

Ohio Hazardous Waste

Notifier

A Publication of Ohio EPA, Division of Hazardous Waste Management

New Uniform Hazardous Waste Manifest is Now in Effect

By: Rose McLean

The requirement to use the *new uniform manifest* form became effective on September 5, 2006. Use of the new uniform manifest is mandatory in all states for all large and small quantity hazardous waste generators, hazardous waste transporters and permitted hazardous waste treatment, storage and disposal (TSD) facilities. U.S. EPA published the final rules revising the hazardous waste manifest in the *Federal Register* on March 4, 2005.

New manifest forms can be obtained from any source that has registered with U.S. EPA to print and distribute the form. Neither U.S. EPA nor Ohio EPA will distribute forms; rather, U.S. EPA will oversee the printing requirements and ensure that registered printers follow them. A *list of entities* that have been approved to print and distribute the form is maintained on U.S. EPA's Web site.

For more information about the manifest:

- See page three of Ohio EPA's Summer 2005 *Notifier*: *New Uniform Hazardous Waste Manifest*.
- See Ohio EPA's *Question and Answer* page.
- See U.S. EPA's Web page on the *new manifest rule*.
- Check out U.S. EPA's fact sheet: *Hazardous Waste Manifest System Streamlined*.
- Read the *Federal Register* Notice: *Federal Register* - March 4, 2005

(NOTE: the Manifest Form is not in the *Federal Register*, because a correction is in progress. It will be posted on this page as soon as it is available). 

New Uniform
Hazardous
Waste Manifest
Now in Effect

Answer Place

Data Reported
by TSD's

Construction,
Renovation
and
Demolition
Debris

Pollution
Prevention for
Painting/
Coating
Applications

DHWM uses Answer Place to Respond to all E-mails

In December 2005, Ohio EPA launched a frequently asked questions Web tool known as the Answer Place. The Answer Place provides quick, easy access to information and allows you to pose questions directly to Agency staff. The development of this site is one of the ways Ohio EPA is working toward achieving Director Koncelik's goal of improving the Agency's compliance assistance efforts.

You can access the Answer Place by clicking on the logo from Ohio EPA's main Web page. Once you arrive at the site, you will notice that there are many questions and answers already in the system, searchable by keyword. If you cannot find the information you are looking for in the existing data, you can use the "Ask a Question" feature to pose a question. When you submit your question, it is forwarded to the appropriate Ohio EPA staff for a response. Another feature of the Answer Place is the ability to create a personal login, which allows customers to track questions they've viewed or submitted and to get automatic e-mail updates if a particular question/issue of interest is updated. Ohio EPA will keep updating the Answer Place with new information as we get questions from our customers. If you have questions about environmental requirements, we encourage you to use the Answer Place.



The Division of Hazardous Waste Management (DHWM) will be using Answer Place to respond to technical or regulatory questions we get via e-mail (in addition to those submitted via the Answer Place), so don't be surprised if you get an e-mail response from "Ohio EPA Answer Place" <ohioepa@mailwc.custhelp.com> with this subject line, "Your Question to Ohio EPA's Answer Place."

If you have any questions about this new tool, or about how you will receive answers from us in the future, please refer to the Answer Place "Find Answers" screen, then select the category "Answer Place" and click the Search button. The results screen will display frequently asked questions such as:

- Asking a question using Answer Place,
- Getting the status of a question you submitted to Answer Place,
- Finding basic help for the Answer Place, and
- Printing answers from your Web browser.

To view the answer, simply select the question. If you still have questions after reviewing the answers, please feel free to submit them using Answer Place. Someone from DHWM Regulatory Support will respond. If you would prefer to talk to someone directly, you can call DHWM at (614) 644-2917. 

Discrepancies in Data Reported by TSDFs

by Pam Allen

The Division of Hazardous Waste Management has been comparing customer data reported by Ohio treatment, storage and disposal facilities (TSDFs) to comparable RCRAInfo data. We have found numerous discrepancies and will be sending letters to identified generators and TSDFs asking them to help resolve the discrepancies. This may require generators to notify or re-notify and TSDFs to update their customer information. If you receive one of these letters, please respond as directed. 

Construction, Renovation and Demolition Debris

By: Andy Kubalak

Debris generated during the construction, renovation or demolition of a commercial building that is destined for disposal is classified as waste. Anyone who generates waste must evaluate it to determine if it is considered a hazardous waste. This evaluation is the generator's responsibility and can include any knowledge of the materials used to construct the building and analyses of representative samples of the waste. (Please see Chapter 1 of the [Generator Handbook](#) for guidance when evaluating waste).



Debris generated during the construction, renovation or demolition of a single family residence does not need to be evaluated because it is excluded under Ohio Revised Code (ORC) [3734.02 \(D\)](#). The exclusion is for waste generated at locations meeting the definition of "household," and includes places such as campgrounds, apartments, motels, hotels and bunkhouses.

Some construction, renovation and demolition debris that businesses generate may be identified as hazardous wastes. The most common contaminant found in buildings that could cause debris to be classified as hazardous waste is lead-based paint. Other removable components that may also be hazardous, and should be removed prior to demolition, are fluorescent lamps and thermostats that contain mercury and other hazardous constituents. We suggest that you manage these as [universal waste](#).

Because of its physical nature and the way it is generated, the evaluation of demolition debris can pose some unique problems. You can find information about sampling demolition debris on the American Society for Testing and Materials' (ASTM) Web site:

- **ASTM Standard E 1908-03:** Standard Guide for Sample Selection of Debris Waste from Building Renovation or Lead Abatement Project for Toxicity Characteristic Leaching Procedure (TCLP) Testing for Leachable Lead (Pb), and
- **Suggested Sampling Plans for Building Debris Disposal:** This Web site contains evaluation strategies for construction and demolition debris from the Washington State Department of Ecology/Connecticut Department of Environmental Protection.

If the demolition debris is some form of metal, such as steel structural components, lead pipes, or electrical components, they may be recycled as scrap metal without regulation under the hazardous waste rules, even if coated with lead-based paint. If you know or suspect that structural debris contains asbestos, you should contact Ohio EPA's [Division of Air Pollution Control](#) (DAPC) at (614) 644-2270, prior to any demolition.

If the debris is generated from a household, or if you determine that debris generated from a commercial building is non-hazardous, it may be disposed of in a construction and demolition debris (C&DD) landfill. Ohio EPA's [Division of Solid and Infectious Waste](#) (DSIWM) prohibits some structural debris from being buried on-site. Clean hard fill such as bricks may be buried on-site. Refer to DSIWM [guidance](#) documents for more information about the C&DD rules. 

Pollution Prevention for Painting/Coating Applications

By Helen Miller

Does your business paint or coat parts as part of its manufacturing process? Painting and coating processes can be found at many types of businesses such as auto body shops, wood finishers and various manufacturers. These processes generally consist of:

- cleaning and preparing the surface;
- applying the paint or coating;
- curing the paint or coating; and
- cleaning the equipment.

The biggest pollution prevention (P2) opportunity when applying a coating is to increase your **application efficiency**. This article focuses on application efficiency and also provides helpful Internet resources.

What is Application Efficiency?

Application efficiency is a combination of:

1) Finish Quality includes characteristics like color, smoothness and durability of the coating.

2) Transfer Efficiency (TE) is the amount of paint/coating that is on the part after application compared to how much is sprayed. It can be calculated by the following mathematical equation:

$$TE = \frac{\text{volume of solids coating deposited on the part} \times 100 \text{ percent}}{\text{volume of solids coating used/sprayed}}$$

Example: A TE of 25 percent means that 25 percent of the coating is on the object, 75 percent is captured by the paint booth (overspray) or lost to the air.

3) Film Build Efficiency (FBE or BE) compares the actual thickness of the coating applied with the targeted thickness. Too much film build can affect finish appearance and performance because of runs, sags, cracking, or peeling. Too little film build can cause premature chalking or poor corrosion resistance. Both can cause unhappy customers.

Applying too much coating also can cost you more in raw material purchases. For example, if two mils dry is the targeted thickness and four mils are applied, both your coating purchase costs and air emissions are doubled. You should periodically measure your FBE to make sure you are on target for your coating thickness.

4) Waste Coating Material is overspray that has to be cleaned from equipment and spray booths.

Why Should You Care About Application Efficiency?

If the TE is low, raw material (coating) is wasted. This increases the costs of raw materials and the amount of waste (overspray) that must be disposed and therefore the cost of producing the part.

continued on page 5...

The Cost of Inefficiency

Example:

One drum or 55 gallons of coating
Product cost: \$30/gallon
TE= 30 percent

In this example, 70 percent (approx. 39 gallons) of the coating is wasted, that means **\$1,155 of material is wasted.**

Other costs include excessive air emissions and clean-up of overspray.

What Are Factors That Affect Efficiency?

• Spray Gun and Booth Design

Some types of spray guns like High Volume Low Pressure (HVLP) or electrostatic spray guns are more efficient than the conventional spray gun. The fluid nozzle, needle and air cap size should match the viscosity of the coating and can affect efficiency. For thinner viscosity of the coatings, use smaller needles and cap sizes. For thicker viscosity coatings, use larger needles and caps.

The spray gun operator may apply too much or too little coating due to poor booth lighting. There are products available to coat paint booths that let you easily clean the booth by peeling off the overspray. Clear plastic film/sheeting that sticks to lighting and peels off for easy clean-up is also available. Flame retardant paper is available to place on the floor to help reflect light or to hang on the booth wall for a test strip. Check with your paint booth or filter suppliers for these accessories.

• Spray Technique of the Operator

The operator should ideally keep the spray pattern on the part to minimize overspray (size the spray to fit your part, trigger the gun and don't spray into the air). Remember to maintain a good gun-to-target distance, keep the gun square to the part surface and maintain overlap.

• Operator Conditions

Operator fatigue and training also can affect efficiency. Be sure to place parts for coating at the proper height and orient them to make it easy for the operator.

Training your spray gun operators can save you money on materials and waste disposal costs. The IWRC trains spray operators through its Spray Technique Analysis Research (STAR) program. After attending training on spray techniques, companies have reported that TE increased 25 percent, Volatile Organic Compounds (VOCs) decreased 30 percent, and \$4,196 was saved per year.

P2 Success Story Operator Training

Ethan Allen Furniture in North Carolina developed a three-stage training program. Operators were video taped and the tapes were reviewed to identify improvements. Employees were then taped again to compare and observe improvements.
Savings of \$50,000- \$70,000 were projected due to less coating being used.

continued on page 5...

Tips for Increasing Your Application Efficiency:

- Properly select, set up and operate your equipment.
- Maintain your equipment and periodically measure your FBE.
- Train your operators on good spray technique.

By Reducing Your Overspray You Will:

- Save money on raw material, since more will be on the part and not wasted.
- Save money on labor for clean-up of overspray on walls, floors and lighting of booth.
- Save money on paint booth filters and their disposal, since you will replace them less.

If you have more questions regarding hazardous waste, please contact your *district inspector*. Our hazardous waste inspectors offer technical assistance to businesses by helping them identify ways to generate less waste. To learn more about pollution prevention, visit our Office of *Compliance Assistance and Pollution Prevention's* (OCAPP) Web site. OCAPP's Web site also has information about free online *P2 training for Painting and Coating*.

References/Resources:

The Iowa Waste Reduction Center (IWRC), in a cooperative effort with U.S. EPA's Design for the Environment program, developed the Painting and Coating Enhancement (PACE) program which focuses on improving efficiency and pollution prevention in the industry. The *PACE* program includes the STAR® training program and Process Training. The Spray Technique Analysis and Research (STAR®) program is dedicated to improving the overall efficiency of manual spray coating operations by enhancing the techniques of spray technicians.

The Minnesota Technical Assistance Program (*MnTAP*) is a business outreach program at the University of Minnesota, helping businesses develop and implement industry-tailored solutions that maximize resource efficiency, prevent pollution, and reduce costs and energy use. 

Ohio Hazardous Waste
Notifier

Bob Taft, Governor
Joseph Koncelik, Director

Editor:
Rose McLean

Contributors:
**Pam Allen,
Andy Kubalak
Rose McLean,
Helen Miller**

Editorial Assistance:
**Carol Hester
Cathryn Allen**

Graphics and Layout:
Pattie Rhodes-Mehrle

Ohio EPA is an
Equal Opportunity Employer
Printed on Recycled Paper