Chapter HFS 163

APPENDIX D

Paint Removal: Commercial and Residential (DNR PUBL WA–173 98)

BACKGROUND

Historically, toxic metals such as lead, chromium, and cadmium have been used in paints and primers. Although lead was banned from use in household paints in the late 1970s, toxic heavy metals may still be present on surfaces constructed prior to that time and on some industrial surfaces where toxic metals are still being used in paint formulations (see below). It is therefore extremely important that the removal, management, and disposal of paints containing these toxic metals be done properly so that adverse effects on health do not occur and that the environment does not become contaminated.

What are the health effects of exposure to lead and other toxic metals that may be found in paint?

Lead present in paints has been implicated in the poisoning of numerous people throughout this country. Young children playing in an area where there are lead paint chips are especially susceptible to the effects of lead compounds through ingestion or inhalation. Children exposed to lead can suffer from damage to the brain and nervous system, slowed growth, hyperactivity, and behavior and learning problems. Adults exposed to lead can suffer difficulties during pregnancy, high blood pressure, nervous disorders, and memory and concentration problems. Although more likely to be found in industrial applications, paint may also contain high levels of chromium, which can be corrosive to tissues and is a suspected human carcinogen, or cadmium, which is highly toxic.

PAINT REMOVAL RESIDUES: SOLID WASTE OR HAZARDOUS WASTE?

Paint scrapings and sandblasting wastes from vehicles, buildings, water towers, bridges, and other structures are solid waste and **may** be hazardous waste. If you generate these wastes, you must determine if they are hazardous prior to disposal unless the wastes fall under the household exemption, which is discussed below under residential paint wastes. DNR recommends that a sample of the paint be collected and tested prior to conducting the removal operation to determine if lead or other toxic metals are present and at what concentration. Paint waste would be considered hazardous waste if it fails the Toxicity Characteristic Leaching Procedure (TCLP) for certain toxic metals. This laboratory test measures how much of certain toxic metals could leach from a waste and potentially migrate into groundwater.

If, based on preliminary testing, the paint is found to contain toxic metals, the generator may need to have the paint waste further tested. Generators who test their wastes should have a certified laboratory perform the TCLP test to determine if their wastes contain hazardous levels of lead or other toxic metals (Alist of certified labs is available from the DNR; call 608/267–7633). However, the regulations do not require generators to have their waste tested. Generators also may use knowledge of the waste stream to determine if their waste is hazardous, but the burden of proof that this knowledge is sufficient lies with the generator. Remember, the generator of a hazardous waste remains responsible for that waste from the point of generation until it is finally disposed. If the paint waste is a nonhazardous solid waste it may be disposed in a solid waste landfill. Paint waste that is a hazardous waste because it fails the TCLP may also be disposed of in a solid waste landfill provided the very small quantity generator (VSQG) exemption applies and the landfill is approved to receive the waste (see discussion below under paint waste from residences).

IF MY PAINT WASTE IS HAZARDOUS, WHICH REGULATIONS APPLY?

Chapters NR 600–685 of the Wisconsin Administrative Code describe the requirements for hazardous waste management. The degree of regulation for hazardous waste generators increases with the amount of waste generated and length of time it is stored. Large Quantity Generators (LQGs) are regulated more extensively than

Small Quantity Generators (SQGs) or Very Small Quantity Generators (VSQGs). Using an abrasive recycling process (e.g. steel grit or garnet blasting agents) can greatly reduce the amount of hazardous waste generated (since the waste will only be paint, rather than paint and abrasive) and may allow you to qualify for the less extensive regulations.

HOW DO THESE REGULATIONS APPLY TO PAINT REMOVED FROM RESIDENCES?

"Household" wastes are exempt from hazardous waste regulations, according to s. NR 605.05. Many residential structures constructed prior to 1978 were painted with coatings that contained lead. If a member of the household performs the paint removal work and manages the paint waste as part of the household solid waste stream, the paint waste residue would be exempt from regulation as a hazardous waste. In addition, if the work is being done by someone who is not a member of the household (i.e. a contractor) and the waste produced can be **safely** managed by the homeowner as part of the household solid waste stream, DNR would not require the contractor to manage the waste in accordance with the hazardous waste regulations by DNR interpretation of the household waste exemption.

DNR along with state and local health officials believe that in many situations leaving these wastes at project sites for disposal may increase the risks of contaminating the environment or exposing people (especially young children) or animals to the waste and potential lead poisoning. Requiring contractors to properly containerize this waste and have it transported to a waste management facility as soon as they complete each removal project will minimize the environmental risk of contamination and the health and safety risks of exposure.

However, if a contractor removes paint from a residence and manages the waste, the waste is not exempt and must be characterized. If the amount of paint waste generated in the project is 220 pounds per month or more and is hazardous, it must be transported by a licensed hazardous waste hauler to a approved hazardous waste management site.

If the amount of paint waste generated during the project is less than 220 pounds and is hazardous (either through testing or knowledge of the waste), the project site qualifies as a very small quantity generator (VSQG) and the following options are available for managing the waste:

Household Hazardous Waste/VSQG option: The waste may be taken directly to a household hazardous waste "clean sweep" collection if the clean sweep accepts wastes from VSQGs. In this situation, neither a solid or hazardous waste transportation license is required.

VSQG Solid Waste Engineered Landfill Disposal Option (allowable under the provisions of s. NR 610.07 (1) (c) 2. c., Wis. Adm. Code): The paint waste may be managed at a licensed, engineered solid waste disposal facility that is approved to accept this waste under s. NR 506.155, Wis. Adm. Code. The paint would be required to be managed in accordance with the following:

- The paint waste must be disposed in a licensed solid waste landfill which has a liner and leachate collection system and is approved to accept lead–based paint waste from VSQGs.
- The paint waste must be transported from the removal location directly to the solid waste landfill or hazardous waste facility approved to accept lead–based paint waste. The waste cannot be transported to a contractor's business location unless the location is licensed and approved to store lead–based paint waste.
- The paint waste must be properly containerized for any short term storage at the work site and for transport. The paint waste should be placed in covered containers or sealed, heavy gauge water tight bags. To prevent dusting, the paint waste may be wetted slightly prior to sealing bags.

In all cases DNR recommends that paint on residential structures be tested prior to removal for the homeowner's protection and that of their neighbors or assumed to contain lead and handled accordingly. The homeowner or contractor should spread tarps or other containment under the work area, avoid work on windy days, and collect and properly dispose of the containerized waste in accordance with the above options. DNR further recom-

mends that if the homeowner manages the waste he or she take the paint removal waste to a household hazardous waste collection program (”clean sweep”) if one is available and will accept the waste. Questions on solid or hazardous waste management can be directed to your Regional Waste Management Specialist (see *Waste Management Program Contact List*).

WHAT PRECAUTIONS SHOULD I TAKE TO PREVENT PAINT WASTES FROM CONTAMINATING THE ENVIRONMENT?

For all paint removal projects, you must use a containment system to prevent the wastes generated from contaminating soils or surface waters or from becoming airborne and dispersing. A containment system may be as simple as a ground cover (i.e., a tarp) while some projects may require a total enclosure. Place paint removal wastes collected in the containment system into covered containers and label them to identify the contents. If the paint wastes are hazardous waste, you must identify the waste as such on the container label. The use of a high efficiency particulate air (HEPA) filter vacuum may reduce the need for containment structures. If paint wastes that contain hazardous constituents are not contained but released to the environment, DNR can require cleanup under the Hazardous Substances Spill Law (section 292.11, Wisconsin Statutes).

DO THESE REGULATIONS APPLY TO PAINT REMOVED FROM PARTS?

Companies that sandblast painted metal parts should ask the customers if the coatings contain toxic metals. Generators may not mix blasting wastes generated by removing coatings that contain toxic metals with other blasting wastes until the generator has determined that the waste containing toxic metals is not a hazardous waste. *Generators should manage blasting waste containing toxic metals as hazardous waste unless the TCLP test shows they are not hazardous waste.*

WHAT ABOUT INDUSTRIAL AND COMMERCIAL STRUCTURES?

If you or a contractor are removing paint from a nonresidential structure, you must determine whether the waste is hazardous and, if so, manage it according to the hazardous waste regulations discussed above.

IS CHEMICAL STRIPPING RECOMMENDED FOR PAINT REMOVAL PROJECTS?

The DNR does not recommend the use of certain traditional chemical stripping agents containing organic solvents for the removal of paint. Even if the paint itself does not exhibit the toxicity characteristic, the paint removal waste may become a listed hazardous waste if certain solvents are used to remove the paint. If you choose to use a chemical stripping agent, there are caustic stripping agents available that dissolve the paint through a saponification (hydrolysis) process, and do not contain toxic or flammable solvents. Proper containment and management for the stripping residues must be provided for projects involving this method.

WHAT ABOUT HIGH PRESSURE WATER BLASTING?

DNR does not generally recommend the use of high pressure water blasting to remove paint from structures unless concerns with managing the wastewater generated in the process are adequately addressed. If this process is used, the paint chips and other solid residues should be separated from the water, collected, and properly managed. Wastewater must be managed in accordance with Wisconsin wastewater regulations. Discharge to the sanitary sewer must be approved by the local sewerage authority or DNR, as appropriate. If the wastewater is to be discharged to the ground surface and may reach surface water or groundwater, this discharge may be subject to general permitting requirements of chapter 147 of the Wisconsin Statutes, and require the generator to utilize best management practices. Closed loop systems for managing water used in this process are available. Your Regional Wastewater Specialist can assist you in determining which requirements apply. You can call the DNR Regional office for your area identified on the attached map to determine the name of your Wastewater Specialist.

CAN YOU TREAT YOUR PAINT WASTE TO MAKE IT NONHAZARDOUS?

Paint waste which is a characteristic hazardous waste may be treated to render it nonhazardous, but to treat hazardous waste you must obtain a treatment license or variance from the WDNR, or use a treatment method exempt from licensing. Obtaining the necessary approvals to treat hazardous waste is a site specific and time consuming process. There are hazardous waste management companies approved to treat paint waste when it is hazardous. You can contact your Regional Hazardous Waste Specialist to obtain more information about

these companies. Provided the waste is TCLP toxic, once the material has been treated to below the TCLP regulatory level for any toxic metals present, the waste is no longer considered hazardous and can be managed in accordance with solid waste regulations. Paint wastes that are listed hazardous waste cannot be treated to render them nonhazardous.

WHAT REQUIREMENTS APPLY TO THE TRANSPORTATION OF PAINT REMOVAL WASTES?

If the paint wastes are hazardous, they must be transported by a licensed hazardous waste hauler. Lists of haulers are available from your DNR Regional Hazardous Waste Contact. There are exceptions to this requirement. You may transport your household waste or your VSQG business waste to an approved waste management facility without obtaining a solid or hazardous waste transportation license. All hazardous waste transported must conform to the hazardous materials transportation requirements of the Department of Transportation at Title 49 of the Code of Federal Regulations (CFR). Contact the Wisconsin State Patrol Division at 608/266–0264 if you have questions about these requirements.

IF I'M DEMOLISHING A BUILDING WITH PAINT CONTAINING LEAD OR OTHER TOXIC METALS, IS IT SUBJECT TO THE HAZARDOUS WASTE REGULATIONS?

In some projects contractors may demolish structures coated with paint or remove their architectural components (e.g. woodwork, walls, doors) without actually removing the paint from the substrate. *The DNR does not typically consider it to be necessary to make a hazardous waste determination on these structural materials if the paint is not separated from the structural materials*. The generator of these wastes must, however, follow the state's solid waste regulations and dispose of the debris in a DNR approved disposal facility. DNR recommends that salvageable scrap metal from these projects be recycled according to Department regulations and guidelines rather than disposed. Loose paint chips or dust generated during demolition must be managed as if they had been mechanically removed by blasting or other means.

WHAT ARE THE AIR MANAGEMENT REQUIREMENTS?

Air Management concerns during sandblasting and other paint removal activities include the potential release of fugitive dust emissions and hazardous air pollutants. Pollutants of concern are cadmium, chromium, and lead. Paint removal operations typically generate substantial amounts of dust, which may contain toxic metals. Containment or vacuum blasting are the best ways to prevent the release of the blasting waste to the air. Paint removal should not continue if you can see dust escaping into the ambient air. At the very minimum, the blasting work area should be completely enclosed with tarps or other barriers. If the paint contains hazardous levels of toxic metals, a full enclosure should have all seams overlapping by six inches and have the bottom of the enclosure completely covered to capture spent dust and other particles. Paint from the proposed project should be analyzed for total lead content, as well as other toxic metals that may be present, to determine the appropriate containment strategy. Your Regional Air Management Specialist can help you determine how to comply with these requirements (see *Waste Management Program Contact List*).

Note: Current Air Management guidance only requires that paint from the proposed project be analyzed for total lead content to determine the appropriate containment strategy. However, failure to contain paint wastes containing other toxic metals may constitute a violation of the hazardous substance spills law and must be avoided.

WHAT ARE THE WATER SUPPLY REQUIREMENTS?

The WDNR's Bureau of Drinking Water and Groundwater regulates projects involving the interior of water towers and other structures that are used for potable water supply. Guidelines issued for repainting projects can be obtained by contacting your WDNR Region's Water Supply Engineer or the WDNR Public Water Supply Section at 608/267–7647.

WHAT CAN BE DONE TO ENSURE WORKER SAFETY?

The U. S. Department of Labor, Occupational Safety and Health Administration (OSHA) has issued standards for worker protection from exposure to lead in construction (29 CFR 1926.62). Lead abatement workers also may require training certification from the Wisconsin Department of Health and Family Services (DHFS) to perform work on certain buildings. If your work involves the removal of lead based paint, you should consult DHFS DHFS Certification Program 608/267–2297) and OSHA (Milwaukee: 414/291–3315; Madison:

608/264−5388; Appleton: 920/734−4521 or Eau Claire 715/832−9019) to determine which regulations and requirements apply.

ARE THERE OTHER REQUIREMENTS THAT MAY APPLY?

Local units of government may have additional requirements that apply to the activities discussed in this guidance. The DNR recommends that you check with your county and municipality for applicable local ordinances.

Questions?

Call your DNR Regional waste management program (see *Waste Management Program Contact List*) if you have additional questions or consult the NR 500 and NR 600 series, Wisconsin Administrative Code. You may also want to check on DNR's web site at http://ww.dnr.state.wi.us/ or contact your regional waste management program or DNR's Bureau of Cooperative Environmental Assistance at 608/267−9700 for a list of other publications that might be of interest.

Copies of Wisconsin statutes and administrative rules can be purchased from Wisconsin Department of Administration, Document Sales and Distribution, P.O. Box 7840, Madison, WI 53707−7840 or call 608/266−3358. Wisconsin State statutes and some administrative rules are also on the Legislative Reference Bureau's world wide web site: http://www.legis.state.wi.us/rsb/stats.html.

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Also, this fact sheet is not intended as a substitute for the statutes and rules that apply. Rather, it is a brief summary of the topic. Please consult Wisconsin's statutes and administrative rules for detailed information.

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