

8. A DISCUSSION ABOUT LEAD-BASED PAINT

An Absence of Guidance.

The issue of lead-based paint can be, and frequently is, problematic with regards to deconstruction. Lead-based paint appears on much of the building materials that are recovered through deconstruction, and therefore available for resale and reuse. The lead content of consumer paints and lead-based paint hazard in housing is regulated through a number of federal standards and statutes.

It is observed, however, that Army installations are usually unwilling to allow LBP-containing materials off of the installation, or unwilling to consider deconstruction or recycling of any materials containing LBP. The reason cited is "liability." Installations are reluctant to expose the Army to what is perceived to be an increased risk of litigation, should some future damage be associated with those materials. The difficulty seems to be that this reluctance is based on a *perceived* risk, and standard practice, *not* specific regulation, standard, policy, or other forms of guidance, either allowing or not allowing salvage and reuse of LBP-containing materials. The conservative interpretation will be that if there is no explicit statement allowing some activity, then is by default not allowed.

Promoting deconstruction must not imply an abandonment of health and safety precautions. However, prohibiting reuse of otherwise valuable materials because of a LBP presence may be unnecessary and contrary to other environmental principles relating to the conservation of resources. Demolishing a typical WWII-era barracks will generate over 100 tons of debris (not counting concrete). Yet, the hundred or so pounds of lead contained in the painted siding can "contaminate" the entire debris stream.

Standards governing LBP in consumer products and LBP hazard in homes do not directly apply to a deconstruction scenario. What is needed by the Army, and any potential consumer of deconstruction services, is guidance that explicitly addresses the removal of materials from a building with the purpose of reusing or recycling, the handling of materials containing LBP, any reprocessing or remanufacturing that may be performed, and re-use of the product.

Relevant Federal Regulations and Standards.

The Resource Conservation and Recovery Act (RCRA) applies to waste, not salvaged building materials. Even if it has a lead concentration greater than the 5 mg/l threshold described by RCRA, a salvaged building material is not a RCRA hazardous waste if it is not introduced into the waste stream.

Per the Consumer Product Safety Act, CPSA 15 USC 2057-8, 1978, CPSC limited the lead content of paint (except for industrial coatings such as bridge paint) to be no more than 0.06% (600ppm), dry weight.

Lead-based paint is regulated in housing where children most vulnerable to the hazards of lead are present (children under the age of six years old). This is referred to as "target housing" and "residential dwelling or child-occupied facility." Note that these regulations apply to a very narrow definition of environments. They do not apply to housing or residential facilities in general, nor do they apply to other facilities where children are not present.

40 CFR PART 745.61; IDENTIFICATION OF DANGEROUS LEVELS OF LEAD; FINAL RULE: In this regulation, EPA defines "lead-based paint hazard" as 1) any LBP on a friction surface subject to abrasion where dust levels are greater than defined in this Rule, 2) damaged or deteriorated paint on an impact surface, 3) any chewable LBP where there is evidence of teeth marks, or 4) any other deteriorated paint on the interior or exterior of a residential dwelling or child-occupied facility. This document defines deteriorated paint as "any interior or exterior paint or other coating that is peeling, chipping, chalking, or cracking, or any paint or coating located on an interior or exterior surface or fixture that is otherwise damaged or separated from the substrate."

EPA FACT SHEET; IDENTIFYING LEAD HAZARDS IN RESIDENTIAL PROPERTIES: This document describes the same conditions that make LBP a hazard, i.e. it is deteriorating, on a friction or impact surface, or is child-accessible and shows evidence of teeth marks. This document also states that "Lead paint is usually not a hazard if the paint is in good condition and is not on an impact or friction surface (like a window, door, or stair)."

HUD 24 CFR PART 35, EPA 40 CFR PART 745 LEAD; REQUIREMENTS FOR DISCLOSURE OF KNOWN LEAD-BASED PAINT AND/OR LEAD-BASED PAINT HAZARDS IN HOUSING; FINAL RULE. This document describes requirements for disclosing LBP when selling or leasing target housing. A definition of "lead-based paint hazard" is consistent with those given above. To paraphrase, the seller or lessor must disclose to the purchaser or lessee the presence of any known LBP and LBP hazard; provide available records and reports, provide the purchaser or lessee with a lead hazard information pamphlet (see below), give the purchaser an opportunity to conduct a risk assessment or inspection, and attach specific disclosure and warning language to the sale or lease contract. The buyer or lessor must then acknowledge they have received the information and have had the opportunity to conduct an inspection. This document provides the specific disclosure language, sample contract provisions, and reference to the EPA pamphlet PROTECT YOUR FAMILY FROM LEAD IN YOUR HOME.

EPA/HUD/CPSC PROTECT YOUR FAMILY FROM LEAD IN YOUR HOME: This document is referenced as the required lead hazard information pamphlet, per the disclosure Rule, above. It describes the harmful effects of lead in body, conditions that constitute lead hazard, and precautionary measures. The description of lead hazard is consistent with the conditions described above. This pamphlet also states that "Lead based paint is usually not a hazard if it is in good condition and is not on an impact or friction surface like a window."

16 CFR PART 1500.230 CONSUMER PRODUCTS SAFETY COMMISSION GUIDANCE; GUIDANCE FOR LEAD (Pb) IN CONSUMER PRODUCTS: Note that this is guidance, not a Rule. It offers the following: Household products that expose children to hazardous quantities of lead under reasonably foreseeable conditions of handling or use are "hazardous substances." A toy or other item intended for use by children containing a hazardous amount of lead accessible for children to ingest is banned. A household product that is not intended for children but which may create a risk of injury because it contains lead requires precautionary labeling under 15 U.S.C. 1261 (p). CPSC bans paint and other surface coatings on toys and other articles intended for use by children with lead concentration of over 0.06%.

29 CFR PART 1926 HEALTH AND SAFETY REGULATIONS FOR CONSTRUCTION: These standards regulate safety on a construction jobsite. Of particular interest with regards to deconstruction are Subpart D, Occupational Health and Environmental Controls, Section 62, Lead. These provisions limit worker exposure to lead and blood lead action levels. Subpart T, Demolition provides guidance on demolition safety.

The Department of Defense and US EPA have convened an Interagency Workgroup to develop the Lead-Based Paint Guidelines for Disposal of Department of Defense Residential Real Property – A Field Guide. While not a regulation per se, it is a description of practices the DoD and EPA have determined appropriate when transferring federal property to the private sector. Once again, however, the focus of this document is exposure of children to LBP hazard, and provides guidance consistent with the existing "Title X" regulations.

A Summary of the Applicability of LBP Regulations to Deconstruction.

Salvaged building materials containing LBP are not regulated by RCRA.

Contemporary paints are defined by CPSC to be "lead free" if they contain no more than 0.06% (600 ppm) lead, dry weight of the paint.

There is no explicit regulation or guidance at the federal level that either permits or prohibits the sale or transfer of building materials that are painted with LBP.

Existing regulations defining and governing LBP hazard are developed for a specific set of conditions; "target housing," which is a residence or child-occupied facility. LBP in other facility types are not regulated.

In a "target housing" context, LBP is defined as a hazard if it is deteriorated (i.e. peeling, chipping, chalking, cracking, or otherwise damaged or separated from the substrate), on friction surfaces subject to abrasion, and on impact surfaces (i.e. subject to repeated sudden forces).

In a "target housing" context, LBP hazard must be disclosed prior to a property's sale or lease.

Even in a "target housing" context, LBP is not considered hazardous if it is in good condition and not on a friction or impact surface.

A "hazardous" level of lead on children's toys and other articles used by children is defined by CPSC at 0.06% dry weight; such items exceeding that limit are banned.

Household items not intended for children's use but possibly creating a risk of injury (i.e. exceeding a lead content of 0.06% dry weight) requires precautionary labeling.

Deconstruction and material handling activities are governed by OSHA (29 CFR 1926). Subpart T, Demolition, and Section 62, Lead, are of specific interest to deconstruction.

A Reasonable Approach.

It seems reasonable to conclude the following in the context of deconstructing WWII-era buildings and salvaging building materials:

- Deconstruction activities must observe OSHA construction safety standards.
- Painted materials found in WWII-era buildings should be assumed to be LBP, unless specifically found not to be. However, unless painted materials are introduced into the waste stream, they are not regulated by RCRA.
- Not all painted items will be of sufficient value to salvage for resale and reuse. However, were it not for the paint coating, some items may possess significant value. The value of the material or product may justify acceptance of the LBP coating.
- LBP that is in good condition is not considered hazardous, even in the "target housing" context. Based on a "target housing" model, LBP is hazardous if it is deteriorated, or if it has been applied to a friction or impact surface.

- There are no federal regulations explicitly allowing or prohibiting materials with deteriorated LBP to be sold, donated, or otherwise transferred from one party to another.
- While the HUD/EPA Rules for disclosure and acknowledgement of the presence of LBP, and the CPSC Guidance for labeling a possible lead hazard to children do not directly apply to the transfer of salvaged building materials or products, it is clear that HUD, EPA, and CPSC intend to inform the public about LBP hazards, especially in environments where children are present. Therefore, disclosure / precautionary labeling would be a prudent practice for the Army in a deconstruction and material sale and reuse scenario. The HUD/EPA Rules for disclosure provide specific language, and reference further guidance for controlling lead hazards in homes. This language may provide a reasonable model for disclosing the presence of LBP on salvaged building materials. The precautionary information may include disclosure of the presence of LBP, information on health hazards to children, precautions for preventing exposure of lead-based painted materials to habitable spaces and surfaces, the referenced guidance documents, and acknowledgment of receipt of the disclosure and precautionary information.

Fort Campbell and AHfH followed this model for the Pilot Deconstruction Project. In a previous bid-for-sale of a WWII-era wood-framed building, Fort Campbell included a disclosure of the probable existence of LBP. EDRC/CERL included Fort Campbell's statement in their Agreement with AHfH, which is as follows.

“LEAD BASED PAINT DISCLOSURE. The Recipient is hereby informed and does acknowledge that lead-based paint was commonly used at the time these buildings were constructed and/or modified and may exist on painted surfaces of the buildings or within the buildings and/or their associated structures. In accordance with the Environmental Protection Agency and the Department of Housing and Urban Development's final rule “Lead; Requirements for Disclosure of Known Lead-Based Paint and/or Lead-Based Paint Hazards in Housing” (61 FR 9064-9088), a federally approved lead hazard information pamphlet and disclosure of any known lead-based paint and/or lead-based paint hazards will be provided to the Recipient upon request.”

Forts McCoy and Knox have also included similar language in their solicitations for salvaging and recycling building materials. Contracts for the bid-for-sale, or auction for salvage rights, for these three installations are included in the Corps of Engineers Public Works Technical Bulletin (PWTTB) 200-1-23, Guidance for the Reduction of Demolition Waste through Reuse and Recycling, available on the Huntsville Engineering Support Center's TECHINFO website.

Austin HfH applied the definition of LBP hazard when selecting painted materials to salvage or to discard as debris. If paint was "deteriorated," per the EPA pamphlet PROTECT YOUR FAMILY FROM LEAD IN YOUR HOME, the material was discarded. If paint was in "good condition" per that document's description, AHfH resold it, but with an accompanying disclosure statement similar to that required by HUD, which is as follows:

[[BILL; PROVIDE STATEMENT]]

The California Integrated Waste Management Board offers the following guidance relative to the reuse of painted building materials in its Military Base Closure Handbook, A Guide To Construction And Demolition Materials Recovery, Revised January 2002.

"The Department of Toxic Substances Control (DTSC) issued clarifying language regarding lead-based paint in Regulation Guidance: Lead Painted Building Debris dated June 13, 1994. "The Department does not generally expect intact painted building materials to exhibit a characteristic of a hazardous waste pursuant to the criteria contained in Chapter 11, Division 4.5, Title 22, California Code of Regulations (Title 22) and would not require the disposal of intact painted material as a hazardous waste. The waste classification is dependent, in part, upon the physical characteristics of the waste. For example, when the paint is still bonded to the building materials, a generator should consider the ratio of the mass of all the materials in a waste to the lead content of the paint when determining the hazardous waste classification of the intact demolition debris. However, if during the demolition or dismantling of the buildings, the paint is separated from the building material (e.g., chemically or physically removed), then the paint waste should be evaluated independently from the building material to determine its proper management." DTSC also states that it is the generator's responsibility to determine if his waste is hazardous or nonhazardous. (To obtain documents relating to the sampling and classification of wastes, call DTSC's waste evaluation helpline at (916) 322-7676 or consult your telephone directory for regional offices of DTSC and contact the local duty officer.)

There are essentially three options available for reuse of lumber that is coated with lead-based paint. The first option is to remove the paint. This will leave the wood clean, but creates the problem of disposing of the now potentially hazardous residue. This option is usually only cost effective for large dimension lumber or unique timbers or fixtures. The second option is to encapsulate the lead paint by painting over it. This is considered an adequate remediation technique which eliminates the exposure pathway of the lead and allows use of the structure. However, if deconstruction or demolition is planned in the future, the lead-based paint will be exposed again. The third option for remediating lead painted materials for reuse is

to reverse the painted surface to expose the unpainted portion of the lumber. This again eliminates the pathway for human contact, but would lead to re-exposure under demolition of the structure. Any paint removed from the structure has to be evaluated separately to determine if it is a hazardous material. Care must be taken not to contaminate surrounding soil or water."

While the specific regulatory citations are unique to the State of California, the measures to prevent LBP exposure to occupied spaces would seem to be universally applicable.