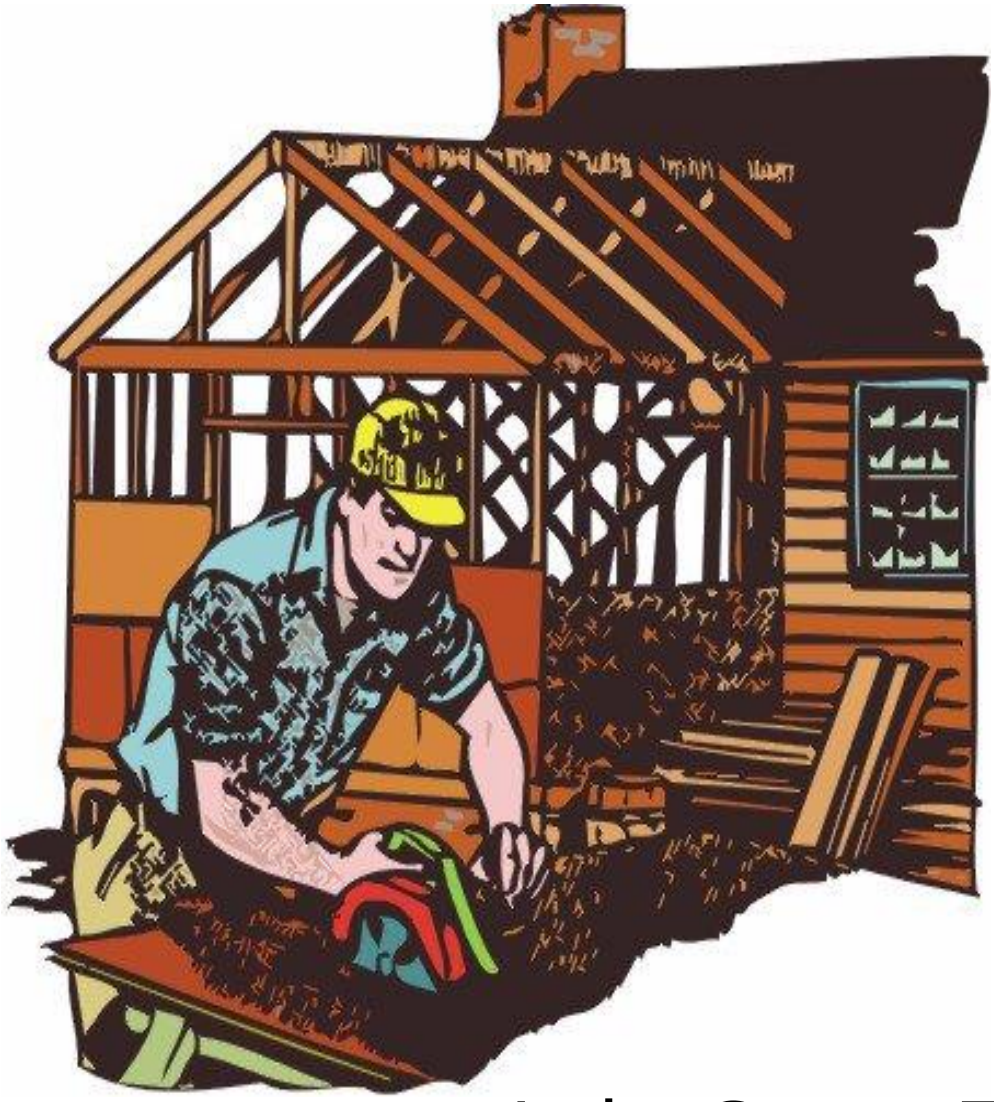


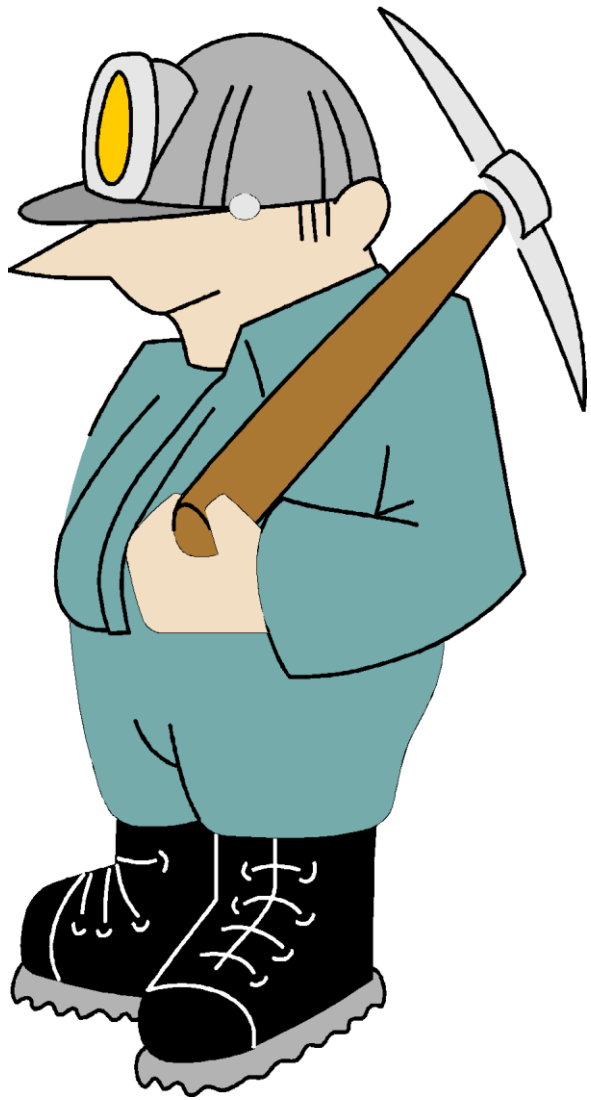
Lead-Safe Methods for Remodeling, Repair and Painting Activities

Lake States Environmental, Ltd.

What is Lead?
Where is it Found?

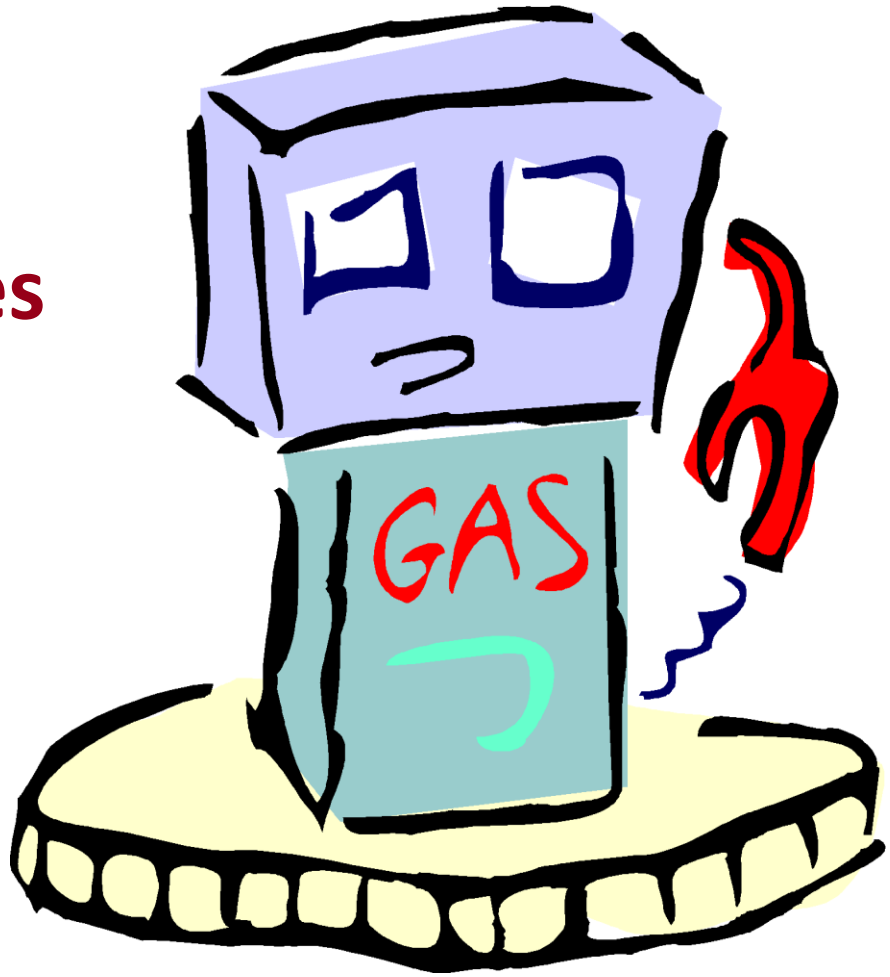
History of Lead

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

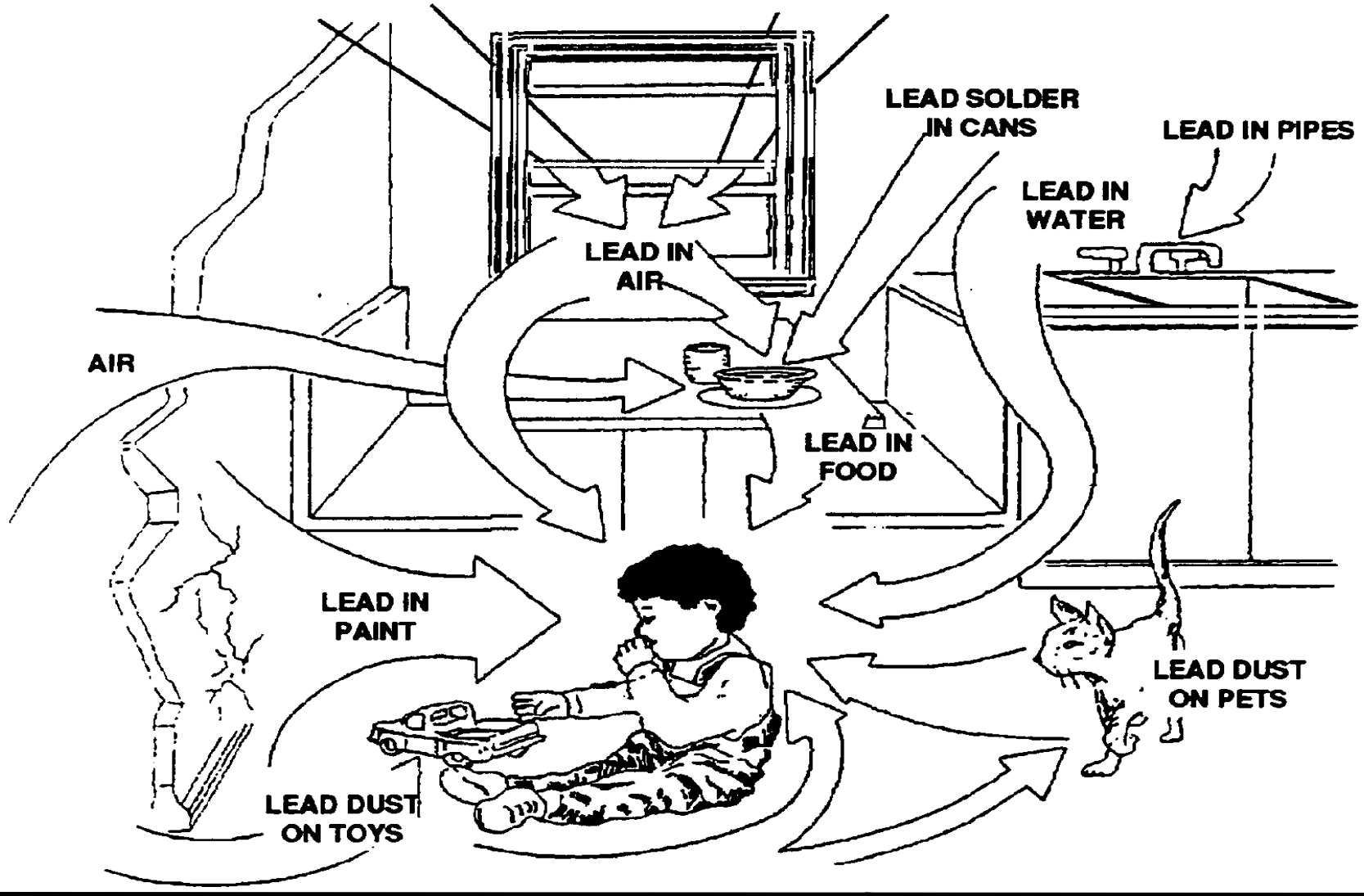


Sources of Lead Exposure

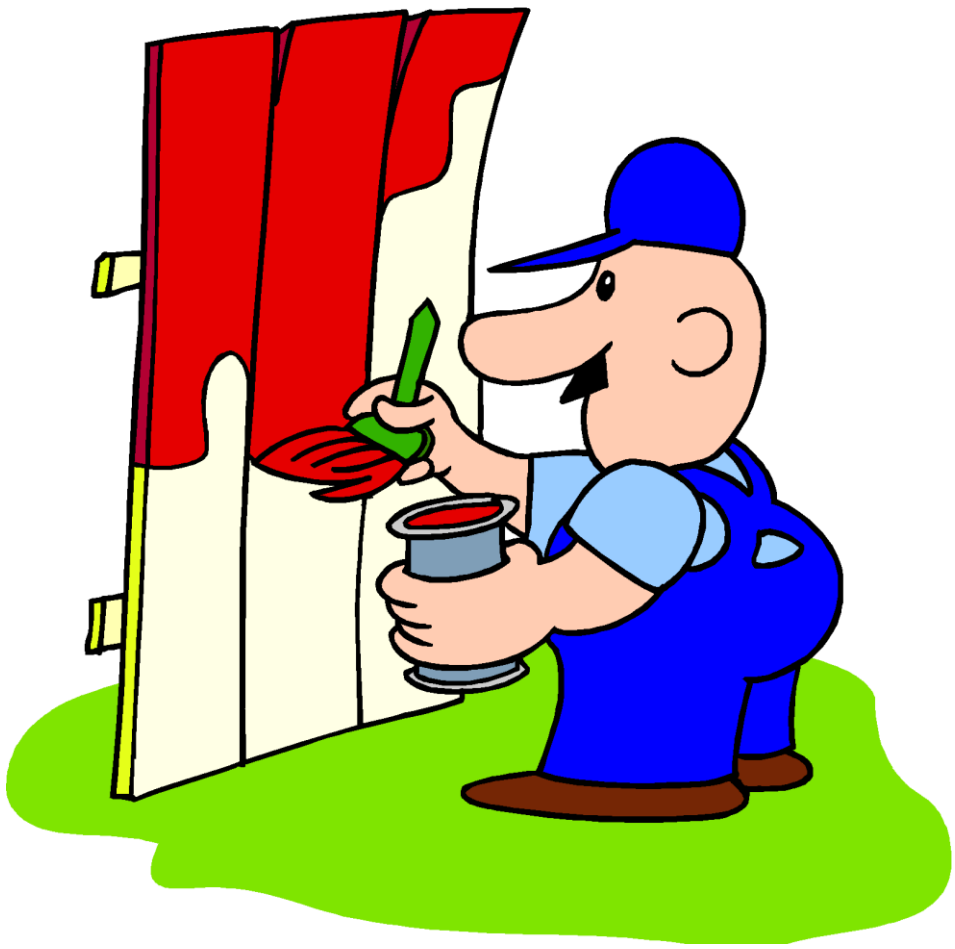
- Leaded Gasoline
- Industrial Releases
- Soil
- Food
- Hobbies
- Occupational Exposure



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^2
- 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

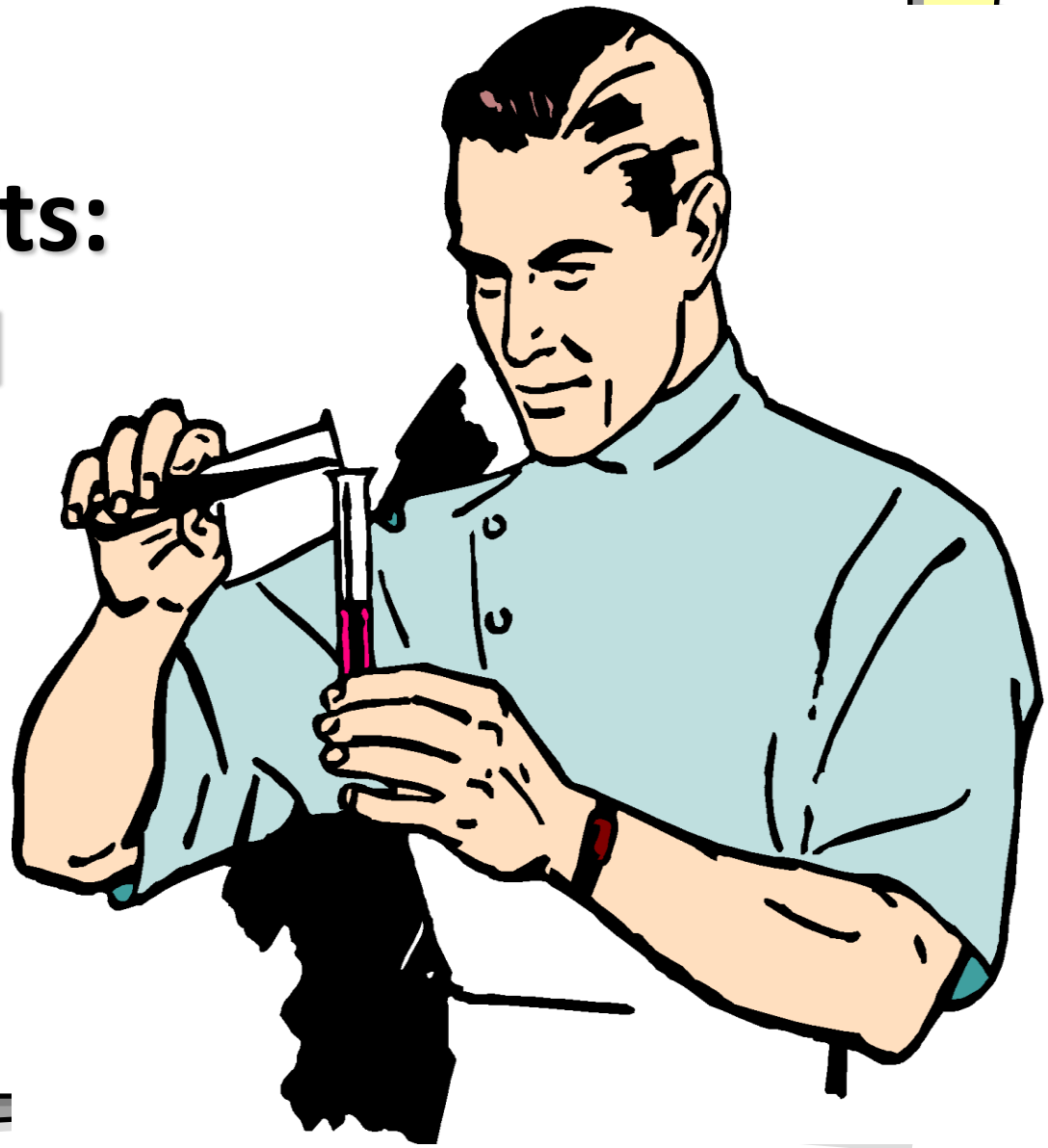
---

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.

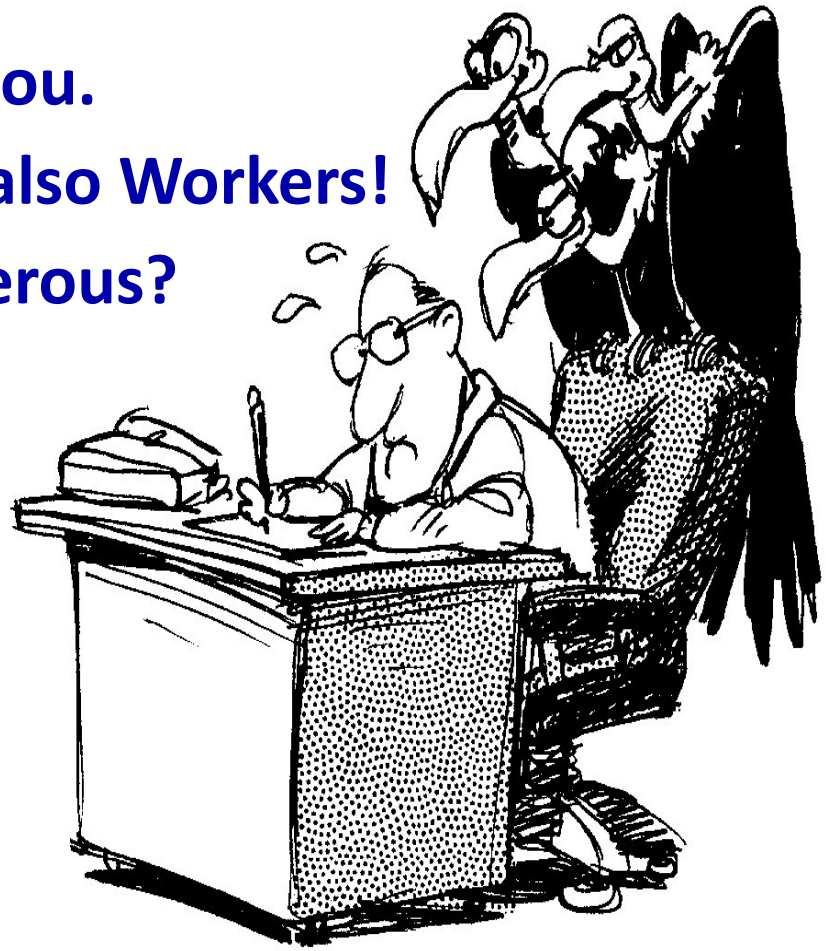
It's not just Kids, but also Workers!

How much lead is dangerous?

Any is a problem.

How does lead get into your body?

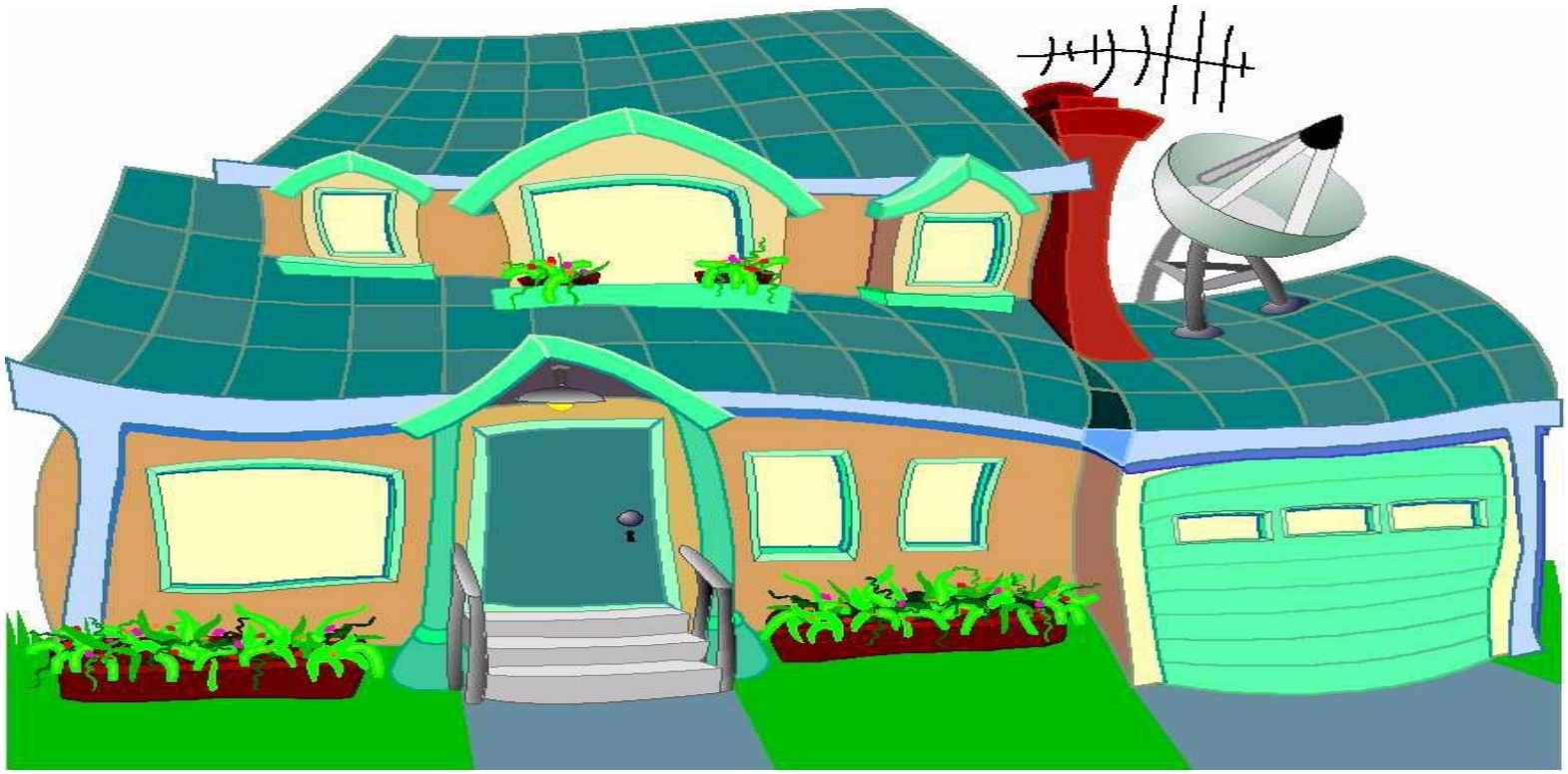
- **Breathing lead**
- **Swallowing lead**



How Can Lead Harm Your Body

- ✓ *Heart and blood system*
- ✓ *Kidneys*
- ✓ *Nervous system*
- ✓ *Bone tissue*
- ✓ *Female reporductive 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 filteration.

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

Until this year the EPA has been enforcing the Lead-Safe Renovation, Repair and Painting (RRP) requirements in Minnesota.

Minnesota Department of Health (MDH) rules covering these activities are nearing final adoption and are expected to go into effect in late summer, at which point the MDH will take over the enforcement of the RRP requirements.

Questions?

Thank You for joining us!

Our Contact info:

Lake States Environmental, Ltd.

www.lakestates.com

Nate Cox nate@lakestates.com

Bob Rogalla bob@lakestates.com

715-434-4467 or 800-254-9811