



ENVIRONMENTAL HEALTH & SAFETY

Control of Lead Hazards for Renovation and Maintenance

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ACRONYMS & DEFINITIONS

EHS	Environmental Health and Safety
EPA	Environmental Protection Agency
FM	Facilities Management
ISS	Institutional Support Services
LBP	Lead-Based Paint
OSHA	Occupational Safety and Health Administration
PDC	Planning Design and Construction
RCRA	Resource Conservation and Recovery Act
TCLP	Toxicity Characteristic Leachate Procedure

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Lead was a major ingredient in many types of paint until the late 1940s. In the early 1950s, other pigment materials became more popular; however, lead compounds were still used in some pigments and as drying agents. EPA defines lead-based paint (LBP) as paint containing greater than 0.5% or 5,000 parts per million (ppm) by weight. Federal regulations lowered the permissible lead content in dry paint film to 0.5% in 1973 and again in 1978 to 0.06%. Because of the potential for widespread use at UNM, we must expect that any building constructed earlier than 1978 may contain LBP.

1. SCOPE

This document describes appropriate methods for managing lead hazards associated with renovation/maintenance projects. It is intended to be used by UNM Institutional Support Services (ISS) departments such as Facilities Maintenance (FM) and Planning Design and Construction (PDC) who are involved with the planning processes of renovation and construction projects and those responsible for oversight during the construction phase. Renovation and construction project designers must contact the Environmental Health & Safety Department (EHS) EHS to ensure adequate and up-to-date information is utilized during the planning process.

2. RESPONSIBILITIES

2.1. ISS renovation/maintenance project planners and managers are responsible for:

- Ensuring that all requirements of this policy are carried out as applicable to their specific projects; and
- Coordinating efforts between EHS and the selected contractor.

2.2. EHS is responsible for:

- Advising ISS representatives concerning the lead hazards that may affect their projects;
- Assessing the presence and scope of lead-containing materials;
- Managing abatement contractors to remove LBP (when necessary) prior to project;
- Coordinating with a vendor to take samples of LBP components for laboratory analysis for purposes of classifying the LBP component as hazardous waste or non-regulated construction debris; and
- Acting as a liaison between UNM and regulatory authorities.

3. IMPLEMENTATION

3.1. Inspection and Sampling

When an upcoming renovation/maintenance project is beginning the planning phase by ISS department, notification and a written scope of work and plans are to be provided to EHS. Once EHS is informed of a project that may involve lead-based paints (LBP), EHS staff will perform or coordinate an inspection of the affected areas, to provide information that is essential to the project planning process. Specifically, inspection results will facilitate early decisions about expected occupational exposures to lead-contaminated dust, the necessity for abatement of LBP, control measures, and the potential for generation of regulated hazardous lead-contaminated waste.

Because of the potential impact on the project, it is paramount that inspections are conducted in such a manner to ensure that resultant information is useful. Therefore, a sufficient number of measurements or samples must be obtained (because of such variables as paint film thickness, inadequate mixing, number of coats, etc.) to assure accurate classification. EHS is responsible for coordinating the collection of samples by a vendor.

- XRF (X-Ray Fluorescence) Sampling. At least five (5) measurements must be taken of each homogeneous building component with a similar coating.
- Bulk Sampling for LBP. At least two (2) samples must be taken of each building component with similar coating. If sampling by scraping paint, the area scraped must be quantified. The paint within this test area (6.25 square centimeters is recommended) is scraped down to the substrate and submitted for analysis of lead content (in ppm) by an accredited laboratory.
- In addition to Bulk Sampling and XRF Sampling, EPA 40 CFR 745.223 allows for the use of EPA approved Rhodizonate-based or Sulfide-based LBP test kits. However, this method is potentially less effective than the other two methods and therefore is not recognized as an appropriate method of determining LBP at UNM by EHS.
- Sampling for waste disposal by the EPA's Toxicity Characteristic Leachate Procedure (TCLP) test. Representative composite samples of at least 125 grams will be taken of the materials expected to become construction debris during any renovation and/or demolition of buildings, and which were determined to be LBP during XRF and bulk sampling. Although, regulations require this sampling to occur on materials containing greater than 10,000 ppm of lead, it is typically appropriate to sample all items determined to be LBP. These composite samples are to be submitted for lead analysis by the EPA's TCLP test by an accredited laboratory. Whenever TCLP analytical results show lead levels in the extract at or above 5.0 milligrams per liter, these materials are regulated by the Environmental Protection Agency as hazardous wastes, and cannot be legally disposed at regular landfills.

3.2. Project Planning

Once the inspection is complete, EHS will present a report of the measurements taken, coupled with specific recommendations to the ISS project planners. Such recommendations will address, but not necessarily be limited to the following areas:

- Necessity for abatement prior to general construction, renovation and/or demolition;
- Types of engineering and administrative controls necessary to protect employees in potentially affected areas;
- Management of lead-contaminated waste materials; and
- Advising ISS on notification requirements to contractors.

3.3. Abatement

When LBP will be disturbed during the course of renovation/maintenance activities and is determined by TCLP to be hazardous waste, abatement by a specialized abatement contractor will be required. All work will be managed by EHS and performed by a contractor who has been prequalified by EHS, and who is contractually obligated to comply with all applicable OSHA and EPA regulations.

3.4. Notification

The ISS representative will inform contractors of the presence of LBP and other lead- containing materials that may be affected by the project. This may be done by letter with the analytical results attached.

3.5. EPA Regulated Lead-Based Hazardous Wastes

Construction wastes from lead abatement projects with analytical results that show lead levels at or above 5.0 milligrams per liter in the TCLP analysis are regulated as hazardous wastes under the Resource Conservation and Recovery Act (RCRA). Because RCRA regulations demand that UNM retain ownership and concomitant liability for the wastes until destruction/disposal, it is essential that all such wastes be managed as hazardous waste and with the assistance of EHS.

4. REFERENCES

29 CFR 1910.1025, OSHA Lead Standard for General Industry

29 CFR 1926.62, OSHA Lead Standard for Construction

40 CFR Parts 260-272, EPA Hazardous Waste Regulations

40 CFR 745, EPA Lead-based Paint