

# **Lead-Safe Methods of Conducting Remodeling, Repair and Painting Activities**

Lake States Environmental, Ltd.

**In accordance with the  
Department of Labor and Industry's  
statute 326.0981, Subd. 11,**

**“This educational offering is recognized by the  
Minnesota Department of Labor and Industry  
as satisfying 1 hour of credit toward  
Building Officials *and* Residential Contractors  
continuing education requirements.”**

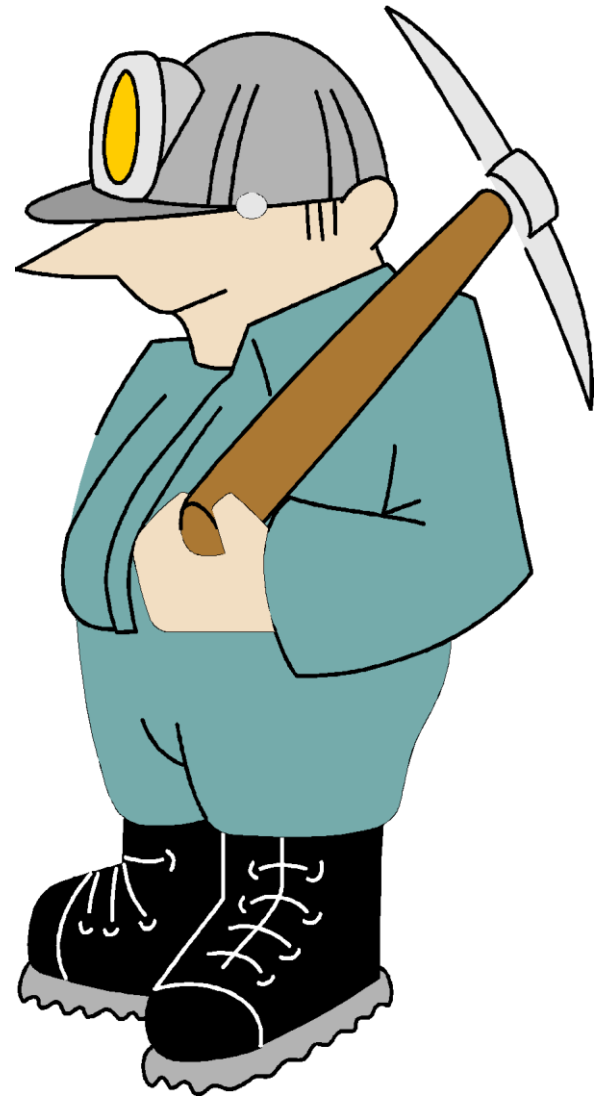
**For additional continuing education approvals,  
please see your credit tracking card.**



**What is Lead?**  
**Where is it Found?**

# History of Lead

- Why was lead used?
- Lead is dangerous.
- Lead causes health problems.
- Where is lead found?
  - House paint
  - Industrial use paint

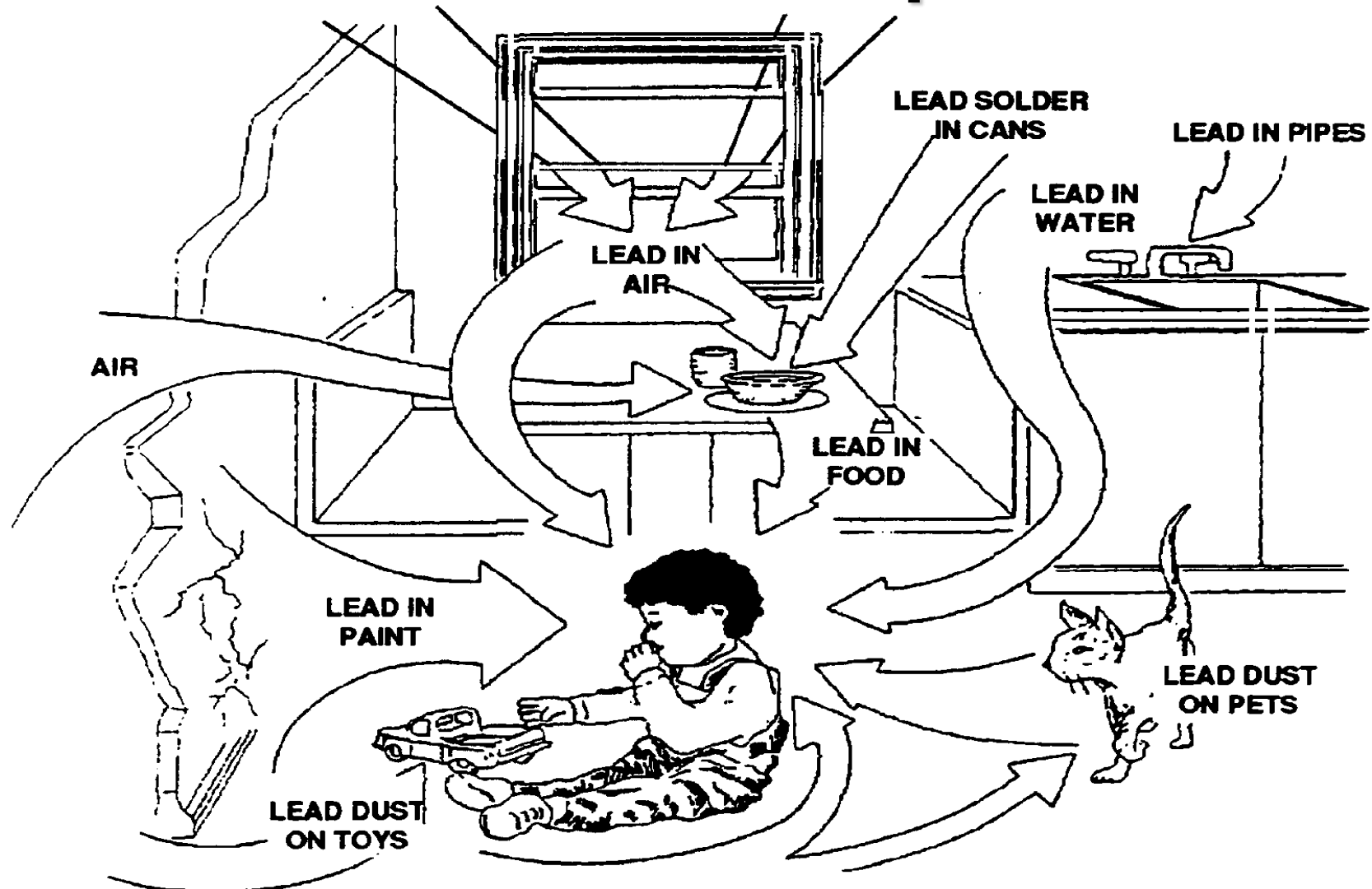


# Sources of Lead Exposure

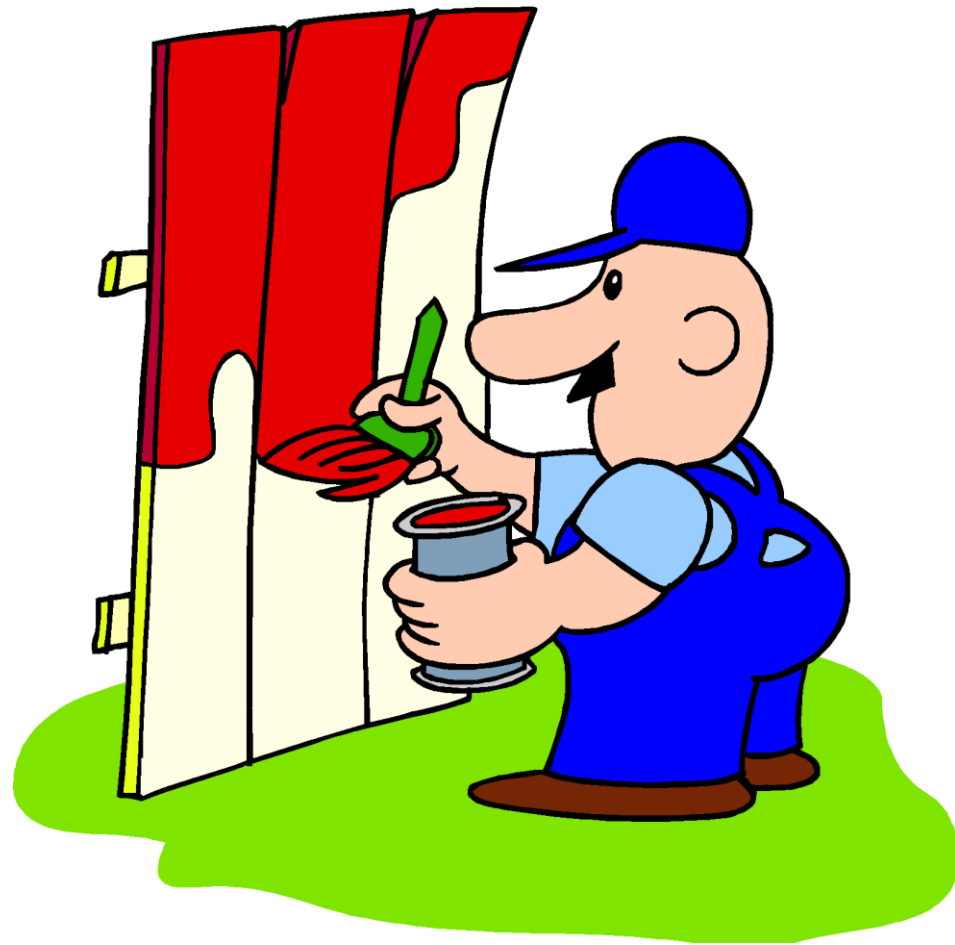
**Leaded Gasoline**  
**Industrial Releases**  
**Soil**  
**Food**  
**Hobbies**  
**Occupational  
Exposure**



# Sources of lead Exposure



## **Lead Paint Problem in U.S.**



**87% of homes built before 1940 have lead-based paint**

**69% of homes built from 1940 to 1959 have lead paint**

**24% of homes built from 1960 to 1978 have lead paint**

## **Important Note!**

Any activity that disturbs more than 6 square feet of paint in a **dwelling** or other **child occupied facility** built before 1978 **MUST** be done by a **Certified Lead-Safe Firm** that has assigned a **Certified Lead-Safe Renovator** to be in charge of that project.



# Measuring Lead in Paint

- Mass loading

  - ✓ 1 mg/cm<sup>2</sup>

- Mass Concentration

  - ✓ .5%

## When is Lead a Hazard?

- ✓ Dust-lead hazard

- ✓ Soil-lead hazard

- ✓ Paint-lead hazard

# Tasks producing high levels of lead

## Class 1 Tasks

Your employer must assume your lead exposure is **above the PEL.**

- Manual demolition of structures
  - Manual scraping or sanding
  - Using heat gun
  - Power tool cleaning with dust collection systems
  - Spray painting with lead paint
- 

## Class 2 Tasks

Your employer must assume your lead exposure is **10 times the PEL.**

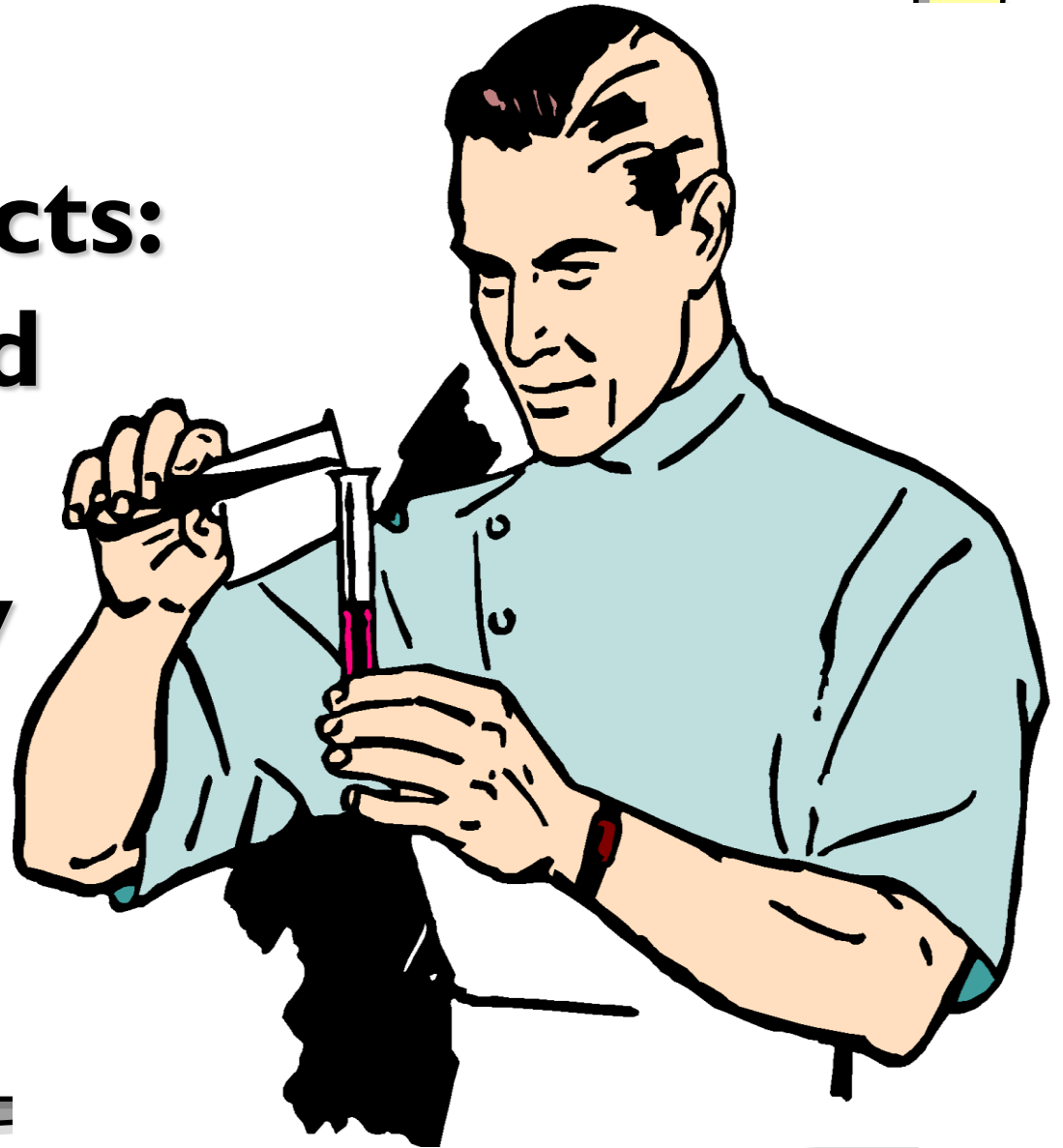
- Using lead containing mortar
  - Burning lead
  - Rivet busting lead-paint surfaces
  - Power tool cleaning without dust collection systems
  - Cleaning up with dry abrasives
  - Moving and removing an enclosure used for abrasive blasting
- 

## Class 3 Tasks

Your employer must assume your lead exposure is **50 times the PEL.**

- Abrasive blasting
- Welding
- Cutting
- Torch burning

# **Health Effects: How Lead Affects the Body**



# How Lead Affects the Body

Lead Poisoning affects you.

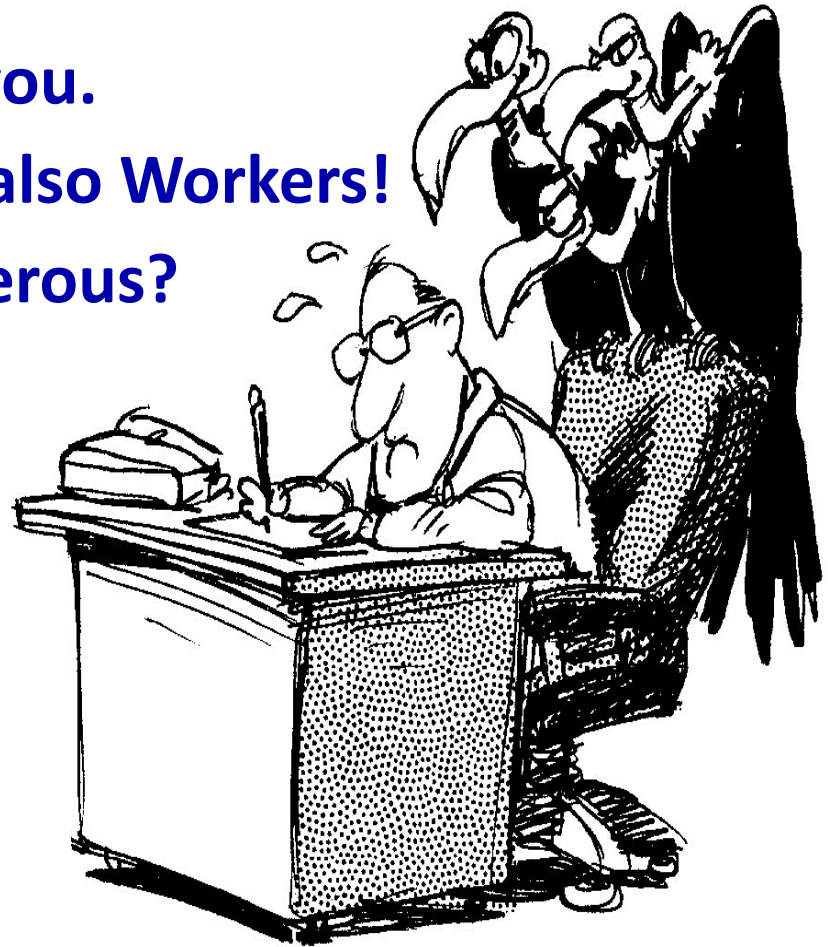
It's not just Kids, but also Workers!

How much lead is dangerous?

Any is a problem.

How does lead get  
into your body?

- Breathing lead
- Swallowing lead

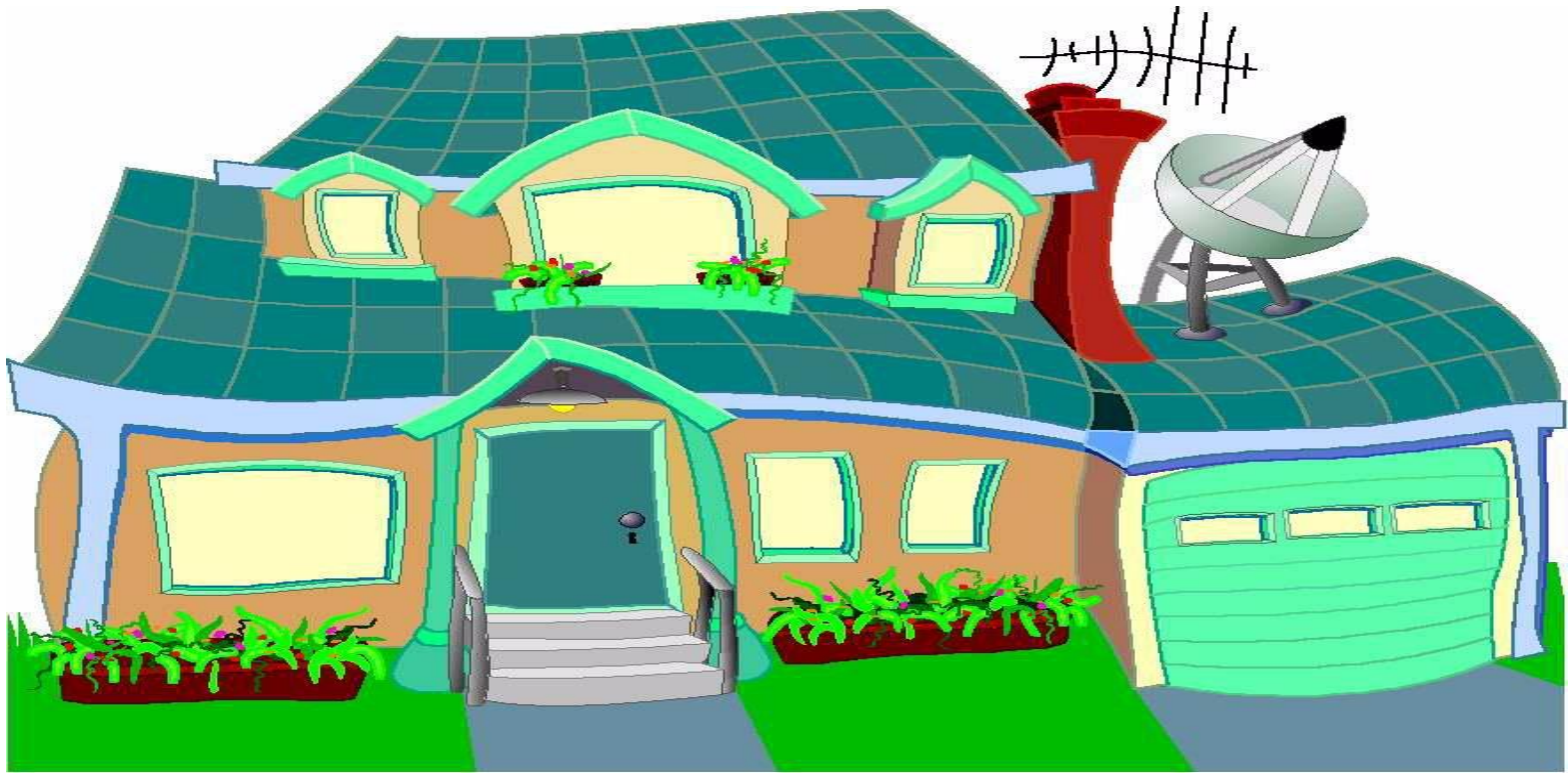


# How Can Lead Harm Your Body

- ✓ *Heart and blood system*
- ✓ *Kidneys*
- ✓ *Nervous system*
- ✓ *Bone tissue*
- ✓ *Female reproductive health*
- ✓ *Male reproductive system*



# Controlling Lead-Based Paint Hazards





# Reducing Lead-Based Paint Problems

## Residential Lead Based Paint Hazard Reduction Act of 1992 - Title X

- ★ Environmental Protection Agency (EPA)
- ★ Department of Housing and Urban Development (HUD)
- ★ Occupational Safety and Health Administration (OSHA)
- ★ WI Dept. of Health Services & MN Department of Health



## What is a Lead-Based Paint hazard

- 1 Lead dust from damaged LBP
- 2 Lead dust from LBP on friction surface.
- 3 Lead dust from LBP on impact surface(s).
- 4 Lead painted surface a child can chew on.
- 5 Lead contaminated dust
- 6 Lead contaminated soil





# Environmental Protection Agency (EPA)



- Section 1018 The HUD/EPA Disclosure Rule
- Section 406b, Notice Prior to Renovation
- Sections 402/404, EPA Training and Certification Rule
- Section 403, Lead Hazard Standard
- 40 CFR Part 745, Subpart Q

# Occupational Safety and Health Administration (OSHA)



- 29 CFR 1926.62, Lead  
Construction Industry Standard
- 29 CFR 1926.62, Appendices A, B, C
- OSHA 29 CFR 1910.1200, Haz Com Program
  - Safety Data Sheets (SDS)
  - Written compliance program
  - Training in hazardous materials

# Prohibited Methods



- Torch or flame burning
- Open abrasive blasting
- Uncontained water blasting
- Machine sanding w/out HEPA
- On-site use methylene chloride
- Dry scraping
- Wall papering or repainting as an abatement method

# Restricted Methods

Use of these methods would normally result in a higher risk of exposure to lead by either workers or other building occupants.

Restricted Methods are allowed *if* accepted Engineering and Work Practices Controls are used in conjunction with the method to control the release of and exposure to lead hazards during and after the activity.

# Special Preparations

All intended to limit the dust and debris.

- Limit how much is created in the first place.
- Limit where it is allowed to go.
  - By containing the work
  - Cleaning/deconning before exiting

# Cleaning Methods



# **Special Cleaning Methods**

Wet Methods must always be used unless using a vacuum with HEPA filtration.

No Dry Sweeping or other Dry Cleaning technique can be used.

# **Special Cleaning Methods Final Cleaning**

- 1 HEPA vacuum all surfaces
- 2 Wash all surfaces with lead cleaner
- 3 HEPA vac all surfaces again



# **How to use a HEPA vacuum**

1. Always work from high to low
2. Move slowly
3. HEPA vacuum all surfaces
4. Use special attachments
5. Maintain the HEPA vacuum

# **Thank You for joining us!**

Our Contact info:

Lake States Environmental, Ltd.

[www.lakestates.com](http://www.lakestates.com)

Bob Rogalla [bob@lakestates.com](mailto:bob@lakestates.com)

715-434-4467 or 800-254-9811