

Mount Holyoke College
Lead Paint Management Policy
February 2013

Purpose

Mount Holyoke College has developed this policy to protect employees and the community from the hazards of lead-based paint. For all buildings built before 1978, Mount Holyoke College will assume that lead paint is present, unless an inspection report or other testing proves otherwise. The main objective of this policy is to ensure that employees are aware of the hazards and use work practices that comply with the OSHA Lead in Construction Standard, 29 CFR 1926.62, and, when applicable, the EPA/Mass. Department of Labor Standards (DLS) Lead Renovation, Repair and Painting Rule (RRP) when performing tasks that have the potential to disturb lead-based paint (454 CMR 22.00). Outside Contractors are responsible for complying with these regulations when applicable, as well as MA DPH Lead Poisoning Prevention and Control (105 CMR 460.000) and MA DLS Deleading regulations (454 CMR 22.00) when performing lead abatement.

Background

Lead is a heavy, soft metal that was added to paint to make it last longer, resist moisture, speed drying and adhere to surfaces better. According to the Occupational Safety and Health Administration (OSHA), "lead means metallic lead, all inorganic lead compounds, and organic lead soaps. Excluded from this definition are all other organic lead compounds." Lead paint is toxic and was banned for residential use in 1978. The most common routes of exposure to lead are inhalation and ingestion. The adverse health effects of lead include damage to the circulatory system, kidneys, nervous system, bone tissue, growth problems, and can lead to death.

Commitment

Mount Holyoke College is committed to ensuring the safety of employees and protecting employees and the community from the hazards of lead paint. Mount Holyoke College employees are expected and required to follow the safe work practices outlined in this policy, including practicing good hygiene and donning the proper personal protective equipment (PPE) when required.

Departments Involved

Facilities Management:

- Painting
- Carpentry
- Any other group of Facilities Management or any outside contractor that is involved with painting, sanding, demolition, window or component removal and installation or other tasks that have the potential to disturb lead paint.

Work Area Assessment

All work areas where there is the potential for lead paint or other lead containing materials based on the age of the area and building materials will be presumed to be positive or tested to determine if lead is present. For large projects, a lead survey or inspection will be done by a certified environmental firm as part of the overall hazardous materials survey done prior to construction activities. For small projects, trained College employees can use EPA-approved kits to test surfaces to be disturbed.

Exposure Level

OSHA has established a permissible exposure limit (PEL) of 50 $\mu\text{g}/\text{m}^3$ (50 micrograms of lead per cubic meter of air) averaged over an eight-hour period. The established action level is 30 $\mu\text{g}/\text{m}^3$, and is the level at which compliance with OSHA 29 CFR 1926.62 Lead in Construction Standard is required. The following table indicates the anticipated exposure levels of some common construction activities.

LEAD-RELATED CONSTRUCTION TASKS -- PRESUMED 8-HOUR TWA EXPOSURE LEVELS

| > 50 to 500 $\mu\text{g}/\text{m}^3$ | > 500 $\mu\text{g}/\text{m}^3$ to 2,500 $\mu\text{g}/\text{m}^3$ | > 2,500 $\mu\text{g}/\text{m}^3$ |
|--|--|----------------------------------|
| Manual demolition | Using lead-containing mortar | Abrasive blasting |
| Dry manual scraping | Lead burning | Welding |
| Dry manual sanding | Rivet busting | Torch cutting |
| Heat gun use | Power tool cleaning without dust collection systems | Torch burning |
| Power tool cleaning with dust collection systems | Clean up of dry expendable abrasive blasting jobs | |
| Spray painting with lead paint | Abrasive blasting enclosure movement and removal | |

Source: OSHA Technical Manual Section V: Chapter 3 - CONTROLLING LEAD EXPOSURES IN THE CONSTRUCTION INDUSTRY: ENGINEERING AND WORK PRACTICE CONTROLS

College employees are only authorized to perform the first three tasks listed in the left column of the table: manual demolition, dry manual scraping, and dry manual sanding. Only trained employees may perform these tasks and they must use lead-safe work practices. Employees are not authorized to perform tasks for which lead exposure is presumed to be greater than 500 $\mu\text{g}/\text{m}^3$ because this level of exposure would exceed the protection factor of a half-face negative pressure air-purifying respirator.

Exposure Assessment

To confirm that employees will not be exposed to the 8-hour time weighted average action level of 30 $\mu\text{g}/\text{m}^3$, personal air monitoring will be conducted for operations lasting more than two hours that have the potential to disturb lead paint. These samples will be analyzed by a certified laboratory to determine if any employee may be exposed to lead at or above the action level. Samples will be collected in such a way that they are

representative of a full shift and include at least one sample for each job classification in each work area either for each shift or for the shift with the highest exposure level.

Negative Initial Determination

When sampling results indicate that employees are not exposed to airborne lead concentrations at or above the action level, a written record will be made. This record will include the date of the determination, location within the worksite, the name and employee identification number of each employee monitored, any information, observations or calculations which would indicate employee exposure to lead, any previous measurements of airborne lead and any employee symptoms which may be attributable to exposure to lead.

Monitoring results will be provided to employees no later than five working days after receipt, either by posting in a location that is accessible to the affected employees or by giving each individual a copy. As long as sampling data was taken within the past twelve months, monitoring requirements of the OSHA standard are fulfilled, except as noted in this policy's section "Additional Exposure Assessments." This record will be written by and kept on file at the Office of Environmental Health and Safety.

Positive Initial Determination

When sampling results indicate that employee exposure is at or above the action level, but at or below the PEL, air monitoring will be conducted at least every six months. Monitoring will continue until at least two consecutive measurements, taken at least seven days apart, indicate exposure is below the action level. At that time, monitoring will be discontinued, except as noted in the section "Additional Exposure Assessments" of this policy. Results will be provided to employees no later than five working days after receipt, either by posting or giving each individual a copy.

When sampling results indicate that employee exposure is above the PEL, monitoring will be conducted at least every three months. Monitoring will continue until at least two consecutive measurements, taken at least seven days apart, indicate exposure is below the PEL, but at or above action level. At this time, monitoring will be conducted at least every six months until at least two consecutive measurements, taken at least seven days apart, indicate exposure is below the action level. At that time, monitoring will be discontinued, except as noted in the section "Additional Exposure Assessments" of this policy. Results will be provided to employees no later than five working days after receipt, either by posting or giving each individual a copy. When exposure is at or above the PEL, a statement will be included on the posting or individual's copy notifying them that exposure was at or above the PEL and of the corrective action to be taken to reduce exposure.

Should a task be determined to exceed the OSHA PEL, a written compliance program will be implemented, reviewed and updated at least every six months.

Since most college operations do not normally last a duration of six months or longer, the Facilities Management Supervisor and Office of Environmental Health and Safety will collaborate to determine sampling schedules to ensure that we have current data

that is representative of specific work activities. These records will be kept on file at the Office of Environmental Health and Safety.

Additional Exposure Assessments

Whenever there is a change of equipment, process, control, personnel or a new task has been initiated that may result in additional employees being exposed to lead at or above the action level or may result in employees already exposed at or above the action level being exposed above the PEL, additional monitoring will be conducted.

Lead Abatement

For properties at which the College must perform lead abatement under MA DPH lead Poisoning Prevention and Control, (any residential premises where a child under the age of 6 resides), a licensed lead abatement contractor will be hired and an independent licensed Lead Inspector will perform dust wipes and must issue a "Letter of Full Compliance" prior to occupancy. The contractor is responsible for tenant and State notifications and any other requirements of applicable regulations.

Residential, School and Child Care Facility Requirements

The EPA Renovation, Repair and Painting (RRP) rule requires that contractors performing renovation, repair and painting projects that disturb lead-based paint in homes, child-occupied facilities (includes day care centers and schools occupied by children under 6) built before 1978 must be certified and must follow specific work practices to prevent lead contamination. The Massachusetts Department of Labor Standards is authorized by EPA to administer this standard, with corresponding regulatory requirements detailed in 454 CMR 22.00.

At Mount Holyoke College, The Gorse Children's Center at Stony Brook was built after 1978. Individual student rooms fall under the EPA Zero Bedroom exemption (a residential dwelling in which the living area is not separated from the sleeping area, e.g., a dorm room or studio apt. The Zero Bedroom exemption does not apply to apartments or suites in dormitories. All other residential properties and apartments are subject to the rule. For those occupancies, unless the repairs meet the definition of a minor repair, the work must be performed with a Mount Holyoke College certified Lead-Safe Renovator Supervisor, present or by a certified Lead-Safe Renovation Contractor or a licensed lead abatement contractor, unless testing determines lead is not present.

The College has identified the following properties maintained by Facilities Management for which the RRP rule would apply:

- 45 College Street - President's residence
- 57B College Street
- 73 College Street - Dean of Faculty's residence
- 79 College Street - Five College Women's Studies Research Center (building has a residential apartment)

- 94 College Street
- 5 Faculty Lane – Jeannette Marks House Community Center (apartment attached)
- 1 Faculty Lane
- 24 Silver Street
- 19 Woodbridge Street
- 21 Woodbridge Street
- 17 Morgan Street
- 3 Park Street
- All suites and apartments within residence halls

Minor Repairs

The following minor repairs or maintenance activities are not covered by the RRP rule:

- activities that disturb 6 square feet or less of paint per room inside
- activities that disturb 20 square feet or less on the exterior of a home or building

Minor repairs and maintenance activities do not include window replacement and projects involving demolition or prohibited practices (burning or torching, sanding, grinding or other high speed operations).

Amherst College Rental Housing is responsible for complying with all applicable regulations when working at Mount Holyoke College properties.

Requirements for Work Performed by College Employees

- Prior to the start of the work, the supervisor will arrange for determination of the presence of lead, either by testing with LeadCheck swabs, sending paint chips to a qualified laboratory or hiring a Lead Inspector. All buildings constructed and/or painted components installed prior to 1978 will be assumed to be positive for lead unless proven otherwise.
- Evaluate the project to determine the appropriate work set up and personal protective equipment (PPE), identify safety hazards and proper work practices.
- No one under the age of 18 may disturb (scrape, sand, etc.) lead paint.
- Keep all unauthorized personnel out of the work area.
- When required, wear a NIOSH-approved respirator with HEPA filters. Disposable dust masks are not sufficient. Note: Individuals wearing respirators must be in the College's Respiratory Protection Program.
- Wear protective clothing, such as full-body coveralls, gloves, and goggles or face shields.

- GFCIs are required for all power equipment.
- Only HEPA-filtered vacuums are permitted.
- Use wet methods, (i.e. misting), to prevent dust generation.
- When using wet methods, do not create run-off and be aware of slippery conditions and electrical hazards.
- Do not use power tools, (grinders, sanders, etc.), unless they are equipped with HEPA-vacuum attachments.
- Never eat, drink, or smoke in the work area.
- Always wash your hands and face before you eat, drink, or smoke and whenever leaving the work area.
- Remove PPE and dispose of it at the work site to avoid tracking dust to other areas or your home.

Indoor Work Practices (when disturbing more than 6 SF)

- Work on only one room at a time.
- Clean and remove all items that can be moved out of the work area.
- Clean and cover immovable items and floors with plastic and seal with tape.
- If applicable, shut down HVAC system, and tape plastic over the vents and grates.
- Seal off the work area by covering windows and doors with plastic sheets.
- Clean the work area completely at the end of each day and vacuum all surfaces with a HEPA-vacuum.
- Decontaminate all tools and equipment before removing them from the work area.
- Plastic sheeting and disposable tarps should be misted, folded inward, put into plastic bags and sealed with tape.
- When the job is completely done, clean the entire work area by HEPA-vacuuming, then wet-wiping, and then HEPA-vacuuming again.
- Mop buckets must be emptied into toilets or utility sinks, only. Do not empty buckets of wash water into public sinks or floor drains.

Outdoor Work Practices (when disturbing more than 20 SF)

- Close all doors and windows within 20 feet of the work area.
- Pre-clean the ground, (i.e. remove visible paint chips/debris), then cover with a tarp/drop cloth and secure it to the building to catch any falling dust and debris. Tarps must extend a minimum of 10 feet out for a 1-story building and must extend

an additional 5 feet out per story or as far as feasible to sufficiently catch falling paint chips and debris.

- Cover nearby plants, sandboxes, play equipment, outdoor furniture, etc.
- Do not work on windy days.
- Follow all ladder safety procedures and check for power lines and other electrical hazards.
- Clean the work area completely at the end of each day and vacuum all surfaces, (window sills, stairs, tarps, etc.), with a HEPA-vacuum.
- Decontaminate all tools and equipment before removing them from the work area.
- At the end of each workday, and when the job is completely done, clean the work area by HEPA-vacuuming all visible paint chips and debris.
- Re-useable tarps should be folded inward and stored in plastic, taped bags.

Post Cleaning Verification

At the conclusion of RRP work and before plastic sheeting and other barriers that separate the work area from other areas are removed, a Certified Lead-safe Renovator-supervisor assigned to the Project must carry out the procedures for post renovation cleaning verification described in Appendix A.

Waste Management

Waste generated from work in residential areas should be collected in plastic bags and can be disposed of as household trash in a municipal solid waste landfill or municipal solid waste combustor, in accordance with Massachusetts DEP regulation 310 CMR 30.104 and the USEPA memorandum “Regulatory Status of Waste Generated by Contractors and Residents from Lead-Based Paint Activities Conducted in Households.”

In non-residential areas, lead paint debris, such as architectural building components, (i.e. doors, window frames, painted wood, etc.), dust and sludge must be analyzed by a certified laboratory using Toxicity Characteristic Leaching Procedure (TCLP). If the results from a representative sample of the waste stream exceed the regulatory limit of 5 mg/L of lead in the waste leachate, then the waste must be managed and disposed of as hazardous waste. All lead paint chips must be collected in a DOT-approved container. The container should be labeled with a hazardous waste label that should list “lead paint chips” as the waste name, “lead” as the ingredient, and “toxic” as the hazard.

Personal Protective Equipment

Respirators are required when an employee’s exposure to lead is at or exceeds the PEL or when performing tasks lasting longer than two hours for which the College does not have a negative initial determination. All employees wearing respirators must be in the College’s Respiratory Protection Program.

OSHA requires that coveralls or similar full-body work clothing, gloves, head covering, and disposable shoe coverlets be provided in a clean and dry condition at least weekly. OSHA requires that this PPE be provided daily when employees are exposed to lead at levels over 200 $\mu\text{g}/\text{m}^3$. Mount Holyoke College will exceed OSHA's requirement by providing this PPE daily to all employees performing tasks that may disturb lead, or upon request from the employee.

Medical Surveillance

If an employee is exposed to lead at the action level, 30 $\mu\text{g}/\text{m}^3$, on any one day, initial medical surveillance, consisting of biological monitoring in the form of blood sampling and analysis for lead and zinc protoporphyrin (ZPP) levels, will be made available. If an employee's exposure to airborne lead is at the action level for more than 30 days in any consecutive 12 months, then a medical surveillance program will be implemented according to the following schedule:

- At least every two months for the first six months, and every six months thereafter.
- At least every two months for employees whose last blood sampling and analysis indicated a blood lead level at or above 40 $\mu\text{g}/\text{dl}$ (micrograms of lead per deciliter of blood).
- At least monthly when an employee is removed from exposure due to an elevated lead level. (Employees must be medically removed when the blood lead level is 50 $\mu\text{g}/\text{dl}$).

Additionally, for employees in the medical surveillance program, a medical exam and consultation will be made immediately available if the employee:

- Develops signs or symptoms associated with lead-related disease.
- Demonstrates difficulty in breathing during respirator use or a fit-test.
- Wants medical advice concerning effects of past or current lead exposure.
- Is under medical removal and has a medically appropriate need.

Training

All employees that perform tasks that have the potential to disturb lead must initially complete the MHC lead paint safety training that covers the OSHA Lead in Construction standard. This training must be repeated annually for any employees subject to lead exposure at/above the action level on any day. Employees performing work, other than minor repairs, in pre-1978 homes or child-occupied facilities must complete the initial 8-hour MA/EPA Lead-Safe Renovator-Supervisor course and attend a 4-hour refresher course every 5 years.

Records

Employee training records, in-house lead testing records and air monitoring data will be kept by the Office of Environmental Health and Safety. Records of lead paint

abatement, lead-safe renovation, inspections, and Letters of Compliance will be kept by the Facilities Management Chief Engineer and Associate Director of Operations.

Program Review

This program will be reviewed periodically by Facilities Management supervisors and the Office of Environmental Health and Safety to ensure compliance with OSHA and any other applicable regulations. Additionally, projects performed throughout the year can create the opportunity to evaluate our work practices to determine if procedures outlined in this policy are adhered to and if there is new information or guidelines that can be implemented to improve this policy and our overall environmental and safety efforts.

EH&S 2/2013

Appendix A

454 CMR: DIVISION OF OCCUPATIONAL SAFETY PROCEDURES FOR POST-RENOVATION CLEANING VERIFICATION

I. Interiors.

(i) A Certified Lead-safe Renovator-supervisor or a Licensed De-leader-supervisor must perform a visual inspection to determine whether dust, debris or residue is still present. If dust, debris or residue is present, these conditions must be removed by re-cleaning and another visual inspection must be performed.

(ii) After a successful visual inspection, the Certified Lead-safe Renovator-supervisor or Licensed De-leader-supervisor must:

(A) Verify that each windowsill in the work area has been adequately cleaned, using the following procedure:

(1) Wipe the windowsill with a wet disposable cleaning cloth that is damp to the touch. If the cloth matches or is lighter than the cleaning verification card, the windowsill has been adequately cleaned.

(2) If the cloth does not match and is darker than the cleaning verification card, re-clean the windowsill as directed 454 CMR 22.11(9)(f), then either use a new cloth or fold the used cloth in such a way that an unused surface is exposed, and wipe the surface again. If the cloth matches or is lighter than the cleaning verification card, that windowsill has been adequately cleaned.

(3) If the cloth does not match and is darker than the cleaning verification card, wait for one hour or until the surface has dried completely, whichever is longer.

(4) After waiting for the windowsill to dry, wipe the windowsill with a dry disposable cleaning cloth. After this wipe, the windowsill has been adequately cleaned.

(B) Wipe uncarpeted floors and countertops within the work area with a wet disposable cleaning cloth. Floors must be wiped using an application device with a long handle and a head to which the cloth is attached. The cloth must remain damp at all times while it is being used to wipe the surface for post-renovation cleaning verification. If the surface 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 such section separately with a new wet disposable cleaning cloth. If the cloth used to wipe each section of the surface within the work area matches or is lighter than the cleaning verification card, the surface has been adequately cleaned.

(1) If the cloth used to wipe a particular surface section does not match the cleaning verification card, re-clean that section of the surface as directed at 454 CMR 22.11(9)(f), then use a new wet disposable cleaning cloth to wipe that section again. If the cloth matches the cleaning verification card, that section of the surface has been adequately cleaned.

(2) If the cloth used to wipe a particular surface section does not match the cleaning verification card after the surface has been re-cleaned, wait for one hour or until the entire surface within the work area has dried completely, whichever is longer.

(3) After waiting for the entire surface within the work area to dry, wipe each section of the surface that has not yet achieved post-renovation cleaning verification with a dry disposable cleaning cloth. After this wipe, that section of the surface has been adequately cleaned.

(iii) When the work area passes the post-renovation cleaning verification, remove the warning signs.

II. Exteriors.

(i) A Certified Lead-safe Renovator Supervisor or a Licensed De-leader-supervisor must perform a visual inspection to determine whether dust, debris or residue is still present on surfaces in and below the work area, including windowsills and the ground. If dust, debris or residue is present, these conditions must be eliminated and another visual inspection must be performed. When the area passes the visual inspection, remove the warning signs.