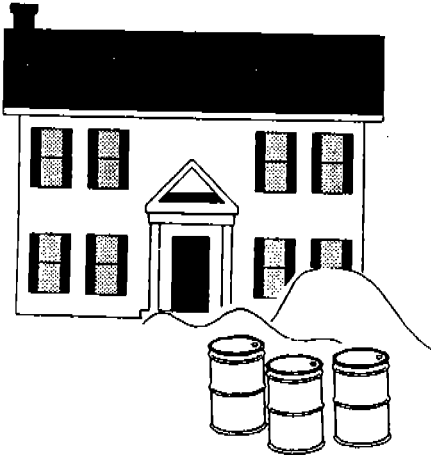




Just the Facts

93-010-1294

Waste Characterization of Lead Paint-Containing Wastes



Federal regulations mandate that waste generators determine whether their wastestreams should be classified as "hazardous wastes." Wastes that are deemed hazardous must be carefully stored, treated and disposed of according to the Resource Conservation and Recovery Act (RCRA). One of the characteristics that defines a hazardous waste is the amount of certain toxic constituents (such as metals like lead) that may leach out of the waste. The RCRA defines the analytical method to evaluate the waste; it also stipulates the allowable limits for a constituent (like lead) to leach.

The table on the back of this page describes various types of debris that are commonly "contaminated" with lead-containing paint. The discussion assumes that lead-containing paint has been previously identified [either through direct laboratory analyses, x-ray fluorescence (XRF) testing, spot-tests, or historic knowledge]. If NO information is available regarding the existence of lead in the painted surfaces, screening with one of these methods (i.e., direct lab analyses, XRF, etc.) is recommended to provide information for worker protection. The screening method can possibly reduce the need for expensive waste characterization analysis (known as the Toxicity Characteristic Leaching Procedure or TCLP).

After each type of waste, the table provides a suggested waste characterization code: HW = hazardous waste [according to RCRA, Title 40, Code of Federal Regulations (CFR), Part 261.24, Toxicity Characteristic]; SW = nonhazardous waste. Use

these suggested waste characterizations as a tool to assess your operation's wastestream and determine when analyses are warranted; also use these waste characterizations to determine when enough information is available to characterize your waste based on "generator knowledge." There are exceptions to the waste characterizations listed based on general industry-based findings.

Keep in mind that when waste is deemed to be SW (i.e., nonhazardous), some limited sampling may be warranted for "liability's sake." Classifying waste as HW without sampling and analyses, on the other hand, may be overly conservative and costly. While HW disposal is more expensive than regular SW disposal, the costs of sampling and analytical analyses (such as the TCLP for lead) do add up. A cost analysis helps in determining the most practical approach for your individual needs. While SW costs are less than HW costs, disposal must still be consistent with state and local waste regulations.

Finally, keep in mind that these suggested guidelines are all based on Federal regulations. Individual states and localities may have more stringent requirements and, therefore, should be consulted when you are determining waste disposal practices.

Reference: USAEHA Interim Final Report, Lead-Based Paint Contaminated Debris, Waste Characterization Study No. 37-26-JK44-92, May 1992-May 1993.

- ◆ DPW/PVNTMED Svc
- ◆ Hazardous Waste
- ◆ Nonhazardous Waste

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(1) **Whole-Building Demolition Debris** (SW). Consists of all building components (painted and non-painted) to include wood, brick, cement (foundations), plaster, drywall, etc., that are torn down during demolition and collected for disposal. Waste characterization is based on analyzed samples that are "representative" of the waste. Therefore, you can obtain proportionate quantities of the various structural components (e.g., by coring or drilling through the materials) and combine them for analyses according to the TCLP requirements.

(2) **Partial Demolition (Building Renovation) Debris** (SW/HW/Both). May consist of a variety of components (painted and non-painted), such as those in whole-building demolition debris, but does not include the entire building/structure. You may use the same sampling procedures as discussed above. A second option involves careful predetermination and characterization of the individual components to allow for special waste handling and segregation procedures during the operations. Careful segregation is more feasible for renovations/partial demolitions than for whole-building demolition and may reduce the volume of HW. Where segregation is not practical for a particular operation, use the overall "representative" sample approach. A cost analysis is beneficial in determining waste management practices.

(3) **Unique Components** (HW). Includes discrete components that have been removed for abatement or maintenance purposes. These components may include baseboards, window frames, doors, etc. Where the components come from similar structures, some minimal sampling may be beneficial, particularly where the concentrations of lead in the paint are not deemed to be extremely high. Sampling should include the substrate (e.g., wood) and, therefore, be consistent with the "representative" approach. Usually, the proportion of paint to overall mass of the waste is sufficient to result in a relatively "high" TCLP concentration, thereby resulting in an HW.

(4) **Contaminated Media/Items**. Encompasses everything from the paint chips/scrapings to solvents, personal protective clothing and other items that are "contaminated" with dust or paint chips/residues. We have listed some of these items below with associated discussion and waste characterizations.

◆ **Paint Chips/Scrapings** (HW). Contain and collect. Handle, package, and dispose of as an HW.

◆ **Blast Grit** (HW/SW). Since there are different types of grit, the degree of contamination will vary; we recommend limited sampling.

◆ **Solvents** (HW). These may be hazardous for constituents other than lead, specifically for RCRA-"listed" compounds. Refer to the material safety data sheets or other product data for more information. "Listed" compounds are HWs regardless of lead concentrations. For otherwise nonhazardous solvents, ascertain the concentration of lead after use for ultimate waste characterization. Some solvents can be distilled/recycled. While the "cleaned" solvent is not an HW, any sludge or filters used for recycling purposes are probably HWs (see below).

◆ **Caustic Pastes** (HW/SW). Due to different compounds and different paints, we suggest minimal sampling and analyses.

◆ **Water** (HW/SW). Water may be used during blasting, decontamination, cleaning, rinsing, etc. Due to the different uses, we recommend minimal sampling. Whenever possible, we recommend recycling of water; filters used in recycling may be HW (see below).

◆ **Filters, Sludges, etc.** (HW). From air filters, water filters/recycling, or solvent reclamation operations, these items are usually very "concentrated" wastes that are high in lead and, therefore, an HW.

◆ **Plastics, Tarps, Personal Protective Equipment** (HW). To the degree possible, reuse these items. At the end of an operation or when disposal of these items is otherwise necessary, best management practices include proper containment (i.e., drumming), handling and disposal. In general, it may be cost efficient to classify these wastes as an HW without sampling. Decontamination of these items may minimize the volume of HW.

◆ **Soil** (HW/SW). Soil that is "contaminated" with lead may require removal from a site and proper disposal. Removal is based on a health risk assessment and/or Environmental Protection Agency Office of Solid Waste and Emergency Response lead cleanup levels of 500-1000 parts per million. Soil removal may not be necessary if a health risk is not evident. In-place management is recommended and soil removal conducted on a case-by-case basis. Similar to other materials previously discussed, the waste characterization of this removed soil will depend on a TCLP analysis for lead. We recommend limited sampling to characterize the waste soil.