Management and Disposal of Building Demolition Waste Containing Lead Based Paint

This fact sheet provides guidance on managing demolition waste from buildings that may contain materials coated with lead-based paint, referred to as LBP. It replaces DEQ Hazardous Waste program policy number 97-002A and previous guidance. The focus of this fact sheet is waste disposal practices; it does not address worker safety or lead-safe practices, which are regulated by the Oregon Occupational Safety and Health Administration and the Oregon Health Authority. For household LBP waste management guidance, please refer to the related fact sheet here.

This fact sheet offers a general overview and does not cover all applicable regulations. Please refer to federal, state, and local regulations for specific requirements, as additional hazardous waste, solid waste, or lead-related laws may apply, including Oregon Revised Statutes Chapter 459, Oregon Administrative Rules Chapter 340 Divisions 93-97, and local lead ordinances. Worker safety and lead-safe practices are not included here. Avoid downloading or saving this fact sheet, as the information may become outdated. For the latest guidance, consult official sources directly.

Applicability

This guidance is for those managing demolition waste from buildings that may contain LBP-coated materials. It focuses solely on demolition and does not cover the removal of LBP from standing structures for re-painting or recoating. If paint is removed (e.g., through blasting, scraping, or washing), an accurate hazardous waste determination must be performed on the resulting waste streams. These may include blast media mixed with paint, wastewater mixed with paint, or paint chips generated from scraping. Proper waste characterization is critical in these cases to ensure compliance with applicable regulations.

Potential LBP-coated materials include, but are not limited to:

Last updated: March 2025

- Siding
- Metals
- Wood products
- Drywall and plaster
- Tile
- Bricks
- Rocks
- Shingles
- Concrete
- Asphalt

Hazardous Waste Determination Methods

When waste is generated, the generator is required to perform a complete and accurate hazardous waste determination as per 40 CFR 262.11 and OAR 340-102-0011(2). This can be made through testing and analysis, generator knowledge, or a combination of both.

For demolition debris that may contain LBP, consider the following methods:

- **Toxicity Characteristic Leaching Procedure Test:** Also called TCLP, this method is used to analyze the waste for the regulated metals, including lead, to determine if it exhibits hazardous characteristics.
- **Total Lead Analysis:** If the lead concentration is below 100 ppm, the waste is generally considered non-hazardous, approximating a TCLP result below the 5 ppm regulatory threshold.
- **Knowledge-Based Determination:** Utilize well-documented knowledge about the materials and processes to evaluate potential for hazardous waste characteristics, considering the amount of LBD present in relation to the total debris.

Sampling for Analysis

The key to sampling a heterogeneous pile of demolition debris is obtaining samples representative of the whole waste pile. Coated and painted surfaces often represent only a small fraction of the whole and should be included proportionally to characterize the debris accurately.

In other words:

- Removing paint from coated materials and sampling only the paint chips does not represent the entire waste pile.
- Sampling only the materials coated with paint, without including other debris mixed with them, does not represent the entire waste pile.
- Excluding painted materials and only sampling unpainted debris does not represent the entire waste pile.

NOTE: Engaging an environmental engineer or consultant can help select methods appropriate for making an accurate hazardous waste determination.

Laboratory Results: TCLP Allowable Levels vs. Totals Analysis

When using a TCLP analysis to make a hazardous waste determination, the allowable levels for lead and the other regulated metals, as specified in 40 CFR 261.24, must not be exceeded. To be non-hazardous, the lead concentration must not be greater than or equal to 5.0 mg/l (5 ppm).

If a hazardous waste determination focuses solely on lead, a **Totals Analysis** may be used as an alternative to TCLP. The relationship between Totals Analysis and TCLP results can be approximated by dividing the total lead concentration by a dilution factor of **20**. This calculation provides an estimated TCLP result. For the waste to be non-hazardous, the total lead concentration must not be greater than or equal to **100 mg/kg (100 ppm)** to ensure the waste meets the TCLP threshold of less than 5 ppm.

This approach is commonly used to narrow the scope of analysis, provided it is supported by well-documented generator knowledge. Accurate sampling of heterogeneous demolition debris remains critical, and any analysis must ensure that the results represent the entire waste pile. Refer to EPA Method 1311 (TCLP) and guidance on hazardous waste determinations in 40 CFR 262.11 for further details.

Best Management Practices (BMPs)

- **Minimize Contamination:** Inspect the structure before demolition and remove potentially hazardous materials such as mercury-containing devices, lead piping, and containerized chemicals. Manage these materials according to applicable hazardous waste regulations.
- **Proper Disposal:** Dispose of non-hazardous construction and demolition debris in a permitted construction and demolition or lined solid waste landfill.
- **Maintain Documentation:** Document the hazardous waste determination process, including the rationale for the chosen determination method, sampling strategies employed, analytical results, and supporting data such as historical information and safety data sheets (SDS). Ensure all documentation aligns with 40 CFR 262.11 and OAR 340-102-0011(2) requirements.

Additional Resources

- **Oregon DEQ:** How to Make a Hazardous Waste Determination
- **EPA:** SW-846 Test Method 1311: Toxicity Characteristic Leaching Procedure
- **EPA:** RCRA Waste Sampling Draft Technical Guidance

Have questions?

Reach out to the DEQ Hazardous Waste program by calling 1-844-841-4938 or email hazwaste@deq.oregon.gov

Translation and Accessibility

Documents can be provided upon request in alternate formats for individuals with disabilities or in languages other than English for people with limited English skills. To request a document in another format or language, call DEQ at 503-229-5696 or email deqinfo@deq.oregon.gov

Non-discrimination statement

DEQ does not discriminate on the basis of race, color, national origin, disability, age, sex, religion, sexual orientation, gender identity, or marital status in the administration of its programs and activities. Visit DEQ's Civil Rights and Environmental Justice page.

700 NE Multnomah Street, Suite 600, Portland, Oregon 97232
Phone: 503-229-5696, Toll Free in Oregon: 800-452-4011

State of Oregon
DEQ Department of Environmental Quality