

# University of Rochester Lead-Safe Guidelines

**Purpose:** These guidelines were written to assist university personnel that may be working on building materials containing lead-based paint.

**Scope:** The scope of this document includes any potential occupational exposure to lead, including the disturbance of building material that may impact lead-based painted surfaces or structures.

**Background:** Lead is a bluish gray heavy metal that is very pliable and malleable. Lead dust can cause adverse health effects if inhaled or ingested; children are particularly susceptible. Overexposure to lead can affect the central nervous system, blood function, kidneys, and reproductive organs. Lead can enter the body via inhaling lead dust or by ingesting lead dust. Common symptoms of chronic lead exposure may include loss of appetite, nausea, vomiting, stomach cramps, fatigue, numbness, muscle and joint pain and headache.

Due to the adverse health effects of overexposure to lead, several government agencies have regulations regarding lead in the workplace:

- OSHA has two Lead Standards addressing occupational exposures to lead: General Industry (1910.1025) and Construction (1926.62).
- New York State has a Lead Law regarding lead levels in children and child-occupied facilities and housing, which states that lead-based paint on a “mouthable surface” or chipping/peeling lead-paint must be abated by a licensed contractor.
- EPA regulates lead-based paint for target housing where children live, attend school or daycare (code rule 40 CFR 745). EPA also regulates disposal of lead-contaminated waste.

Lead is corrosion-resistant which made it a popular paint additive. EPA has banned the use of lead-based paint (LBP) in target housing or child occupied facilities since 1978. Many homes and businesses built prior to 1980 still have lead-based paint. UR will consider buildings built after 1980 to be free of LBP. In general, anyone who is paid to perform work that disturbs paint in housing and child-occupied facilities built before 1978 must be an EPA-certified contractor. The UR owned daycare facility was built in 1997, so it does not have LBP in that building. UR owned family apartments (i.e. Whipple Park, University Park) were built prior to 1978, so all UR contracted building management companies must follow EPA Lead Safe requirements for management of target housing.

The primary lead hazard at UR properties involves the disturbance of lead-based paint. Lead exposure in the workplace can occur from inhalation or ingestion of dust that is generated during construction, repair, or renovation of building materials that contain lead-based paint. Lead-based paint is no longer used at UR. Surfaces with LBP in good condition are not considered a health hazard; it is only when the LBP deteriorates, chips, peels or is sanded or scraped that lead dust can be generated which creates a potential hazard.

## **Guidelines:**

The UR Lead-Based Paint program is managed by the Occupational Safety Unit/Asbestos Control Group (ACG) in the Environmental Health and Safety (EH&S) Department.

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## **A. Construction/Renovation Projects:**

- Prior to the start of any construction/renovation project, the Construction/Renovation Project Manager shall contact ACG to determine if asbestos and/or lead-based paint are present in the scope of work area.
- Typically, no Lead-Based Paint (LBP) sampling is completed for buildings built after 1980, unless the substrate is structural steel or some other coated metal that is highly suspect.
- For pre-1980 building renovation projects, a LBP survey is performed along with an ACM (Asbestos Containing Material) survey for the area to be impacted. If it's a large project, the survey contractor will employ an XRF gun. Paint chips are analyzed in smaller scale jobs to be more cost-effective.
- All LBP **abatement** activities are completed by EPA Certified Lead Abatement Contractors.
- If the lead level is greater than or equal to 1 mg per square centimeter or greater than 0.5% by weight, it is considered lead-based paint. At that level, a TCLP (Toxicity Characteristic Leaching Procedure) test is performed on the substrate to be discarded in order to determine if it is a hazardous waste. If it is determined to be hazardous waste, disposal is arranged through the UR Environmental Compliance Unit for small amounts (i.e. <55 gallon drum). Any materials with 5 mg/L or more on the TCLP test are regulated as Hazardous Waste. The Environmental Compliance Unit will dispose of materials that contain lead or lead-based paint by shipping it off-site for either recycling, incineration or landfill.
- For large amounts of LBP waste (i.e. >55 gallon drum of waste), the disposal is managed by a Hazardous Waste contractor through the UR Environmental Compliance group. For peeling lead paint, a TCLP test is not done and it is assumed to be hazardous waste; the contractor will bag up the paint chips and dispose of through the UR Environmental Compliance Unit
- Any construction/renovation project work that has the potential for creating lead dust (i.e. grinding, sanding LBP surface) requires containment and is to be completed by an EPA certified Lead contractor. Federal law requires that contractors performing renovation, repair or painting work that disturbs lead-based paint in target housing or child-occupied facilities must be EPA Lead-Safe Certified and use lead-safe work practices that minimize occupant exposure to lead dust. In addition, the Asbestos Control Group manages LBP testing prior to any demolition of UR owned properties.
- Manual sanding of LBP surfaces must be done with dust controls (i.e. either wet sanding or dust collection in place). Grinding of LBP surfaces is prohibited for UR employees and must be completed by EPA Lead Certified contractors. Abrasive blasting, welding, burning or cutting of LBP surfaces is not allowed; the lead-based paint must be removed from the surface prior to this type of work.

## **B. General Maintenance Work:**

For general maintenance work managed by in-house facilities personnel requiring wall penetrations (i.e. drilling holes for wall hangings, cutting holes for running wires or pipes) or minor maintenance to painted surfaces:

1. Contact the Asbestos Control Group to determine if asbestos is present. If asbestos is present, then an EPA certified contractor must do the work. If asbestos is NOT present, then the facilities personnel can proceed with wall penetrations/minor maintenance work using proper dust control strategies; wet methods or a dust collection system. If LBP testing is not done, then employees must assume that any painted surface in a pre-1980 building contains LBP.

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2. Specific work details shall be discussed and reviewed with supervision prior to the work being done to ensure safe work practices will be used. Many good dust control work practices are already in use at the Medical Center due to Joint Commission requirements.
3. See Appendix A for details on how to minimize lead dust exposure during minor maintenance work using lead-safe work practices such as containing dust inside the work area, using dust-minimizing work methods, and conducting a careful cleanup.
4. Any project dust collected in vacuum containers from a building or structure built before 1980 must be sent to the Environmental Compliance Group to determine if it is hazardous waste and how to dispose of it properly.

## C. Other Lead Sources:

In addition to LBP, another source of lead at UR is lead shielding used for Xray areas. Any installation or removal of lead-lined walls or bricks shall be done by an EPA Lead-Certified contractor. Lead aprons are inspected regularly and disposed of as hazardous waste if any cracks, holes, or other defects are found. Many shielding aprons currently in use are lead-free.

Other materials on campus that may potentially contain lead are lead solder, glazings, stained glass, sink traps, and sink liners in older buildings. Any use or planned destructive type activities should be reviewed by EH&S prior to work. Some lead compounds are used in UR Research Laboratories; these uses are covered under the OSHA Laboratory Standard (see the Chemical Hygiene Plan)

## D. Lead Awareness Training:

Lead Awareness Training is available either via MyPath or by scheduling a live session by contacting EH&S (275-3241). All employees involved in maintenance activities on surfaces that may contain lead-based paint must complete the Lead Training.

## References:

- OSHA Lead in Construction Standard 1926.62 [1926.62](#)
- OSHA Lead in General Industry Standard 1910.1025 [1910.1025](#)
- EPA Renovation Repair and Painting, RRP rule 40 CFR 745 [RRP Rule](#)
- New York State Lead Law NYCRR Title X, Part 67 [Part 67](#)
- [UR Chemical Hygiene Plan](#)
- EPA pamphlet Lead-Safe Certified Guide to Renovate Right [Renovate Right](#)

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## Appendix A:

### ***Dust Control for small-scale maintenance work:***

1. Conduct a Job Hazard Review with Supervisor prior to work to determine scope of work and to specify containment requirements, PPE requirements, and dust control methods to be used.
2. Prep the work area. The work area must be contained so that dust and debris does not escape from that area. Depending on scope of work, the rooms or areas where work is to be done may need to be blocked off or sealed with plastic sheeting to contain any dust that is generated. At a minimum, restrict access to only those doing the work task. No eating or drinking is allowed in work areas that may potentially contain lead dust.
3. Don PPE and use dust-control strategies to minimize dust such as wet methods or a tool shroud with dust collection systems with HEPA vacuum filter. For example, hand-held drills shall be equipped with a shroud and dust collection system for any wall penetrations. Water may be used to mist surfaces prior to sanding or scraping.
4. Thoroughly cleanup using wet methods or HEPA vacuum. Dry sweeping is prohibited. Use of compressed air or blowers is prohibited. Use a HEPA vacuum to clean up any residual dust and debris on all surfaces followed by wet wiping/wet mopping with plenty of rinse water as needed. Do a final check to be sure there is no visible dust, paint chips or debris in the work area.
5. If the HEPA vacuum is near full, empty it so it is ready for the next user. Use good dust control work practices to minimize airborne dust. A good method to minimize dust is to place the full vacuum container inside a large disposable bag, twist bag to seal the opening, then tip over vacuum container to empty contents into sealed bag. Wait a few minutes to let airborne dust settle inside of bag before opening it to remove the empty container. A N95 mask is recommended for this task. After the container is removed, the bag must be securely sealed and labelled. A Chematix disposal ticket should then be completed so the Environmental Compliance Group can pick up the waste bag.
6. Remove and discard any plastic sheeting that isolated the work area.
7. Remove PPE and wash hands.

### **Administration:**

- Contact EH&S (275-3241) for assistance in implementing these guidelines if needed.
- The Environmental Compliance Unit, formerly known as the Hazardous Waste Unit, can be reached at 275-2056.
- The Asbestos Control Group can be reached at 278-5900.

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