



Environmental Regulations for Paint Removal on Outdoor Structures

Hazardous Waste Program fact sheet

6/2006

Introduction

There are thousands of bridges, water towers, and storage tanks in cities, towns, and rural areas across Missouri. In the 1960s and 1970s, coatings for these structures contained metals that helped provide stability to the coating. Health and environmental professionals now realize that many of these materials can pose a threat to human health and ecological systems.

When repainting outdoor structures, owners and contractors must often remove all or part of the existing coating. They need to determine the hazardous contents of the paint, plan how to prevent release of hazardous substances, and know the options for disposal of blast waste.

The Missouri Department of Natural Resources implements the following laws that affect paint removal activities: the Missouri Hazardous Waste Management Law, the Missouri Solid Waste Management Law, the Missouri Clean Water Law, and the Missouri Air Conservation Law. To ensure compliance, owners and contractors should carefully plan their activities to include the basics of compliance: Waste Determination, Notification, Containment and Disposal.

Waste Determination

The owner or contractor must determine whether the waste is hazardous as defined by law. The two ways to make this determination are the Toxicity Characteristic Leaching Procedure (TCLP) test and "Use of Knowledge."

TCLP is the legal standard established by the U.S. Environmental Protection Agency to determine whether a waste contains hazardous levels of toxins. It measures the leachability of toxic substances under conditions that simulate the environment of a solid waste landfill. Most commercial environmental labs can perform this test.

The owner or contractor must arrange to provide a lab with a representative sample of the waste generated by the removal. A representative sample reflects the true makeup of the waste that will be generated on average throughout the entire paint removal. The sample need not be the most toxic possible, nor should it be the least toxic possible.

For paint removal purposes, the waste need only be tested for the eight TCLP metals in Table 1. If waste exceeds a level set for any of these metals, all the waste from that project is hazardous waste. To avoid the expense of TCLP testing, owners may employ "Use of Knowledge," which means analyzing the waste using existing information. Often the experienced contractor can use data about the coating and the blast media and past experience to know whether the waste will or will not fail the TCLP.

Table 1

| TCLP Metals | Regulated Level (ppm) |
|----------------|-----------------------|
| Arsenic | 5.0 |
| Barium | 100.0 |
| Cadmium | 1.0 |
| Chromium | 5.0 |
| Lead | 5.0 |
| Mercury | 0.2 |
| Selenium | 1.0 |
| Silver | 5.0 |

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For example, a high lead coating that is removed and separated from steel grit media will undoubtedly fail the TCLP. There is no need to test.

However, a zinc oxide system on a structure that has no other coatings beneath will not likely fail TCLP. Owners and contractors who employ "Use of Knowledge" should document their evidence carefully.

Many contractors mix additives into the blast media to render the resulting wastes non-hazardous. These additives are legal provided that they truly render the wastes safe from leaching above acceptable levels. Additives that achieve their results by temporarily binding materials to pass the TCLP test do not truly render the waste non-hazardous. Contractors who employ these additives and handle their waste as non-hazardous do so illegally.

Notification, Handling and Disposal (Hazardous Waste)

If the waste is hazardous, owners and contractors must comply with regulations for hazardous waste generators.

Notification - Generators must complete a *Notification of Regulated Waste Activity*, a form provided by DNR. DNR uses the notification to issue a hazardous waste generator identification number which generators must obtain prior to sending hazardous waste off site. Generators need to allow about a month for the department to process the notification and receive a number.

Handling - Paint removers whose waste is hazardous must provide 100 percent containment during removal. This means no detectable release to air, ground, or water. Steel Structures Painting Council Containment Class 2 provides the minimum standard. All residues must be collected daily in drums or bulk containers. Except when adding or removing waste, drums and containers must be closed tightly at all times. They must be marked with the words "Hazardous Waste," the beginning date of accumulation, and have the appropriate Department of Transportation label. Drums and containers must be stored out of potential flood areas and in a way that restricts access to all but authorized employees. In general, hazardous waste may not be stored for longer than 90 days from the day it is generated. Longer time frames may apply for projects that generate small quantities as defined by law. Paint removers who generated hazardous waste must also comply with regulations for emergency preparedness and personnel training and must have written contingency plans. Liquid wastes require secondary containment for drums and containers.

Disposal - Hazardous wastes must be sent to a facility authorized by state or federal law to receive hazardous wastes. Usually, this is a permitted or interim status treatment, storage or disposal facility, such as a hazardous waste landfill or incinerator. Generators must contract with a licensed hazardous waste transporter and use a *Uniform Hazardous Waste Manifest* to ship hazardous waste. Owners engaged in projects where a small amount of waste will be generated can, in some cases, store their hazardous wastes for longer periods of time and be subject to fewer regulations. The department's technical bulletin *Does Your Business Generate Hazardous Waste?* (Pub117), has more information.

Sandblasters whose residue has high metals content may send the blast residue to a lead smelter. Provided that it is used directly as a substitute for raw materials ordinarily introduced into the smelter and that it is not released into the environment, these materials are no longer considered waste and are not subject to hazardous waste regulations. By choosing this option, sandblasters avoid the regulations regarding notification, storage time, manifesting and hazardous waste transportation.

Owners and contractors who use this exclusion must ensure that the waste is not released into the environment. If there is a spill or release, the waste no longer enjoys the exclusion and becomes a hazardous waste. The waste must be contained or covered before and during transport to prevent release. Transporters must meet all safety requirements.

How to Obtain Copies of Hazardous Waste Laws and Regulations

Copies of the Revised Statutes of Missouri are available through the Revisor of Statutes at (573) 526-1288, or are available online at www.moga.mo.gov. Copies of the Missouri Code of State Regulations are available through the Missouri Secretary of State at (573) 751-4015, or are available online at www.sos.missouri.gov/adrules/csr/csr.asp. Federal regulations may be viewed at federal depository libraries or may be purchased from a U.S. Government Bookstore, the U.S. Government Printing Office, or from a commercial information service such as the Bureau of National Affairs. Federal Regulations are also available online at www.access.gpo.gov/nara/cfr/index.html.

Notification, Handling, and Disposal (Non-Hazardous Waste)

Owners whose waste is non-hazardous need not notify the department of their activities unless their activities require a water pollution control permit. A water pollution control permit is required for any discharge of contaminants to waters of the state or discharges to the environment of water blasting residues. This includes any solid materials that fall as a result of washing the structure and have access to waters of the state (i.e., not contained). Owners and contractors who do not have discharge permits must collect all visible wastes.

To comply with Missouri fugitive dust regulations, fugitive dusts from blasting must not leave the boundaries of the property on which the structure exists. Dust plumes around the removal area or escaping containment structures can also violate visible emissions regulations as determined by a Missouri Department of Natural Resources inspector who is a certified opacity reader.

Owners and contractors may send non-hazardous wastes to a sanitary landfill by first obtaining a special waste request from a landfill operator, completing it, and sending it back to the operator along with proof that the waste is non-hazardous. After receiving approval from the operator, the owner or contractor may send the waste to the landfill. Sandblast waste must not be sent to a clean fill area.

Owners and contractors may also beneficially reuse the waste in a way that does not cause a threat to human health or the environment and does not create a public nuisance or threat of nuisance. An example would be using non-hazardous sandblast waste as an ingredient in concrete. Certain kinds of beneficial reuse require pre-approval. Contact the the department's Solid Waste Management Program prior to any beneficial reuse project involving blast wastes.

Owners and contractors should consider that superfund liability applies even if they have complied with the law in disposing of their waste. If a metal leaches from waste to groundwater beneath the landfill, they may be asked to contribute to its cleanup even if the waste passed TCLP at the time of disposal.

For more information call or write:

For more information on water pollution control permits and water discharges, contact the department's Water Pollution Control Program. For more information on fugitive dust opacity requirements and air releases, contact the department's Air Pollution Control Program. For more information on special waste, solid waste disposal or beneficial reuse, contact the department's Solid Waste Management Program. All of these programs can be contacted at 1-800-361-4827.

Missouri Department of Natural Resources
Division of Environmental Quality
P.O. Box 176
Jefferson City, MO 65102
www.dnr.mo.gov/env Program Home Page

Air Pollution Control Program
1-800-361-4827 or (573) 751-4817
www.dnr.mo.gov/env/apcp Program Home Page

Hazardous Waste Program
1-800-361-4827 or (573) 751-3176
www.dnr.mo.gov/env/hwp Program Home Page

Solid Waste Management Program
1-800-361-4827 or (573) 751-5401
www.dnr.mo.gov/env/swmp Program Home Page

Water Pollution Control Program
1-800-361-4827 or (573) 751-1300
www.dnr.mo.gov/env/wpp Program Home Page