

Advanced topics in hazardous waste

Advanced Topics in Hazardous Waste: Part 2
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Universal Waste Management System

- Designed to encourage collection and recycling of wastes from wide variety of sources including households and small businesses
- Includes wastes that pose low hazards
- Wastes can be safely managed under less restrictive rules than other hazardous wastes

What is the Universal Waste Rule?

- Streamlined hazardous waste management system
- For widely generated hazardous wastes
- Currently hazardous lamps, batteries, recalled pesticides and thermostats can be universal wastes (UW) in Ohio

What are its advantages?

- Generator acting as a handler:
 - Does not have to evaluate their waste
 - Does not have to count universal waste toward generation rate
 - Does not have to use manifest or hazardous waste transporter
 - Can send it to another universal waste handler
- Intermediate handler:
 - Does not have to have a hazardous waste storage permit
 - Does not have to have financial assurance
 - Is not subject to RCRA corrective action

Where can I find the rules?

- Ohio Administrative Code (OAC) chapter [3745-273](#)
- **Small handler** rules are OAC rules 3745-273-10 through 3745-273-20
- **Large handler** rules are OAC rules 3745-273-30 through 3745-273-40

Ohio Universal Waste Types

- Recalled pesticides
- Batteries
- Mercury containing equipment (including thermostats)
- Lamps

Universal Waste Requirements

- **Small Quantity Handler** of UW if you accumulate less than 5.5 tons of UW (collectively) at any time
- **Large Quantity Handler** of UW if you accumulate 5.5 tons or more of UW waste at any time (that's a lot of lamps)

Small Handlers

- Must send UW to another handler or a destination facility
- Can receive and accumulate UW from other handlers
- Cannot dispose, dilute or treat except as specified in rule for each type of UW
- Not required to notify and get an ID number

Small Handler

- Label or mark the UW (or container) to identify type of UW as specified in OAC rule 3745-273-14
- May accumulate up to 1 year
- Manage UW to prevent releases to environment
- Must keep records to demonstrate how long UW has been accumulated
- Inform employees of proper handling and emergency procedures

Small Handler

- Contain releases from UW
- Determine if material from spill cleanup is hazardous waste - if so properly manage it
- Must follow DOT rules for shipping UW (e.g., proper package, label, mark, placard, shipping papers)
- Must make sure receiving handler agrees to accept UW
- No tracking requirements

Large Handler

Must comply with small handler requirements and;

- Notify and obtain an ID number if no previous notification
- Keep shipping and receipt records for three years
- Ensure that employees are familiar with proper handling and emergency procedures

Can I crush my lamps?

- Universal waste handlers cannot crush their lamps and still comply with the universal waste rules
- You can crush your hazardous waste lamps if you comply with full hazardous waste rules
 - Hazardous waste generator requirements including evaluation, counting and onsite management
 - Manifest
 - Send directly to a permitted facility

Can I throw green tip lamps in the trash?

- Must evaluate lamps to determine if they are hazardous
- Must keep evaluation documents
- You can have representative sample of lamps analyzed for TCLP metals or use reliable complete up-to-date manufacturer's data as all or part of your evaluation

Why recycle green tip lamps?

- Keeps mercury containing products out of inappropriate waste disposal methods (especially incineration)
- Conserves resources - glass, metals
- Preferred management method in Ohio for mercury-containing lamps
- No need to evaluate them

DOT rules for batteries

- Batteries destined for recycling need to be properly packaged per [DOT rules](#)
- Batteries present a fire hazard if they short circuit
- Terminals must be taped, or batteries placed in individual bags or original containers

Ohio's Used Oil Regulations for Generators

Ohio's Used Oil Regulations for Generators



Used Oil Regulations

- Used oil rules effective October 1998. Ohio Administrative code (OAC) Chapter 3745-279.
- Revised standards for used oil handlers, including generators.
- Used oil program handled by Ohio EPA, Division Materials and Waste Management (DMWM).

Other Used Oil Activities

- transportation
- collection centers
- burning
- marketing
- processing, re-refining



There are used oil regulations that apply to each of these activities.

Used Oil Generator Standards

- Regulations relating to housekeeping and paperwork.
- Regulations encourage companies to send used oil to recycling companies for reconditioning, reusing, re-refining or energy recovery.

What is Used Oil?

- Petroleum-based or synthetic oils that have been used and are contaminated with physical or chemical impurities.
- Used oil that is recycled and exhibits a characteristic of hazardous waste is not regulated as hazardous waste (unless mixed with hazardous waste or must be disposed).

Examples of Used Oil

- engine oils from vehicles and equipment
- lubricating oil
- brake/transmission fluid
- hydraulic fluid
- insulating oil
- metal cutting fluid
- compressor or refrigerant oil



Used Oil Does Not Include

- oil products (unused/new)
- cleanup material from oil product spills
- animal/vegetable oil
- sludge from virgin oil storage tanks
- antifreeze
- kerosene (unless used for lubricating purposes)
- petroleum distillate solvents
- gasoline, diesel fuel
- wash waters that may be contaminated with used oil

Mixing Used Oil With Other Materials

- Be careful when mixing used oil with other materials materials, especially chemicals like used solvents, brake fluids, etc.
- You may cause the whole mixture to become a hazardous waste. Or, it may be harder to recycle the used oil.

Mixing Used Oil With Other Wastes

- Mixing is acceptable under some circumstances. Conditionally Exempt Small Quantity Generators (CESQGs) can mix their hazardous waste (listed or characteristic) and used oil together and still manage it as used oil.
- A CESQG generates less than 220 lbs. (or about 25 gallons) of hazardous waste in a calendar month.

Mixing Used Oil With Other Wastes

- Used oil mixed with listed waste generated by generators who generate greater than 220 lbs. in a calendar month is regulated as listed hazardous waste.
- Used oil mixed with hazardous waste that is only ignitable (D001) can be managed as used oil if the mixture is not ignitable.
- Used oil mixed with hazardous waste that is corrosive, reactive or TCLP toxic can be managed as used oil if the mixture does not exhibit **any** characteristic.

Rebuttable Presumption

- Used oil with >1000 ppm total halogens (Chlorine, Fluorine, Bromine compounds) is presumed to be mixed with halogenated hazardous waste
- You may rebut the presumption by:
 - Demonstrating that you are a CESQG
 - Demonstrating that it contains insignificant levels of halogenated hazardous constituents
 - Demonstrating that they are cutting or machining oils containing chlorinated paraffins that are reclaimed under a tolling agreement.

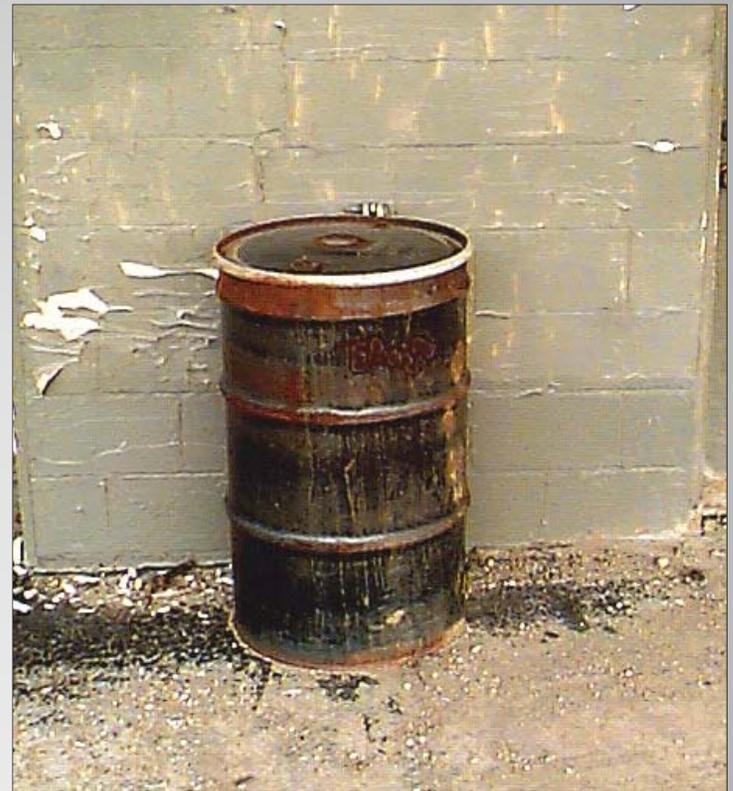
Who Is a Used Oil Generator

A person whose action first causes used oil to become subject to regulation. Examples:

- manufacturers
- machine shops
- metal working shops
- quick lube and auto service shops
- equipment servicing (compressors, forklifts, field vehicles, other large equipment)

Used Oil Containers and Aboveground Tanks

- Label used oil tanks or containers with the words “Used Oil”
- Containers and tanks must be in good condition (no rust, leaks)





This company was not being careful in how they stored used oil.

Make sure your containers are in good condition and managed to prevent spills or leaks.

Used Oil in Underground Tanks

- Fill pipes used to transfer used oil into tanks must be labeled “Used Oil.”
- If you store used oil in underground storage tanks you are also subject to Ohio’s underground storage tank regulations. Contact BUSTR, State Fire Marshal’s Office

Managing Used Oil

- Ohio EPA has a list of companies that recycle used oil. See handout materials.
- Used oil CANNOT go into the dumpster, a septic system or on the ground!

Used Oil Releases

If you have a spill or leak of used oil:

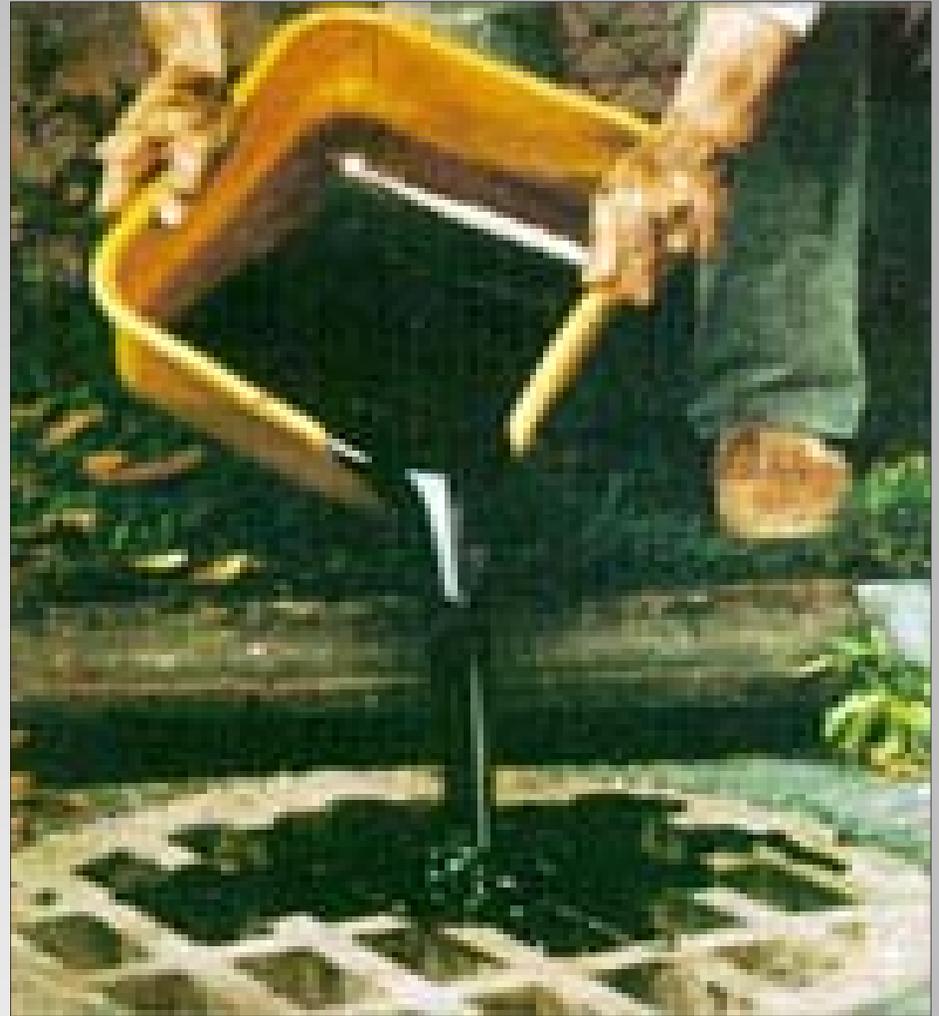
- Stop the release
- Clean up the spill
- Remove contaminated soil
- Replace/repair tanks or containers if needed
- Visual Standard
- Soils you will dispose must be evaluated to determine if they are hazardous waste

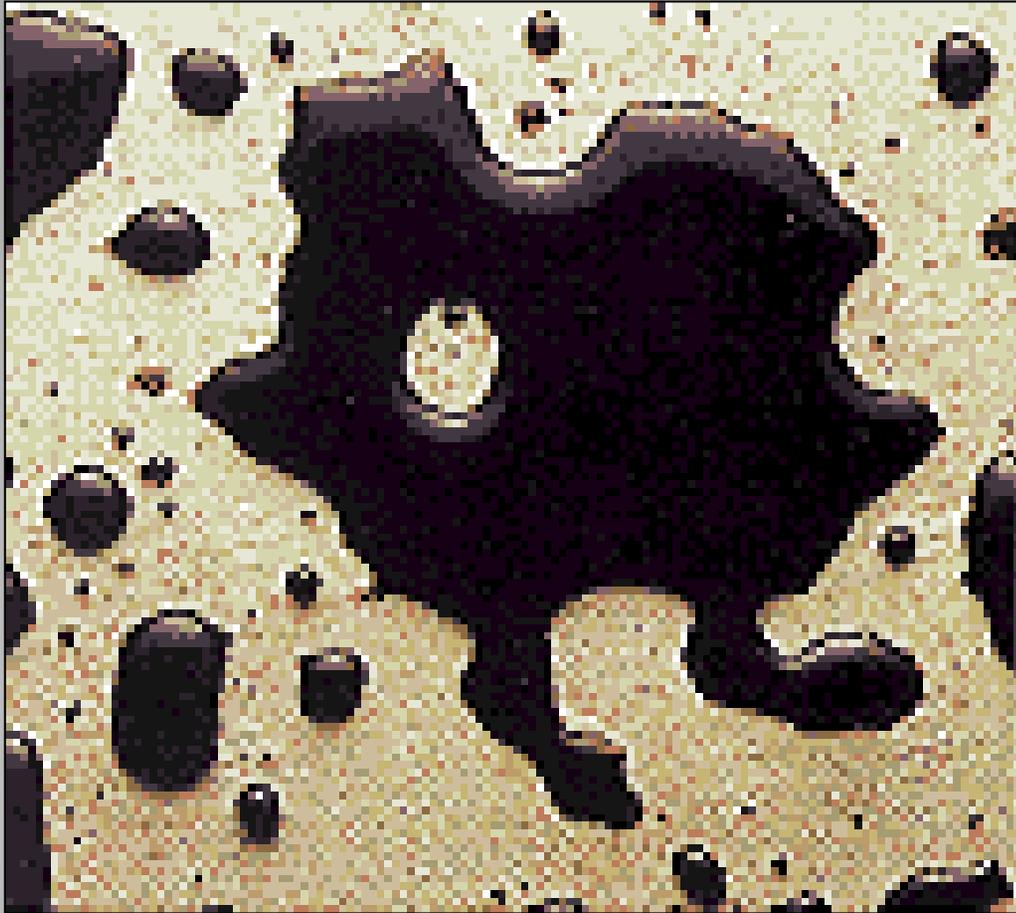
Make sure you don't pour used oil or any other chemical wastes into your floor drains!



DON'T pour your used oil into a sewer or down a storm drain!

Not only does this cause environmental damage, it can also lead to violations or penalties.





DON'T use
used oil
outside on the
ground for
any reason!

Used Oil Shipments Off-Site

- The transporter picking up your used oil must have an identification number from Ohio EPA.
- You can check on a transporter's number by calling the Division of Hazardous Waste at (614) 644-2621.



Used Oil Transportation

- If your used oil is reclaimed under a contractual agreement, your transporter does not need an EPA identification number. The transport vehicle must be owned by the processor. The reclaimed oil must be returned to you for use as a lubricant, cutting oil or coolant.
- Your contractual agreement must also meet certain conditions as outlined in the regulations.

Used Oil Transportation

A used oil generator may self-transport up to 55 gallons of used oil to the following locations without registering with Ohio EPA as a transporter:

- collection center, or
- aggregation point

Used Oil Collection Center

A site that is registered with Ohio EPA and accepts used oil from generators and DIY used oil generators.

Used Oil Aggregation Point

A site that accepts used oil from other sites that it owns or operates.

Remember, you can only self-transport up to 55 gallons of used oil.

Used Oil Transportation to a Burner

- If you have used oil transported directly to a company that will be burning the oil for energy recovery, you are a *used oil marketer*.
- If you are the first person to claim that used oil meets the specification you are a *used oil marketer*.
- You must comply with the marketer requirements in OAC rules 3745-279-70 through 3745-279-75.

Oil Spill Prevention



Spills can be expensive to clean up. Take steps to prevent spills and if one does happen, respond quickly.

Respond promptly to oil spills. Don't let them become a problem!



This company had to pay for an expensive clean up because of oil and waste contamination.



Used Oil Regulations Spill Prevention

Depending on how much used oil you store on-site, you may need to develop a spill response plan, called an SPCC plan. (Spill Prevention and Countermeasures Plan)



Ohio EPA's Division of Environmental Response and Remediation (DERR) is responsible for the SPCC Program.

What About Used Oil Filters?

Used oil filters should be properly drained. The EPA has guidelines on how to properly “hot drain” filters.

Once the filters are drained, the best option is to have them sent to a scrap metal recycler.

Used oil generated from draining filters must be managed properly.



Properly Handling Used Oil Filters

- Puncture the anti-drain back valve or dome end and hot drain,
- Hot drain and crush, or
- Dismantle and hot drain.

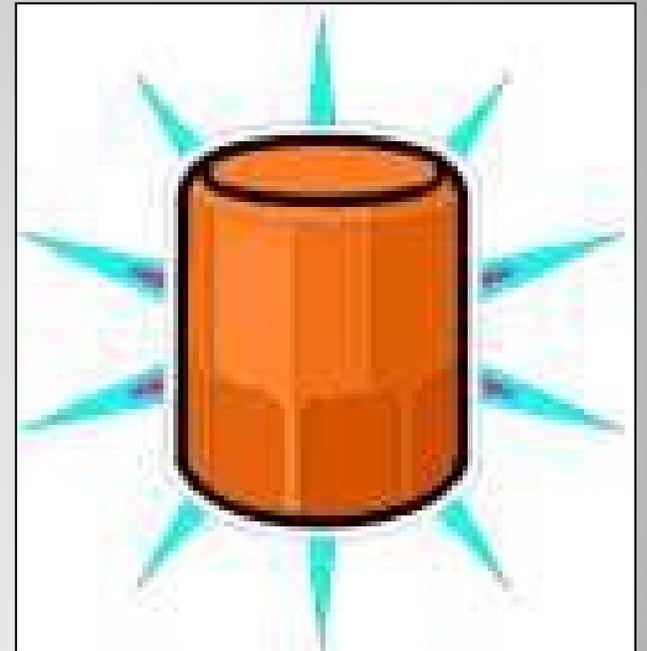
Hot draining means that oil is removed at close to engine operating temperature. Filters need to be drained for 12-24 hours.

Used Oil Filters

- If you hot drain oil filters, they can be thrown in the dumpster with your other solid waste. You do not have to evaluate them to determine if they are hazardous should still consider recycling filters at a scrap metal company
- Make sure the filters have not been mixed with hazardous wastes such as solvents. Also, the filters must be non-terne plated.

Terne-Plated Filters

Terne is an alloy of lead and tin. The lead in terne plating can make a used oil filter hazardous. Terne-plated filters are used more commonly with heavy-duty vehicles such as trucks and buses.



Can I burn used oil in my space heater?

This is acceptable, if

- You only burn oil that you've generated, received from a household oil changer ("do-it-yourselfer") or that has been proven to meet the **specification**
- The space heater has a burning capacity of no more than 1/2million BTUs per hour, and
- The combustion gases from the space heater are vented outside.

Burning Used Oil

- You should also check with Ohio EPA's Division of Air Pollution Control on any air regulations that might apply to burning used oil.
- If you are burning used oil in a unit other than a space heater, such as a boiler or industrial furnace, you may not be allowed to burn it or you will be subject to the used oil burner rules in OAC rules 3745-279-60 through 3745-279-67.

Burning Other Businesses' Used Oil

- If you take used oil from other businesses to burn it must meet the specification in OAC rule 3745-279-11.
- Either you or the person sending you the used oil will be required to show that the used oil meets the specification and keep records of analyses and shipments.
- Also, open burning of used oil, shop rags or any other waste from your business is strictly prohibited under Ohio's air rules.

Specification and Rebuttable Presumption

They both apply to used oil

- **Rebuttable presumption** applies to all used oil and assigns burden of proof to used oil generators, transporters, processors and burners that used oil containing greater than 1000 ppm total halogens has not been mixed with hazardous waste
- **Specification** only applies to used oil that is burned for energy recovery
 - Used oil that does not meet the specification can only be burned in industrial furnaces, industrial and utility boilers, hazardous waste incinerators and in a used oil generator's own space heater

Used Oil Specification

- Whoever first claims that used oil meets the specification must have documentation that proves it meets the specification
- Must keep documentation for three years.

Used Oil Specifications

OAC rule 3745-279-11 Table 1

Constituent/Property	Allowable Level
Arsenic	5 ppm maximum
Cadmium	2 ppm maximum
Chromium	10 ppm maximum
Lead	100 ppm maximum
Flash Point	100° F minimum
Total halogen	4000 ppm maximum

Other Used Oil Issues

- You CANNOT put used oil on the ground to control dust at your business. This includes putting used oil on roadways, drives and parking lots.
- DON'T put used oil on the ground to control weeds.
- You cannot manage used oil in ponds or surface impoundments.