



ENVIRONMENTAL HEALTH AND SAFETY

Environmental Program: Lead Paint

Purpose/General Discussion:

Some facilities and equipment at the Colorado School of Mines have surfaces coated with lead paint. In addition, research projects may involve the use of elemental lead or lead-containing compounds. This document outlines procedures to be used in dealing with lead-based paint, elemental lead, and lead-containing compounds.

Authoritative References:

Title 29, Code of Federal Regulations, Chapter 1910.1025, Lead

Title 29, Code of Federal Regulations, Chapter 1926.62, Lead in Construction

Colorado Department of Public Health and Environment, Regulation 19, Lead-Based Paint Abatement

HUD Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing, June 1995, HUD-006700

Title 40, Code of Federal Regulations, Part 745, Lead-Based Paint Poisoning Prevention in Certain Residential Structures

Title 24, Code of Federal Regulations, Part 35, Lead-Based Paint Poisoning Prevention in Certain Residential Structures

Responsibilities:

Facilities Management and Capital Planning and Construction Departments are responsible for surveying and testing buildings for the presence of lead-based paint prior to renovation or demolition. When necessary, these departments are responsible for obtaining lead-based paint abatement services for renovation and demolition projects.

The Environmental Health and Safety Department is responsible for the following:

- Lead Hazard Awareness Training for maintenance personnel and researchers performing research that involves potential for lead exposures.
- Medical surveillance services to campus personnel involved in lead related work or research.
- Proper collection and disposal of lead containing wastes.
- Sampling and analysis of lead.
- Providing guidance to Facilities Management and Capital Planning and Construction on renovation and demolition projects that may impact lead-based paint.

Academic Departments are responsible for identifying personnel who are working with lead or lead compounds. Academic Departments are also responsible for implementing and enforcing safe work practices.

The Student Life Department is responsible for proper disclosure of lead-based paint hazards to residents of child-occupied facilities where lead-based paint may be present. A copy of the standard lease agreement with disclosure documents is attached.

Discussion/Description:

1. Research Use of Lead and Lead Compounds: The use of lead and lead compounds in research creates a potential for exposure to lead. The use of small amounts of lead reagents for short-term projects may be handled in a manner appropriate to other hazardous materials used in research. If larger (500 grams or more) quantities are used or extended projects are anticipated, the project manager should contact EHS. EHS can provide assistance in obtaining medical monitoring services, developing a written lead protection program, and training personnel in the use of respirators and other protective measures.
2. Lead Paint in Construction Activities: Buildings constructed prior to 1978 may contain lead-based paint (lead content above 0.5% by weight).
 - If renovation activities are expected to disturb painted surfaces, the surfaces should be tested for the presence of lead prior to disturbance.
 - Disturbance of lead-painted surfaces through demolition, sanding, cutting, or burning may release hazardous concentrations of lead. Other means of removal or proper control measures must be used.
 - EHS can provide assistance in identifying lead paint coated surfaces. Federal Occupational Safety and Health Administration rules for management of lead in construction provide guidance for renovation and demolition projects. See Title 29, Code of Federal Regulations, Chapter 1926.62, Lead in Construction.

3. Training: Each student, staff, or faculty member whose duties may result in lead exposures above concentrations of 30 micrograms per cubic meter of air ($\mu\text{g}/\text{M}^3$) receive training.
 - Training includes information on the hazards of lead exposure, occupational exposure standards, use of respirators, personal protective equipment, decontamination procedures, medical monitoring, and medical removal protection requirements.
 - EHS provides lead safety training on an annual basis.
 - All painting, plumbing, and carpentry personnel, including foremen and supervisors, are required to complete this training.
 - Supervisors should ensure that new hires are directed to receive this training.
4. Permissible Exposure Limit: The permissible exposure limit for lead is $50 \mu\text{g}/\text{M}^3$ averaged over an eight-hour workday.
5. Respirator Selection: If respirators are used to control airborne lead exposures, respirators must be equipped with dust filtering P100 rated cartridges. Half-face respirators are limited to use in atmospheres with less than 0.5 milligrams of lead per cubic meter of air (ten times the permissible exposure limit). Full-face respirators that use filtering or air-purifying cartridges are limited to atmospheres with airborne lead concentrations less than $2.5 \text{ mg}/\text{M}^3$ (fifty times the permissible exposure limit). Respirators should be fit tested for each individual prior to use. Respirator use should comply with the Mines Respiratory Protection Program. A copy of this program can be obtained at the Environmental Health and Safety Department.
6. Medical Monitoring: Any individual required to wear a respirator as a part of their duties is required to undergo an annual physical examination. The examination must be completed prior to the first use of the respirator. EHS arranges for the provision of appropriate physical examinations by qualified occupational health physicians. Any individual who may be exposed to airborne lead concentrations above 30 micrograms per cubic meter of air is required to undergo initial and annual physical examinations.
7. Medical Removal Protection: Individuals found to have elevated blood lead levels may be reassigned to work areas that do not have potential for lead exposures. This reassignment is continued until monitoring indicates that blood lead concentrations have returned to acceptable levels.

8. Child-Occupied Facilities: The Mines Park married student housing facility is the only facility on campus that is considered a child-occupied facility.
- (i) Disclosures of Lead-Based Paint Risks: At the time of initial occupancy, lessees are provided with a Lead-Based Paint disclosure form and the brochure, *Protect Your Family From Lead in Your Home*, Federal Environmental Protection Agency, May, 1995, Document Number EPA747-K94-001.
 - (ii) Testing of Child-Occupied Facilities for Lead-Based Paint: The testing of surfaces or collection of samples for evaluation of the presence of lead-based paint will be performed by qualified individuals. An individual who holds current licensure as a Certified Lead Inspector under State of Colorado Department of Public Health and Environment (CDPHE) Regulation Number 19 is considered qualified. Only individuals who hold current licensure as a Certified Lead Risk Assessor will perform risk assessment in child-occupied facilities.
 - (iii) Children with Elevated Blood Lead Levels: Upon discovery of a child with elevated blood lead levels who is a resident at a CSM facility, a lead hazard screen shall be performed on the residential unit occupied by the child at the time of the discovery. The lead hazard screen will be performed pursuant to the requirements of CDPHE Regulation Number 19.IV.B.