

All About...

Lead Evaluation & Hazard Control



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Title X Two-Step Plan for Reducing Lead Hazards

- Evaluate lead hazards
 - Inspections
 - Risk Assessments
 - Clearance
- Reduce lead hazards
 - Abatement
 - Interim Controls
 - Renovations
 - Maintenance



EPA Regulations

Requirements for Lead-Based Paint Activities in Target Housing and Child-Occupied Facilities 40 CFR Part 745

- ◆ Procedures & Requirements for
 - accreditation of LBP activities training programs
 - certification of individuals & firms engaged in LBP activities including:
 - Inspection
 - Risk Assessment
 - Abatement, and
 - Renovation
- ◆ Work Practice Standards

Lead Hazards Evaluations

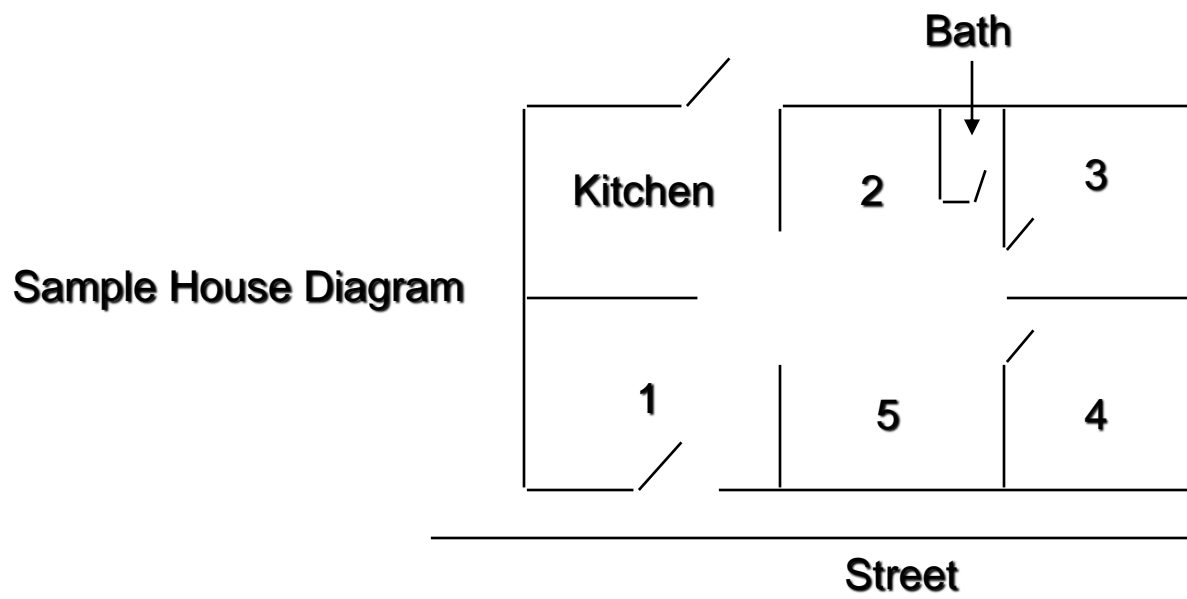
Evaluating Lead Hazards

- Inspections & Paint Testing
- Risk Assessments
 - Hazard Screen
 - Bypass Hazard ID
 - Re-evaluation
- Clearance Examinations



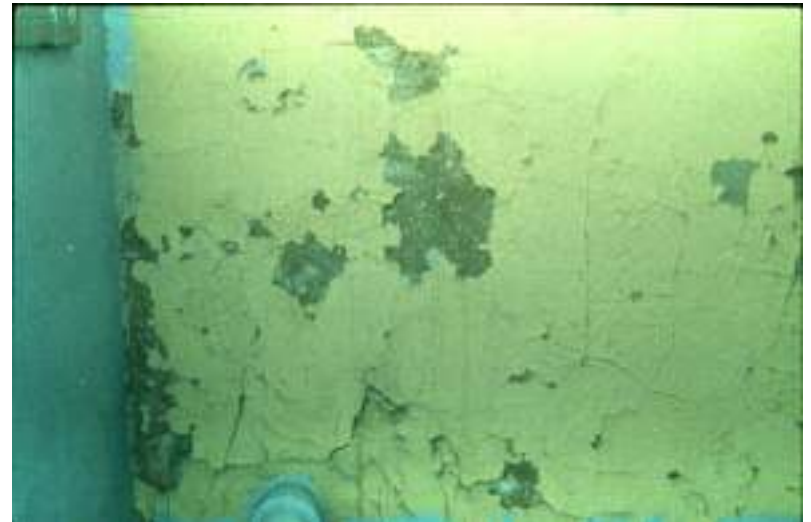
What a lead inspector does

- Sketch of the home
- Looks for lead-based paint on all “painted” surfaces
- Document each sample



Inspections

- Surfaces tested include
 - Painted
 - Stained
 - Varnished
 - Shellacked
- Done by certified lead inspector or risk assessor



Ways to test for LBP

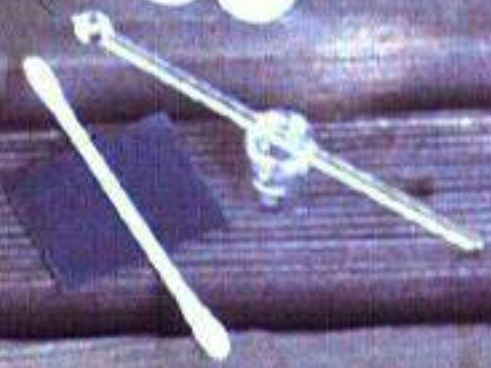
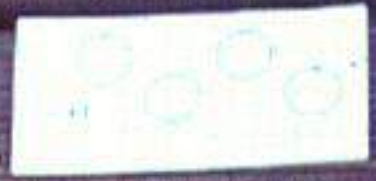
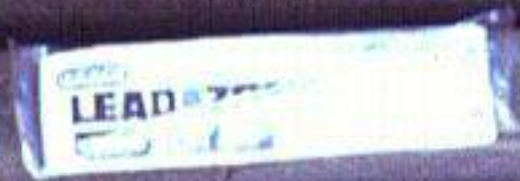


- X-Ray Fluorescence (XRF)
- Paint chip analysis
- Wet chemical field test kits







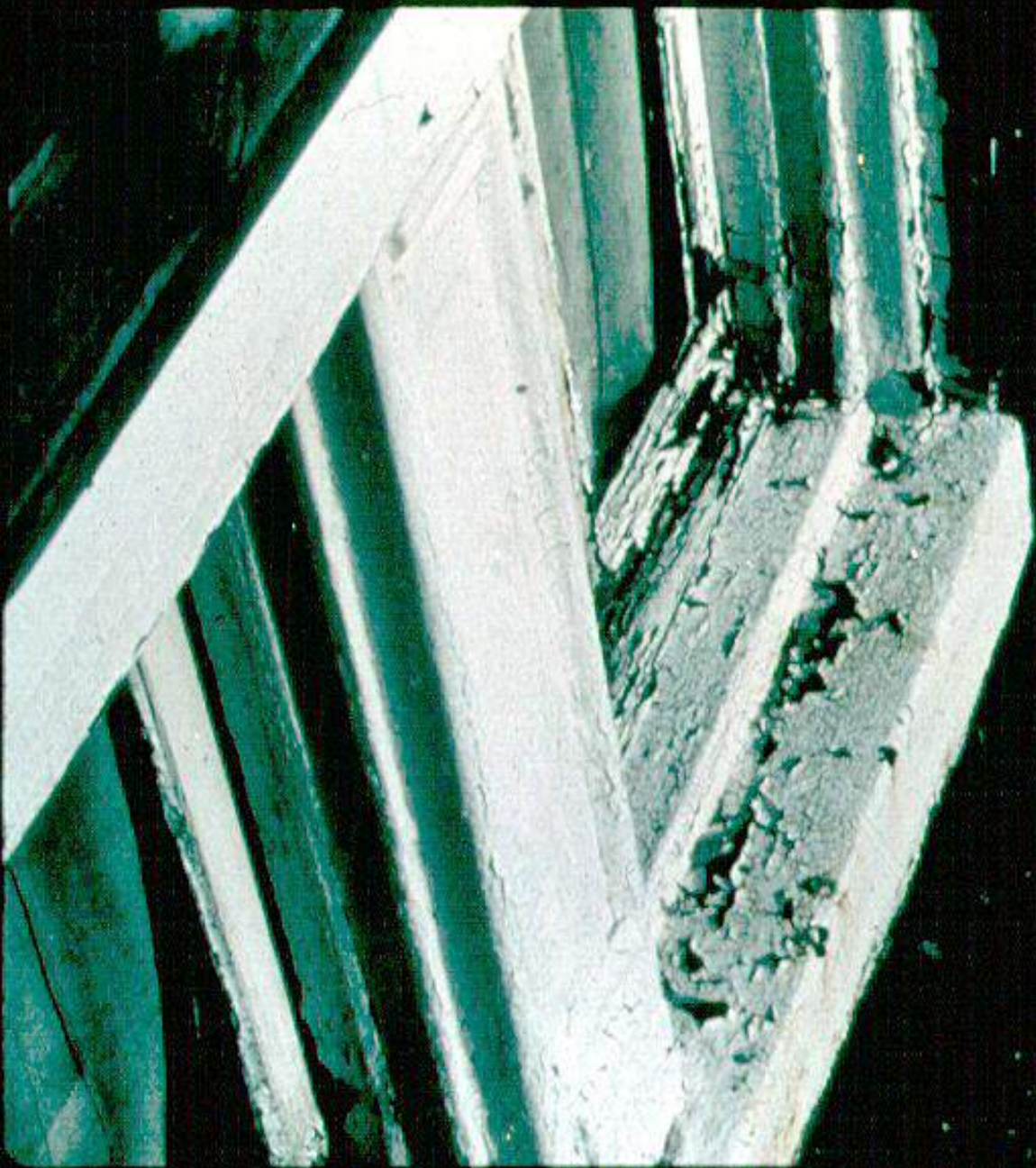


Risk Assessment

- Differs from a LBP inspection
 - LBP inspection tells you where the LBP is
 - A risk assessment tells you if there are LBP hazards in or around the home
- Risk assessment looks at sources of lead-based paint hazards
- A certified Risk Assessor will then recommend hazard control options









Dust & Soil Sampling & Analysis

Ways to Determine if Lead Hazards are present in Dust and Soil

- Dust wipe tests
- Soil sampling





EPA/HUD Dust-Lead Hazard Levels

SURFACE	LEAD IN DUST
Floor	10 $\mu\text{g}/\text{ft}^2$
Window sills	100 $\mu\text{g}/\text{ft}^2$





Soil-Lead Hazard Levels

AREA	SOIL HAZARD
Childs play	400 ppm
Non-childs play	1200 ppm

Two-Step Plan for Reducing Lead Hazards



- Reduce lead hazards
 - Abatement
 - Interim Controls
 - Renovations
 - Maintenance

“Abatement & interim controls make it better, renovations & maintenance make it no worse”

Lead Safe Work Practices (LSWP)

- All hazard control should include the 3 (or 4) C's
 - Contain
 - Control
 - Clean
 - Clearance – Required for Abatement



Abatement

Actions that permanently eliminate lead-based paint hazards

- Replacement
- Removal
- Enclosure and encapsulation (20 years)
- Cleanup of lead dust
- Removal or permanent covering of lead-contaminated soil
- Site preparation and cleanup
- Waste disposal
- Final inspections and clearance testing



Major Abatement Considerations

- Occupant protection
- Worker certification
- Worksite preparation
- Containment
- Lead-based paint abatement methods
- Daily cleanup procedures
- Controlling off-site contamination
- Final cleanup procedures
- Clearance



EPA Abatement Certifications

- **LBP Activities Firm Certification**
- **Accredited Training for**
 - Supervisors – 4 days
 - Workers – 2 days
- **Renewed every three (3) years**



Occupant Protection Plan

- A written occupant protection plan (OPP) shall be developed for all abatement projects
- OPP shall be unique to each residential dwelling or child-occupied facility and be developed prior to the abatement.
- OPP shall describe the measures and management procedures that will be taken during the abatement to protect the building occupants from exposure to any lead-based paint hazards.
- A certified supervisor or project designer shall prepare the OPP.

Interior Containment

- Clearing the work area of movable material
- Covering non-movable material with 6-mil plastic
- Separation of work from non-work areas
- Using barriers at work site entrances
- Covering non-movable objects
- Covering floors when necessary
- Shutting down HVAC and seal duct openings
- Checking containment periodically
- Using engineering controls to reduce worker exposure
- Working in common areas in apartment buildings



Lead-Based Paint Abatement Strategies

- Removing lead-based paint
 - replace component or structure
 - remove paint from substrate
- Covering lead-based paint
 - enclosing the paint
 - encapsulating the paint



Soil Lead Abatement

- **Lead in soil can be a hazard**
- **Abatement as a solution**
- **Abatement strategies**
 - soil replacement
 - permanent barriers
 - mixing soil
 - alternative methods
- **Interim controls**

Abatement Tasks

- **Final cleanup**
 - preliminary final cleanup
 - painting & sealing surfaces
 - final cleanup
 - clearance testing
- **Record keeping**
 - records to be retained
 - who keeps the records

Clearance

- **Two phases**
 - **visual examination**
 - interior
 - exterior
 - **environmental sampling**
 - dust
 - soil (if exterior work was completed)



EPA/HUD Dust-Lead Clearance Levels

SURFACE	LEAD IN DUST
Floor	10 ug/ft ² (EPA & HUD)
Porch floor	40 ug/ft ² (HUD)
Window sill	100 ug/ft ² (EPA & HUD)
Window well/trough	100 ug/ft ² (HUD) 400 ug/ft ² (EPA)

Interim Controls

- . . . are actions that reduce a lead hazard temporarily
 - Education programs
 - Special cleaning methods
 - Repairs, repainting, and maintenance

Interim Control Plan for a House

- These actions can reduce lead exposure in a home
 - Do a special cleaning
 - Do small repairs to windows to reduce lead dust
 - Wet scrape edges and loose paint
 - Wash entire house with cleaning solution again
 - Have clearance dust wipe testing done by a certified inspector or risk assessor
 - Repaint wet-scraped surfaces with non-lead-based paint

Interim Control Measures

- Substrate repair
- Paint film stabilization
- Friction & impact surface treatment
- Treating accessible surfaces
- Treating exposed soil
- Dust removal and control
- Educating residents and maintenance workers
- Conducting reevaluations

Friction & Impact Surface Treatment

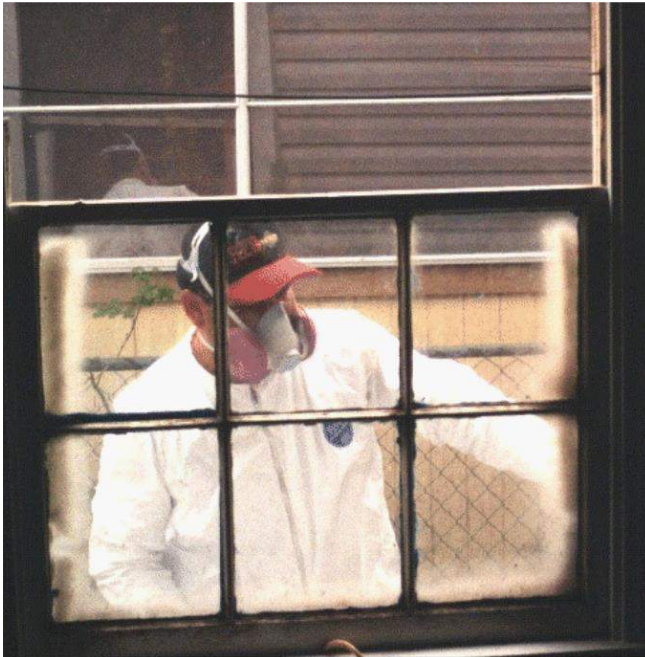
- Definitions
 - friction surfaces
 - impact surfaces
- Procedures
 - window systems
 - door systems
 - stair systems
 - baseboards and corners
 - drawers and cabinets
 - porches, decks, and interior floors



Soil Interim Control Procedures

- Soil interim control strategies:
 - covering with thin layer of soil
 - ground cover
 - land use controls
 - drainage and dust control
- Controlling migration into buildings
- Reevaluating and monitoring

In-Place Management



- Lead safe work practices
- Needed whenever interim controls are used and lead-based painted surfaces remain
- Critical for long term lead poisoning prevention

Holistic Approach to Lead Hazard Control



- Lead work should always be part of the maintenance approach
- Long term maintenance issues should be considered

Special Cleaning Methods

- Should be used when working with lead-based painted surfaces
- Can be used alone to control lead dust
- Must be used with abatement methods
- Should be used with interim control methods
- Two methods work well
 - HEPA vacuums
 - All-purpose cleaners or lead-specific cleaners



Renovation, Repair & Painting Rule (RRP)

- **Addresses activities that disturb lead-based paint in target housing and child-occupied facilities. It requires:**
 - Renovators to be certified through training.
 - Firms to be certified.
 - Training providers to be accredited.
 - Lead-safe work practices during renovations.
 - Pre-renovation education in target housing and child-occupied facilities.
- **Firms working in pre-1978 homes and child-occupied facilities must be certified and use lead-safe work practices during renovations.**
- **EPA may authorize states, territories and tribes to enforce the Rule.**

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The RRP Rule: Exclusions

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

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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 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 state or Indian tribal area.

The RRP Rule: Firm Responsibilities

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

The 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.

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.

HUD Lead-Safe Housing Rule

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



HUD's Lead Safe Housing Rule: Safe Work Practices

- HUD's rule requires lead safe work practices for:
 - Paint stabilization
 - Interim control of identified lead-based paint hazards
 - Rehabilitation (renovation)
 - Standard treatments
 - Ongoing lead-based paint maintenance

HUD LSHR Rule Addresses:

- Training (usually classroom training for workers)
- Occupant protection and worksite preparation
- Prohibited methods (3 in addition to RRP Rule's)
- De minimis levels (smaller than RRP Rule's)
- Lead safe work practices
- Specialized cleaning
- Clearance testing
- Occupant notification (within 15 days)

That's all folks...

- Andrew McLellan, Training Director
ajm@environmentaleducation.com
- Environmental Education Associates (EEA)
www.environmentaleducation.com
- Across New York State
 - Training Facilities in Manhattan, Buffalo & Utica
- 888 4 ENV EDU

