



Best Practices in Wood Waste Recycling

Handling Hazardous Contaminants Such as Asbestos and Lead Paint

Material: Wood Waste

Issue: *At certain sources that generate wood waste, particularly demolition projects, processors must realize that the wood-waste stream potentially contains hazardous contaminants such as lead paint and asbestos. Delivered wood waste that contains hazardous contaminants present challenges to operators at processing facilities. First, these hazardous contaminants could violate the facility's regulatory permits because wood-waste processors, generally, do not acquire licenses to receive, process, or transfer hazardous wastes. Second, the hazardous contaminants present an occupational safety concern because facility workers are vulnerable to any exposure because hazardous contaminants inevitably become airborne during the handling and size-reduction processes. Next, the presence of a hazardous contaminants could create product problems and potential product liability issues, depending upon the intended end-product. Finally, the presence of hazardous contaminants in wood-waste products creates lower market values for the processor.*

Following are examples of end-product problems caused by asbestos and lead-paint contamination:

- *The health risks of airborne asbestos make it an unacceptable component of any end-product.*
- *Mulch, compost or other land application end-markets must avoid the presence of lead because of the potential for soil contamination.*
- *Hogged fuel customers cannot tolerate the presence of lead contaminants because of air emission and residual ash quality concerns without adequate regulatory permits and pollution control systems.*
- *Manufacturing feedstock applications (e.g., composite panel-board, pulp and paper, etc.) cannot tolerate hazardous contaminants because of occupational safety and product quality concerns.*

Some processors decide to obtain the appropriate regulatory permits that are required when handling wood contaminated with lead-based paint. These processors must secure a market for the lead-contaminated product or dispose of any residual material containing lead in approved hazardous waste disposal sites. Then, they must carefully implement measures to satisfy the requirements of the regulatory agencies and protect the health of employees.

Best Practice: This Best Practice recommends that wood-waste processors implement elimination programs or control programs for hazardous contaminants as an important aspect of their business operation. Non-permitted facilities must eliminate hazardous contaminants and permitted facilities must carefully control them. Companies can employ a number of mechanisms to manage hazardous contaminants in their wood-waste supplies.

Customer Information: A recycling or processing business must maintain clear communication with the wood-waste generators or haulers regarding hazardous contaminants policy. Effective communication include the following:

- information about unacceptable materials in advertisements and other marketing tools,
- informational literature made available during customer interactions,
- clear signage on wood-waste receptacles and at facility entrance gates, and
- verbal reinforcement during one-on-one interactions with customers.

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Contamination Penalty Fee: A processing facility can modify its standard tipping fees with a surcharge when customers deliver contaminated loads. The surcharge's design should cover the additional labor, testing, and disposal costs caused by the contamination. A contamination penalty fee provides a clear, financial incentive to the customer to either eliminate or minimize the inclusion of unacceptable materials in the wood-waste delivery. Operators should immediately reject excessive contamination levels or unacceptable contaminants such as asbestos.

Employee Training: All staff members should be aware and mindful of the variety of problems that hazardous contaminants can create regarding facility permits, occupational safety, end-product quality, and market values. Personnel at all stages of the processing operation should be trained to recognize the various forms and indications of asbestos or lead-paint contamination.

Material Receiving Procedures: The processing facility should have a designated representative who inspects each incoming load while it is still in the truck to verify that no prohibited contaminants are present. These staff members should be trained to identify potentially problematic loads, carefully inspect the wood material for any hazardous contaminants, and reject or segregate it accordingly.

Implementation: To be most effective, processors need to implement comprehensive hazardous contaminants elimination or control procedures.

Asbestos: Although asbestos should always be removed before building demolition, unique circumstances sometimes allow it to reach the processing facility; therefore, the processor must be prepared for this possibility. When trained employees identify suspicious material, they should immediately segregate and then sample the suspect wood for a testing laboratory. If the processor confirms the suspicion, he/she should notify the generator or its hauler and arrange for its safe removal and disposal.

Lead Paint: If a facility is permitted to process lead-contaminated wood, contaminated loads should be segregated from other wood and processed separately. Acceptable levels of lead contamination on incoming wood waste must be pre-determined with regulators. While processing this wood, employees must be protected from the hazard of lead-laden dust with approved respirators and extra spraying systems to minimize airborne dust. End-products must be lab tested to document that lead levels are acceptable for the targeted end user according to the regulatory agencies.

Benefits: The effective management of hazardous contaminants such as asbestos and lead paint helps alleviate many serious and potentially costly problems. The potential problems are extensive, including violations of operating permits, safety hazards for facility personnel, end-user dissatisfaction with products, product liability issues, and generally lower values for marketable products. All of these potential problems provide strong motivation for the development of an effective asbestos and lead paint management program.

Application Site: This Best Practice applies to wood-waste processing facilities.

Contact: For more information about this Best Practice, CWC (206) 443-7746, e-mail info@cwc.org.

1. **References:**

2. Gillis, Terry. Recovery I; Tacoma, WA.
3. International Resources Unlimited, Inc. Eugene, OR.
4. Steuteville, Robert. "Large Scale Wood Processing and Marketing." *BioCycle*. January 1997

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