Regulatory Compliance Seminar
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Hazardous Waste Training &
RCRA Update
An Overview of Ohio’s Hazardous Waste Requirements

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What We Will Cover

• Hazardous Waste Basics
  – Waste Evaluation
  – Generator Categories
  – Generator Requirements

• Universal Waste Rule

• Most Commonly Cited Violations

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

“Cradle-to-Grave” Management

Generator → Transporter → TSDF

Treatment, Storage, Disposal Facility
Waste Evaluation
the cornerstone of RCRA
Waste Evaluation Requirement

Don’t throw any waste into the dumpster unless you have confirmed and demonstrated that it is NOT a hazardous waste.
Waste Evaluation

Under Ohio’s laws, all wastes must be evaluated by the generator.

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

**In order for a material to be a hazardous waste, it must be a waste.
A waste is any material that will be discarded by:

- Disposal
- Burning
- Storing or treating in lieu of discard

A waste is any material that will be recycled by being:

- Used on the ground
- Burned for energy
- Speculatively accumulated
What is Not a Waste?

• Excluded waste
  – Wastes specifically defined in rule as not being a waste or a hazardous waste

• Materials that will be reused or reclaimed
  – Only applies to certain materials
Hazardous Waste Evaluation

Tools you can use:

- Ohio hazardous waste rules
- Lab analysis of waste
- Generator knowledge
  - Process inputs
  - Information from vendor/supplier
  - Material Safety Data Sheet (MSDS)

**Need to document your evaluation and keep on file**
Steps To Properly Evaluate Your Waste

1st – Determine if your waste is excluded

2nd – Determine if your waste is listed

3rd – Determine if your waste exhibits a characteristic
Excluded Wastes

Excluded wastes are not subject to Ohio’s hazardous waste regulations.

- Found in Ohio Administrative Code (OAC) rule 3745-51-04
- Examples: Domestic sewage, NPDES discharge, non-terne-plated oil filters, shredded circuit boards, excluded scrap metal, household hazardous waste
Listed Hazardous Wastes
F-Listed

Non-specific waste sources (F-listed)

- OAC rule 3745-51-31
  - Means HW can be generated from any type of manufacturing process

Examples

- Spent solvents
  - F001, F002, F003, F004, F005

- Spent electroplating operation wastes
  - F006, F007, F008, F009
Listed Hazardous Wastes  
K-Listed

• Specific waste sources (K-listed)
  – OAC rule 3745-51-32
  – Meaning waste is only generated from the specific type of industry and process given in the listing description

• Examples
  – Spent potliners from primary aluminum-K088
  – Iron and steel production
    • Electric arc furnace dust - K061
    • Spent pickle liquor - K062
Listed Hazardous Wastes
P- or U-Listed

• Discarded commercial chemical products (P- and U-listed)
  – OAC rule 3745-51-33
  – Must be an unused commercial chemical product

• Examples of P-listed hazardous wastes:
  – Copper cyanide – P029
  – Phosgene – P095

• Examples of U-listed hazardous wastes:
  – Creosote – U051
  – Lindane shampoo – U129
Characteristic Hazardous Wastes

Determine if your waste exhibits a characteristic.

– Ignitable - OAC rule 3745-51-21

– Corrosive - OAC rule 3745-51-22

– Reactive - OAC rule 3745-51-23

– Toxic - OAC rule 3745-51-24
Ignitable Hazardous Wastes
D001 waste code

- Liquid & flash point <140 F (except solution <24% alcohol by volume)

- Ignitable compressed gases

- Solids that spontaneously ignite & burn vigorously

- Oxidizers as defined DOT rules

- Examples include:
  - Solvents/degreasers
  - Some metal swarfs
Corrosive Hazardous Wastes
D002 waste code

• Aqueous solution; pH < 2 or pH > 12.5

• Liquid that corrodes steel at a specified rate

• Examples include:
  – Acids
  – Alkaline cleaning fluids
  – Waste battery acids
Reactive Hazardous Wastes
D003 waste code

• Explosive, unstable, reacts violently with water or generates toxic gas

• Examples include:
  – Dynamite
  – Waste peroxides and ethers
Toxic Hazardous Wastes
D004 –D043 waste codes

• Contains toxic constituents equal to or above regulatory levels
  – 8 metals; 32 organics
• Determined by Toxicity Characteristic Leaching Procedure (TCLP)
• Examples include:
  – Electronic equipment, most cathode ray tubes
  – Spent foundry sand, some clay poker chips, certain waste pesticides
## Toxic Hazardous Waste Examples

<table>
<thead>
<tr>
<th>Ohio EPA Hazardous Waste No.</th>
<th>Contaminant</th>
<th>CAS No</th>
<th>Regulatory Level (mg/l)</th>
</tr>
</thead>
<tbody>
<tr>
<td>D004</td>
<td>Arsenic</td>
<td>7440-38-2</td>
<td>5.0</td>
</tr>
<tr>
<td>D005</td>
<td>Barium</td>
<td>7440-39-3</td>
<td>100.0</td>
</tr>
<tr>
<td>D006</td>
<td>Cadmium</td>
<td>7440-43-9</td>
<td>1.0</td>
</tr>
<tr>
<td>D007</td>
<td>Chromium</td>
<td>7440-47-3</td>
<td>5.0</td>
</tr>
<tr>
<td>D008</td>
<td>Lead</td>
<td>7439-92-1</td>
<td>5.0</td>
</tr>
<tr>
<td>D009</td>
<td>Mercury</td>
<td>7439-97-6</td>
<td>0.2</td>
</tr>
<tr>
<td>D010</td>
<td>Arsenic</td>
<td>7782-49-2</td>
<td>1.0</td>
</tr>
<tr>
<td>D011</td>
<td>Silver</td>
<td>7440-22-4</td>
<td>5.0</td>
</tr>
</tbody>
</table>
Do I Have A Hazardous Waste?

It is excluded?

Yes → Not a hazardous waste.

No → Is the waste on Ohio EPA’s F, K, P or U lists?

Yes → You have a listed hazardous waste

No → Does the waste have any hazardous waste characteristics?

Yes → You have a listed and characteristic hazardous waste

No → Not a hazardous waste
Generator Categories
Generator Categories

There are three hazardous waste generator categories:

• Conditionally Exempt Small Quantity Generators (CESQGs);

• Small Quantity Generators (SQGs); and

• Large Quantity Generators (LQGs).
Determining Your Category

Total weight of hazardous waste that the entire facility generates (produces) in any given month of the calendar year

- For example: Hazardous waste that you generate between October 1st and October 31st

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

NOTE: Generator categories are NOT determined by the weight of waste shipped off-site or by averaging.
Conditionally Exempt Small Quantity Generators (CESQGs)

You are a CESQG if you:

– generate no more than 220 pounds of hazardous waste in a calendar month; AND

– never accumulate more than 2,200 pounds of hazardous waste on your property

Note:

– 220 pounds is about half of a 55-gallon drum
– 2,200 pounds is about five 55-gallon drums
Conditionally Exempt Small Quantity Generators (CESQGs)

OAC rule 3745-51-05 – Special requirements for hazardous waste generated by conditionally exempt small quantity generators.
What If I Go Over The CESQG Limits?

• Generate more than 220 pounds of HW/month
  – you become either an SQG or an LQG if you generate more that 2,200 lb. for that month

• Accumulate more than 2,200 pounds of HW at any given time
  – you become an SQG until that HW is moved off-site
Small Quantity Generators (SQGs)

You are an SQG if you:

• generate more than 220 pounds but less than 2,200 pounds of hazardous waste/month; and

• never accumulate over 13,200 pounds of hazardous waste on-site
What If I Go Over The SQG Limits?

- Generate more than 2,200 pounds of hazardous waste in a calendar month
  - you become an LQG until that hazardous waste is moved off-site

- Accumulate over 13,200 pounds of hazardous waste on-site
  - you become a treatment, storage and disposal facility (TSDF) and must have a hazardous waste installation and operation permit
Large Quantity Generators (LQGs)

You are an LQG if you:

– generate 2,200 or more pounds of hazardous waste/month

Note: LQGs do not have a limit on the amount of hazardous waste stored on-site
What Is Episodic Generation?

• Often 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

• If you reach LQG status at any time during the calendar year, you must file a [biennial report](#) (if the generation is in an odd year)
Generator Requirements
Generator Requirements Summary Table

• Management requirements

• OAC references

• CESQG, SQG, or LQG compliance requirement

• DERR has a Web page on Hazardous Waste Generator Requirements
Hazardous Waste Determination

• Applies to all generators

• Failure to properly evaluate your waste may lead to unsafe conditions or violations from improper management

• OAC rule 3745-52-11
Remember This!

Don’t throw any waste into the dumpster unless you have confirmed and demonstrated that it is NOT a hazardous waste.
U.S. EPA Identification Number* (12-digit)

**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
  - [http://epa.ohio.gov/derr/hazwaste/notiform](http://epa.ohio.gov/derr/hazwaste/notiform)
  - Need help? Call me! 614-728-5324
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 Satellite Accumulation?

• Use of this rule reduces some regulatory requirements for storage areas

• Only applies to SQGs and LQGs

• Satellite Accumulation Guidance Document

• 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
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 accumulation requirements (180/90 day storage limits)
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
  – amenable for storage
  – reduced in volume

• Defined in OAC rule 3745-50-10(A)(125)

• 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**
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
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
- Remove all hazardous waste from site when facility closes

OAC rule [3745-66-101](https://example.com) specific to SQGs
What Are The LQG Tank Management Requirements?

• Be able to show - emptied/overturned once every 90 days

• Good condition

• Compatible with waste and area

• Labeled as “Hazardous Waste”

• Daily inspections
What Are The LQG Tank Management Requirements?

• 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](http://www.puc.state.oh.us) for more information (800-686-7826) Found in OAC rules [3745-52-30](http://codes.ohio.gov/R3745/3745-52-30) to [3745-52-33](http://codes.ohio.gov/R3745/3745-52-33)
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](https://www.ohiodata.org/regulations/3745-65-16) and [3745-52-34](https://www.ohiodata.org/regulations/3745-52-34)
How Do I Prepare For Emergencies?

No requirements for CESQGs

SQGs and LQGs must:

• Maintain emergency equipment on-site
• Maintain and operate your facility to minimize the possibility of emergencies
• Test and maintain your emergency equipment ‘as necessary’ and record the inspections in a log
• Maintain adequate aisle space
  – Movement of personnel and emergency response equipment
• Make arrangements with local emergency authorities

Found in OAC rules 3745-65-30 to 3745-65-37
When Do I Need Emergency Procedures & A 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.

Example contingency plan available!
What Are My Recordkeeping Requirements?

• CESQG must be able to demonstrate that they evaluated their waste
• Have ensured proper disposal

Found in OAC rule 3745-52-05(G)
What Are My Recordkeeping Requirements?

• SQGs and LQGs must keep a copy of the following for at least 3 years:
  – Manifest
  – Biennial reports
  – Waste evaluation
    • Test results
    • Waste analysis
    • or other determinations made in accordance with rule 3745-52-11

Found in OAC rule 3745-52-40
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](#)
National e-Manifest System

• U.S. EPA is establishing a national system for tracking hazardous waste shipments electronically.

• This system, known as “e-Manifest,” will modernize the nation’s cradle-to-grave hazardous waste tracking process while saving valuable time, resources, and dollars for industry and states.

• EPA launched e-Manifest on June 30, 2018.

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

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
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 1st in even numbered years

OAC rule [3745-52-41](http://epa.ohio.gov/derr/hazwaste/annual_report)
Waste Evaluations

• The generator must keep records of any test results, waste analyses, or other determinations made in accordance with rule 3745-52-11

• for at least three years after the date that the waste was last sent to on-site or off-site treatment, storage, or disposal.

OAC 3745-52-40
What Are My Recordkeeping Requirements?

SQGs and LQGs must also keep a copy of the following for at least 3 years:

Land disposal restriction notifications,

Found in OAC rule 3745-270-07
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 HW to meet LDRs

• Land Disposal Restrictions (An Overview)

Found in OAC Chapter 3745-270
What Are Additional Recordkeeping Requirements?

– Weekly container inspections;
  • in a log or summary

– Emergency equipment inspections (as necessary)
  • in a log or summary

– Daily tank inspections (Includes Weekends)
  • in the operating record of the facility
What Are LQG’s Additional Recordkeeping Requirements?

Everything mentioned in the previously;

– Personnel training documents;

– Contingency Plan
Training Requirements

• Does the generator have a training program which teaches facility personnel hazardous waste management procedures

• (including contingency plan implementation)

• relevant to their positions?

OAC 3745-65-16(A)(2)
Training Requirements

• Does the personnel training program, at a minimum, include instructions to ensure that facility personnel are able to respond effectively to emergencies involving hazardous waste by familiarizing them with emergency procedures, emergency equipment and emergency systems (where applicable)?

OAC 3745-65-16(A)(3)
Training Requirements

• Job titles for each position at the facility related to hazardous waste management, and the name of the employee filling each job?
  
  OAC 3745-65-16(D)(1)

• A written job description for each position listed under a Job title description?
  
  OAC 3745-65-16(D)(2)
Training Requirements

• A written description of the type and amount of both introductory and continuing training that will be given to each person filling a position listed under paragraph (D)(1) of this rule?
    OAC 3745-65-16(D)(3)

• Completed training or job experience required?
    OAC 3745-65-16(D)(4)
Training Requirements

• Are training records for current personnel kept until closure of the facility and are training records for former employees kept for at least three years from the date the employee last worked at the facility?

OAC 3745-65-16(E)
Training Requirements

• Site specific training for the contingency plan.
Training Requirements – Contingency Plan

• Actions to be taken in response to fires, explosions or any unplanned release of hazardous waste? [3745-65-52(A)]

• Arrangements with local police departments, fire departments, hospitals, contractors, state and local emergency response teams to coordinate emergency services? [3745-65-52(C)]

• A current list of names, home addresses and telephone numbers (home or cellular telephone numbers) of all persons qualified to act as emergency coordinator? [3745-65-52(D)]

• A list of all emergency equipment, including: location, a physical description and brief outline of capabilities? [3745-65-52(E)]

• An evacuation plan for facility personnel where there is possibility that evacuation may be necessary? [3745-65-52(F)]
Contingency Plan

• Each owner or operator shall have a contingency plan for the facility.

• The provisions of the contingency plan shall be implemented immediately whenever there is a fire, explosion, or release of hazardous waste or hazardous waste constituents which could threaten human health or the environment.
Solvent Contaminated Wipes and Other Textiles Laundered for Reuse
Solvent Contaminated Wipes

Specifically, the rule includes:

• A conditional exclusion from the definition of solid waste for solvent-contaminated wipes sent for cleaning ("reusable wipes") OAC rule 51-04(A)(26)

• A conditional exemption from the hazardous waste rules for solvent-contaminated wipes sent for disposal ("disposable wipes") OAC rule 51-04(B)(18)
Solvent Contaminated Wipes Details

The definition for “solvent-contaminated wipe” in OAC rule 3745-50-10 (123)(b). refers the reader to what's is not eligible for the exclusions in paragraphs (A)(26) and (B)(18) of rule 3745-51-04 of the Administrative Code.

• Solvent-contaminated wipes that contain listed hazardous waste other than solvents, or exhibit the characteristic of toxicity, corrosivity, or reactivity due to contaminants other than solvents, are not eligible for the exclusions.
# Solvent Contaminated Wipes - Details

<table>
<thead>
<tr>
<th>Solvent-Contaminated Reusable Wipes</th>
<th>Solvent-Contaminated Disposable Wipes</th>
</tr>
</thead>
<tbody>
<tr>
<td>➢ Wipes containing one or more F001-F005 listed solvents listed in § 261.31 or the corresponding P- or U- listed solvents found in § 261.33, including:</td>
<td></td>
</tr>
<tr>
<td>- Acetone</td>
<td>- Isobutyl alcohol</td>
</tr>
<tr>
<td>- Benzene</td>
<td>- Methanol</td>
</tr>
<tr>
<td>- n-Butanol</td>
<td>- Methyl ethyl ketone</td>
</tr>
<tr>
<td>- Chlorobenzene</td>
<td>- Methyl isobutyl ketone</td>
</tr>
<tr>
<td>- Creosols</td>
<td>- Methylene chloride</td>
</tr>
<tr>
<td>- Cyclohexanone</td>
<td>- Tetrachloroethylene</td>
</tr>
<tr>
<td>- 1,2-Dichlorobenzene</td>
<td>- Toluene</td>
</tr>
<tr>
<td>- Ethyl acetate</td>
<td>- 1,1,2- Trichloroethane</td>
</tr>
<tr>
<td>- Ethyl benzene</td>
<td>- Trichloroethylene (*For reusable wipes only.)</td>
</tr>
<tr>
<td>- 2-Ethoxyethanol</td>
<td>- Xylenes</td>
</tr>
<tr>
<td>➢ Wipes that exhibit a hazardous characteristic resulting from a solvent listed in part 261.</td>
<td></td>
</tr>
<tr>
<td>➢ Wipes that exhibit only the hazardous characteristic of ignitability when containing one or more non-listed solvents.</td>
<td></td>
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</tr>
<tr>
<td>✗ Wipes that exhibit the characteristic of toxicity, corrosivity, or reactivity due to non-listed solvents or contaminants other than solvents.</td>
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</tr>
<tr>
<td></td>
<td>✗ Wipes that are hazardous waste due to the presence of trichloroethylene.</td>
</tr>
</tbody>
</table>
Solvent Contaminated Wipes Details

• The final rule includes *conditions for the* exclusion of solvent contaminated wipes.

• Meaning that if one or more of the conditions are not met, the solvent contaminated wipes could lose their status and become subject to hazardous waste regulation from the point of generation.

• The conditions for both the reusable wipes and disposable wipes exclusion are practically the same, which should ease implementation and compliance.
What is a textile?

• Examples:
  – Rags
  – Gloves
  – Uniforms
  – Linens
  – Smocks
  – Coveralls
  – Mops
Textile must

• Become contaminated with hazardous constituents through use

• Meet the definition of a hazardous waste

• Intended to be laundered and returned to use
Conditions for Exemption

• Textile is not
  – Burned for energy recovery
  – Used to produce a fuel or is contained in fuels
  – Used in a manner constituting disposal
  – Used to produce products that are applied to the land
  – Otherwise exempt from regulation
  – Mixed with a hazardous waste after use
Conditions (continued)

• At the point being sent for cleaning (on-site) or being transported off-site for cleaning, the textiles shall contain “no free liquids”

• Not contaminated with acute hazardous waste

• Do not exhibit the characteristics of ignitability or reactivity
Conditions (continued)

• All visible free flowing used oil has been removed
  – The textiles are only contaminated with used oil
Conditions (continued)

- The laundry or cleaning facility is subject to regulation under Section 402 or Section 307(b) of the Clean Water Act for discharge to a publicly owned treatment works or for discharge directly to the waters of the state
UNIVERSAL WASTE RULES
What We Will Cover

- Background information
- Types of universal waste
- Ohio-Specific 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
  • It does not prohibit disposal

• 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
Universal Waste Rules
General - Advantages

Promotes the proper disposal of the designated wastes

UWs do not count toward a generator’s monthly HW generation rate

Generator is not required to determine if UW is a hazardous waste (assumption is that the waste is hazardous)

Recycling of UW is encouraged (but not required)

No hazardous waste manifesting required in Ohio
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.
“Ohio Specific” New Universal Waste

• December 21, 2017
• Three new universal waste rules become effective only within the confines of the State of Ohio
  – Antifreeze
  – Non empty Aerosol Containers
  – Spent Paint and Paint Related Waste
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
What are the UW handler categories?

• Two categories:
  – Small quantity handlers
    • Accumulates on-site less than 5,000 kilograms (11,000 pounds) of UW (not by type) at any time.
  – Large quantity handlers
    • Accumulates on-site more than 5,000 kilograms (11,000 pounds) of UW (not by type) at any time.
What can a UW handler do?

• UW Handlers are persons who may
  – Generate
  – Receive
  – Store

Note: UW handlers may treat or recycle UW if authorized in the rules
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, and Aerosol cans
- only required if leaking

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

• Warning about mercury...

• There is a potential for exposure to harmful mercury vapors when lamps are crushed.

• Crushing operations should following the OSHA and bulb crushers manufactures guidelines

• OSHA’s fact sheet is titled: Protecting Workers from Mercury Exposure While Crushing and Recycling Fluorescent Bulbs.
What are the labeling requirements for UW?

• Most category of UW must be clearly marked with the appropriate wording
  – For example: “Universal Waste Lamps;” “Waste Lamps;” or “Used Lamps”
  – Ohio Specific UW
  – Each container or tank accumulating Ohio Specific universal waste shall be labeled with words that identify the contents of the container or tank 3745-273-14

• One example of demonstrating an 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?

- There are No recordkeeping requirements for small quantity handlers of UW
What are my recordkeeping requirements?

- Large Quantity Handlers and
- Destination Facilities 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
Universal Waste Rule
Ohio-specific wastes

Non-empty aerosol containers

Antifreeze

Paint

Paint-related wastes
Ohio-Specific Universal Wastes Definitions

Aerosol container:

• non-openable and non-refillable container; holds substance under pressure; uses propellant gas to deliver a product; does not include gas cylinders

Antifreeze:

• Ethylene or propylene glycol used in heat transfer equipment or to winterize equipment
Paint:

- Pigmented or unpigmented powder coating
- Pigmented or unpigmented mixture of binder and suitable liquid
- Generated from commercial, industrial, mining, agricultural and post-consumer activities
- Forms an adhering coating on a surface upon drying or through the use of heat

Intended to include products commonly known as paint that are used to decorate, protect, convey a design or image and applied in a very thin coat; does not include ingredients used to produce paint
Ohio-Specific Universal Wastes Definitions

Substances that are **NOT** paint

- Adhesives
- Stucco/cement based coatings
- Geotextiles and geomembranes
- Surface leveling products
- Insulation products/spray foams
- Petroleum asphalt products
- Ingredients used to make paint (solvent, binder, pigment/colorant, part A epoxy, part B hardener)
Ohio-Specific Universal Wastes Definitions

Paint-related Wastes:

• A material legitimately contaminated with paint and
• Produced from the packaging of paint, wholesale/retail operations, paint manufacturing, paint application and removal activities

• Wastes that are NOT paint-related wastes
  – Demolition debris
  – Ingredients used to make paint (solvent, binder, pigment/colorant, part A epoxy, part B hardener)
  – Spill cleanup materials
  – Floor sweepings other than paint chips
Universal Waste
UW Management Provisions

Tank & container standards
Labeling requirement
Accumulation time limit up to one year
Training requirement
Spill cleanup requirement
Notification requirement LQHUWs/destination facility
Tracking requirement for LQHUWs/destination facility
Transportation per DOT requirements
Waste specific management standards
Antifreeze
Management Standards

Develop written procedure to prevent commingling w/ other hazardous wastes
  - use dedicated collection and storage units

Note: Antifreeze, subsequent to generation, mixed w/used oil is classified as a used oil and is not a universal waste

Handlers can recycle antifreeze
Aerosol Containers
Management Standards

UW Satellite accumulation area allowed for aerosol containers

Handler may puncture, drain & crush aerosol containers
- management standards apply

Contents removed from containers is not a universal waste and must be evaluated to determine whether it is HW – please consider recycling container
Paint & Paint-related wastes
Management Standards

Handler may puncture, drain & crush containers of paint
  – Management standards apply
  – Collected paint is still a universal waste

Any handler can recycle UW paint waste

Only the handler that generated UW paint-related wastes can reclaim the paint-related wastes on-site
  – Residual from reclamation is not a UW; determine if waste is a HW – it may be listed HW
Issues of Confusion

If the waste is not hazardous waste, it is not required to be managed as a hazardous waste or a universal waste.

The universal waste program is an optional regulatory program, 3745-273-01.

UWs are a unique group of hazardous wastes subject to less burdensome generator and transporter requirements.
Issues of Confusion

UW is classified as hazardous waste at the destination facility where the waste is treated & subject to full regulation under the hazardous waste rules

- Land Disposal Restrictions (LDRs) apply to the treatment of UWs; destination facility will likely ask handler for waste information

A destination facility may also be a handler

- Storage or treatment per UW rules of incoming waste = a handler
- Treatment of waste not covered by handler rules = a destination facility
Issues of Confusion

Listed hazardous waste codes may apply to treatment residuals of certain UWs (e.g., solvent distillation bottoms)

Use manifest for Ohio-specific UWs shipped out of Ohio and designated as HW in pass-through or receiving state

– Note waste is UW in Ohio on line #14 of manifest
– Michigan has UW antifreeze

Move UW satellite accumulation container of aerosol cans to central collection area when full; one year time period now begins
Issues of Confusion

Aerosol containers are not categorically designated a reactive waste (D003) in Ohio

Aerosol containers of paint can be managed as a UW aerosol container or UW paint waste

The AABBCC hazardous waste air emission requirements do not apply to UWs
Issues of Confusion

Aerosol containers labeled “Don’t puncture or incinerate” can be punctured under the UW rules

- FIFRA letter 4/30/2004

Accumulation container of intact non-empty aerosol containers is not required to be closed until shipped off-site
UW Resources

• Universal Waste Webpage
  – http://epa.ohio.gov/derr/hazwaste/universalwaste

• Links to
  – Resources, Rules, Guidance's, Checklist and Contacts

• Universal Waste Handler Requirement
Most Commonly Cited Violations
Most Commonly Cited Violations

- Violations Most Frequently Cited Fact Sheet
- Failure to evaluate your waste
- Labeling used oil, Universal waste and hazardous waste
- Not properly managing containers or maintaining an inspection log
- Not testing or maintaining emergency equipment
- Not filing your biennial (formerly annual) report correctly
Key Point With Waste Evaluation

Don’t throw any waste into the dumpster unless you have confirmed and demonstrated that it is NOT a hazardous waste.
Avoiding Used Oil Violations

- OAC Chapter 3745-279
- Labeling Tanks and Containers with – “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
Container Management

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

- 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, looking for signs of leaks or deterioration

- Record inspections in a log or summary (SQG, LQG)
Emergency Equipment

• OAC rule 3745-65-33

• 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
Avoiding Biennial Reporting Violations

• OAC rule 3745-52-41

• Due by March 1\textsuperscript{st} of each even numbered year.

• Only report hazardous waste; not universal waste or used oil

• Cover generator activities for the previous calendar year

• Check accuracy and completeness
Resources
The Division of Emergency and Remedial Response Hazardous waste Program’s site

Division Home Page
http://epa.ohio.gov/derr/

Hazardous Waste Programs Page
http://epa.ohio.gov/derr/compliance

Rules
http://epa.ohio.gov/derr/derrrules/rcra#176615082-effective-rules

Publications/Guidance Documents
http://ohioepapubs.custhelp.com/
DERR’s Web site (cont.)

Recyclers List
https://ebiz.epa.ohio.gov/Recyclers/jsp/search.jsp

Ohio Commercial Facilities Accepting Hazardous Waste
https://ebiz.epa.ohio.gov/Recyclers/jsp/results.jsp?category=29

Universal Waste
http://epa.ohio.gov/derr/hazwaste/universalwaste
Guidance Documents

Hazardous Waste Generator Handbook
www.epa.ohio.gov/portals/32/pdf/gen_handbook.pdf

Generator Requirements Summary Table
www.epa.ohio.gov/portals/32/pdf/GeneratorRequirementsTable.pdf

Hazardous Waste Generator Guidance Requirements
http://epa.ohio.gov/derr/hazwaste/generator_requirements#177015210-guidance
Additional Web sites

How to clean up a broken mercury lamp
http://ohioepa.custhelp.com/app/answers/detail/a_id/983/~/handling-a-broken-compact-fluorescent-lamp-%28cfl%29

DOT - Transportation of batteries

U.S. EPA – RCRA On-Line (rule interpretations instructions)
https://yosemite.epa.gov/osw/rcra.nsf/search1?OpenForm
Ohio EPA Resources

Information and Resources from Ohio EPA

Answer Place

Division of Environmental Response and Revitalization
Hazardous Waste Inspection and Compliance Assistance
   Weekdays from 8 AM – 5 PM
   (614) 644-2924

Office of Compliance Assistance & Pollution Prevention
   Weekdays, 8 AM - 5 PM
   (800) 329-7518
Questions?