Disclaimer

This will not be a substitute for your training requirements.

Job specific training is required to meet the requirements under RCRA.
Hazardous Waste Generator Workshop

Topics For This Session

Part 1:
• Introduction to RCRA
• Waste Determinations

Part 2:
• Hazardous Waste Generator Classifications
• On-site Management

Part 3:
• On-site Management (Continued)
• Compliance/Resources
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Welcome to RCRA

Land of Acronyms

Our Mission: To protect and improve the health and environment of all Kansans.
Introduction To RCRA

RCRA – Resource Conservation and Recovery Act

• “Cradle to Grave” Law (Point of generation until final disposal)
  • All wastes must be evaluated and properly managed.
  • Responsibility falls to everyone handling, managing, and otherwise in possession.
  • Ignorance of the law is not an excuse.
Why?

To protect human health and the environment by ensuring responsible management of hazardous and nonhazardous waste.
Introduction To RCRA


1980 – EPA implements regulations.

1982 – Kansas Hazardous Waste Program begins
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Introduction to RCRA

2006 – Last set of federal regulations Kansas has adopted.

2013 – Technical revisions and adoption of RCRA Corrective Action.

April 29, 2011 – Major revisions to the Kansas Hazardous Waste Program.

TBD – Major revisions to the Kansas Hazardous Waste Regulations
How does RCRA work?

Solid Waste

Universal Waste

Hazardous Waste
**Where to start?**

<table>
<thead>
<tr>
<th>Waste Determinations</th>
<th>On-Site Management</th>
<th>Disposal</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Identify waste streams</td>
<td>• Notification</td>
<td>• Disposal Options</td>
</tr>
<tr>
<td>2. Is it a solid waste?</td>
<td>• Container Management</td>
<td>• Transportation</td>
</tr>
<tr>
<td>3. Exemptions?</td>
<td>• Storage</td>
<td>• Manifests</td>
</tr>
<tr>
<td>4. Is it hazardous?</td>
<td></td>
<td>• Land Disposal Restrictions (LDRs)</td>
</tr>
<tr>
<td>5. How much are you generating?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Generator Classification?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Where should you start?

KDHE BWM Website: https://www.kdheks.gov/waste

• Federal and State Regulations
• Policies and Technical Guidance Documents
• Forms, Checklists, CAV Requests
• And much more…
Where should you start?

Hazardous Waste Generator Handbook
• Available on our website
• Contains
  • Guide to complying with the regulations
  • Technical Guidance Documents
  • Example forms
  • Training Guide/Manual
Website Update!

We are updating our website. The update will include:
• Reorganization/consolidation
• Removal of duplicate links
• Removal of dead or outdated links
• Other user friendly changes.

Listservs!
• Hazardous Waste Updates
• Various Solid Waste listservs
• Keep It Clean Kansas
First steps?

Waste Determinations

1. Identify waste streams
2. Is it a solid waste?
3. Exemptions?
4. Is it hazardous?
5. How much are you generating?
6. Generator Classification?

Understanding what wastes you have on site is key!
Waste Determinations

- Required at the point of generation, prior to:
  - Dilution,
  - Mixing, or
  - Other alteration of the waste, and
  - Any point thereafter where exposure or other factors may have changed the properties of the waste.
Waste Determinations

- Waste determinations only need to be done once for the lifetime of that process, however…
- **Any** change to the process which generates this waste will require a new waste determination.
  - Additions, substitutions, and/or fewer ingredient(s)
  - Manufacturing changes (e.g. hardware)
  - Etc.
Waste Determinations

Step 1: Identify your wastes

• What are your waste streams?
  • What do you discard?
  • What gets recycled?
  • What off-spec products/by-products?
  • What is no longer of value to your process?

40 CFR §261.2
Step 2: Identify your “solid wastes”

What is a solid waste?

• Anything (solid, liquid, or gas) that has been discarded
  • Abandoned (disposed, burned, accumulated, or stored)
  • Recycled (recovered, regenerated, etc.)
  • Inherently waste-like
• Is not excluded by §261.4(a)
Disposed

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Accumulated or Stored
Recycled

Generated
- Out of Process
- Unusable/Off-Spec

Accumulated and Stored

Recycled
- Regenerated into usable product

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Inherently Waste-Like

Once were and may still be products, but:
• Signs of deterioration
• Excessive dust or other growths/buildup
• Not stored in a manner that shows value

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## Hazardous Waste Generator Workshop

### Table 1

<table>
<thead>
<tr>
<th>Use constituting disposal (§261.2(c)(1))</th>
<th>Energy recovery/fuel (§261.2(c)(2))</th>
<th>Reclamation (§261.2(c)(3)), except as provided in §§261.4(a)(17), 261.4(a)(23), 261.4(a)(24) or 261.4(a)(27)</th>
<th>Speculative accumulation (§261.2(c)(4))</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spent Materials</td>
<td>(*)</td>
<td>(*)</td>
<td>(*)</td>
</tr>
<tr>
<td>Sludges (listed in 40 CFR Part 261.31 or 261.32)</td>
<td>(*)</td>
<td>(*)</td>
<td>(*)</td>
</tr>
<tr>
<td>Sludges exhibiting a characteristic of hazardous waste</td>
<td>(*)</td>
<td>-</td>
<td>(*)</td>
</tr>
<tr>
<td>By-products (listed in 40 CFR 261.31 or 261.32)</td>
<td>(*)</td>
<td>(*)</td>
<td>(*)</td>
</tr>
<tr>
<td>By-products exhibiting a characteristic of hazardous waste</td>
<td>(*)</td>
<td>-</td>
<td>(*)</td>
</tr>
<tr>
<td>Commercial chemical products listed in 40 CFR 261.33</td>
<td>(*)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Scrap metal that is not excluded under 40 CFR 261.4(a)(13)</td>
<td>(*)</td>
<td>(*)</td>
<td>(*)</td>
</tr>
</tbody>
</table>

**Note:** The terms “spent materials,” “sludges,” “by-products,” and “scrap metal” and “processed scrap metal” are defined in §261.1.
First Impressions:
• Empty or full?
• Product or waste?
• Inherently waste-like?
What About These?
Other Examples

- Floor drain with sump
- Floor Sweepings
- Sandblast Media
- PPE/Uniforms/Aprons/Rags
- Paint filters
- Masking Media (e.g., tape and paper)
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- RCRA “C”
- RCRA “D”
- CAA
- CWA
- Exempt

RCRA “C”
RCRA “D”
CAA
CWA
Exempt

Process Wastes
- By-Products
- Off-Spec
- Spent
- Etc

Recycle
Trash

Manufacturing

Emissions

Scrubber Sludge, Filters

Storage

Wastewater Treatment

Discharge to POTW
- Evaporation Pond
- Surface Water

Products

Spills
- Discarded Products
- Off-Spec
- Etc

Waste Removed From System Prior to Discharge

Recycle
Trash

NOTE: This is an oversimplification of regulatory applicability. Reality may have additional considerations.
Waste Determinations

Step 3: Exemptions

§261.4(a) – Solid Waste
§261.4(b) – Hazardous Waste

Examples:

• Industrial Wastewater (Clean Water Act)
• Agricultural Wastes
• Excluded Scrap Metal (process, unprocessed home, and unprocessed prompt) being recycled
• Household Hazardous Waste
Waste Determinations

Step 4: Is it hazardous?
A solid waste which, if not excluded by §261.4(b), meets the definition of:

- Characteristic Waste (D-List)
- Listed Waste (F, K, P, U-Lists)
- Refer to 40 CFR §261 Subpart B
Waste Determinations

Listed Wastes

• Spent Wastes
  • F-Listed (non-specific sources)
  • K-Listed (specific sources)

• Unused Commercial Chemical Products
  • P-Listed (acutely hazardous; sole active ingredient)
  • U-Listed (sole active ingredient)

• Covered in more detail in the advanced session
Characteristic Waste

Wastes that are hazardous because they exhibit a hazardous characteristic.

- D001
- D002
- D003
- D004-D043
Characteristic Waste

D001 – Ignitibility

- Liquid:
  - Flashpoint < 140˚ F (60˚ C)
- Non-liquid:
  - Fire through friction, absorption of moisture, spontaneous chemical changes
  - Burns vigorously and persistently
  - §261.21
Characteristic Waste

D002 – Corrosivity

- Aqueous
- pH ≤ 2 or ≥ 12.5
- Not the same as DOT corrosive
- §261.22
Characteristic Waste

**D003 – Reactivity**

- Unstable
- Reacts violently with water or other external substances
- Explosive
- §261.23
Characteristic Waste

D004-D043 – Toxicity

- Concentration of contaminant at or above the regulatory limit.
- §261.24

Example:

<table>
<thead>
<tr>
<th>Table 1 - §261.24</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPA HW No.</td>
</tr>
<tr>
<td>D018</td>
</tr>
<tr>
<td>D008</td>
</tr>
</tbody>
</table>
Characteristic Waste

Toxicity Characteristic Leaching Procedure (TCLP)

- Soil sample extraction method for chemical analysis employed as an analytical method to simulate leaching in a landfill.
  - Volatile Compounds
  - Heavy Metals
  - Pesticides/Herbicides
  - Base Neutral Acids
How do you make this determination?

**Process Knowledge**

- SDS – Flashpoint, pH, Reactivity, Ingredients
- What chemicals are involved?
- What is the process/chemical interaction?
- 2017 - EPA clarified what constitutes process knowledge.

**Laboratory Analysis from a KDHE-Certified Laboratory**

- TCLP analysis by Method 1311 (SW-846)
Now Document the Determination

• Clearly state the waste is hazardous or non-hazardous.

• Include copies of all supporting documentation (analytical reports, design plans, SDSs, etc.)
  
  • Supporting documents by themselves are not waste determinations.

• Retain all documentation until three years after waste was last shipped off site.
Now Document the Determination

• **NOTE:**
  - Waste profiles by themselves are not generally sufficient determinations or documentation.
  - Do not rely on your contractor/waste disposal company.
    - Not familiar with your processes
    - Generic waste profiles
    - Labs may not be KDHE-certified

40 CFR §262.40(c)
Common Things That Are Not Hazardous Wastes

<table>
<thead>
<tr>
<th>Waste Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Used Oil</strong></td>
<td>• Recycled for energy or material recovery</td>
</tr>
<tr>
<td></td>
<td>• Subject to Used Oil regulations (40 CFR §279)</td>
</tr>
<tr>
<td><strong>Medical Waste</strong></td>
<td>• Generated in connection with human or animal care</td>
</tr>
<tr>
<td></td>
<td>• Potentially capable of causing disease or injury</td>
</tr>
<tr>
<td></td>
<td>• May be a “special waste.”</td>
</tr>
<tr>
<td><strong>Special Waste</strong></td>
<td>• Physical, chemical, or biological characteristics requiring special</td>
</tr>
<tr>
<td></td>
<td>management standards due to concerns for safety regarding handling,</td>
</tr>
<tr>
<td></td>
<td>management, or disposal.</td>
</tr>
</tbody>
</table>
Waste Counting

Step 5: What is your monthly generation?

Each calendar month:

• Calculate how many pounds of EACH hazardous waste you generate
• Cannot average over time
• Includes satellite accumulation
• Add up all weights for your monthly TOTAL

The total tells you which class you fall into.

40 CFR §261.5(c) and (d)
Generator Classifications

• Permit exempt classification system based on your monthly generation rate.

• Designed to account for the amount of waste generated/accumulated on site and apply appropriate regulatory standards to protect human health and the environment.

• Permit exemption exists as long as regulations are followed.
<table>
<thead>
<tr>
<th>Federal</th>
<th>Kansas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large Quantity Generator</td>
<td>Large Quantity Generator</td>
</tr>
<tr>
<td>Small Quantity Generator</td>
<td>Small Quantity Generator</td>
</tr>
<tr>
<td>Very Small Quantity Generator</td>
<td>Kansas Small Quantity Generator</td>
</tr>
<tr>
<td>(Formerly Conditionally Exempt</td>
<td>Conditionally Exempt Small</td>
</tr>
<tr>
<td>Small Quantity Generator)</td>
<td>Quantity Generator)</td>
</tr>
</tbody>
</table>
Conditionally Exempt Small Quantity Generator

Hazardous Waste Monthly Generation:

Non-Acute Hazardous Wastes:
• Less than 55 pounds

Acutely Hazardous:
• Accumulate or generate less than 2.2 pounds of P-Listed Hazardous Waste and F-Listed Dioxins:
  • F020
  • F022
  • F026
• 220 pounds of spill cleanup residues and debris
Hazardous Waste Generator Workshop

55 Pounds of Water

This is only an approximation based on water weight.

Your weights/volumes will vary!

55 gallons
Kansas Small Quantity Generator

Hazardous Waste Monthly Generation:

Non-Acute Hazardous Wastes:
- 55 pounds or more
- Less than 220 pounds

Acutely Hazardous:
- Accumulate or generate less than 2.2 pounds of P-Listed Hazardous Waste and F-Listed Dioxins:
  - F020
  - F022
  - F026
- 220 pounds of spill cleanup residues and debris
220 Pounds of Water

This is only an approximation based on water weight.

Your weights/volumes will vary!
Small Quantity Generator

Hazardous Waste Monthly Generation:

Non-Acute Hazardous Wastes:
- 220 pounds or more
- Less than 2,200 pounds

Acutely Hazardous:
- Accumulate or generate less than 2.2 pounds of P-Listed Hazardous Waste and F-Listed Dioxins:
  - F020
  - F022
  - F026
- 220 pounds of spill cleanup residues and debris

40 CFR §262.34 and K.A.R. 28-31-262/262a
Large Quantity Generator

Hazardous Waste Monthly Generation:

Non-Acute Hazardous Wastes:
• 2,200 pounds or more

And/Or

Acutely Hazardous:
• Accumulate or generate 2.2 pounds or more of P-Listed Hazardous Waste and F-Listed Dioxins:
  • F020
  • F021
  • F022
  • F023
  • F026
  • F027
• More than 220 pounds of spill cleanup residues and debris

40 CFR §262.34 and K.A.R. 28-31-262/262a
Waste Counting

Example:

Paint Booth
- Waste paint (D007)
- Spent solvent (D001/D007/F003)

Maintenance Area
- Spent blast media (D007)
- Used oil
## Waste Counting – Month 1

<table>
<thead>
<tr>
<th>Waste Stream</th>
<th>Waste Codes</th>
<th>Generated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waste Paint</td>
<td>D007</td>
<td>50 lb</td>
</tr>
<tr>
<td>Spent Solvent</td>
<td>D001/D007/F003</td>
<td>120 lb</td>
</tr>
<tr>
<td>Spent Blast Media</td>
<td>D007</td>
<td>--</td>
</tr>
<tr>
<td>Used Oil</td>
<td>--</td>
<td>Not Counted</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>170 lb (KSQG)</strong></td>
</tr>
<tr>
<td>Waste Stream</td>
<td>Waste Codes</td>
<td>Generated</td>
</tr>
<tr>
<td>----------------------------</td>
<td>------------------------------</td>
<td>------------</td>
</tr>
<tr>
<td>Waste Paint</td>
<td>D007</td>
<td>70 lb</td>
</tr>
<tr>
<td>Spent Solvent</td>
<td>D001/D007/F003</td>
<td>180 lb</td>
</tr>
<tr>
<td>Spent Blast Media</td>
<td>D007</td>
<td>--</td>
</tr>
<tr>
<td>Used Oil</td>
<td>--</td>
<td>Not Counted</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>250 lb (SQG)</strong></td>
</tr>
</tbody>
</table>
Waste Counting – Month 3

<table>
<thead>
<tr>
<th>Waste Stream</th>
<th>Waste Codes</th>
<th>Generated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waste Paint</td>
<td>D007</td>
<td>50 lb</td>
</tr>
<tr>
<td>Spent Solvent</td>
<td>D001/D007/F003</td>
<td>120 lb</td>
</tr>
<tr>
<td>Spent Blast Media</td>
<td>D007</td>
<td>200 lb</td>
</tr>
<tr>
<td>Used Oil</td>
<td>--</td>
<td>Not Counted</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>370 lb (SQG)</strong></td>
</tr>
</tbody>
</table>
Waste Counting

If your monthly generation rate varies routinely, you must take the highest generator class you fall into.

In addition, some waste streams may only be generated every other month, a couple times per year, or every other year. Do not forget to count these!
On-Site Management
What is this?

On-Site Management
- Notification
- Container Management
- Storage

- Training
- Emergency Preparedness
- Record Keeping

Your generator class (monthly generation rate) determines your requirements!
General Requirements

KSQGs, SQGs, and LQGs are required to:

• Notify KDHE of generator activity and obtain an EPA ID number (Form 8700-12)
• Update within 60 days of change
• Submit an annual report, and
• Pay an annual monitoring fee to KDHE
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Preparedness and Prevention KSQGs and SQGs

Emergency Coordinator:

• Available 24/7
• Able to reach facility within a short period of time
• Familiar with emergency procedures and locations of waste

Post the following information next to a telephone:

• Name and telephone number of emergency coordinator;
• Location of fire extinguishers, spill control material and fire alarm (if present);
• Telephone number of the fire department, unless direct alarm is available

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ATTACHMENT C
HAZARDOUS WASTE EMERGENCY RESPONSE

EMERGENCY COORDINATOR: ________________________________
HOME PHONE NUMBER: ________________________________
CELL PHONE NUMBER (Optional): __________________________

ALTERNATE EMERGENCY COORDINATOR: __________________
HOME PHONE NUMBER: ________________________________
CELL PHONE NUMBER (Optional): __________________________

FIRE DEPARTMENT PHONE NUMBER: _______________________
(unless there is a direct alarm)

.................................................................

EQUIPMENT LOCATION
(A map showing the locations is sufficient)

.................................................................

FIRE EXTINGUISHERS: ________________________________
SPILL CONTROL: ________________________________
FIRE ALARMS (if present): ________________________________

.................................................................

RESPONSE ACTION

FIRE: Call the Fire Department or extinguish the fire using an appropriate fire extinguisher.

SPILL: Contain the flow of hazardous waste, clean up the hazardous waste and any contaminated materials or soil as soon as possible.

FIRE, EXPLOSION, OR RELEASE, WHICH THREATENS HUMAN HEALTH OR SURFACE WATER:
Notify the National Response Center with the following information:

1. Name, address, and U.S. EPA ID Number of generator
2. Date, time, and type of incident
3. Quantity and type of hazardous waste involved
4. Extent of any injuries
5. Estimated quantity and disposition of recovered materials

.................................................................

NATIONAL RESPONSE CENTER  1-800-424-8802
KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT  (785) 296-1479
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Preparedness and Prevention KSQGs and SQGs

Training

• Must provide within 6 months of hire or transfer to new position
• Must provide annual training
• Document the training (who, what, when) and maintain for 3 years.

Please Note:

• Training must be sufficient to ensure all personnel are thoroughly familiar with proper waste handling and emergency procedures relevant to their responsibilities during normal facility operations and emergencies.
Preparedness and Prevention KSQGs and SQGs

Must be equipped with:

- Internal communications or alarm system
- A device capable of summoning emergency assistance from local emergency responders
- Portable fire extinguishers, fire control equipment, spill control equipment, and decontamination equipment
- Water at adequate volume and pressure to supply water hose streams, foam producing equipment, automatic sprinklers, or water spray systems
Preparedness and Prevention KSQGs and SQGs

*Must attempt* arrangements with local emergency organizations, including:

- Familiarize police, fire departments, and hospitals with the facility, hazardous waste handled, etc.
- Designate one department as the primary emergency authority where more than one might respond.
- Maintain agreements with state emergency response teams, emergency response contractors, and equipment suppliers as necessary.
Preparedness and Prevention KSQGs and SQGs

Maintain and operate facility to minimize the possibility of:

- Fire
- Explosion
- Unplanned Sudden Release
- Unplanned Non-Sudden Release

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Preparedness and Prevention KSQGs and SQGs

Test and maintain all emergency and communications equipment to ensure proper operation in an emergency.

Ensure personnel have immediate access to an internal alarm or emergency communication device when handling hazardous waste.
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Preparedness and Prevention LQGs Only

Prepare and maintain (update) a contingency plan that meets all of the requirements of 40 CFR §265 Subpart D, including:

- Name, address, and contact information for the Emergency Coordinator
- Arrangements with all emergency services
- List and location of all emergency equipment at the facility, their description, and their capabilities
- Emergency procedures
- Evacuation plan
Preparedness and Prevention LQGs Only

Must ensure the contingency plan is available in case of an emergency.

Must train employees and maintain required training records.
Management of Waste

Accumulation of waste can occur in:

- Satellite Accumulation Containers
- Storage Containers
- Tanks

Refer to 40 CFR §262.34; 265 Subparts I and J

Also see the definitions of “container” and “tank” in 40 CFR §260.10
Management of Waste

All containers must be:

- Labeled with the words “Hazardous Waste”
- In good condition and compatible with the contents
- Kept closed unless actively adding or removing waste
Management of Waste

Preprinted labels are great for legibility and will meet the requirement, but...

Good Container:

- Preprinted labels are great for legibility and will meet the requirement, but...

40 CFR §262.34 and K.A.R. 28-31-262/262a
Management of Waste

Good Container:

Labels can be handwritten on an adhesive applied to the container...
Management of Waste

Good Container:

Or written directly on the container.

40 CFR §262.34 and K.A.R. 28-31-262/262a
Management of Waste

Good Container:

They should be legible…
Management of Waste

Good Container:

And visible.
Management of Waste

Not Labeled:

What does “Bad” mean?
Management of Waste

Open Container:

Although some processes require a direct discharge into the waste container, the tubes do not create a complete seal by themselves.
Management of Waste

Closed Container:

A cap or bung which allows a tube connection can provide the seal required to be considered closed.
Management of Waste

Open Container:

The funnel is not latched.
Management of Waste

Open Container:

- Plastic film is punctured.
- Brush is not a stopper.
Management of Waste

Poor Condition:

Containers are dented, preventing them from closing properly.
Management of Waste

Poor Condition:

Under pressure!
Management of Waste

Poor Condition:

Lid is cracked, allowing for volatilization and will no longer completely contain contents if knocked over.
Management of Waste

Corrosive wastes should not be placed in metal containers.

**BE CAREFUL!**
- Some halogenated solvents can soften plastic.
- Some acids, such as those used for chemical etching, can dissolve glass.
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Where are the labels?

Open funnels

Hazardous Waste Acetone

No bungs
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Management of Waste

Not Containerized:

Once the sandblast media leaves the unit, it is subject to regulation and must be managed properly.
Management of Waste

Not Containerized:

Accumulated over a drain.

What are the implications in these photos?
Hazardous Waste Generator Workshop

Management of Waste

Satellite Accumulation Containers

• At or near the point of generation
• Under the control of the operator
• Only one container for each waste stream at each point of generation
• 55 gallons or less
• Must be managed as a storage container within three days of no longer meeting the definition of a satellite.
Management of Waste

Day Accumulation Containers

- At or near the point of generation
- Under the control of the operator
- Only one container for each waste stream at each point of generation
- 6 gallons or less
- Must be emptied into a container at the end of each day, or each shift if operating 24-hours.
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Management of Waste

Good Container:

- At or near the point of generation
- Under the control of the operator
- Marked “Hazardous Waste”
- Closed
- In good condition
- 55 gallons or less
Management of Waste

Container Issues:

- Not marked “Hazardous Waste”
- Open
- More than one container of the same waste at the same point of generation.
Management of Waste

More Than One Container:

Not compliant unless each container holds a separate waste stream.
Hazardous Waste Generator Workshop

Management of Waste

Manage Within Three Days:

Satellite container with blue cap just became full and a new satellite container has been started. Is this okay?

Yes, as long as it is managed within 3 days.
Management of Waste

Storage Containers

- Marked with the accumulation start date
  - Date hazardous waste is first added, or date the satellite container became a storage container.
- Separate incompatibles
  - Dike, Berm, etc.
- Adequate aisle space to allow unobstructed movement in case of emergency.
- LQGs must store D001 and D003 waste at least 50 feet from property line.
Management of Waste

Storage Areas

- Can be located indoors or outdoors
- Recommend they be covered and/or on pallets
- Recommend secondary containment
- No state or federal limit on number of storage areas
Management of Waste

**Good Storage:**

- Adequate aisle space
- Easily assess labeling and condition of containers
- Recommend stacking no more than two high
Management of Waste

Poor Aisle Space:

Boxes blocking the aisle and hindering access to containers
Management of Waste

Poor Aisle Space:

Access to any containers behind the outer row is not possible without taking time to move them.

How quickly can you address a fire in the back corner?
Management of Waste

Inspections

- CESQGs and KSQGs – Monthly
- SQGs and LQGs – Weekly

What to look for

- Deterioration and Leaks
- Container Requirements (closed, labeled, dated)
- Storage Area Requirements (aisle space, separation)
Management of Waste

Document

- Date and Time of Inspection
- Name of Inspector (Not Initials)
- Observations Made
- Date and Nature of Remedial Actions Taken
Management of Waste

Time on site:
- LQGs – 90 days or less
- SQGs – 180 days or less
- May have up to 270 days if the waste is transported more than 200 miles
- CESQGs and KSQGs – No limit*

Weight restrictions:
- SQGs – 13,200 lb (6,000 kg)
- Subject to TSDF permitting requirements
- CESQGs and KSQGs – 2,200 lb
- Subject to SQG requirements

* See CESQG and KSQG weight restrictions.
Management of Waste

Universal Waste

- Universal waste (UW) is a subset of hazardous waste.
- Kansas follows EPA rules for UW.

UW in Kansas includes:

- Batteries
- Certain pesticides
- Mercury-containing equipment
- Lamps (including fluorescent bulbs)
Management of Waste

**UW batteries, mercury-containing equipment, and lamps, must be labeled (on container or each individual item):**

- “Universal Waste - ____________”; or
- “Waste _____________”; or
- “Used ____________”.
- Fill in the blank with: Batteries, mercury-containing equipment (or mercury thermostats), or lamps.

**UW pesticides must be labeled either:**

- “Universal Waste – Pesticides”; or
- “Waste Pesticides”.

40 CFR §273
Management of Waste

Containers must be:

- Closed except when adding or removing waste.
- In good condition.

UW may be accumulated on site for up to one year. Must be able to demonstrate this by:

- Dating each container or the group of containers (such as on a pallet); or
- Date the accumulation area; or
- Maintain a written inventory or log
Management of Waste

Not properly managed.

- Not Containerized
- Are there labels?
Management of Waste

UW can be shipped under a bill of lading or other shipping papers. A Uniform Hazardous Waste Manifest is not required.

Employees who handle or have responsibility for managing UW must be given information describing the proper handling and emergency procedures appropriate to the type(s) of UW handled (Training).
Compliance Evaluation Inspections (CEIs)

Inspections are unannounced
• Routine inspections are chosen months in advance based on the following:
  • Generator classification
  • Amount of time since last inspection
  • Industry sector priorities established by EPA or KDHE Enforcement
Why Do We Conduct Inspections?

Inspections are unannounced
• Properly assess day-to-day activities without influence.
• Inspectors provide compliance assistance best when they can observe the normal routines.

Violations do not always result in enforcement. Use them as a learning opportunity.
Compliance Evaluation Inspections (CEIs)

Complaints can result in a full RCRA inspection
- Already there and probably looking at many of the required items already.
- Reset the clock for next inspection.

Compliance Assistance Visits (CAV) are available
- Intended for new generators
- Restrictions apply depending on inspection and enforcement history.
- More information in policy.
Compliance Evaluation Inspections

Order may change, but will always start with an introduction and end with an exit briefing.
Inspection Checklists – On Website

Hazardous Waste Generator Requirements:

- Waste Stream Table
- General Requirements
- Universal Waste
- Generator Requirements
- Container Management
- Reporting and Recordkeeping
- Prepare and Train – KSQGs and SQGs
- Personnel Training for LQGs
- Manifest Requirements
- LDR Requirements
- Prepare and Prevent Requirements
- Contingency Plan for LQGs
Common Violations (By Type)

The most common group of violations relate to on-site management, container management, and prevention and preparedness (40 CFR 262 Subpart C).

Of these, labeling is the most common:
• Labeling satellite containers with the words “Hazardous Waste”
• Labeling storage containers with the words “Hazardous Waste” and/or the accumulation start date
Our Mission: To protect and improve the health and environment of all Kansans.

Common Violations (By Regulation)

Labeling containers is also one of the most commonly cited violations overall.

Another commonly cited violation, and just as frequent, is failure to make a waste determination.

- Overlooked waste streams
- Accuracy
- Changes since the last determination

Ensure this determination is documented.

Ignorance of any regulation is never an excuse.
Other Areas of Concern - Recordkeeping

RCRA has many recordkeeping requirements.

• Most require retention for three years from the final date of the document.

• Waste determinations and LDRs are exceptions to this rule (3 years beyond last shipment of waste).

These records, in addition to being required, serve as your proof that certain activities were completed, such as:

• Employee training
• Storage area inspections
• Waste determinations
• Appropriate disposal (manifests)
Other Areas of Concern - Recordkeeping

Must be able to present to an inspector upon request.
• Can be paper or electronic

More information about specific records will be discuss in the advanced session.
Hazardous Waste Generator Workshop

Required Records

- Waste Determinations
  - Is it Hazardous?
  - Supporting Documentation
- Training Records
- Manifests (or access to e-Manifest)
- Land Disposal Restrictions (LDRs)

- Storage Area Inspections
- Posted Emergency Information
- Contingency Plan
- Biennial Report
- Annual Report
Additional Resources

KDHE wants to help all generators achieve compliance. Please call us with any questions at 785-296-1600.

Small Business Environmental Assistance Program (SBEAP) operated by the Pollution Prevention Institute (PPI) at KSU 1-800-578-8898 (free anonymous assistance).
Available Resources

- Website: http://www.kdheks.gov/waste
  - Hazardous Waste Generator Handbook
    - Compliance/Training Manual
  - Inspector Checklists
  - Technical Guidance Documents and Policies
SBEAP

- Website: [https://www.sbeap.org/waste-management/hazardous-waste](https://www.sbeap.org/waste-management/hazardous-waste)
  - Contains information and helpful links:
  - Hazardous Waste Compliance Calendars *(2022 Now Available)*
  - YouTube Compliance Video – Container Management
  - Training Module
Contact Information

BWM web site:
http://www.kdheks.gov/waste

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Thank you/Questions