

# **An Overview of Ohio's Hazardous Waste Requirements**

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# What We Will Cover

- Hazardous Waste Characterization
- Generator Categories
- Generator Requirements
- Universal Waste Rules
- Most Commonly Cited Violations
- Resources



# Resource Conservation and Recovery Act (RCRA) Cradle-To-Grave Management

## “Cradle-to-Grave” Management



# Hazardous Waste Basics

**Generator** – any person, by site, whose act or process produces or causes a hazardous waste to become subject to the hazardous waste rules.

Under Ohio's laws, **all** wastes must be evaluated and documented by the generator.

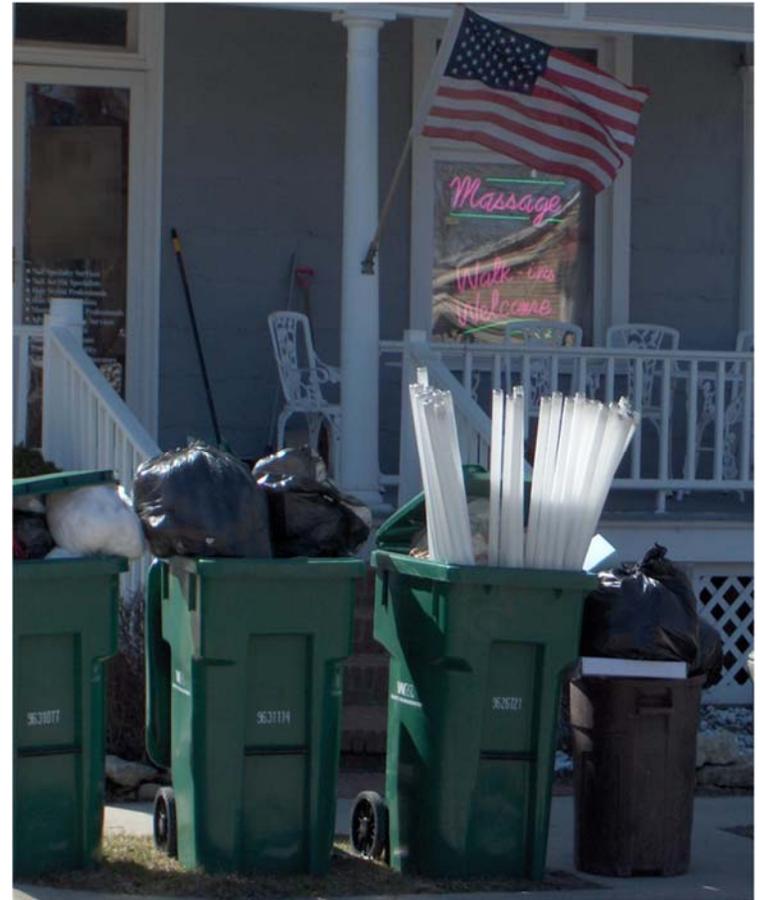
In order for a material to be a hazardous waste, it must first be considered a **waste**.

# When does a material become a waste?



**A material becomes a waste when destined for disposal.**

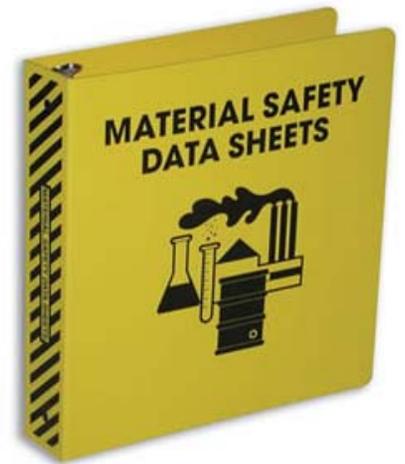
# Waste Evaluation Requirement



Don't do this unless you have confirmed and documented that it is **NOT** a hazardous waste.

# Waste Evaluation Requirements

- Resources may include:
  - Lab analysis
    - Toxicity Characteristic Leaching Procedure (TCLP)
  - Generator knowledge
    - Information from vendor/supplier
    - Safety Data Sheets
    - Process information



**\*\*Must keep waste evaluation documentation on-site for at least 3 years**

# Steps To Properly Evaluate Your Waste

**1<sup>st</sup> – Determine if your waste is excluded**

**2<sup>nd</sup> – Determine if your waste is listed**

**3<sup>rd</sup> – Determine if your waste exhibits a  
characteristic**

# Exclusions and Exceptions...

- **Exclusions**

- **Ohio Administrative Code (OAC) rule [3745-51-04](#)**
  - **Samples sent to laboratory**
  - **Allowable discharges to public sewer**
  - **Household hazardous waste**



- **Materials that will be recycled, reused or reclaimed**

- **Only applies to certain materials**
- **Remain wastes if:**
  - **Placed on the land**
  - **Accumulated speculatively**
  - **Burned for energy recovery**



# Steps To Properly Evaluate Your Waste

**2<sup>nd</sup> – Determine if your waste is listed**

# Listed Hazardous Wastes

- **Non-specific waste sources (F listed)**
  - OAC rule [3745-51-31](#)
- **Specific waste sources (K listed)**
  - OAC rule [3745-51-32](#)
- **Unused discarded commercial chemical products (P and U listed)**
  - OAC rule [3745-51-33](#)

# F Listed Hazardous Wastes

- **Non-specific sources**
  - Meaning from any type of process
- **Examples**
  - Spent solvents / Parts washer solvents
    - F001, F002, F003, F004, F005



# F Listing Table Example

Hazardous Waste Number	Hazardous Waste Description	Hazard Code
F001	<p>The following spent halogenated solvents used in <u>degreasing</u>: tetrachloroethylene, trichloroethylene, methylene chloride, 1,1,1-trichloroethane, carbon tetrachloride, and chlorinated fluorocarbons; all spent solvent mixtures/blends used in degreasing containing, before use, a total of ten per cent or more (by volume) of one or more of the above halogenated solvents or those solvents listed in F002, F004, and F005; <u>and still bottoms from the recovery of these spent solvents and spent solvent mixtures.</u></p>	(T)
F003	<p>The following spent non-halogenated solvents: xylene, acetone, ethyl acetate, ethyl benzene, ethyl ether, methyl isobutyl ketone, n-butyl alcohol, cyclohexanone, and methanol; all spent solvent mixtures/blends containing, before use, only the above spent non-halogenated solvents; and all spent solvent mixtures/blends containing, before use, one or more of the above non-halogenated solvents, and, a total of ten per cent or more (by volume) of one or more of those solvents listed in F001, F002, F004, and F005; <u>and still bottoms from the recovery of these spent solvents and spent solvent mixtures.</u></p>	(I) *

# K Listed Hazardous Wastes

- **Specific waste sources**
  - **Meaning from a specific source or industry**
- **Examples**
  - **Wood preserving - K001**
  - **Iron and steel production**
    - **Arc furnace dust - K061**
    - **Spent pickle liquor - K062**



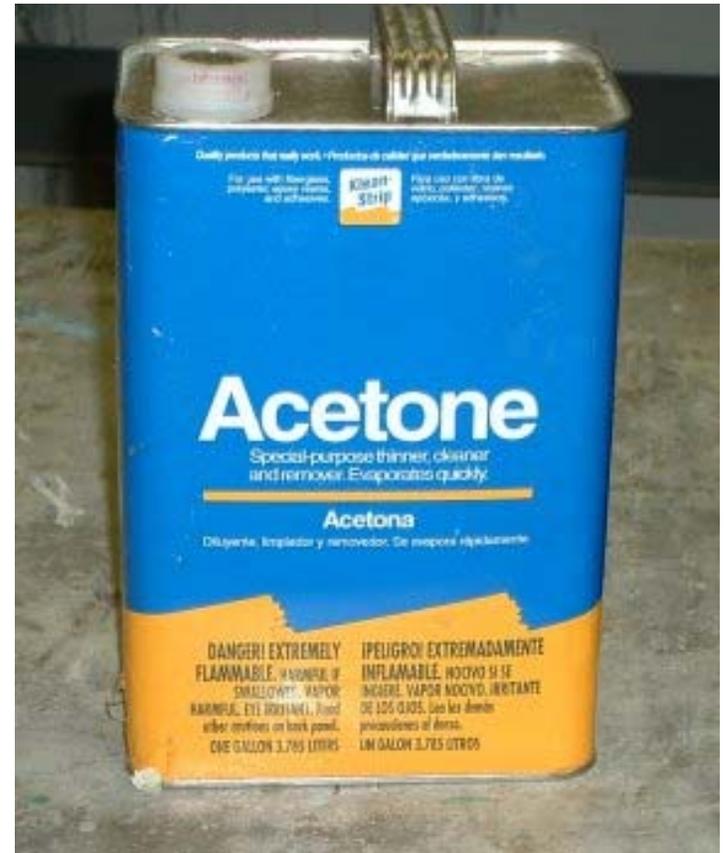
# K Listing Table Example

Hazardous Waste Number	Hazardous Waste Description	Hazard Code
<b>Wood preservation</b> K001.....	Bottom sediment sludge from the treatment of wastewaters from wood preserving processes that use creosote and/or pentachlorophenol.	(T)
<b>Iron &amp; Steel</b> K061.....  K062.....	Emission control dust/sludge from the primary production of steel in electric furnaces  Spent pickle liquor generated by steel finishing operations of facilities within the iron and steel industry (SIC Codes 331 and 332)	(T)  (C)(T)

# P or U Listed Hazardous Wastes

Must be an unused commercial chemical product

- Examples of P listed hazardous wastes:
  - Acetic acid – P058
  - Copper cyanide – P029
- Examples of U listed hazardous wastes:
  - Acetone – U002
  - Mercury – U151



# Where You May Generate P or U Listed Hazardous Waste?

- Outdated chemicals – laboratory clean-outs
- Science laboratories
- Photo laboratories
- Medical facilities (Pharmaceuticals)
- Chemicals used for HVAC systems



# “Acute” Hazardous Waste?

- Has nothing to do with appearance...
- Most P listed hazardous wastes and F020, F021, F022, F023, F026 and F027.
- Listed hazardous waste designated with an “H” hazard code.



# Acute Listing Example

Hazardous Waste Number	Hazardous Waste Description	Hazard Code
F021.....	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of pentachlorophenol, or of intermediates used to produce its derivatives.	(H)
F022.....	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tetra-, penta-, or hexachlorobenzenes under alkaline conditions.	(H)

# Steps To Properly Evaluate Your Waste

**3<sup>rd</sup> – Determine if your waste exhibits a  
characteristic**

# Characteristic Hazardous Wastes

4 categories of characteristic hazardous wastes (D001 – D043 codes):

- Ignitable
- Corrosive
- Reactive
- Toxic



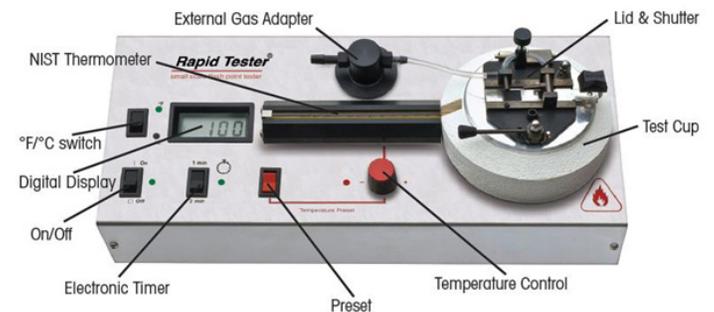
# Ignitable Hazardous Wastes

- Flash point <140 F
- Usually a liquid
- **D001** hazardous waste code



## – Examples include:

- Paint waste
- Degreasers
- Solvents



# Corrosive Hazardous Wastes

- $\text{pH} < 2$  or  $\text{pH} > 12.5$
- Usually a liquid
- **D002** hazardous waste code
  - Examples include:
    - Waste acids
    - Alkaline cleaning fluids
    - Waste battery acids



# Reactive Hazardous Wastes

- Explosive, unstable, reacts violently with water
- **D003** hazardous waste code
  - Examples include:
    - Waste bleaches
    - Other oxidizers
    - Lithium Sulfur Batteries



# Toxic Hazardous Wastes

- **Contain toxic constituents above certain concentrations**

- Heavy metals, insecticides, herbicides and other organics



- **Toxicity Characteristic Leaching Procedure (TCLP)**

- **D004 through D043 hazardous waste codes**

- **Examples include:**

- **Electronic equipment containing lead**
    - **Photographic fixer containing silver**
    - **Fluorescent lights**  
(can be managed as universal waste)



# Toxic Hazardous Waste Metal Concentration Levels

Ohio EPA Hazardous Waste No.	Contaminant	CAS No.	Regulatory Level (mg/l)
D004	Arsenic	7440-38-2	5.0
D005	Barium	7440-39-3	100.0
D006	Cadmium	7440-43-9	1.0
D007	Chromium	7440-47-3	5.0
D008	Lead	7439-92-1	5.0
D009	Mercury	7439-97-6	0.2
D010	Selenium	7782-49-2	1.0
D011	Silver	7440-22-4	5.0

# Mixture / Derived-From

## Mixture Rule

- waste mixed with listed hazardous waste remains a listed hazardous waste
  - Example - Spills

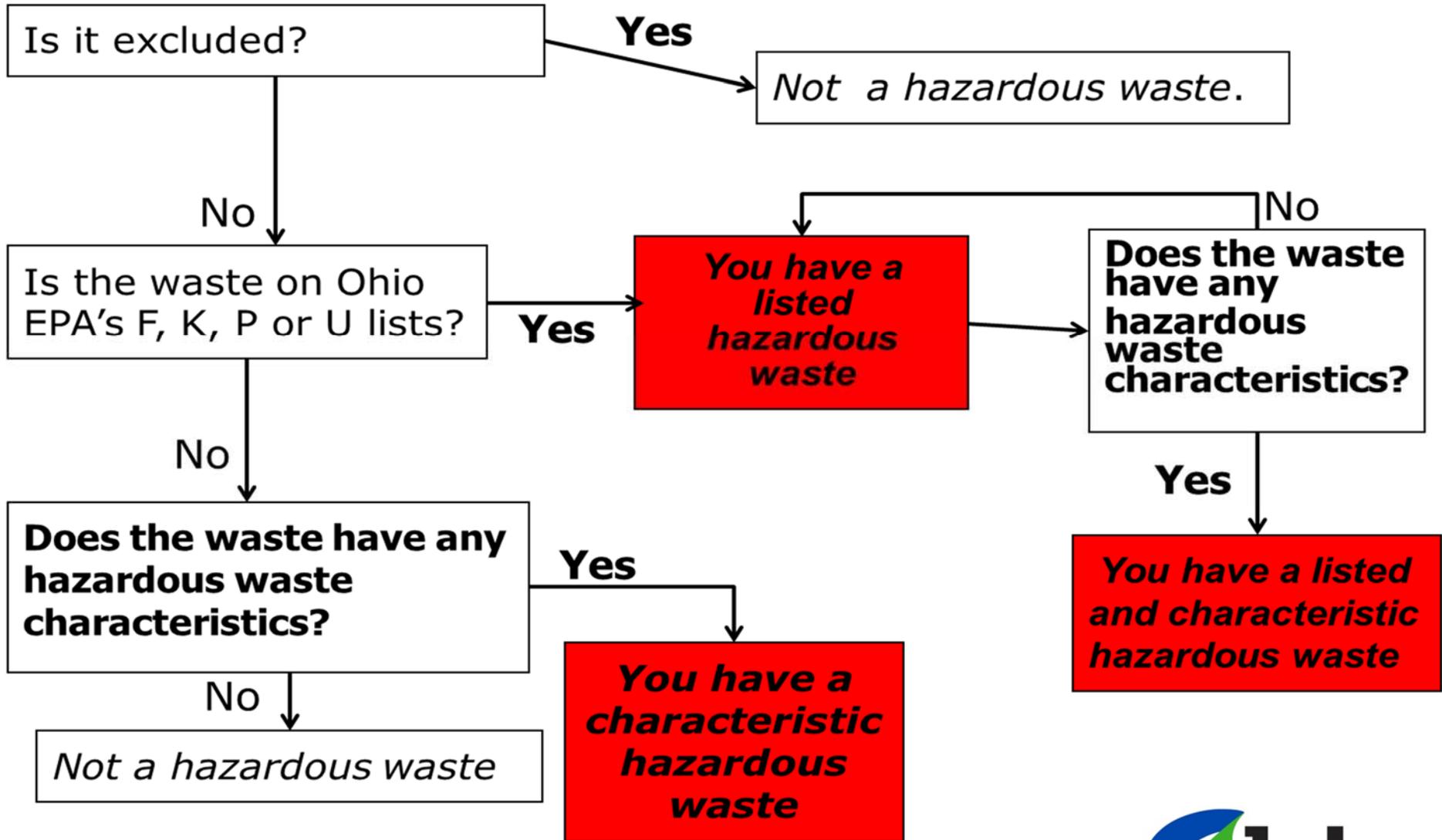


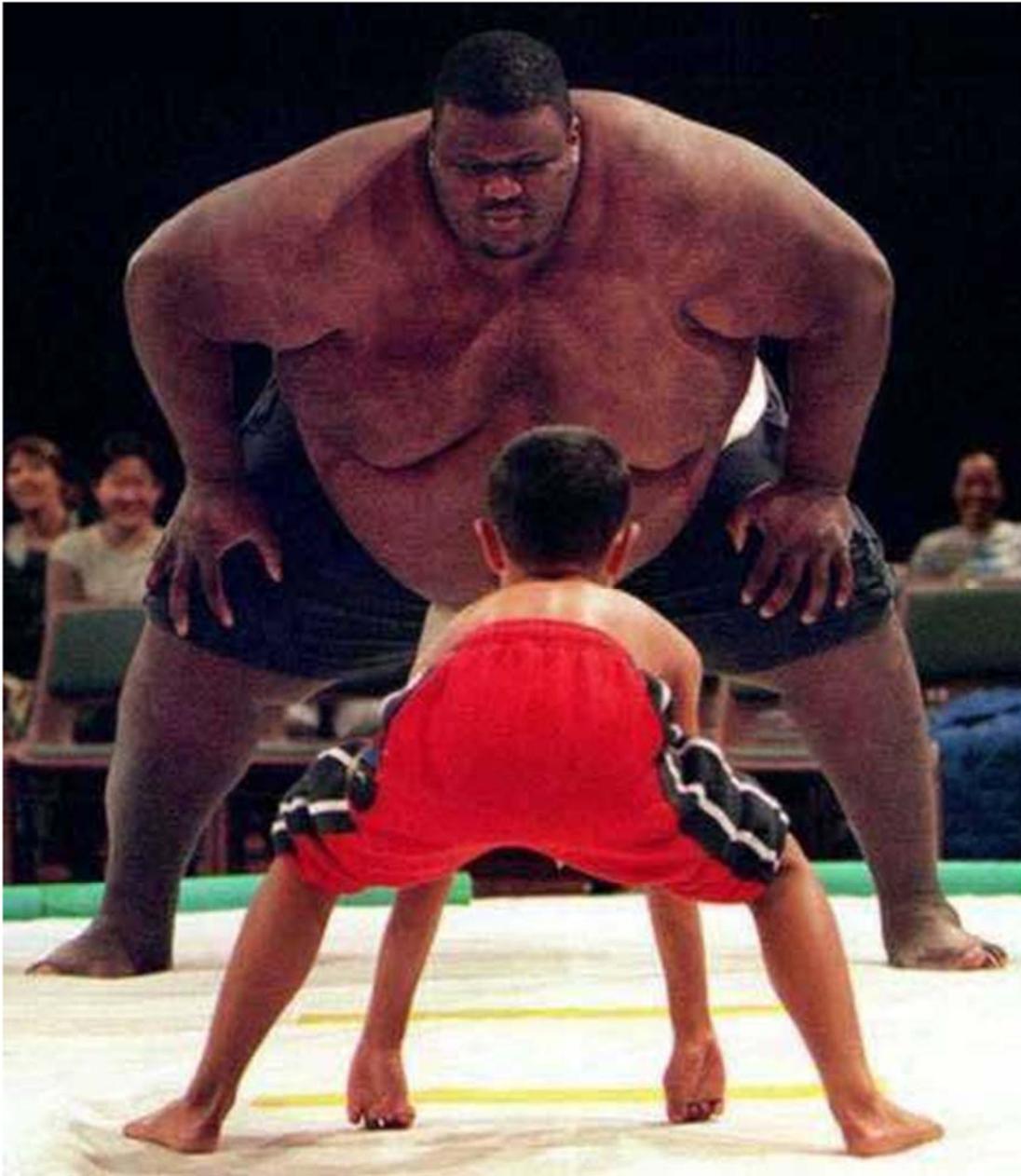
## Derived-From Rule

- any waste derived-from the treatment, storage, or disposal of a listed hazardous waste remains a listed hazardous waste
  - Example – Still bottoms



# Do I Have A Hazardous Waste?





# Generator Categories

# 3 Hazardous Waste Generator Categories

## Conditionally Exempt Small Quantity Generator (CESQG)

- $\leq$  220 lbs/month (about  $\frac{1}{2}$  of a 55-gallon drum)
- $\leq$  2.2 lbs/month of “acute” hazardous waste
- Never accumulates  $> 5$ , 55-gallon drums onsite



## Small Quantity Generator (SQG)

- 220 to 2,200 lbs/month ( $\frac{1}{2}$  up to 5, 55-gallon drums)
- Never accumulates 30, 55-gallon drums onsite



## Large Quantity Generator (LQG)

- over 2,200 lbs/month (over 5, 55-gallon drums)
- $> 2.2$  lbs/month of “acute” hazardous waste



# Determining Your Category

- Total weight of hazardous waste that you generate (create) in any given month of the calendar year
  - For example: Hazardous waste that you generate between August 1<sup>st</sup> and August 31<sup>st</sup>

**AND**

- Total amount of hazardous waste on-site at any given time (only for **CESQGs** and **SQGs**)

**NOTE:** Generator categories are **NOT** determined by the weight of hazardous waste shipped off-site.

## Conditionally Exempt Small Quantity Generator



**Less Regulations**

## Large Quantity Generator



**More Regulations**

# When do I start counting my waste?

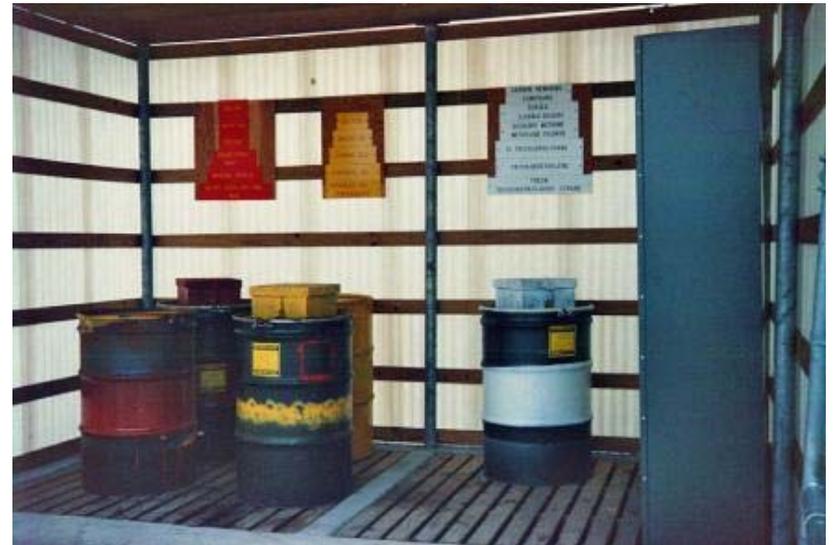
**Count waste when generated**

- Removed from the process**
- No longer usable product**



# Examples of what to count...

- **All listed and characteristic hazardous wastes that are:**
  - Accumulated prior to treatment, disposal or recycling
  - Generated as still bottom or sludge and removed from process equipment



# Examples of what NOT to count...

- Laboratory samples
- Recyclable materials
  - Examples: electronics and scrap metal
- Hazardous waste remaining in an “empty container”
- Wastes that are recycled, without prior storage, in an on-site recycling unit
  - Solvent distillation unit



# What NOT to count...(continued)

- Waste residues in raw material storage/production units
- Wastes in elementary neutralization units, totally enclosed treatment facility or wastewater treatment unit
  - no prior storage
- Discharge to sewer
  - no prior storage
- Used oil (existing [webinar](#))
- Lead acid batteries under “old rule”
- Universal wastes (existing [webinar](#))
  - Batteries, light bulbs, mercury-containing devices

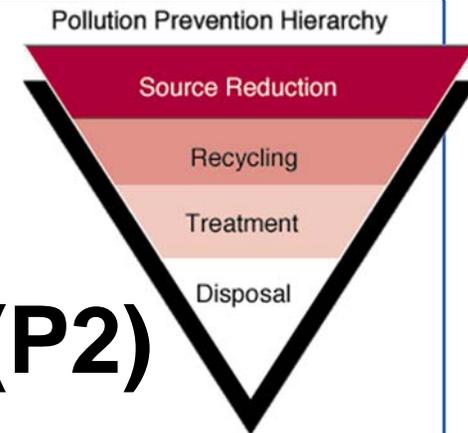


# What If I Change Generator Categories?

- Termed **episodic generation**
- Must manage your hazardous waste under all applicable generator requirements for hazardous wastes generated that month for as long as that waste remains on-site



# How Do I Reduce My Hazardous Waste?



- **Implement pollution prevention (P2)**
  - Eliminating waste at the source
  - Use less-hazardous products
  - Take advantage of [FREE P2 assessment](#)
- **Recycle when possible**
  - Electronics
  - Universal waste (batteries, bulbs, mercury-containing devices)
  - Scrap metal
  - Paint waste
  - [Recycler List](#)
- **Avoid mixing waste streams**
  - Keep waste streams segregated
  - Label containers/tanks

# Generator Requirements

# Generator Requirements Summary Table

- Management requirements
- Rule references
- CESQG, SQG, or LQG compliance requirement
- DMWM has a Web page on [Hazardous Waste Generator Requirements](#)

## Hazardous Waste Generator Requirement Summary Table

Generator Requirements and OAC reference	Generator Category		
	CESQG	SQG	LQG
<b>Monthly Generation</b> 3745-52-34	≤ 2.2 lbs of "acute" hazardous waste ≤ 220 lbs of hazardous waste about ½ (55)g drum <sup>1</sup>	≤ 2.2 lbs of "acute" hazardous waste > 220 lbs about ½ (55)g Drum to < 2,200 lbs about (5) (55)g drums of hazardous waste	> 2.2 lbs of "acute" hazardous waste ≥ 2,200 lbs or more than 5 (55)g drums of hazardous waste
<b>Total Accumulation On-site</b> 3745-52-34	≤ 2.2 lbs of "acute" hazardous waste ≤ 2,200 lbs, about (5) (55)g drums of hazardous waste	≤ 2.2 lbs of "acute" hazardous waste > 220 lbs and < 13,200 lbs of hazardous waste, about 30 (55)g drums	> 2.2 lbs of "acute" hazardous waste ≥ 13,200 lbs of hazardous waste
<b>Hazardous Waste Determination</b> 3745-52-11	Required through process knowledge or analysis (documentation required)	Required through process knowledge or analysis (documentation required)	Required through process knowledge or analysis (documentation required)
<b>EPA ID Number</b> 3745-52-12	No applicable requirement	Required	Required
<b>Accumulation Time</b> 3745-52-34	None	180 days or 270 if the TSDF is > 200 miles away	90 days

# Hazardous Waste Determination

- Applies to all generators
- Failure to properly evaluate your waste may lead to unsafe conditions or violations
- OAC rule [3745-52-11](#)



[Identifying your Hazardous Waste fact sheet](#)

# Hazardous Waste Determination



Don't do this unless you have confirmed and documented that it is **NOT** a hazardous waste.

# U.S. EPA Identification Number

- **CESQGs** - Not Required – but...
  - Waste hauler might want you to have one
- **SQGs** and **LQGs** – Required
- Site specific, identifies company that created the waste
- No fee – just fill out [9029 Site ID form](#)

**Need help?**

**Call our confidential hotline**

**800-329-7518**



# How Long May I Accumulate (store) HW On-site?

- **CESQGs** do not have any storage time limits
- **SQGs** can store hazardous waste on-site for up to 180 days; **HOWEVER**, if transporting a distance of 200 miles or more, can store for up to 270 days (30 day extension available)
- **LQGs** can store hazardous waste on-site for up to 90 days (30 day extension available)

# What is Treatment?

- Treatment - any method, technique or process, designed to:
  - render waste non-hazardous
  - less-hazardous
  - safer to transport, store or dispose of
  - amenable for recovery
  - amendable for storage
  - reduced in volume
- Defined in OAC rule [3745-50-10\(A\)\(137\)](#)
  - See on page 24
- [Generator Treatment Guidance Document](#)



# May I Treat My Hazardous Waste On-site?

- **Allowed forms without a permit:**
  - Neutralization
  - Polymerization
  - Stabilization
  - Wastewater treatment
- **Generator treatment no-no's:**
  - Thermal treatment (incineration, certain evaporators)
  - Land disposal (surface impoundments, landfills)
- **90/180 day time limits still apply during treatment**
- **Consult with us if you wish to treat your hazardous waste**



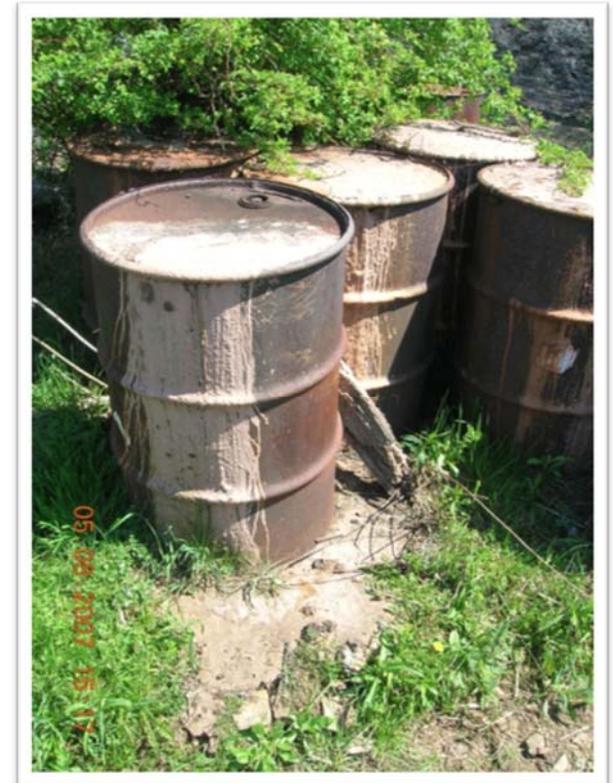
# What Is Satellite Accumulation?

- Use of this rule reduces some regulatory requirements for storage areas
- Only applies to **SQGs** and **LQGs**
- [Satellite Accumulation Guidance](#)
- Found in OAC rule [3745-52-34\(C\)](#)



# What Requirements Apply to Satellite Accumulation Areas?

- Up to 55 gallons of hazardous waste in containers at or near each “**point of generation**”
- Containers must be “**under control of the operator**” of the process which generated the waste
- Containers must be compatible with waste and in **good condition** – not leaking, rusting or have defects



# What Requirements Apply to Satellite Accumulation Areas?

- Containers must be marked with the words “**Hazardous Waste**” (or other words that identify contents)
- Containers **must remain closed** except when adding or removing hazardous waste



# What Happens When I Reach the 55-Gallon Limit?

- Put the date on container
- Move the container within 3 days
- Put new date on container
- Comply with storage requirements (180/90 day storage limits)



# Container or Tank

**Portable**



**Container**

**Stationary**



**Tank**

# What Are My Container Management Requirements For SQGs and LQGs?

- Only applies to SQGs and LQGs
- Must be in good condition
- Compatible with the hazardous waste and area
- **Clearly** labeled as “Hazardous Waste”
- Closed (lids)
- Conduct weekly inspections
  - [Weekly log](#)

**HAZARDOUS WASTE**

FEDERAL LAW PROHIBITS IMPROPER DISPOSAL.  
IF FOUND, CONTACT THE NEAREST POLICE OR PUBLIC SAFETY  
AUTHORITY OR THE U.S. ENVIRONMENTAL PROTECTION AGENCY  
OR THE CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCE CONTROL.

GENERATOR INFORMATION:

NAME \_\_\_\_\_ PHONE \_\_\_\_\_  
ADDRESS \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_  
CITY \_\_\_\_\_

EPA MANIFEST ID NO. / DOCUMENT NO. \_\_\_\_\_ CA. ACCUMULATION WASTE NO. \_\_\_\_\_ WASTE NO. \_\_\_\_\_ START DATE \_\_\_\_\_

CONTENTS COMPOSITION

PHYSICAL STATE: [ ] SOLID [ ] LIQUID HAZARDOUS PROPERTIES: [ ] CORROSIVE [ ] REACTIVITY [ ] FLAMMABLE [ ] TOXIC [ ] OTHER

D.O.T. PROPER SHIPPING NAME AND UN OR NA NO. WITH PREFIX

**HANDLE WITH CARE!**

# What Are My Container Management Requirements For SQGs and LQGs? (cont.)

- Label storage start date
- Maintain aisle space (as part of Preparedness and Prevention)
- Ignitable/reactive located 15 meters (50 feet) from facility's property line
- U.S. EPA air emission standards (i.e. AA, BB, CC) (LQGs only)

# What Are My Tank Management Requirements?

- They only apply to SQGs and LQGs
- Large Quantity Generator Tank System Requirements



Found in OAC rules 3745-66-90 through 3745-66-101

# What Are My **SQG** Tank Management Requirements?

- **Be able to show**
  - emptied/overturned once every 180 days
- **Good condition**
- **Compatible with waste and area**
- **Labeled as “Hazardous Waste”**
- **Daily inspections – maintain records in a log**
- **Remove all hazardous waste from site when facility closes**

OAC rule [3745-66-101](#) specific to **SQGs**

# What Are The **LQG** Tank Management Requirements?

- **Be able to show**
  - emptied/overturnd once every 90 days
- **Good condition**
- **Compatible with waste and area**
- **Labeled as “Hazardous Waste”**
- **Daily inspections – maintain records in a log**

# What Are The **LQG** Tank Management Requirements? (continued...)

- **Secondary containment**
- **Leak detection system**
- **Tank system assessment/certification by PE**
- **Closure**
- **U.S. EPA air emission standards (i.e. AA, BB, CC)**

# What Am I Required To Do When I Ship My HW Off-site?

**CESQGs** are not required to prepare a manifest  
**SQGs** and **LQGs** must prepare manifest and:

- **Package** your HW
- **Label** each package of HW
- **Mark** each package of HW
- **Placard** or offer the initial transporter the appropriate placards
  
- Contact [Public Utilities Commission of Ohio](#) for more information (800-686-7826)

Found in OAC rules [3745-52-30 to 3745-52-33](#)



# Does My Business Need Personnel Training?

- **CESQGs** are not required to conduct personnel training
- **SQGs** must:
  - ensure that all employees are thoroughly familiar with proper waste handling and emergency procedures
- **LQGs** must:
  - conduct classroom instruction or on-the-job personnel training for facility employees
  - conduct annual refreshers and keep records

OAC rules [3745-65-16](#) and [3745-52-34](#)

# How Do I Prepare For Emergencies?

No requirements for **CESQGs**

**SQGs** and **LQGs** must:

- Maintain emergency equipment on-site
- Post emergency contact info and location of emergency equipment in accumulation area
- Minimize the possibility of emergencies
- Test and maintain your emergency equipment 'as necessary' and record the inspections in a [log](#)
- Maintain adequate aisle space
- Make arrangements with local emergency authorities

Found in OAC rules [3745-65-30 to 3745-65-37](#)



# When Do I Need Emergency Procedures and Contingency Plan?

- **SQGs** – at least one employee on-site or on-call to respond to all emergencies
- **LQGs** – prepare and maintain a written contingency plan
  - Maintain all reports of contingency plan implementation on-file and report the incidents to Ohio EPA
  - A copy of your contingency plan must be maintained at your facility & submitted to local police, fire, hospitals, emergency response teams and Ohio EPA

[Example contingency plan available!](#)

# What Are My Recordkeeping Requirements?

- **SQGs** and **LQGs** must keep a copy of the following for at least 3 years:
  - Test results
  - Waste evaluation
- **CESQGs** must be able to show that they evaluated their waste



Found in OAC rule [3745-52-40](#)

# What Are **SQG's** Additional Recordkeeping Requirements?

- Additionally, **SQGs** must keep a copy of these for at least 3 years:
  - Weekly container inspections;
  - Daily tank inspections;
  - All manifests; and
  - Land disposal restriction notifications, certifications and waste analysis data

# What Are **LQG's** Additional Recordkeeping Requirements?

- **LQGs** must keep a copy of these for at least 3 years:
  - Everything mentioned in the previous two slides;
  - Personnel training documents;
  - Biennial reports; and
  - Daily tank inspection logs



# What Are My Manifesting Requirements?

- Manifests are HW tracking documents
  - Revised form – [US EPA has info where to get them](#)
- Only **SQGs** and **LQGs** must manifest their HW
  - Each person who transports, stores, treats or disposes must sign & retain a copy
  - Must receive signed copy of your manifest from the final destination facility
  - Each transporter must have a copy for their records
  - Destination facility must have a copy

Found in OAC rules [3745-52-20 to 3745-52-23](#)

# What Is An Exception Report?

- **Exception reports are part of the RCRA manifest tracking system**
- **After you send waste off-site for disposal, the TSDf is required to return to you a copy of the original manifest**
- **If you don't receive the manifest from the TSDf, then you must submit an exception report to Ohio EPA**
- **Report must include a copy of your manifest and a letter describing your efforts to contact the TSDf**

Found in OAC rule [3745-52-42](#)

# Am I Required To File An Exception Report?

- **CESQGs** - Not Required
- **SQGs** – Required
  - If you do not receive a copy of the manifest signed by the designated facility within 60 days
    - Send exception report to Ohio EPA
- **LQGs** – Required
  - If you do not receive a copy of the signed manifest within 35 days
    - Contact transporter and/or the designated facility
  - If you do not receive a copy of the signed manifest within 45 days
    - Send exception report to Ohio EPA

# Rejected Loads

- **A shipment of hazardous waste that cannot be accepted because:**
  - Facility permit restriction, or
  - Capacity limitations
- **Includes all shipments in whole or in part regardless whether the manifest has been signed**
- **Generators can store rejected loads or residues sent back to them for 90 or 180 days depending on the amount of hazardous waste on-site during the calendar month the rejected load/residue was received**

# What Are The Land Disposal Restrictions (LDRs)?

- These only apply to **SQGs** and **LQGs**
- Standards developed to ensure that toxic constituents present in hazardous waste are properly treated before land disposal
- Under LDRs, generators need to complete a notification (one-time) which accompanies manifest to TSD facility
- TSDFs treat your hazardous waste to meet LDRs
- [Land Disposal Restrictions \(An Overview\)](#)

Found in OAC Chapter [3745-270](#)

# One-Time LDR Notice to TSD

## You have choices!!!

- Decide not to make a determination if waste must be treated
- **-OR-**
- Make the determination that the waste is or is not subject to the LDRs and follow applicable LDR rules.

## If you decide not to make the determination:

- Your one-time written notice to the TSD must include:
  - List of hazardous waste codes – D001, D008, F003, etc.;
  - Number on the manifest; and
  - “This hazardous waste may or may not be subject to the LDR treatment standards. The treatment facility must make that determination.”

# Must I File a Biennial Report?

- Only **LQGs** file biennial reports
  - Includes episodic generators who became LQGs
- Report provides Ohio EPA and U.S. EPA with data concerning your facility's hazardous waste generation, management and waste minimization activities
- Due by March 1<sup>st</sup> in **even numbered years**

OAC rule [3745-52-41](#)



# Resources

- [Hazardous Waste Generator Handbook](#)
- [Hazardous Waste Generator Requirements Summary Table](#)
- [Identifying Your Hazardous Waste](#)
- [List of Recyclers](#)
- [Commercial Facilities Accepting Hazardous Waste](#)

# Universal Waste Rules

# What We Will Cover

- Background information
- Types of universal waste
- Handler categories
- Green-tipped light bulbs
- Crushing light bulbs
- Packaging
- Notification
- Labeling
- Storage
- Manifesting
- Transportation
- Recordkeeping



# Background

- **What are the universal waste rules?**
  - Subset of hazardous waste regulations
  - Intended to promote recycling
  - Eases certain regulatory requirements
- **What determines a universal waste (UW)?**
  - Must be a hazardous waste
  - Must be widespread
  - Commonly found in medium to large volumes
  - Exhibit low-level hazards
  - Must be easily managed
  - Generated by numerous businesses



# Types of Universal Waste

- **Hazardous waste pesticides**
  - Recalled or suspended under FIFRA
- **Mercury-containing devices**
  - Includes all mercury-containing devices
- **Discarded batteries**
  - Alternative option for lead acid batteries
- **Light bulbs**
  - Includes incandescent, fluorescent, compact fluorescent, LED, high intensity discharge, neon, high pressure sodium, etc.



# What about those “green” light bulbs?

- **They still contain mercury**
  - regulatory level 0.2 mg/L
- **We encourage recycling rather than disposal**
- **If disposed, must evaluate and retain documentation for **three years****



# Who are the UW handlers?

- **UW Handlers are persons who**
  - Generate
  - Receive
  - Store (but do not treat, dispose of or recycle UW generated elsewhere)

**Note:** UW handlers cannot treat, dispose of or recycle UW



# What are the UW handler categories?



- **Two categories:**
  - **Small quantity handlers**
    - Accumulates on-site less than 5,000 kilograms (11,023 pounds) of UW (not by type) at any time.
  - **Large quantity handlers**
    - Accumulates on-site more than 5,000 kilograms (11,023 pounds) of UW (not by type) at any time.

# Who are the UW Destination Facilities?



- **UW Destination Facilities**
  - **Permitted hazardous waste treatment, storage and disposal facilities (TSDFs)**
  - **They can:**
    - Receive
    - Store
    - Treat
    - Recycle and/or Dispose of Universal Waste

## Commercial Facilities Accepting Hazardous Waste

# Where do I send my UW?

- Another UW handler

OR

- Permitted UW destination facility
  - A facility permitted to treat, dispose of or recycle your UW

# Do I count my UW towards my hazardous waste generator category?

**No**

**UW does not count towards your hazardous waste category.**

**\*\* do not confuse these categories with the hazardous waste generator categories (CESQG, SQG, or LQG)**

# Am I required to notify Ohio EPA of my UW activities?

- **Small quantity handlers** are NOT required to notify Ohio EPA or to obtain a U.S. EPA identification number
- **Large quantity handlers** ARE required to notify and obtain a U.S. EPA identification number (unless you already have one)

# What are the packaging requirements for UW?



## Batteries

- only required if leaking

## Mercury-Containing Devices, Light Bulbs and Pesticides

- place in closed container
- must be designed to contain potential releases
- broken or damaged light bulbs can be sent to a permitted facility

**Warning about mercury...**

# DOT rules for batteries

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

# Can I use a crusher to crush my light bulbs?



- **UWR prohibits handlers from crushing light bulbs**
- **If you crush your bulbs, you must manage them under the hazardous waste requirements**

# How do I manage broken bulbs?

- **Accidentally broken bulbs can be managed as Universal Waste**
  - Place in a sealed container
  - Manage as universal waste



**[Instructions on how to clean up a broken bulb](#)**

# What are the labeling requirements for UW?

Each category of UW must be clearly marked with the appropriate wording

- For example: “Universal Waste Lamps;” “Waste Lamps;” or “Used Lamps”

Must be able to demonstrate accumulation time



# How long can I accumulate UW?

- **Up to one year on-site regardless of your handler category**
- **If greater than one year is required, you must be able to prove why it is necessary**



# Do I manifest my UW?

**NO**

- **UW handlers are not required to manifest off-site shipments of UW**
- **UW handlers, however, must ensure delivery to another UW handler or to a permitted destination facility**



# Can I transport my own UW?

**YES**

**- deliver only to another UW handler or to a permitted UW destination facility**

**- must follow all DOT requirements**

**• Check with Public Utilities Commission of Ohio (PUCO)**

**– 800-866-7826**

**– responsible for spills and clean up**



# Can I take or send my UW to any recycler?

**No**

**UW handlers must ensure delivery to another UW handler or to a permitted destination facility**



# What are my recordkeeping requirements?

- **No recordkeeping requirements for **small quantity handlers** of UW**
- **Large quantity handlers of UW must retain on- and off-site shipment records for at least three years**
  - Name and address
  - Quantity of each type of UW
  - Date of shipment



# UW Resources

- [Universal Waste Rule Guidance Document](#)
- [Universal Waste Webpage](#)
- [Universal Waste Handler Requirements Summary Table](#)
- [Fluorescent Light Bulb Management Webpage](#)
- [Commercial Facilities Accepting Universal Waste](#)

# Most Commonly Cited Violations

# Most Commonly Cited Violations

- **Failure to evaluate your waste**
- **Not labeling used oil containers, tanks or fill pipes**
- **Not properly managing containers or maintaining an inspection log**
- **Not testing or maintaining emergency equipment**
- **Not filing your biennial (formerly annual) report correctly**

[Violations Most Frequently Cited Fact Sheet](#)

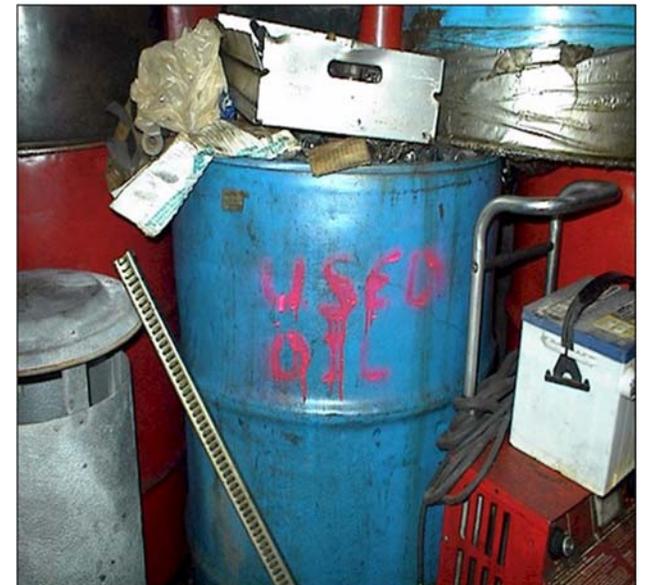
# Hazardous Waste Determination



Don't do this unless you have confirmed and documented that it is **NOT** a hazardous waste.

# Avoiding Used Oil Violations

- Labeling Tanks and Containers with the words “Used Oil”
  - **Do Not** Label as “Waste Oil” or “Hazardous Waste”
- Containers and tanks must be in good condition
- Releases – Be sure to clean up



OAC Chapter [3745-279](#)

# Container Management

- Keep containers closed while in storage
- Do not open, handle or store containers in a manner that will cause them to rupture or leak
- Conduct inspections of container storage areas, at least weekly (Sunday to Saturday), looking for signs of leaks or deterioration
- Record inspections in a log or summary (SQG, LQG)

OAC rules 3745-66-73 and 3745-66-74

# Emergency Equipment

- Alarm systems, fire protection equipment, spill control equipment and decontamination equipment must be tested and maintained “**as necessary**” to ensure proper operation in time of emergency
- Record inspections in [log](#) or summary

OAC rule [3745-65-33](#)



# Avoiding Biennial Reporting Violations

- Due by March 1<sup>st</sup> of each **even numbered year**.
- Only report hazardous waste;
  - not universal waste or used oil
- Cover generator activities for the previous calendar year (activities in odd numbered years)
- Check accuracy and completeness

OAC rule [3745-52-41](#)

# Ohio EPA Resources

[Subscribing to Ohio EPA for Timely Information](#)

[Frequently Asked Questions](#)

[Division of Environmental Response and Revitalization](#)  
**Hazardous Waste Inspection and Compliance Assistance**

**Weekdays from 8 AM – 5 PM**

**(614) 644-2621**

[Office of Compliance Assistance & Pollution Prevention](#)

**Weekdays, 8 AM - 5 PM**

**(800) 329-7518 (Confidential Hotline!!!)**





**OCAPP: 1-800-329-7518**  
**Free and confidential hotline**

**Dan Sowry**  
Office of Compliance Assistance & Pollution Prevention  
Division of Environmental & Financial Assistance  
614-728-8575  
[dan.sowry@epa.ohio.gov](mailto:dan.sowry@epa.ohio.gov)

