

Ohio Hazardous Waste

Notifier

A Publication of Ohio EPA, Division of Hazardous Waste Management

Mixtures of Hazardous Waste and Used Oil

by Dan Sowry

In most cases, if you mix your hazardous waste with your used oil, the resulting mixture must be managed as hazardous waste rather than used oil. Mixing hazardous waste with used oil can also make it more costly to manage and dispose. It is very important to understand when mixtures can be managed as used oil or if they must be managed as hazardous waste.

Ohio's used oil mixture rule is found in Ohio Administrative Code (OAC) rule [3745-279-10](#). This rule discusses mixtures of used oil and hazardous waste and how the resulting mixture is regulated if it will be recycled.



Special Rules for CESQGs

A business that generates less than 220 pounds of hazardous waste in a calendar month is called a conditionally exempt small quantity generator (CESQG). CESQGs who mix used oil with either *listed* or *characteristic* hazardous waste can manage it as used oil if it will be recycled. As a CESQG, if you plan to dispose of your used oil/hazardous waste mixture rather than recycle it, you must evaluate the mixture to determine if it is hazardous and manage it accordingly. To evaluate your mixture, see OAC rule [3745-52-11](#).

Exceptions for SQGs and LQGs

If you generate 220 pounds or more of hazardous waste in a calendar month [small quantity generator (SQG) or large quantity generator (LQG)] and you mix your hazardous waste with your used oil, the resulting mixture will likely be considered a hazardous waste rather than a used oil. There are a few exceptions in the used oil mixture rule, however, that allow mixtures of certain *listed* and/or *characteristic* hazardous wastes and used oil to be managed as used oil.

- Mixtures of used oil and a waste that is hazardous waste only for ignitability may be managed as used oil if the resulting mixture is not ignitable.
- Mixtures of waste that exhibit one or more characteristics of hazardous waste and used oil can be managed as used oil if the resulting mixture does not exhibit ANY characteristic of hazardous waste. Otherwise, the mixture must be managed as hazardous waste. For example, let's

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say that you have a waste that is hazardous for *corrosivity* and you mix it with used oil that contains 10 parts per million (ppm) *chromium*. The resulting mixture no longer displays the corrosivity characteristic, but it is hazardous for chromium. This mixture must be managed as a hazardous waste because it exhibits the toxicity characteristic for chromium.

- Mixtures of listed hazardous waste with used oil must be managed as a listed hazardous waste rather than a used oil UNLESS the listed hazardous waste was listed solely because it exhibits one or more characteristics (ignitable, corrosive, or reactive, not toxic), and the resulting mixture does not exhibit ANY characteristics of hazardous waste - in this instance, it may be managed as used oil. For example, F003 is a listed hazardous waste that was listed solely for its ignitability characteristic. If you mix an F003 listed hazardous waste with used oil, and the resulting mixture does not exhibit the ignitability (or any other) characteristic, it can be managed as used oil. Otherwise, it must be managed as an F003 listed hazardous waste.

Used Oil Containing Halogens

If used oil contains more than 1,000 ppm total halogens, it is presumed to have been mixed with a hazardous waste. Used oil containing more than 1,000 ppm total halogens cannot be managed as a used oil unless you can demonstrate that the halogens are not from a listed hazardous waste or that you are a CESQG. This applies to all used oil regardless of whether it is being used as a fuel or is re-refined to make a lubricant. For more information, see U.S. EPA's *guidance on rebutting the presumption*.

If you have any questions about mixtures of hazardous waste and used oil, please contact our Regulatory Services Unit (614) 644-2917. 

Annual Report Training

By Tammy Heffelfinger

The Division of Hazardous Waste Management (DHWM) is preparing for the 2006 Annual Reports. Sites that generated more than 2,200 pounds of non-acute hazardous waste in any one calendar month during 2006 must complete and file the report, even if it was a one-time event and the U.S. EPA identification number has already been deactivated. The reports are due by close of business on March 1, 2007. The forms, instructions and free electronic reporting software can be found on our Web site www.epa.state.oh.us/dhwm/ann_report.html. The forms have not changed from last year.

DHWM is pleased to announce that we will once again offer *free* generator annual report training for the 2006 report. Please note that SPACE WILL BE LIMITED at each location, but we plan to offer six opportunities in various locations around the state for your convenience. The training will be held at the Ohio Department of Transportations (ODOT) facilities, and you must bring identification with you for security purposes. The dates and locations are as follows:

January 17, 2007 Ashland ODOT District 3 — 50 people max (morning and afternoon sessions)
January 24, 2007 Jacksontown ODOT District 5 — 50 people max
January 31, 2007 Lebanon ODOT District 8 — 70 people max
February 7, 2007 Lima ODOT District 1 — 40 people max (morning and afternoon sessions)

The link to register is www.surveymonkey.com/s.asp?u=87353041482. These sessions will be very similar to those presented in previous years. If you are unable to attend, but would like a copy of the presentation materials, contact Tammy Heffelfinger at tammy.heffelfinger@epa.state.oh.us or 614-644-2954. 

Ohio Printer Reduces Hazardous Waste Disposal 96 Percent by Purchasing a Blanket Wash Distillation Unit

By: Helen Miller

Robin Enterprises Co. (**Robin Enterprises**) is a 40-year old family owned lithographic printing business in Columbus, Ohio with 127 employees. They have eight sheet-fed presses that use soy and linseed based inks. The company has all-digital pre-press, bindery, finishing and mailing departments. In 2005, business grew 22 percent. Currently, they are one of the top 400 printers in the U.S.



A few years ago, as waste generation and management responsibilities increased, Production Supervisor Duane Moore wondered how he could improve the company's waste management. Ohio EPA suggested that he consider using a distillation unit to recycle spent blanket wash. Blanket wash is a solvent, usually a combination of alcohol and water. It cleans the excess ink from the printing press and plates. Moore began researching various distillation unit vendors, considering their equipment and labor costs associated with equipment use. On paper it appeared that it would probably take two years after purchasing the unit to break even and he was afraid it would be a labor-intensive effort. He was also very concerned about the quality of recycled blanket wash. The company's printing presses range from \$1.5 to \$3 million in capital investment per machine. If the recycled wash damaged the presses, the project could be a catastrophe. There was also concern for the printing quality. The appearance and quality of their printed products are crucial to their customers who are some of the top retailers in the country.

One day a vendor came to the plant to promote a blanket wash distillation unit. He offered to distill a small amount of his spent blanket wash to demonstrate how effectively the machine recycled spent wash and the high quality of the product it produced. The vendor also supplied a list of references of other printers that had been using their equipment. Moore contacted them and found they were happy with the equipment and its performance.

The company purchased a distillation unit (approximately \$40,000) and began using it in 2003. They phased it into operation gradually, carefully monitoring the quality of recycled blanket wash. Recycled wash was routinely sent to a lab to accurately analyze the make-up of the recycled wash. Press employees developed more consistent procedures for the press jobs. All products/chemicals that were used in the facility were evaluated and many were eliminated to ensure production of a more consistent recycled wash would be produced. They went from using 15 to three different products for their operations. Today, all blanket wash is recycled. They continue to periodically send out their blanket wash for chemical analyses.

How Did Robin Enterprises Benefit by Purchasing a Distillation Unit?

Cost Savings

Robin Enterprises saves approximately \$34,000 a year in raw materials (\$13,000) and hazardous waste disposal (\$21,000) costs. They purchase less "new" blanket wash and add a "rejuvenator" to the recycled wash before using it to make sure it meets their performance expectations. The unit produces recycled blanket wash, water and "still bottoms." The still bottoms are disposed of as hazardous waste. There are two filters on the unit; one is a re-usable metal screen mesh filter where solids are periodically scraped into the drum of still bottoms and the other filters water. Water, a by-product of the distillation process, is high quality and is re-used in the printing process. Since they must pre-treat all water used in their printing process this also saves them money. Their water use has decreased by approximately 20 percent in the pressroom since they now reuse the water from the distillation process.

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Reduced Environmental Regulation

Robin Enterprises used to be a large quantity generator (LQG) of hazardous waste. Moore indicated this year the company would probably qualify as a conditionally exempt small quantity generator (CESQG) of hazardous waste. This eliminates many of the regulatory requirements for the company making compliance with environmental regulations easier. In 2003 they disposed of approximately 105 55-gallon drums of hazardous waste. This year Moore anticipates generating only four 55-gallon drums of still bottoms for hazardous waste disposal. This is a 96 percent reduction of hazardous waste disposed.

Other

Moore was pleasantly surprised with the amount of labor required to run the unit. The unit runs for two shifts, but only one employee is needed for two hours per day to operate it. Moore estimates the actual payback or break-even point on the unit was probably close to six months.

Robin Enterprises worked closely with the fire department on installation of the unit. And although additional electrical wiring was needed for the unit, the cost of the extra electricity to run the unit is negligible. The money they save on water treatment has helped reduce the additional cost of electricity.

What Recommendations Does Robin Enterprises Have for Someone Evaluating a Potential Opportunity Like This?

- Call Ohio EPA. At first Moore was uncomfortable contacting Ohio EPA. After the experience he said, "Ohio EPA sees all types of businesses that are doing different things that might work at your business. They were helpful in recommending several companies to start researching and answering questions on waste management and how to complete the paperwork."
- Talk to other companies that are using the technology you are considering investing in and find out how it is working for them.

Approximately two and a half years after implementing these changes, Moore reports that the business is more competitive, a better place to work, and better for the community.

Continued Improvement

Robin Enterprises continues to look at ways to improve their operations. Currently they are working with a supplier to see if a blanket wash with a flash point of > 140° F will work for them. This can potentially extend the life of the rubber seals on their presses. This may reduce the amount of service the presses require, saving them money. The spent blanket wash could also be managed as a non-hazardous waste prior to recycling, simplifying their environmental management requirements. If they make this change, they will work with the distillation unit vendor to recalibrate the unit to allow it to distill the new blanket wash.

Ohio EPA would like to thank Robin Enterprises for sharing their experience with us. If you have any questions about the company featured in this article, please contact Duane Moore at dmoore@robinent.com or (614) 891-0250. You may also visit them on the Web at www.robinent.com/.

If you have other questions about hazardous waste, please ask the *Answer Place*, contact the regulatory service unit at (614) 644-2917 or your *district office inspector*. Our hazardous waste inspectors offer technical assistance to businesses to help them identify ways to generate less waste. If you would like to learn more about Pollution Prevention (P2) go to Ohio EPA's *Office of Compliance Assistance and Pollution Prevention's* Web page.

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Vendors/Suppliers of Equipment

(Ohio EPA does not endorse any product/company)

There are several companies that sell distillation units, some of them are:

Maratek Environmental Inc. - www.maratek.com/

Solvent Waste Management Inc. - www.solventwasher.com/index.htm

Uniram at - www.uniram.com/home.html



Ohio's Voluntary Action Program - an Option for RCRA Facilities Conducting Site Cleanup

By Harry Courtright, Supervisor, Northeast District Office

A number of options exist to address Resource Conservation and Recovery Act (RCRA) Corrective Action obligations. One option to consider is the State of Ohio's Voluntary Action Program (VAP), administered by Ohio EPA's Division of Emergency and Remedial Response (DERR). Under the VAP, a volunteer that complies with program requirements (*Ohio Revised Code Chapter 3746, Ohio Administrative Code Section 300*), and certifies that the property meets applicable standards, will be issued a Covenant Not to Sue (CNS) by the director of Ohio EPA. A CNS protects the volunteer from state civil liability as they perform additional investigation and remedial activities for the property addressed by the covenant. However, Ohio EPA retains its rights regarding RCRA Corrective Action under Ohio law for any areas of the property that are not eligible for the VAP, or are eligible but not sufficiently addressed by the voluntary action.

The VAP is a program available to some RCRA facilities that are subject to RCRA Corrective Action requirements. VAP is also an option for facilities to address contamination that may have originated from historic activities, releases from product and raw material handling units, and waste units not subject to RCRA closure. Eligibility for VAP should be evaluated before proceeding, as some facilities and units, such as RCRA permitted facilities and units subject to RCRA closure, are not eligible.

Any facility that has established and operated a hazardous waste management unit and thereby is the owner/operator of a hazardous waste treatment, storage or disposal facility is subject to the RCRA Corrective Action requirements under Ohio law. RCRA Corrective Action requires that the owner/operator of a treatment, storage or disposal facility be responsible for investigating and, as necessary, cleaning up any hazardous waste or hazardous constituent releases at or from their facilities, regardless of when they occurred.

The VAP program has two tracks. Volunteers can follow the classic VAP track or the Program Memorandum of Agreement (MOA) track. In the classic track, a volunteer proceeds with work on its own and, at the end of the process, a Certified Professional issues a no further action letter to Ohio EPA for review. The MOA track is an investigation and cleanup process originally developed pursuant to a July 31, 2001, "Superfund Memorandum of Agreement" entered into between Ohio EPA and U.S. EPA. This agreement allows sites cleaned up under Ohio's VAP MOA track to also receive assurance that U.S. EPA will not ask for additional cleanup.

Both of the VAP tracks contain the same cleanup standards; however, unlike the classic track, the MOA track includes public involvement and incorporates oversight and document review by Ohio EPA. Although the 2001 agreement under which the MOA track was developed does not yet extend to hazardous waste management facilities subject to RCRA Corrective Action, discussions with U.S. EPA for that purpose are ongoing and the outlook is positive. Ohio EPA technical assistance is available throughout either track. More information on the VAP can be found at www.epa.state.oh.us/derr/volunt/volunt.html.

The State of Ohio may have grants or loans available to fund site investigation or facility cleanup. Sources of these funds can be found in the Ohio's Voluntary Action Program Fact Sheet at www.epa.state.oh.us/derr/vap/docs/fact1.pdf. There may be restrictions, and/or a requirement for partnering with local government, but money for characterization and remediation is available to eligible applicants.



Just the Right Words

By Neil Wasilk

The hazardous waste, universal waste and used oil regulations identify certain words that must be used to mark or label containers and/or tanks holding certain materials. The purpose of these regulations is to ensure that marks and labels clearly and unambiguously indicate tank and container contents by mandating the use of standard wording. Only the specified words may be used.

Improper labeling and marking are some of DHWM's most frequently cited violations. Attention to labeling and marking will reduce the potential for mismanagement of these materials and avoid citations.

By rule, generators must:

- Label or mark containers and tanks in 90-day accumulation areas (180/270 day areas for small quantity generators) with the words **Hazardous Waste**. (*Ohio Administrative Code (OAC) 3745-52-34(A)(3)*)
- Mark satellite accumulation area containers with the words **Hazardous Waste** or other words that identify the contents. (OAC rule 3745-52-34(C)(1)(b))
- Before transporting off-site, mark each container of hazardous waste of 110 gallons or less with the words: **Hazardous waste - Federal law prohibits improper disposal. If found, contact the nearest police or public safety authority, or the United States Environmental Protection Agency**, and the generator's name, address and manifest document number. (OAC rule 3745-52-32(B))

Similarly, OAC rules *3745-273-14* and *3745-273-34* require handlers of universal wastes (generators are handlers) to clearly label or mark:

- Each universal waste battery or container holding such batteries, with the words **Universal Waste- Battery(ies)**, or **Waste Battery(ies)**, or **Used Battery(ies)**.
- Containers, (or multiple container package units), tanks, transport vehicles or vessels holding universal waste pesticides, with the words **Universal Waste- Pesticide(s)** or **Waste- Pesticide(s)**, plus other information specified in the rule.
- Each universal waste thermostat, or container holding such thermostats, with the words **Universal Waste-Mercury Thermostat(s)**, or **Waste Mercury Thermostat(s)**, or **Used Mercury Thermostat(s)**.
- Each universal waste lamp or containers or packages holding such lamps, with the words **Universal Waste- Lamp(s)**, or **Waste Lamp(s)**, or **Used Lamp(s)**.

And Used oil generators must clearly label or mark:

- Containers and above ground tanks used to store used oil with the words **Used Oil**.
- Fill pipes used to transfer used oil into underground storage tanks with the words **Used Oil**.

If you have any questions about marking or labeling your containers correctly, please contact your district office hazardous waste inspector or our Regulatory Services Unit (614) 644-2917.



What's on DHWM's Web site?

By Rose McLean and Dan Sowry

If you haven't been to our Web site recently, you should check it out. The Web address is www.epa.state.oh.us/dhwm.

On the front page, you'll find a drop-down list of topics. Here's just a small sampling of topics and what you'll find when the topic is selected:

- **Annual reports** - forms, changes, instructions and examples
- **Closure** - U.S. EPA and Ohio EPA articles, checklists and guidance documents
- **Compliance history** - U.S. EPA's enforcement and compliance history online
- **Databases** - numerous links to search for environmental information
- **Enforcement** - process, civil penalty matrix, actions and common violations
- **EPA ID #s** - frequently asked questions, forms and instructions
- **Waste minimization and pollution prevention** - Ohio EPA articles and assessments
- **Written regulatory interpretations** - a search engine of Ohio EPA correspondence

On the top right-hand side of the page, there's a current issues section where you'll find frequently updated links to new guidance documents, information and announcements.

In the center of the page, we've added a link to our new Hazardous Waste Education Program for Kids. This new program is designed for kids in grades 3-5 and 6-8. DHWM's environmental specialists use an EnviroScape® hazardous materials model to define and demonstrate pollution sources, waste generation, waste management and pollution prevention concepts in a way that's fun, friendly and easy to understand.

On the left side of the page you'll find links to general Agency topics. Below that you'll see our Division links:

- **Forms and Publications** - includes a topic index, inspection checklists, guidance documents and recyclers lists.
- **Rules and Laws** - view all of Ohio's hazardous waste, used oil and universal waste rules (including their federal counterpart citation).
- **DHWM Offices & Staff** - contact information for a particular inspector or regulatory support person.
- **The Notifier** - our quarterly newsletter. It's geared toward hazardous waste generators.
- **Stakeholder Involvement** - provides links to draft permit action, variances, guidance documents, rules and corrective action activities open for public comment.
- **Final Actions** - links to enforcement actions, permits, environmental covenants, 3734.02(G) exemptions, variances, non-permitted corrective action and commercial incinerator capacity assessments.
- Or if you have not visited our Web page lately, you can click on "What's New" and be provided with an archive of past messages about permitting, rule-making, enforcement, new guidance, and more.

On the left side of our division's Web page, you'll also find logos for the State of Ohio's Web page, and the Agency's search engine and online tools such as the [Answer Place](#) and [Permit Wizard](#). The Answer Place provides quick, easy access to information and allows you to pose questions directly to Agency staff. Ohio EPA's Permit Wizard allows you to identify the various permit, licensing and registration requirements that may apply to your business.

If you have questions, concerns or suggestions for improvement of our division's Web page, please contact Pam Allen at (614) 644-2917 or pam.allen@epa.state.oh.us.



HAZARDOUS WASTE EDUCATION PROGRAM FOR KIDS



Ohio Hazardous Waste

Notifier

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