractor — One who contracts for the construction of an entire building or project, rather than for a portion of the work. The general contractor hires subcontractors (e.g. plumbing, electrical, etc.), coordinates all work, and is responsible for payment to subcontractors.

Housing for the Elderly — Retirement communities or similar types of housing specifically reserved for households of one or more persons 62 years of age or older at the time the unit is first occupied.

Interim Controls — Interim controls means a set of measures designed to temporarily reduce human exposure or likely exposure to lead-based paint hazards, including specialized cleaning, repairs, maintenance, painting, temporary containment, ongoing monitoring of lead-based paint hazards or potential hazards, and the establishment and operation of management and resident education programs.

Lead Abatement — Work designed to permanently address lead-based paint hazards when dust loadings are at or above the dust-lead action levels. If you are hired to do lead-abatement work only, the Lead-Based Paint Renovation, Repair, and Painting Program does not apply. Abatement does not include renovation, remodeling, or other activities done to repair, restore, or redesign a given building — even if such renovation activities incidentally address lead-based paint hazards. (***Note:*** Some states define this term differently than described above. Consult your state officials if you are not sure how "lead abatement" is defined in your state.)

Lead Pamphlet — The lead hazard information pamphlet for the purpose of pre-renovation education is *The Lead Safe Certified Guide to Renovate Right: Important Lead Hazard Information for Families, Child Care Facilities and Schools*, or an EPA-approved alternative pamphlet. (See page 29 for information on obtaining copies.)

Minor Repair and Maintenance — Activities that disrupt 6 square feet or less of painted surface per room for interior activities or 20 square feet or less of painted surface for exterior activities where none of the prohibited work practices is used and where the work does not involve window replacement or demolition of painted surface areas. When removing painted components, or portions of painted components, the entire surface area removed is the amount of painted surface disturbed. Jobs, other than emergency renovations, performed in the same room within the same 30 days must be considered the same job for the purpose of determining whether the job is a minor repair and maintenance activity.

Owner — Any person or entity that has legal title to housing, including individuals, partnerships, corporations, government agencies, Tribes, and nonprofit organizations.

Painted Surface — A component surface covered in whole or in part with paint or other surface coatings.

Prohibited Practices — Work practices listed below are prohibited during a renovation:

- Open-flame burning or torching of painted surfaces;
- Use of machines that remove paint or other surface coatings through high speed operation such as sanding, grinding, power planing, needle gun, abrasive blasting, or sandblasting, unless such machines have shrouds or containment systems and are equipped with a HEPA vacuum attachment to collect dust and debris at the point of generation. Machines must be operated so that no visible dust or release of air occurs outside the shroud or containment system.
- Operating a heat gun on painted surfaces at temperatures above 1100 degrees Fahrenheit.

Record of Notification — A written statement documenting the steps taken to notify occupants of renovation activities in common areas of multi-family housing. (See page 25 for sample.)

Renovation — Modification of all or part of any existing structure that disturbs a painted surface, except for some specifically exempted activities (e.g., minor repair and maintenance). Includes:

- Removal/modification of painted surfaces, components, or structures
- Surface preparation activities (sanding/scraping/other activities that may create paint dust)
- Window replacement

**Examples**

1. Demolition of painted walls or ceilings
2. Replastering
3. Plumbing repairs or improvements
4. Any other activities which disturb painted surfaces

Renovation Notice — Notice to tenants of renovations in common areas of multi-family housing. (See sample form on page 25.) Notice must describe nature, location, and expected timing of renovation activity; and must explain how the lead pamphlet may be obtained free of charge.

Renovator — A person who either performs or directs workers who perform renovation. A certified renovator is a renovator who has successfully completed a renovator course accredited by EPA or an EPA authorized Tribal or state program. (**Note:** Because the term "renovation" is defined broadly by the Lead-Based Paint Renovation, Repair, and Painting Program, many contractors who are not generally considered "renovators", as that term is commonly used, are considered to be "renovators" under the program and must follow the rule's requirements.)

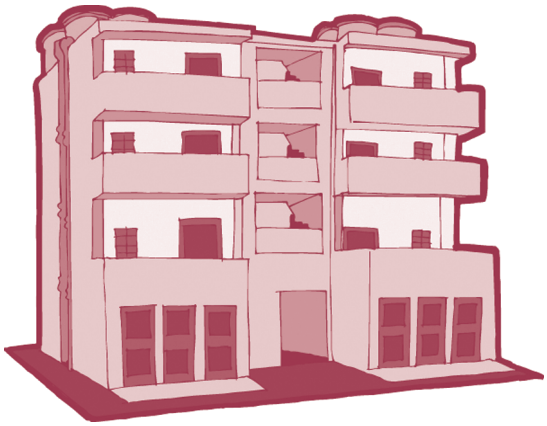


Self-Certification of Delivery — An alternative method of documenting delivery of the lead hazard information pamphlet to a tenant. This method may be used whenever the tenant is unavailable or unwilling to sign a confirmation of receipt of lead pamphlet. (See sample form on page 23.) (**Note:** This method is not a permissible substitute for delivery of the lead pamphlet to an owner.)

Supplemental Renovation Notice — additional notification that is required when the scope, location, or timing of project changes.

Vertical Containment — A vertical barrier consisting of plastic sheeting or other impermeable material over scaffolding or a rigid frame, or an equivalent system of containing the work area. Vertical containment is required for some exterior renovations but it may be used on any renovation.

Zero-Bedroom Dwelling — Any residential dwelling where the living area is not separated from the sleeping area. This term includes efficiency and studio apartments, dormitory housing, and military barracks.



# 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.

**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.

---

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.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## 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:

_____

Activity *(e.g., sanding, window replacement)*

_____

Location *(e.g., lobby, recreation center)*

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, *Renovate Right*, 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.

_____ _____

Date Printed name of renovator

_____

Signature of renovator

Record of Tenant Notification Procedures

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


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ENVIRONMENTAL PROTECTION AGENCY

# Sample Renovation Recordkeeping Checklist

Name of Firm: _____

Date and Location of Renovation: _____

Brief Description of Renovation: _____

Name of Assigned Renovator: _____

Name(s) of Trained Worker(s), if used: _____

Name of Dust Sampling Technician, Inspector, or Risk Assessor, if used: _____

___ Copies of renovator and dust sampling technician qualifications (training certificates, certifications) on file.

___ Certified renovator provided training to workers on (check all that apply):

- ___ Posting warning signs
- ___ Setting up plastic containment barriers
- ___ Maintaining containment
- ___ Avoiding spread of dust to adjacent areas
- ___ Waste handling
- ___ Post-renovation cleaning
- ___ Test kit or test results from an EPA-recognized laboratory on collected paint chip sample, used by certified renovator to determine whether lead was present on components affected by renovation (identify method used, type of test kit used (if applicable), laboratory used to conduct paint chip analysis, describe sampling locations and results):

_____

___ Warning signs posted at entrance to work area.

___ Work area contained to prevent spread of dust and debris

- ___ All objects in the work area removed or covered (interiors)
- ___ HVAC ducts in the work area closed and covered (interiors)
- ___ Windows in the work area closed (interiors)
- ___ Windows in and within 20 feet of the work area closed (exteriors)
- ___ Doors in the work area closed and sealed (interiors)
- ___ Doors in and within 20 feet of the work area closed and sealed (exteriors)
- ___ Doors that must be used in the work area covered to allow passage but prevent spread of dust
- ___ Floors in the work area covered with taped-down plastic (interiors)
- ___ Ground covered by plastic extending 10 feet from work area—plastic anchored to building and weighed down by heavy objects (exteriors)
- ___ Vertical containment installed if property line prevents 10 feet of ground covering, or if necessary to prevent migration of dust and debris to adjacent property (exteriors)

___ Waste contained on-site and while being transported off-site.

___ Work site properly cleaned after renovation

- ___ All chips and debris picked up, protective sheeting misted, folded dirty side inward, and taped for removal
- ___ Work area surfaces and objects cleaned using HEPA vacuum and/or wet cloths or mops (interiors)

___ Certified renovator performed post-renovation cleaning verification (describe results, including the number of wet and dry cloths used): _____

_____

- ___ If post-renovation dust-lead testing was performed instead, attach a copy of report

___ I certify under penalty of law that the above information is true and complete.

_____

Name and title Date


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## Where Can I Get Copies of the Lead Pamphlet?

For single copies, in Spanish or English, of *The Lead-Safe Certified Guide to Renovate Right: Important Lead Hazard Information for Families, Child Care Facilities and Schools* (EPA-740-K-10-001), call the National Lead Information Center (NLIC) at 1-800-424-LEAD (5323).

**There are four ways to get multiple copies:**

1. Obtain downloadable copies (PDF) from the EPA website at www.epa.gov/lead/renovate-right.

2. Call the Government Printing Office (GPO) Order Desk at 1-866-512-2800.

3. Order from the GPO Bookstore at bookstore.gpo.gov/products/lead-safe-certified-guide-renovate-right-september-2011-revision.

4. Request copies in writing from:
   U.S. GPO
   P.O. Box 979050
   St. Louis, MO 63197-9000




The pamphlet may be photocopied for distribution as long as the text and graphics are readable.

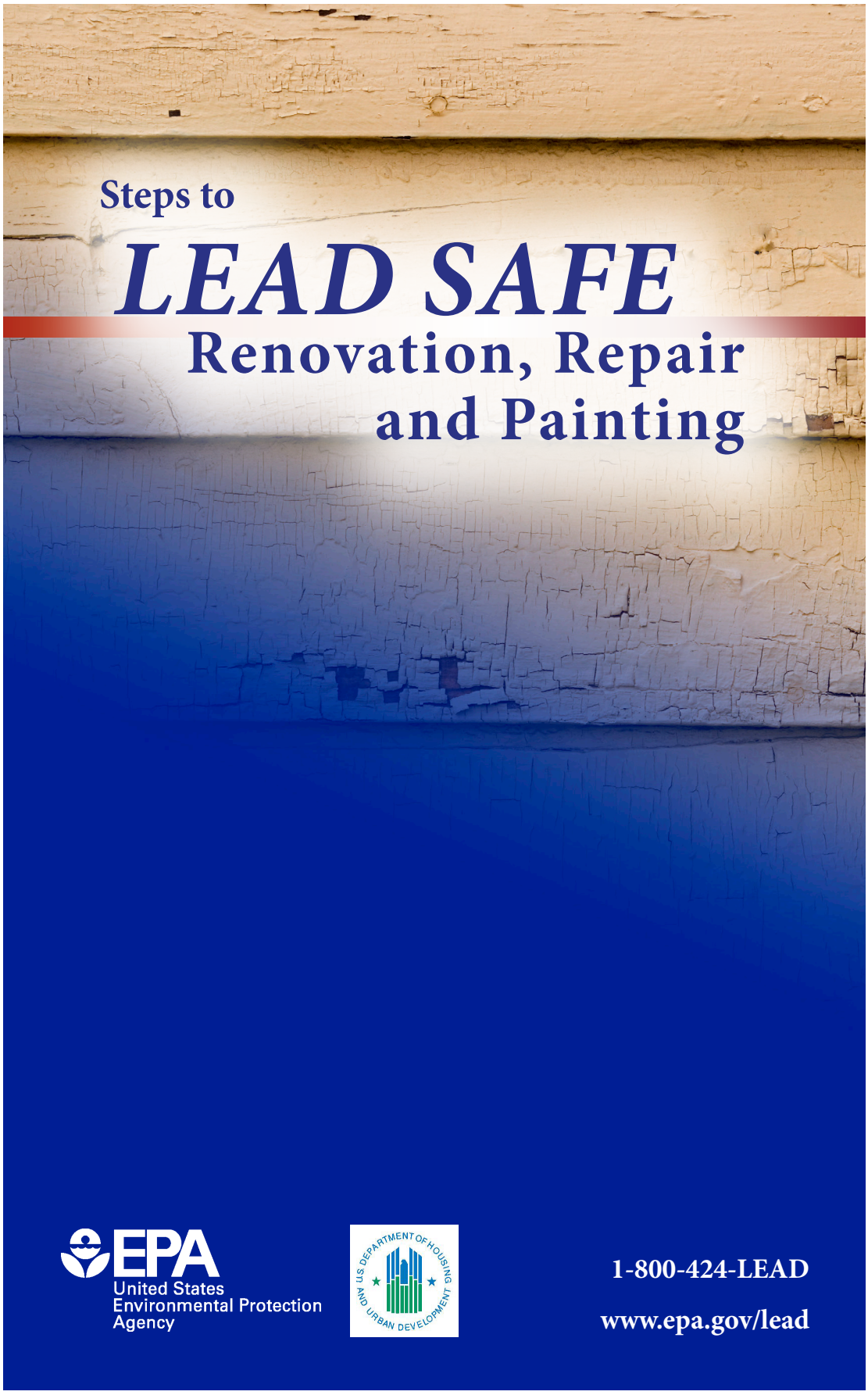
*Paperwork Reduction Act Notice:* The incremental public burden for the collection of information contained in the Lead Renovation, Painting and Repair Program, which are approved under OMB Control No. 2070-0155 and identified under EPA ICR No. 1715, is estimated to average approximately 54 hours per year for training providers. For firms engaged in regulated renovation, repair, and painting activities, the average incremental burden is estimated to be about 6.5 hours per year. Comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, may be sent to: Director, Collection Strategies Division, Office of Environmental Information, U.S. Environmental Protection Agency (Mail Code 2822T), 1200 Pennsylvania Avenue, N.W., Washington, D.C. 20460. Include the OMB number identified above in any correspondence. Do not send any completed form(s) to this address. The actual information or form(s) should be submitted in accordance with the instructions accompanying the form(s), or as specified in the corresponding regulations.

**NOTICE**

This guide was prepared pursuant to section 212 of the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), Pub. L. 104-121. THIS DOCUMENT IS NOT INTENDED, NOR CAN IT BE RELIED UPON, TO CREATE ANY RIGHTS ENFORCEABLE BY ANY PARTY IN LITIGATION WITH THE UNITED STATES. The statements in this document are intended solely as guidance to aid you in complying with the Lead-Based Paint Renovation, Repair, and Painting Program requirements in 40 CFR 745, Subpart E. EPA may decide to revise this guide without public notice to reflect changes in EPA's approach to implementing the Lead-Based Paint Renovation, Repair, and Painting Program or to clarify and update text. To determine whether EPA has revised this guide and/or to obtain copies, contact EPA's Small Business Ombudsman at 202-566-2075, or contact the National Lead Information Center at 1-800-424-LEAD(5323), or on the web at https://www.epa.gov/lead/forms/nlic.

EPA
United States
Environmental Protection
Agency
1-800-424-LEAD (5323)
**www.epa.gov/lead**

# Appendix 5: *Steps to LEAD SAFE Renovation, Repair and Painting*



Steps to

# LEAD SAFE

## Renovation, Repair and Painting

EPA
United States
Environmental Protection
Agency

U.S. Department of Housing and Urban Development

1-800-424-LEAD

www.epa.gov/lead

# Renovating, Repairing or Painting?

***Do you renovate, repair or paint homes or child-occupied facilities built before 1978?***

If so, you need to know how to work safely with lead-based paint. This guide is designed to help plan for and complete a home renovation, repair or painting project using lead-safe work practices. Lead-safe work practices are a group of techniques that reduce the amount of dust produced by renovation activities. When used correctly, they make the work area safer for workers and the home safe for residents when renovation is complete.

**Are you a professional renovator?**

Contractors doing work for compensation in homes or child-occupied facilities built before 1978 must be certified and follow certain work practices. This guide describes those required work practices and provides additional helpful recommendations.

**Are you a do-it-yourselfer?**

If you are doing work yourself you should follow the work practices described in this brochure to ensure your home and family are protected from lead hazards the project could generate.

*Contractors, Painters, Landlords! If you are working in a home or child-occupied facility built before 1978, you are required to provide information about lead-based paint to occupants and owners of homes, and owners and parents of child-occupied facilities.* *For more information, see page 31.*

*Renovation, repair and painting contractors must be certified and use lead safe work practices when working in homes built before 1978.* *For more information, see page 6.*



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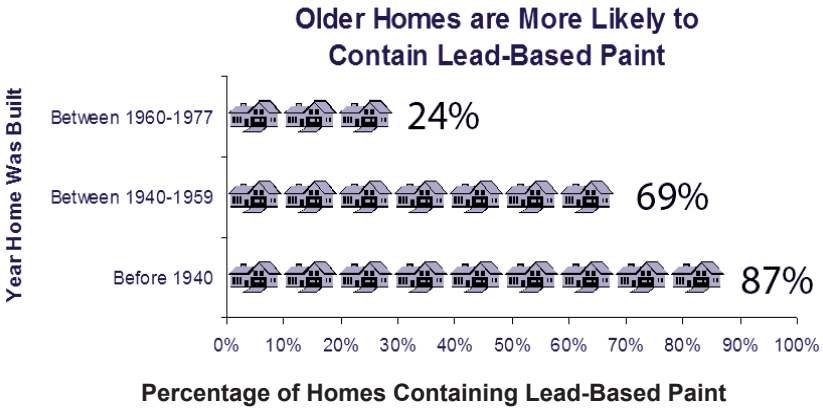
# *Learn the Facts about Lead-Based Paint*

**About half of homes built before 1978 have lead-based paint.** The likelihood of finding lead-based paint increases with the age of the home:

- Two out of three homes built between 1940 and 1960 have lead-based paint.
- Nine out of ten homes built before 1940 have lead-based paint.




*Source: American Healthy Homes Survey: Lead and Arsenic Findings. April 2011.*

**Lead-based paint may be found on any surface in the home—inside or outside.** When lead-based paint is disturbed during renovation, repair or painting activities, dangerous amounts of lead dust can be created. Jobs such as demolition, window replacement, opening up walls, etc., can also release accumulated lead dust into the home. Even after a typical renovation cleanup, dangerous levels of lead dust can remain.



**Lead gets into the body when it is swallowed or breathed.**

- People, especially children, can swallow lead dust as they eat, play, and perform other ordinary hand-to-mouth activities.
- People may also breathe in lead dust or fumes while they work on jobs that sand, scrape, brush, blast or otherwise disturb painted surfaces that contain lead-based paint.
- Additionally, pets may be poisoned by the same types of exposure to lead.

**Once in the body, lead can have significant effects on human health.**

- In children, lead poisoning damages the nervous system and causes developmental and behavioral problems that can affect them for their lifetime.
- In adults, lead poisoning causes health and reproductive problems. Pregnant women are especially vulnerable to the effects of lead.

**Research has shown that general residential renovation activities are associated with an increased risk of elevated blood lead levels in children.**



***By working safely you can help prevent lead exposure and poisoning. This guide tells you how.***

United States Environmental Protection Agency

# The Renovation, Repair and Painting Program Rule

The Renovation, Repair and Painting (RRP) Rule affects contractors, property managers and others who disturb known or presumed lead-based paint during renovation. The term renovation covers all activities done for compensation that disturb painted surfaces including most repair, remodeling and maintenance activities, such as window replacement, weatherization and demolition. The RRP Rule applies to all renovation work performed in residential houses, apartments and child-occupied facilities such as schools and day-care centers built before 1978 where a child under six years of age regularly visits. To assist those affected by the RRP Rule, EPA developed the Small Entity Compliance Guide to Renovate Right, which provides an overview of the rules requirements. This guide, along with links to other related materials is available on EPA's website at www.epa.gov/lead/outreach.

**Requirements for Renovation Contractors Include:**

**Certification and Training Requirements**

- All firms paid to perform renovation, repair or painting work in pre-1978 housing and child-occupied facilities must be certified. This is accomplished by applying to EPA or to the state, if it has an EPA-authorized renovation program, and paying a fee. For information about the authorization status of your state, visit https://www.epa.gov/lead/renovation-repair-and-painting-program-firm-certification#1 or call the National Lead Information Center at 1-800-424-LEAD (5323).
- Firms must have a "certified renovator" assigned to each job where lead-based paint is disturbed. To become certified, a renovator must successfully complete an EPA or state-approved training course conducted by a training program accredited by EPA or an EPA authorized state program.
- All renovation workers must be trained. Renovation workers can be trained on-the-job by a certified renovator to use lead-safe work practices, or they can become certified renovators themselves.



### Pre-Renovation Education Requirements

- Contractors, property managers and others who perform renovations for compensation in residential houses, apartments, and child-occupied facilities built before 1978 are required to distribute EPA's *Lead-Safe Certified Guide to Renovate Right* lead hazard information pamphlet before starting renovation work to occupants and owners of homes, and owners and parents of child-occupied facilities. More information about pre-renovation education requirements can be found on page 32.




### Work Practice Requirements

- Renovators must use work-area containment to prevent dust and debris from leaving the work area.
- Certain work practices are prohibited. Open-flame burning, using heat guns at greater than 1,100 degrees Fahrenheit and the use of power tools without high-efficiency particulate air (HEPA) exhaust control (to collect dust generated) are prohibited.
- Thorough cleaning followed by a cleaning verification procedure to minimize exposure to lead-based paint hazards is required.
- Minor repair and maintenance activities (6 square feet or less per interior room or 20 square feet or less per exterior project) are exempt from the work practices requirements. However, this exemption does not apply to jobs involving window replacement or demolition, or that involve the use of any of the prohibited practices listed above.




# Other Federal and State Regulations

**The U.S. Department of Housing and Urban Development (HUD) Lead Safe Housing Rule**

HUD's Lead Safe Housing Rule (24 CFR Part 35) covers pre-1978 federally-owned or assisted housing and federally-owned housing that is being sold. It does not cover child-occupied facilities outside of residential housing. The requirements of HUD's rule are similar to EPA's RRP Rule, but there are some differences in the details, including:

- **Training Requirements.** To conduct lead hazard control in federally-assisted housing there must be a Renovator certified by EPA or an EPA authorized state and all workers must have completed a HUD-approved course, or the crew must be supervised by a Renovator certified by EPA or an EPA authorized state who is also a Certified Lead Abatement Supervisor and untrained workers must receive on the job training from the Certified Renovator.
- **Minor Repair and Maintenance.** HUD's definition of minor repair and maintenance that is exempt from its rule is different than EPA's (2 square feet interior and 20 square feet exterior or 10 percent of the surface area of a small building component type).

Other differences between the EPA and HUD rules (concerning paint testing, prohibited practices, dust-lead testing and waste disposal) are pointed out in the appropriate places throughout this document.

**State and Local Regulations**

Other state or local requirements that are different from or more stringent than the federal requirements may apply. For example, federal law allows EPA to authorize states to administer their own lead renovation program in place of the federal lead program. (For a list of authorized states go to **https://www.epa.gov/lead/renovation-repair-and-painting-program-firm-certification#1**. Even in states without an authorized lead renovation program, a state may promulgate its own rules that may be different or go beyond the federal requirements.

For more information on the rules that apply in your state, please contact the National Lead Information Center at www.epa.gov/lead/forms/nlic or **1-800-424-LEAD (5323)**.

# Step 1



## Determine If the Job Involves Lead-Based Paint

**Before you begin a job, consider whether lead-based paint will be an issue.**

**Find Out the Age of the Home or Child-Occupied Facility..**
The age of a home can tell you a lot about whether lead-based paint is likely to be present.

- If it was built before 1978, it may have lead-based paint.
- The older the home, the greater the likelihood that lead is present in the paint and accumulated dust.
- Lead-based paint may be found either inside or outside the home and is most common in kitchens or bathrooms and in high gloss paint on trim, such as on window sills, door frames, and railings.

**Look for Information About Lead..**
Information about lead-based paint in your home may be readily available. Under a federal disclosure law, when a pre-1978 home is sold or leased, the seller/landlord must provide information to the buyer/tenant about any known lead-based paint. Homeowners should check their records to see if they have information about lead-based paint and share this information with anyone performing work on the home.





**Consider Lead Testing.**
If a home or child-occupied facility was built before 1978, all surfaces affected by a renovation covered by the RRP Rule must either be tested for lead-based paint or presumed to contain lead-based paint. Testing must include all affected surfaces coated with paint, shellac, varnish, stain, coating or even paint covered by wallpaper, if it will be disturbed during the renovation work. A report documenting the testing must describe the test used, the surfaces tested, and the results of the testing. If lead-based paint is present on an affected surface, then the lead safe work practices described in this pamphlet must be used on the job.

There are two options for testing paint under the RRP Rule:

1. Paint testing by a certified lead-based paint inspector or lead-based paint risk assessor—These licensed professionals conduct a surface-by-surface investigation for lead-based paint by collecting paint chips for laboratory analysis or by testing painted surfaces with an machine called an X-Ray Fluorescence Analyzer (XRF) which measures the amount of lead in the paint.
2. Paint testing by a certified renovator—certified renovators, at the request of the owner, can use EPA-recognized test kits or collect paint chips for laboratory analysis to test all painted surfaces affected by the renovation.

Note: HUD does not recognize testing by a certified renovator using test kits. In housing covered by the HUD Lead Safe Housing Rule, only the first option is allowed.

For a list of certified lead testing professionals in your area, go to cdxapps.epa.gov/ocspp-oppt-lead/firm-location-search or contact the **National Lead Information Center** at **1-800-424-LEAD (5323).**

Remember, if the home or child-occupied facility was built before 1978 and there is no information available about the paint, renovators must presume lead-based paint is present and use the lead-safe work practices described in this pamphlet. Make sure everyone involved on the job, including workers, supervisors and residents, uses proper safety precautions.

# Step 2




## *Set It Up Safely*

**When you work on a job with lead-based paint, you must contain the work area to prevent the escape of dust and debris.** The goal of proper setup of the work area is to keep dust in the work area and non-workers out.

The work area is the area that may become contaminated during the work. The size of the work area may vary depending on the method used to disturb lead-based paint and the amount of dust and debris that is generated as a result. Whenever lead-based paint is disturbed, the work area must be protected by plastic sheeting applied to the floor, ground or other applicable surfaces to prevent contamination of the home or exterior, from dust generated by the work.

The RRP Rule requires that the work area be protected by plastic sheeting that extends a minimum of 6 feet for interior projects and 10 feet for exterior projects in all directions from the location where paint will be disturbed. For exterior renovations within 10 feet of the property line, vertical containment or equivalent extra precautions are required. The RRP Rule further requires that protective plastic sheeting extend far enough from the location of paint disturbance so that all dust or debris generated by the work remains within the area protected by the plastic. The entire portion of the home or exterior that is protected by plastic sheeting, however large, is the work area.

Unauthorized persons and pets must be prevented from entering the work area. This can be accomplished by posting warning signs and by establishing barriers around the work area such as barrier tape, fencing, plastic barriers in doorways, etc.





## Shopping List

Here is a list of supplies and tools you will need to set up the work area safely. These items are available in hardware, paint or garden supply stores.

**Materials to Restrict Access and Cover the Floor/Ground**

- ❑ Signs
- ❑ Barrier tape, rope or fencing
- ❑ Cones
- ❑ Heavy duty plastic sheeting
- ❑ Tape (masking, duct or painter's)
- ❑ Stapler
- ❑ Utility knife or scissors
- ❑ Rigid framing material for vertical containment



**What To Do**

To keep the dust in and people out of your work area, you must take the steps below for inside or outside jobs.

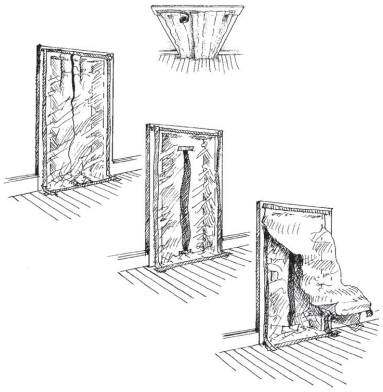
**Post Signs**

You 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 primary language of the occupants and should say "Warning – Lead Work Area" and "Poison, No Smoking or Eating." Also remember to keep pets out of the work area for their safety and to prevent them from tracking dust and debris throughout the home.



**For Inside Jobs**

- Remove all objects from the work area, including furniture, rugs, and window coverings, or cover them with plastic sheeting with all seams and edges taped or otherwise sealed.
- Cover the floor surface, including installed carpet, with taped-down plastic sheeting in the work area 6 feet from the area of paint disturbance or a sufficient distance to contain the dust, whichever is greater. If a vertical containment system is employed, floor covering may stop at the vertical barrier, providing it is impermeable, extends from floor to ceiling, and is tightly sealed at floors, ceilings, and walls.
- Close windows and doors in the work area. Doors must be covered in plastic sheeting. When the work area boundary includes a door used to access the work area it must be covered in a way that allows workers to pass, but also confines dust and debris to the work area. One method is to cover the door with two layers of protective sheeting as described here:
  - Cut and secure one layer of sheeting to the perimeter of the door frame. Do not pull the sheeting taut. Rather, leave slack at the top and bottom of the door before taping or stapling.
  - Cut a vertical slit in the middle of the sheeting leaving 6” uncut at the top and bottom. Reinforce with tape.
  - Cut and secure a second layer of sheeting to the top of the door.



- Close and cover all ducts opening in the work area with taped-down plastic sheeting.
- Ensure that all personnel, tools, and other items, including the exteriors of containers of waste, are free of dust and debris before leaving the work area.



**For Outside Jobs**

- Cover the ground with plastic sheeting or other disposable impermeable material extending 10 feet beyond the perimeter of surfaces undergoing renovation or a sufficient distance to collect falling paint debris, whichever is greater. If the renovation will affect surfaces within 10 feet of the property line, then vertical containment or equivalent extra precautions must be erected to prevent contamination of adjacent buildings and property.
- Close all doors and windows within 20 feet of the renovation. 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 below that are the same horizontal distance from the renovation.
- Ensure that doors within the work area that will be used while the job is being performed are 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.
- In certain situations, the renovation firm must take additional precautions in containing the work area to ensure that dust and debris from the renovation does not contaminate other buildings or other areas of the property or migrate to adjacent properties.
    - When working on the 2nd story or above, you should extend the sheeting farther out and to each side where paint is being disturbed.
    - It is also a good idea to use vertical containment if work is close to a sidewalk, street, or property boundary, or the building is more than three stories high.
    - Avoid working in high winds if possible. EPA's rule does not address wind speed, but when the wind is strong enough to move dust and debris, 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. Ultimately, you are responsible for preventing dust and debris from leaving the work area, so take appropriate precautions when wind is a factor or consider rescheduling the renovation for a less windy day.

# Step 3



## *Protect Yourself*

**Workers should protect themselves.**
Without the right personal protective equipment, workers may ingest or inhale lead from the job and may risk bringing lead from the worksite home to their families. The following items are available through hardware, paint, garden supply stores or other specialty suppliers.

## Shopping List



- ❑ Painter's hat
- ❑ Disposable coveralls
- ❑ Disposable N-100 rated respirator
- ❑ Disposable shoe covers

## What to Do

**Consider wearing:**

- Disposable protective clothing covers to limit contamination of your clothing. They can be stored in a plastic bag and reused if they are fairly clean and are not torn. Small tears can be repaired with duct tape.
- Disposable shoe covers to prevent the tracking of dust from the work area and to protect your shoes from exposure to dust.
- A painter's hat to protect your head from dust and debris. These are easy to dispose of at the end of the day.



**Respiratory protection.**
When work creates dust or paint chips, workers should wear respiratory protection, such as an N-100 disposable respirator, to prevent them from breathing lead dust.

**No smoking, drinking or eating in the work area.**

**You should not eat, drink or smoke in a lead work area because dust and debris that comes in contact with these items can contaminate them and cause the ingestion of lead when consumed.**

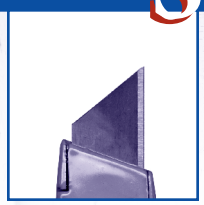
**Wash up.**
Workers should wash their hands and faces each time they stop working. It is especially important to wash up before eating and at the end of the day.



Wash your work clothes separately from family laundry.

Note: OSHA rules may require employers to take further steps to protect the health of workers on the job. See **www.osha.gov/SLTC/lead/index.html.**

# Step 4



## *Minimize the Dust*

**As you work, your goal is to keep down the dust.**
Remember that as you scrape, drill, cut, open walls, etc., you are creating dust. You can keep dust down by using the right tools and following some simple practices that minimize and control the spread of dust. The following items are available through hardware, paint, garden supply stores or other specialty suppliers.

## Shopping List

**Materials for all jobs:**



- ❑ Wet-dry sandpaper, sanding sponge
- ❑ Misting bottle or pump sprayer
- ❑ Heavy plastic sheeting
- ❑ Utility knife or scissors
- ❑ Masking tape, duct tape, or painters' tape
- ❑ High Efficiency Particulate Air (HEPA) vacuum
- ❑ Heavy duty plastic bags
- ❑ Tack pads (large, sticky pads that help remove dust), paper towels, or disposable wipes

**Other tools that may be needed:**

- ❑ Low-temperature heat gun (under 1,100 degrees Fahrenheit)
- ❑ Chemical strippers without methylene chloride
- ❑ Power tools with HEPA filter equipped vacuum attachments



# What To Do

**Do Not Use Prohibited Practices.**
The RRP Rule prohibits the following dangerous work practices by contractors:

- Open-flame burning or torching of painted surfaces
- The use of machines designed to remove paint or other surface coatings through high speed operation such as sanding, grinding, power planing, needle gun, abrasive blasting, or sandblasting, on painted surfaces unless such machines have shrouds or containment systems and are equipped with a HEPA vacuum attachment to collect dust and debris at the point of generation. Machines must be operated so that no visible dust or release of air occurs outside the shroud or containment system.
- Operating a heat gun on painted surfaces at temperatures greater than 1,100 degrees Fahrenheit.

**Control the spread of dust.**

- You must keep the work area closed off from the rest of the home. The work area must be sufficiently isolated and maintained to prevent the escape of dust or debris.
- You must ensure that all personnel, tools, and all other items exiting the work area are free of dust and debris. Don't track dust out of the work area:
  - Vacuum all personnel leaving the work area, pay particular attention to the soles of shoes. Consider disposable protective clothing and shoe covers to minimize the contamination of work clothes and shoes. Also, a large disposable tack pad on the floor can help to clean the soles of your shoes.
  - Vacuum and/or wipe down, as necessary, all tools and other items exiting the work area.
- You should launder non-disposable protective clothing separately from family laundry.



**Use the right tools.**

- You should use wet sanders and misters to keep down the dust created during sanding, drilling and cutting.
- You must use HEPA vacuum attachments on power sanders and grinders to contain the dust created by these tools.
- When a heat gun is needed to remove paint or other surface coatings, you must use a temperature setting below 1,100 degrees Fahrenheit.

**Use work practices that minimize dust.**

- You should mist areas before sanding, scraping, drilling and cutting to keep the dust down (except within 1 foot of live electrical outlets).
- You should score paint with a utility knife before separating components.
- You should pry and pull apart components instead of pounding and hammering.
- You must keep components that are being disposed of in the work area until they are wrapped securely in heavy plastic sheeting or bagged in heavy duty plastic bags. Once wrapped or bagged, remove them from the work area and store them in a safe area away from residents.

**In federally-assisted housing, HUD's rule prohibits additional work practices:**

- Extensive dry scraping and sanding by hand.
- Heat guns that char paint.
- Paint stripping in a poorly ventilated space using a volatile paint stripper.

Note: The EPA RRP Rule does not apply to homeowners who renovate their own property. However, because the practices prohibited under the rules generate significant amounts of dust, EPA recommends that they be avoided by the do-it-yourself homeowner also.

# Step 5



## *Leave the Work Area Clean*

**The work area should be left clean at the end of every day and must be cleaned thoroughly at the end of the job.** The area must be completely free of dust and debris. The following cleaning supplies, tools, and equipment are available in hardware, paint or garden supply stores.

## Shopping List

- ❑ Heavy-duty plastic bags
- ❑ HEPA vacuum with attachments and a powered beater bar
- ❑ Masking tape, duct tape, or painters tape
- ❑ Misting bottle or pump sprayer
- ❑ Disposable wet-cleaning wipes or hand towels
- ❑ General-purpose cleaner
- ❑ Mop and disposable mop heads
- ❑ Two buckets or one two-sided bucket with a wringer
- ❑ Shovel and rake
- ❑ Wet Mopping System
- ❑ Electrostatically charged dry cleaning cloths





## What To Do

**On a daily basis, you should:**

- Pick up as you go. Put trash in heavy-duty plastic bags.
- Vacuum the work area with a HEPA vacuum cleaner frequently.
- Clean tools at the end of the day.
- Wash up each time you take a break and before you go home.
- Dispose of or clean off your personal protective equipment.
- Remind residents to stay out of the work area.

**When the job is complete, you must clean the work area until no dust, debris or residue remains:**

**Interior and exterior renovations**

- Collect all paint chips and debris and seal in a heavy-duty bag.
- Remove the protective sheeting. Mist the sheeting before folding it dirty side inward, and either tape shut or seal in heavy-duty bags. Sheeting used to isolate contaminated rooms from non-contaminated rooms must remain in place until after the cleaning and removal of other sheeting. Dispose of the sheeting as waste.

**Additional cleaning for interior renovations.**

- The firm must clean all objects and surfaces in the work area and within 2 feet of the work area, cleaning from higher to lower:
- Walls. Clean walls with a HEPA vacuum or wiping with a damp cloth.
- Remaining surfaces. Thoroughly vacuum all remaining surfaces and objects in the work area, including furniture and fixtures, with a HEPA vacuum. The HEPA vacuum must be equipped with a beater bar when vacuuming carpets and rugs.
- Wipe all remaining surfaces and objects in the work area, except carpet or upholstery, with a damp cloth. Mop uncarpeted floors thoroughly.

# Step 6



## Control the Waste

## Waste from Renovations

- 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.
  - Collect and control all your waste. This includes dust, debris, paint chips, protective sheeting, HEPA filters, dirty water, cloths, mop heads, wipes, protective clothing, respirators, gloves, architectural components and other waste.
  - Use heavy plastic sheeting or bags to collect waste. Seal the bag securely with duct tape. Consider double bagging waste to prevent tears. Large components must be wrapped in protective sheeting and sealed with tape.
- Bag and seal all waste before removing it from the work area.
- At the conclusion of each workday 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.
- Waste transported from renovation activities must be contained to prevent release of dust and debris.





**Dispose of wastewater appropriately.**

- Water used for cleanup should be filtered and dumped in a toilet if local rules allow. If not, collect it in a drum and take it with you. Never dump this water down a storm drain, or on the ground. Always dispose of wastewater in accordance with federal, state and local regulations.
- EPA's website has state information on solid and hazardous waste disposal. See the following link for further information: www.epa.gov/hwgenerators/links-hazardous-waste-programs-and-us-state-environmental-agencies.

**Be aware of waste disposal rules.**

- Because EPA considers most residential renovation and remodeling as "routine residential maintenance," most waste generated during these activities is classified as solid, non-hazardous waste, and should be taken to a licensed solid waste landfill. This is not the case for work done in commercial, public or other nonresidential child-occupied facilities, where waste may be considered hazardous and require special disposal methods. See the following link for further information: www.epa.gov/lead/regulatory-status-waste-generated-contractors-and-residents-lead-based-paint-activities.
- Always check state and local requirements before disposing of waste. Some are more stringent than federal regulations.

# Step 7



## *Verify Work Completion with the Cleaning Verification Procedure or Dust-Lead Testing*

When all the work is complete, and before interior space is reoccupied, you must determine whether it is a safe environment to live in.

**To ensure work areas are ready for reoccupancy,** cleaning verification is required by the RRP Rule. If the housing receives federal assistance, post-renovation dust-lead testing is required. When the cleaning verification procedure is required, an EPA certified renovator must perform the cleaning verification procedure. If post-renovation dust-lead testing is required, a certified lead inspector, certified lead risk assessor, or certified lead sampling technician must conduct dust-lead testing procedures.

## Cleaning Verification Procedure

After completion of cleaning, the certified renovator must visually inspect the work area to confirm that it is free of dust, debris, or residue.

For exterior projects, when work areas have passed the visual inspection, the project is complete and the area may be turned over to the occupants.

For interior projects, when work areas have passed the visual inspection, the cleaning verification procedure is performed by wiping all dust collection surfaces in the work area with a wet, disposable cleaning cloth and comparing that cloth visually to a cleaning verification card. Dust collection surfaces include window sills, countertops and floors. Cleaning verification cards are available by calling the **National Lead Information Center** at **1-800-424-LEAD (5323)**. Cleaning verification may only be performed by an EPA certified renovator if renovations covered by the RRP Rule were performed.



**The cleaning verification procedure for window sills is described below:**

- Each window sill in the work area is wiped by the certified renovator using a single, wet, disposable cleaning cloth.
- Once the entire window sill surface is wiped, the cleaning cloth is compared to the cleaning verification card. (See "Interpreting the Cleaning Verification Procedure" on page 26).

**The cleaning verification procedure for countertops and floors is described below:**

- Each countertop is wiped by the certified renovator using a wet disposable cleaning cloth:
  - For smaller countertops and floors with a total surface area less than 40 square feet—wipe the entire surface with a single wet disposable cleaning cloth and compare to the cleaning verification card.
  - Large area surfaces, such as large countertops and floors, have surface areas larger than 40 square feet—each of these large countertops and floors must be divided into roughly equal sections that are 40 square feet or less. Wipe each section separately using a new wet disposable cleaning cloth for each separate section. When conducting cleaning verification on floors, the wet disposable cleaning cloth will be attached to the handle of a wet mopping system. The use of the wet mopping system handle allows the certified renovator to apply uniform pressure on the cleaning cloth. Each cleaning cloth is then compared to the cleaning verification card.



## Interpreting the Cleaning Verification Procedure

- The certified renovator compares each cleaning cloth representing a specific surface section to the cleaning verification card. If the cleaning cloth used to wipe a surface section within the work area is cleaner than the example cleaning cloth on the cleaning verification card, then that surface section has been adequately cleaned.
- If the cloth is not cleaner than the cleaning verification card, re-clean that surface section. Then the certified renovator uses a new wet disposable cleaning cloth to wipe the surface section again. If the second cloth is cleaner than the cleaning verification card, that surface section has been adequately cleaned.
- If the second cloth is not cleaner than the cleaning verification card, wait for 1 hour or until the surface section has dried completely, whichever is longer.
- Then the certified renovator wipes the surface section with a dry electrostatic cleaning cloth. The cleaning verification procedure is now complete and the surface is considered clean.
- When all of the surfaces in the work area have passed comparison with the cleaning verification card, or have completed the post-renovation cleaning verification, the project is complete and the area can be turned over to occupants unless the housing is receiving federal assistance, or state or local laws require post-renovation dust-lead testing, in which case the project must pass dust-lead testing before the area can be turned over to occupants.



## Post-Renovation Dust-Lead Testing

**Dust-lead testing is conducted by certified lead-based paint inspectors, certified lead-based paint risk assessors, or certified lead dust sampling technicians. For homes receiving federal assistance, the post renovation dust-lead testing must be done by a person independent of the renovation firm.**

- Although optional under the RRP Rule, some states and localities may require post-renovation dust-lead testing. Also, a homeowner may specifically request that post-renovation dust-lead testing be performed in the contract. In this case, clean up the work area and check your work, then contact a certified lead-based paint inspector, risk assessor or lead dust sampling technician to arrange for post-renovation dust-lead testing.
- HUD requires dust-lead testing after renovation or repair work in pre-1978 homes receiving federal assistance, which are regulated under the Lead Safe Housing Rule. Contractors must determine whether the home is federally-assisted. Federal assistance may be channeled through a state or local government, community development corporation or other similar entity.
- Post-renovation dust-lead sampling for interior jobs will consist of a floor sample taken in each room where work was performed (to a maximum of four samples) and an additional sample on the floor outside the entry to the work area. Where window sills and window troughs were present in the work area, a window sill or window trough sample will be collected in each room where work was performed (to a maximum of four samples).
- All dust-lead samples must be sent to an EPA-recognized dust-lead laboratory for analysis. You can view the list of laboratories at www.epa.gov/lead/nllap.



## Interpret the Dust-Lead Testing Results

The laboratory will report the amount of lead in the dust. A dust sample at or above the following limits means the area is not ready for reoccupancy:

- Floors: 5 micrograms per square foot
- Window sills: 40 micrograms per square foot
- Window troughs: 100 micrograms per square foot

**If the laboratory report shows lead levels at or above these thresholds, the home fails the post-renovation dust-lead test.** The home must be cleaned and retested until compliance with the dust-lead action level is achieved.

**If a homeowner decides they want post-renovation dust-lead testing performed, it is a good idea to specify in the initial contract, before the start of the job, that dust-lead testing is to be done and who will do the testing, as well as whether re-cleaning will be required based on the results of the test.** No one besides the contractor and the person taking the dust samples should enter the work area until the area has met the dust-lead action levels and, where applicable, any other lower regulatory levels (e.g., from state or local laws).



# *Learn More*

To learn more about the RRP Rule, and lead-safe work practices, go to www.epa.gov/lead or you may also contact the National Lead Information Center (NLIC) at **1-800-424-LEAD (5323)**. The NLIC is the federal government's leading source of quality information on lead poisoning prevention and lead hazards.

**Take a Course.**
Get trained and certified in lead safety. Go to cdxapps.epa.gov/ocspp-oppt-lead/training-search to find a training provider in your area accredited by EPA.

**Find Out About Local Rules and Resources.**
To check whether a state is authorized to administer its own program in lieu of the EPA Renovation, Repair and Painting Program, and for information on EPA authorized state programs, visit **www.epa.gov/lead/renovation-repair-and-painting-program-firm-certification#1**. In addition, the National Lead Information Center can provide information on how to contact your Tribal, state, and/or local programs to get general information about lead poisoning prevention.

- Local health departments can provide information about local programs, including assistance for poisoned children.
- Tribal and state lead poisoning prevention or environmental protection programs can provide information about the lead regulations that apply in your community and can tell you about possible sources of financial aid for reducing lead hazards. They also may be able to tell you about the costs and availability of individuals certified to test lead-based paint and/or lead dust.
- Building code officials can tell you the regulations that apply to the renovation and remodeling work that you are planning.



**Access Additional Resource Materials.**
EPA's website provides the following general reference and how-to guidance materials:

- The Lead-Safe Certified Guide to Renovate Right: Important Lead Hazard Information for Families, Child Care Providers and Schools (EPA-740-K-10-001, Revised September 2011). www.epa.gov/lead/renovate-right
- Small Entity Compliance Guide to Renovate Right: A Handbook for Contractors, Property Managers and Maintenance Personnel Working in Homes, Child Care Facilities and Schools Built Before 1978. (EPA-740-K-26-003, Revised March 2026). www.epa.gov/lead/small-entity-compliance-guide-renovate-right
- Protect Your Family from Lead in Your Home (EPA 747-K-26-001, Revised January 2026). This is a general information pamphlet on lead-based paint, lead hazards, the effects of lead poisoning and steps you can take to protect your family. www.epa.gov/lead/protect-your-family-lead-your-home-real-estate-disclosure
- For a copy of these materials you may also contact the National Lead Information Center at www.epa.gov/lead/forms/nlic or call **1-800-424-LEAD (5323)**.



# Other Resources

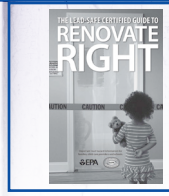
**For other resources on lead, visit the following web sites:**

www.epa.gov/lead — EPA is playing a major role in addressing residential lead hazards, including those associated with lead-based paint, lead contaminated dust and lead contaminated residential soil. This Web site provides information about lead and lead hazards and provides some simple steps to protect your family. It contains links to basic information, as well as more detailed information and documents on lead in the news, rules and regulations, education and outreach materials, training, and other lead links.

www.hud.gov/contactus/healthy-homes — The Department of Housing and Urban Development (HUD) provides funds to state and local governments to develop cost-effective ways to reduce lead-based paint hazards in America's privately-owned low-income housing. In addition, the office enforces HUD lead regulations, provides public outreach and technical assistance, and conducts technical studies to help protect children and their families from health and safety hazards in the home. The site will direct you to resources on lead-based paint regulations, training, guidance/technical guidelines and compliance and enforcement.

www.osha.gov/lead — The mission of the U.S. Department of Labor's Occupational Safety and Health Administration (OSHA) is to assure the safety and health of America's workers by: setting and enforcing standards; providing training, outreach, and education; establishing partnerships; and encouraging continual improvements in workplace safety and health. OSHA has established the reduction of lead exposure as a high strategic priority. This site contains links to lead recognition, evaluation, compliance, and training resources.

www.cdc.gov/lead — The U.S. Department of Health and Human Services Centers for Disease Control and Prevention (CDC) are committed to achieving improvements in people's health. This site provides CDC's compiled information on lead and includes materials and links for parents, health professionals, researchers, students and others interested in the topic of lead. The key resources include fact sheets, guidelines and recommendations and questions and answers.




# *Pre-Renovation Education Requirements*

The pre-renovation education requirements of the RRP Rule ensure that owners and occupants of pre-1978 homes and child-occupied facilities are provided information about potential hazards of lead-based paint exposure before renovations are begun.

**Who is affected?** The requirements apply to any person paid to do work that disturbs paint in residential housing or child-occupied facilities built before 1978. This includes residential rental property owners and managers, general contractors and special trade contractors such as painters, plumbers, carpenters and electricians.

**What properties are affected?** All residential properties and child-occupied facilities built before 1978 are affected unless they meet one of the exceptions listed below.

**Are there any exceptions?** The requirements do not apply to housing designated for the elderly, disabled persons, or zero-bedroom dwellings (studio apartments, dormitories, etc.) unless a child under 6 years of age resides or is expected to reside in such housing, as well as housing determined to be free of lead-based paint by a lead-based paint inspection, emergency renovations and repairs, and minor repairs that disturb 6 square feet or less of paint on interior surfaces or 20 square feet or less of paint on exterior surfaces. The minor repair exemption does not apply to projects involving demolition, window replacement, or involve the use of any of the practices prohibited by the RRP Rule.

**What are the requirements?** The RRP Rule requires the distribution of the lead pamphlet *The Lead-Safe Certified Guide to Renovate Right: Important Lead Hazard Information for Families, Child Care Providers and Schools* before the work starts.

- In housing built before 1978, you must:
  - Distribute EPA's lead pamphlet to the owner and occupants before renovation starts.
- In a child-occupied facility, you must:
  - Distribute the lead pamphlet to the owner of the building and an adult representative of the child-occupied facility before the renovation starts.
  - Either distribute renovation notices to parents/guardians of the children attending the child-occupied facility, or post informational

signs about the renovation or repair job.

- For work in common areas of multi-family housing, you must:
  - Either distribute renovation notices to tenants or you must post informational signs about the renovation or repair job.
- Obtain confirmation of receipt of the lead pamphlet from the owner or a certificate of mailing from the post office.
- Obtain confirmation of receipt of the lead pamphlet from the housing occupants or the adult representative of the child-occupied facility or a certificate of mailing from the post office. For these persons, you may also certify in writing that you delivered the lead pamphlet but were unable to obtain written confirmation.
- Retain records for three years.

**How do I get the pamphlet?** You can download the pamphlet from EPA's website at www.epa.gov/lead/renovate-right**.** Single copies of the pamphlet are available from the **National Lead Information Center** at **1-800-424-LEAD (5323).** Ask for *The Lead-Safe Certified Guide to Renovate Right: Important Lead Hazard Information for Families, Child Care Providers, and Schools* pamphlet. For multiple copies you may do the following:




1. Call the Government Printing Office (GPO) Order Desk at (202) 512-1800.

2. Order from the GPO Bookstore at https://bookstore.gpo.gov/catalog/environment-nature

3. Request copies in writing from:
U.S. GPO
P.O. Box 979050
St. Louis, MO 63197-9000

Note: In federally-assisted housing, HUD requires notification to be distributed to occupants within 15 days after lead-based paint or lead-based paint hazards are identified in their unit (or common areas, if applicable), and within 15 days after completion of hazard control work in their unit or common areas.



# Prevent Lead Exposure During Renovation, Repair, and Painting

**Understand that Renovation, Repair and Painting Jobs Can Create Hazards.** People, especially children, may swallow the lead dust or paint chips created during the job and get poisoned. Lead poisoning has serious health effects.

**Read EPA and HUD's Lead Hazard Information Pamphlet *The Lead-Safe Certified Guide to Renovate Right Important Information for Families, Child Care Providers and Schools.*** Contractors are required by law to give clients in pre-1978 homes and child-occupied facilities a copy of this pamphlet. The pamphlet explains the hazards associated with lead-based paint. You can get copies of the pamphlet by calling **1-800-424-LEAD (5323)** or you can download it at www.epa.gov/lead/renovate-right.

**Use Lead-Safe Work Practices.** Follow practices that will protect you and residents from exposure to lead. These practices may take a small amount of additional time and money, but they are necessary to protect children, residents, workers and workers' families from exposure to lead dust.

**Conduct Lead Testing Before and/or After the Work is Performed.** Pre-job testing can identify any lead-based paint in the home and allow workers to target lead-safe work practices to the areas where there is lead-based paint. Using the cleaning verification procedure or post-renovation dust-lead testing at the end of the job ensures that no dust has been left behind.

**Learn More About Lead.** To learn more about working safely with lead, visit EPA's website at **www.epa.gov/lead** or HUD's website at www.hud.gov/contactus/healthy-homes. You may also contact the National Lead Information Center at **1-800-424-LEAD (5323)**

*March 2026, EPA-740-K-26-001*
*U.S. Environmental Protection Agency, Office of Chemical Safety and Pollution Prevention*
*U.S. Dept. of Housing and Urban Development, Office of Healthy Homes and Lead Hazard Control*
*Printed with Vegetable Oil-Based Inks, Recycled Paper*

# Appendix 6: Hands-on Exercises for Renovator Refresher Training

# Hands-on Exercises

The following exercises can be used in place of the hands-on exercises or as supplemental activities. Exercise worksheets and answers are provided.

- Skill Set #1 Using EPA-Recognized Test Kits and Paint Chip Sample Collection Procedure
- Skill Set #2: Cleaning Verification Procedure

## Recommended Supplies for Hands-on Activities

**Test Kit Supply List**

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

**Paint Chip Collection Supply List**

□ Resealable rigid walled container for use as paint collection containers, e.g. screw-top plastic centrifuge tube.

- Note: Resealable plastic bags are not suitable for holding and transporting dried paint samples due to potential losses of paint chips during laboratory handling.

□ Steel or plastic measuring ruler - metric only with millimeter and centimeter divisions

□ Cloths for cleaning purposes

□ White paper for making paper funnels (paint chip collection trays)

□ Masking, painters and/or duct tape

□ Indelible (permanent) marking pen

□ Personal safety gear

□ Cutting and scraping tools:

- Sharp-edged razor knife
- Single-edged safety razor blades
- Pocket knife with locking blade
- Rigid blade paint scrapper with extra blades
- Flexible putty knife
- Chisels
- Hammer

□ Flashlight

□ Trash bags

□ Plastic gloves, powder-less

□ Painted wood surface with no lead-based paint layer

□ *Paint Chip Sample Collection Form*

□ Facilities and hand soap

**Cleaning Verification Procedure Supply List**

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

# Participant Progress Log: Hands-on Activities for Renovator Refresher Training

| Name of Trainee | Module 2 (25 minutes) | Module 5 (20 minutes) |
|---|---|---|
| | **Skill Set #1:** Using EPA-Recognized Test Kits and Paint Chip Sample Collection Procedure | **Skill Set #2:** Cleaning Verification Procedure |
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| | | |

Date of Training: _____

Certified Renovator Name: _____

# Participant Progress Log: Hands-on Activities for Renovator Initial

| Name of Trainee | Module 3 (15 min.) | Module 4 (45 min.) | | | | Module 5 (10 min.) | Module 6 (50 min.) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Skill Set #1:** Using EPA-Recognized Test Kits and Paint Chip Sample Collection Procedure | **Skill Set #2:** Setting Up Barriers, Signs and Flapped Entry Doors | **Skill Set #3:** Cover or Remove Furniture | **Skill Set #4:** Establish Interior Containment | **Skill Set #5:** Establish Exterior Containment | **Skill Set #6:** Personal Protective Equipment | **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 |
| | | | | | | | | | | | |
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| | | | | | | | | | | | |

Date of Training: _____ Certified Renovator Name: _____

# Certified Renovator Hands-On Skills Assessment for Renovator Refresher

Date: _____ Address: _____ City & State: _____

Student Name: _____ Student Signature: _____

| Skill Set | Skill Description | Student has demonstrated proficiency at the following skills consistent with the requirements of the EPA RRP Rule | Trainer's Initials |
|---|---|---|---|
| #1 | Using EPA-Recognized Test Kits and Paint Chip Sample Collection Procedure | Using test kits and collecting paint chip samples for laboratory lead analysis to properly test for lead-based paint and document results. | |
| #2 | Cleaning Verification Procedure | Conducting cleaning verification procedure. | |

I am the trainer for the Certified Renovator Refresher course offered on the date and location described above. I verify that the student has demonstrated the skills as described above.

Trainer Name: _____ Trainer Signature: _____

Trainer Phone: _____ Organization: _____ Date: _____

# Certified Renovator Hands-On Skills Assessment for Renovator Initial

Date: _____ Address: _____ City & State: _____

Student Name: _____ Student Signature: _____

| Skill Set | Skill Description | Student has demonstrated proficiency at the following skills consistent with the requirements of the EPA RRP Rule | Trainer's Initials |
|---|---|---|---|
| #1 | Using EPA-Recognized Test Kits and Paint Chip Sample Collection Procedure | Using test kits and collecting paint chip samples for laboratory lead analysis to properly test for lead-based paint and document results. | |
| #2 | Setting Up Barriers, Signs and Flapped Entry Doors | Placing critical barriers and posting signs to isolate work area from access by unauthorized individuals. | |
| #3 | Cover or Remove Furniture | Identifying the proper steps in determining when and how to cover or remove furniture and belongings from the work area. | |
| #4 | Establish Interior Containment | Using the proper steps to cover floors and close and seal doors and windows in the work area. | |
| #5 | Establish Exterior Containment | Taking proper steps to restrict entry to the exterior work area and to protect the ground under and around the work area from becoming contaminated. | |
| #6 | Personal Protective Equipment | Using dust reduction techniques while performing common renovation, repair, and painting work activities. | |
| #7 | Interior Final Cleaning | Cleaning the interior work area after the completion of work and prior to the visual inspection and cleaning verification procedure or dust clearance examination. | |
| #8 | Exterior Final Cleaning | Cleaning the exterior work area after the completion of the work and prior to visual inspection and (if required) cleaning verification or dust clearance examination. | |
| #9 | Bagging Waste | Taking steps to bag and gooseneck waste, wrap large pieces of debris, and to carry them out of the work area. | |
| #10 | Visual Inspection | Conducting a visual inspection of the work area prior to the cleaning verification procedure. | |
| #11 | Cleaning Verification Procedure | Conducting cleaning verification procedure. | |

I am the trainer for the Certified Renovator course offered on the date and location described above. I verify that the student has demonstrated the skills as described above.

Trainer Name: _____ Trainer Signature: _____

Trainer Phone: _____ Organization: _____ Date: _____

# Skill Set #1: Using EPA-Recognized Test Kits and Collecting Paint Chip Samples for Laboratory Lead Analysis

**Time:** 25 minutes

**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. In addition, students will learn an alternative method for determining the presence of lead-based paint by collecting paint chip samples that are submitted to a NLLAP-recognized laboratory for analysis.

- *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 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 as well as the collection of paint chip samples for lead analysis. The demonstration should not take longer than 5 minutes for each method including the time needed to hand out materials.

**Evaluating the Students:** Allow students to practice the required steps on the following pages. 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 and sample paint chips 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.

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

**Test Kit Supply List**

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

**Paint Chip Collection Supply List**

□ Resealable rigid walled container for use as paint collection containers, e.g. screw-top plastic centrifuge tube.

- Note: Resealable plastic bags are not suitable for holding and transporting dried paint samples due to potential losses of paint chips during laboratory handling.

□ Steel or plastic measuring ruler - metric only with millimeter and centimeter divisions

□ Cloths for cleaning purposes

□ White paper for making paper funnels (paint chip collection trays)

□ Masking, painters and/or duct tape

□ Indelible (permanent) marking pen

□ Personal safety gear

□ Cutting and scraping tools:

- Sharp-edged razor knife
- Single-edged safety razor blades
- Pocket knife with locking blade
- Rigid blade paint scrapper with extra blades
- Flexible putty knife
- Chisels
- Hammer

□ Flashlight

□ Trash bags

□ Plastic gloves, powder-less

□ Painted wood surface with no lead-based paint layer

□ *Paint Chip Sample Collection Form*

□ Facilities and hand soap

□

**Test Kit Procedure**

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 (2 ft 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.* If possible, perform one test where a positive test result can be observed; and 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 how to determine the absence of 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 where lead is not determined to be absent 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.

**Test Kit Documentation Form** Page 1 of ___

## 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: _____/_____/_____

**Test Kit Documentation Form** Page ___ of ___

Renovation Address: _____ Unit#: _____

City: _____ State: _____ Zip code: _____

Test Location # _____ Test Kit Used (Circle one): Test Kit #1 Test Kit #2 Test Kit #3

Description of component tested, including location: _____

_____

Result: Is lead present? (Circle only one) YES NO Presumed

Date of Test: _____/_____/_____

**Test Location #** _____ Test Kit Used (Circle one): Test Kit #1 Test Kit #2 Test Kit #3

Description of component tested, including location: _____

_____

Result: Is lead present? (Circle only one) YES NO Presumed

Date of Test: _____/_____/_____

**Test Location #** _____ Test Kit Used (Circle one): Test Kit #1 Test Kit #2 Test Kit #3

Description of component tested, including location: _____

_____

Result: Is lead present? (Circle only one) YES NO Presumed

Date of Test: _____/_____/_____

**Test Location #** _____ Test Kit Used (Circle one): Test Kit #1 Test Kit #2 Test Kit #3

Description of component tested, including location: _____

_____

Result: Is lead present? (Circle only one) YES NO Presumed

Date of Test: _____/_____/_____

**Test Location #** _____ Test Kit Used (Circle one): Test Kit #1 Test Kit #2 Test Kit #3

Description of component tested, including location: _____

_____

Result: Is lead present? (Circle only one) YES NO Presumed

Date of Test: _____/_____/_____

**Test Location #** _____ Test Kit Used (Circle one): Test Kit #1 Test Kit #2 Test Kit #3

Description of component tested, including location: _____

_____

Result: Is lead present? (Circle only one) YES NO Presumed

Date of Test: _____/_____/_____

# Collecting Paint Chip Samples Skills Practice

**Paint Chip Collection Procedure**

Step 1: Read the Paint Chip Sample Collection Guide (Appendix 9)

Step 2: Write required information and observations about the test location on the Paint Chip Sample Collection Form.

Step 3: Mark the collection area either using a template or freehand.

Step 4: Set up a paint collection tray using a sheet of letter-sized white paper for making a paper funnel for paint sample collection.

Step 5: Remove the paint using a cold scraping method (see step 5-1 below). Wear plastic gloves as appropriate.

> Step 5-1: Cold Scraping Method. Using the appropriate cutting tool, begin removing the paint from the substrate. Carefully scrape away all paint within the marked area down to the substrate and ensure that all the scraped paint lands in or is pushed into the paint collection tray

Step 6: Clean all cutting tools used during paint sample collection.

Step 7: Check documentation for completeness on the Paint Chip Sample Collection Form.

Step 8: Transfer the collected sample to the paint collection container.

Step 9: Label the container with sufficient information to uniquely identify the sample. Be sure to record the dimensions of the sample surface, including the measurement units.

Step 10: Submit the paint chip sample for lead analysis to a NLLAP-recognized laboratory. Record all results reported from the laboratory.

**Documenting Paint Chip Sample Lead Analysis Results:** A report of the findings from the submitted paint chip samples to a NLLAP-recognized entity must be given to the person contracting the work within 30 days following the completion of the renovation work. The certified firm should keep the completed *Paint Chip Sample Collection Form* for 3 years after the work is completed.

**Paint Chip Sample Collection Form** Page 1 of ___

## Client/Project 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: _____/_____/_____

## Paint Chip Sample Information

**For each sample collected, fill out all of the following information**

Sample Identifier: _____

Sample Collector Name: _____

Sampling Location: _____

Sampling site description: _____ Date of Collection: _____/_____/_____

Sample Dimensions (cm): _____ Calculate Sample Area ($cm^2$): _____

NLLAP-recognized entity and location: _____

Submission date: _____/_____/_____ Results: _____ Result Date: _____/_____/_____

**Paint Chip Sample Collection Form**

Renovation Address: _____ Unit#: _____

City: _____ State: _____ Zip code: _____

**For each sample collected, fill out all of the following information**

Sample Identifier: _____

Sample Collector Name: _____

Sampling Location: _____

Sampling site description: _____ Date of Collection: _____/_____/_____

Sample Dimensions (cm): _____ Calculate Sample Area ($cm^2$): _____

NLLAP-recognized entity and location: _____

Submission date: _____/_____/_____ Results: _____ Result Date: _____/_____/_____

**For each sample collected, fill out all of the following information**

Sample Identifier: _____

Sample Collector Name: _____

Sampling Location: _____

Sampling site description: _____ Date of Collection: _____/_____/_____

Sample Dimensions (cm): _____ Calculate Sample Area ($cm^2$): _____

NLLAP-recognized entity and location: _____

Submission date: _____/_____/_____ Results: _____ Result Date: _____/_____/_____

# Skill Set #2: Cleaning Verification Procedure

**Time:** 15 minutes

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

**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 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.

**Materials Needed:**

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

## Cleaning Verification 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.*

<u>For window sills</u>:

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 CVC. If the first wipe is the same as or whiter (lighter) than the CVC, the window sill is clean; and continue to Step 6. If the first cleaning wipe is not the same as or whiter (lighter) than the CVC, 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 CVC. If the second wipe is the same as or whiter (lighter) than the CVC, 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 CVC, 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.*

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

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 $ft^2$ per wipe. For countertops wipe the whole surface of the countertop up to 40 $ft^2$ per wipe.*

Step 7: Compare each floor and countertop cleaning wipe to the CVC. 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 CVC, 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 CVC. If the second wipe is the same as or whiter (lighter) than the CVC, 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 CVC, wait one hour or until the wet surface is dry (for the purposes of this exercise you do not wait). Then reclean 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.

# Appendix 7: State and Local Regulations

*Note: This Appendix is intentionally blank to allow training providers to add applicable state and local regulations.*

# Appendix 8: Regulatory Status of Waste Generated by Contractors and Residents from Lead-Based Paint Activities Conducted in Households

# MEMORANDUM

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

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

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

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

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

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

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

LBP debris (such as architectural building components -- doors, window frames, painted wood work) that do not exhibit the TC for lead need not be managed as hazardous waste. However, LBP waste such as debris, paint chips, dust, and sludges generated from abatement and deleading activities that exhibit the TC for lead (that is, exceed the TC regulatory limit of 5 mg/L lead in the waste leachate), are hazardous wastes and must be managed and disposed of in accordance with the applicable RCRA subtitle C requirements (including land disposal restrictions) except when it is "household waste." Under 40 CFR 261.4(b)(1), household wastes are excluded from the hazardous waste management requirements. Today, EPA is clarifying that waste generated as part of LBP activities conducted at residences (which include single family homes, apartment buildings, public housing, and military barracks) is also household waste, that such wastes are no longer hazardous wastes and that such wastes thus are excluded from RCRA's hazardous waste management and disposal regulations. Generators of residential LBP waste do not have to make a RCRA hazardous waste determination. This interpretation holds regardless of whether the waste exhibits the toxicity characteristic or whether the LBP activities were performed by the residents themselves or by a contractor.

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

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

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

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

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

EPA clarifies that this interpretation also applies to contractor-generated LBP waste from renovations, remodeling and abatements in residences. Both the definition of household waste in section 261.4(b)(1) and the Agency's criteria for determining the scope of the exclusion focus on the type of waste generated and the place of generation rather than who generated the waste (e.g., a resident or a contractor). This approach is consistent with prior Agency policy.[1] Since contractor-generated LBP waste from residential renovations, remodeling, rehabilitation, and abatements are of the type generated by consumers in their homes, it is appropriate to conclude that such waste, whether generated by a resident or contractor, falls within the household waste exclusion. This clarification will facilitate lead abatements and deleading activities in target housing by reducing the costs of managing and disposing of LBP waste from residences.

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

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

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

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

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

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

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

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

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

- The HUD Guidance for contractors doing publically-funded rehabilitation/renovation projects in public housing. (See Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing. U.S. Department of Housing and Urban Development, June 1995) The HUD guidelines can be accessed via the Internet at: http://www.hud.gov/lea/learules.html.

- TSCA 402/404 training and certification requirements. (See 40 CFR Part 745; 61 FR 45778, August 29, 1996) and the proposed TSCA onsite management standards (See 40 CFR Part 745, Subpart P; 63 FR 70227 - 70230, Dec. 18, 1998). [EPA expects to issue the final rule next year.]

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

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

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

We are distributing this memorandum to all 56 States and Territories, and Tribal Programs and various trade associations. We encourage States to arrange for implementation of the

interpretation discussed in this memo in their States to facilitate residential LBP abatements making residential dwellings lead-safe. We encourage trade associations to inform their memberships about this memo and instruct them about ways to manage residential LBP waste.

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

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

cc: Key RCRA Contacts, Regions 1 - 10
RCRA Regional Council Contacts, Regions 1 - 10
RCRA Enforcement Council Contacts, Regions 1 - 10
Association of State and Territorial Solid Waste Management Officials ( ASTSWMO)

# Appendix 9: *Paint Chip Sample Collection Guide*

# *Paint Chip Sample Collection Guide*

Lead Renovation, Repair and Painting Program - October 2011



## What is the *Paint Chip Sample Collection Guide*?

This document, the Paint Chip Sample Collection Guide, provides step-by-step instruction in how to collect paint chip samples and submit them for analysis to a laboratory recognized by the National Lead Laboratory Accreditation Program (NLLAP).

## Whom does this guide apply to?

This guide applies to Certified Renovators who want to use paint chip sampling to determine whether lead-based paint is present on components to be disturbed during a renovation.

## When is it appropriate to use this guide?

EPA's Renovation, Repair, and Painting (RRP) Rule covers renovations in target housing and child-occupied facilities built before 1978. The RRP rule does not require any paint testing. However, many provisions of the RRP rule do not apply to renovations where a Certified Renovator determines that the components that will be disturbed by the renovation are free of lead-based paint. Certified Renovators must make this determination for each component either by using an EPA-recognized test kit or by collecting a paint chip sample and submitting it to an NLLAP laboratory for analysis. Certified Renovators should use this guide as they collect and submit paint chip samples for this purpose.

## Recommended Materials and Equipment

- Resealable rigid walled container for use as paint chip sample collection containers, e.g. screw-top plastic centrifuge tube
  *Note: Resealable plastic bags are not suitable for holding and transporting dried paint chip samples due to potential losses of paint chips during laboratory handling.*
- Steel or plastic measuring ruler - metric only with millimeter and centimeter divisions
- Cloths for cleaning purposes
- White paper for making paper funnels (paint chip sample collection trays)
- Masking and duct tape
- Permanent (indelible)marking pen
- Personal safety gear
- Cutting and scraping tools:
  - Sharp-edged razor knife
  - Single-edged safety razor blades
  - Pocket knife with locking blade
  - Rigid blade paint scraper with extra blades
  - Flexible putty knife
  - Chisels
  - Hammer
- Flashlight
- Trash bags
- Plastic gloves, powderless
- Sample Paint Chip Sample Collection Form (www.epa.gov/lead/renovator-training)

**Note:** Before you begin, take precautions to protect yourself and prevent the contamination of the area with lead dust. This may include using protective sheeting in the sampling area and donning the appropriate personal protective equipment (PPE). You should clean all tools used as well as the sampling area after each sample collection.

## Step 1: Write the required information about the test location and sample on a paint chip sample collection form and paint chip sample container

The field collection report should include, at a minimum:

- Project or client name
- General sampling site description
- The name of the person collecting the samples

The paint chip sample container should include, at a minimum:

- A unique identifier
- Dimensions of the sampled surface (include measuring units)

## Step 2: Outline the collection area

- Using a ruler, draw an outline of the sampling area on the painted surface with a permanent marking pen.
- Record the dimension of the outline.
- Score the outlined area with a razor knife or equivalent cutting tool.
- Use the cutting tool to retrace the outline area.
- Clean the ruler with a cloth.

**Note:** Samples generally should be at least 1 $in^2$, however, the minimum sample size needed may vary by laboratory. Therefore, it is advisable to contact the NLLAP laboratory that will be analyzing the sample to determine their minimum sample size requirement.

## Step 3: Set up a paint chip sample collection tray

For Horizontal Surfaces:

- Use a sheet of letter-size white paper for making a paper funnel for paint chip sample collection. In cases where the sampling location is too small to accommodate a funnel made with a sheet of the letter-size paper, cut the paper to an appropriate smaller size. The name of the person collecting the samples.

For Vertical Surfaces:

- Center a piece of tape along one of the long edges of a clean sheet of white paper. The tape should be slightly shorter than the paper and placed so that sufficient adhesive is available to firmly stick the paper to the paint surface.
- Stick the paper directly below the location to be sampled with the taped edge closest to the scored location.
- Pull the two lower corners of the paper together and overlap slightly to form a funnel.
- Secure with a piece of tape.
- Fold the bottom of the newly formed funnel up and use a piece of tape to close off the funnel bottom. Be sure no sticky tape surfaces are exposed on the inside of the funnel.

For Overhead Horizontal Surfaces (Painted Surfaces Facing Down):

- Make a closed-bottom funnel in the same manner as described in “For Vertical Surfaces.”
- Affix the funnel to the painted surface in a way so that it is directly under the location to be sampled without impeding access to the surface, or attach the funnel to a ladder beneath the sample location.

## Step 4: Remove the paint chip sample

- Using a cutting tool, begin removing the paint chip sample from the substrate.
- Peel the paint chip sample from the substrate by sliding the blade along the score and underneath the paint chip sample.
- If problems are encountered in removing the paint chip sample, use a scraping tool or other equivalent tool to aid in paint chip sample removal.

## Step 5: Transfer the collected sample to the paint chip sample collection container

- Remove the paint chip sample collection tray from the sampling location. Avoid any sample spillage.
- Carefully tap all the collected paint chip sample into the paint chip sample collection container.
- Seal the paint chip sample collection container.
- Dispose of paint chip sampling trays made of paper in a trash bag.
- If a reusable paint chip sample collection tray is used, clean it thoroughly with a cloth and allow it to dry completely before reusing it at a new sampling location.

**Note:** Carefully clean the area of all dust using a wet wipe procedure.

## Step 6: Clean all cutting tools used during paint chip sample collection

- Clean all cutting tools used during paint chip sample collection with a cloth.

## Step 7: Check documentation for completeness on the Paint Chip Sample Collection Form

- Ensure all required documents and paint chip sample collection containers are completely labeled.

## Step 8: Submit the paint chip sample for lead analysis to a NLLAP-recognized laboratory

- A list of NLLAP-accredited laboratories is available at www.epa.gov/lead/pubs/nllaplist.pdf.
- Record all results reported from the laboratory.

## Step 9: Document paint chip sample lead analysis results

- A report of the findings from the submitted paint chip samples must be given to the person contracting for the work within 30 days following the completion of the renovation work. The Certified Firm should keep the completed Paint Chip Sample Collection Form for 3 years after the work is completed.

## Client/Project 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: _____/_____/_____

## Paint Chip Sample Information

**For each sample collected, fill out all of the following information**

Sample Identifier: _____

Sample Collector Name: _____

Sampling Location: _____

Sampling site description: _____ Date of Collection: _____/_____/_____

Sample Dimensions (cm): _____ Calculate Sample Area ($cm^2$): _____

NLLAP-recognized entity and location: _____

Submission date: _____/_____/_____ Results: _____ Result Date: _____/_____/_____

Renovation Address: _____ Unit#: _____

City: _____ State: _____ Zip code: _____

**For each sample collected, fill out all of the following information**

Sample Identifier: _____

Sample Collector Name: _____

Sampling Location: _____

Sampling site description: _____ Date of Collection: _____/_____/_____

Sample Dimensions (cm): _____ Calculate Sample Area ($cm^2$): _____

NLLAP-recognized entity and location: _____

Submission date: _____/_____/_____ Results: _____ Result Date: _____/_____/_____

**For each sample collected, fill out all of the following information**

Sample Identifier: _____

Sample Collector Name: _____

Sampling Location: _____

Sampling site description: _____ Date of Collection: _____/_____/_____

Sample Dimensions (cm): _____ Calculate Sample Area ($cm^2$): _____

NLLAP-recognized entity and location: _____

Submission date: _____/_____/_____ Results: _____ Result Date: _____/_____/_____

**For each sample collected, fill out all of the following information**

Sample Identifier: _____

Sample Collector Name: _____

Sampling Location: _____

Sampling site description: _____ Date of Collection: _____/_____/_____

Sample Dimensions (cm): _____ Calculate Sample Area ($cm^2$): _____

NLLAP-recognized entity and location: _____

Submission date: _____/_____/_____ Results: _____ Result Date: _____/_____/_____

# Appendix 10: For More Information

# For More Information

*Hearing- or speech-challenged individuals may access the telephone numbers below via TTY by calling 711.*

**Where can I get copies of the *Lead-Safe Certified Guide to Renovate Right* pamphlet in English or Spanish?**

- Download pdf's at: www.epa.gov/lead/renovate-right
- Contact the National Lead Information Center at 1-800-424-LEAD (5323)
- Get in touch with your Regional Lead-Based Paint Coordinator by visiting: www.epa.gov/lead/contacts
- Order bulk copies from the Government Printing Office:
  - Call 1-866-512-1800; making sure to refer to the pamphlet by name
  - Order online at bookstore.gpo.gov/products/lead-safe-certified-guide-renovate-right-september-2011-revision

**Where can I get copies of *Small Entity Compliance Guide to Renovate Right* in English or Spanish?**

- Download pdf's at: www.epa.gov/lead/small-entity-compliance-guide-renovate-right
- Contact the National Lead Information Center at: 1-800-424-LEAD (5323)
- Get in touch with your Regional Lead-Based Paint Coordinator by visiting: www.epa.gov/lead/contacts

**Where can I find additional information and resources related to lead-based paint?**

- Contact the National Lead Information Center: 1-800-424-LEAD (5323)
- Visit EPA's website: www.epa.gov/lead
  - Answers to Frequent Questions about EPA's Lead-Based Paint Program: www.epa.gov/lead/fq
- Get in touch with your Regional Lead-Based Paint Coordinator by visiting: www.epa.gov/lead/contacts
- HUD's Office of Healthy Homes and Lead Hazard Control
  - Visit: www.hud.gov/contactus/healthy-homes
  - Lead-Based Paint HUD Exchange: www.hudexchange.info/programs/lead-based-paint/