



Hazardous Waste Generator Workshop

Basic Course

Disclaimer

This will not be a substitute for your training requirements.

Job specific training is required to meet the requirements under RCRA.

Topics For This Morning

Introduction to RCRA

Waste determinations

- What is a waste
- What defines a solid waste
- Exemptions
- Hazardous Waste

Generator Classifications

On-site Management

- Containers
- Training
- Emergency Preparedness

Navigating KDHE Website

- Resources
- CAVs

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

1976 – Resource Conservation and Recovery Act (RCRA)

- Purpose was to create responsible disposal options and encourage recycling/reuse.

1980 – EPA implements regulations.

- Created a set of rules to ensure the proper handling and disposal of “solid waste.”

Introduction To RCRA

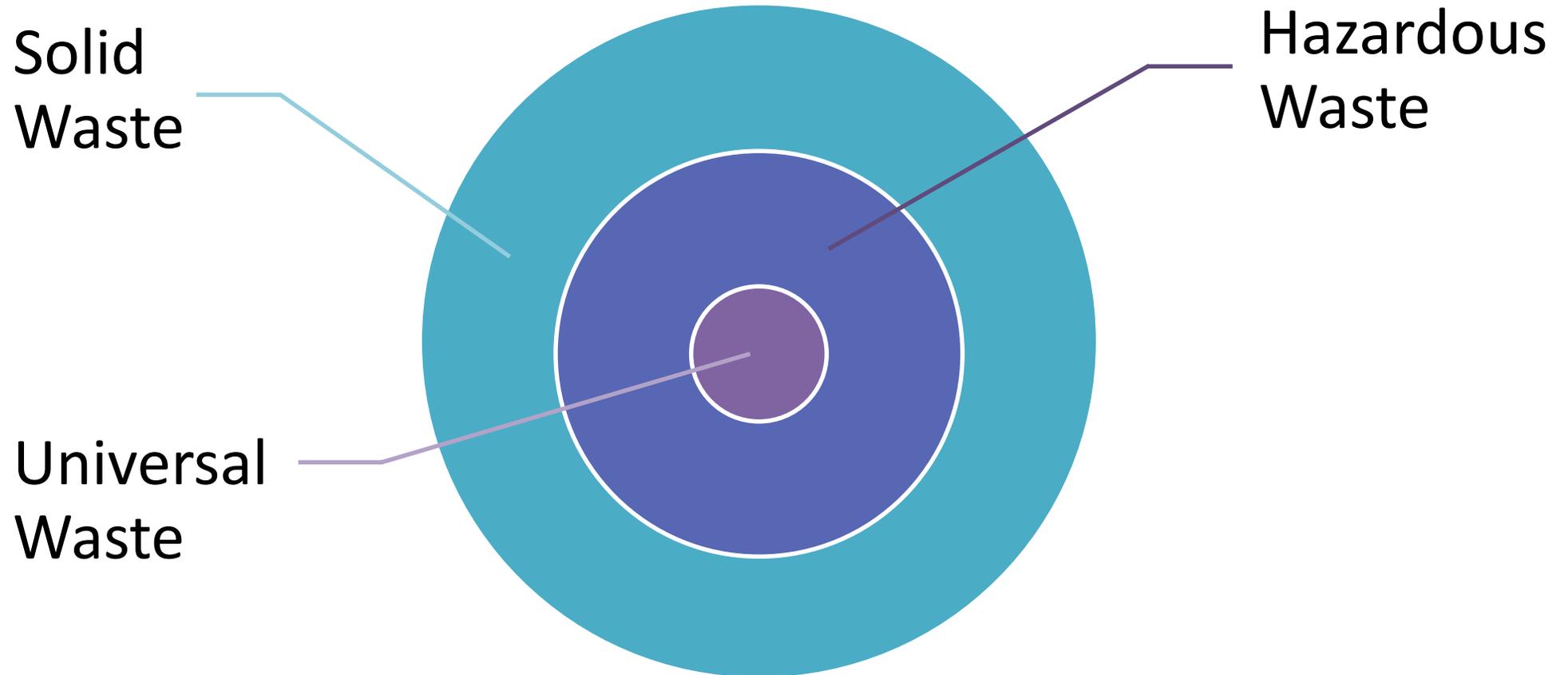
1982 – Kansas Hazardous Waste Program begins

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

2013 – Technical revisions and adoption of RCRA Corrective Action.

Additional adoptions and revisions are coming (will be discussed this afternoon).

How does RCRA work?



How does RCRA work?

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



Governor Jeff Colyer, M.D.
Jeff Andersen, Secretary

- Home
- Public Health
- Environment
- Health Care Finance
- Laboratories
- News

Bureau of Waste Management



Waste Management

[A to Z Topic Listing](#)

Bill Bider, Director
Phone: (785) 296-1600 Fax: (785) 559-4252

1000 SW Jackson, Suite 320
Topeka, KS 66612-1366

Mission - To minimize the health and environmental impact associated with the generation, storage, transportation, treatment, and disposal of all solid and hazardous wastes in Kansas.

Upcoming Events



It's easy to learn, easy to implement, and saves time and money! [Learn more.](#)

[Free 2018 Hazardous Waste Generator Workshops](#)

Waste Mgmt Links

- [Contact Us](#)
- [BWM Staff Listing](#)
- [What's New](#)

Events

- [2018 KICK Earth Day Park Clean Up](#)
- [2018 KICK Calendar Contest Winners](#)
- [Workshops, Training, Special Events](#)

Frequently Used Forms

- [All Forms](#)
- [Disaster Response Forms and Information](#)

Free 2018 Hazardous Waste Generator Workshops
 2019 Keep It Clean Kansas Calendar Contest **NEW**
 2018 Small Arid Landfill Owner & Operators Workshop **NEW**
 Waste Tire Grant application now available

Forms

[All Solid Waste & Hazardous Waste Forms](#)
[Solid Waste Facility - Planning - Activities Not Requiring a Permit - Disaster - Financial Assurance - Grants - Hazardous Waste](#)

Announcements and News

- [Medical Sharps Disposal](#) **NEW**
- [Medical Sharps Disposal for Livestock](#) **NEW**
- [Household Hazardous Waste Program Report - SFY17](#) **NEW**
- [Kansas Coal Combustion Residuals Documents](#)
- [Kansas Solid Waste Program Report - SFY17](#) **NEW**

Compliance, Assistance, & Enforcement

- [Accredited Environmental Laboratories](#)
- [Old City Dump Cleanup Program](#)
- [City/County Illegal Dump Cleanup Program](#)
- [File a Complaint](#)
- [Compliance Assistance Visits Program](#)
- [Solid & Hazardous Waste Compliance Documents](#)

Composting

- [Composting at Livestock Facilities Information Sheet](#)
- [Composting Forms](#)

Hazardous Waste Generators & Transporters

- [Biennial HW Report](#)
- [e-Manifest](#) **NEW**
- [EPA's RCRAInfo Database](#)
- [Hazardous Waste Compliance Calendars](#)
- [Hazardous Waste Fees](#)
- [Hazardous Waste & Used Oil Forms](#)
- [Hazardous Waste Generator Handbook](#)
- [Hazardous Waste Transporter List](#)
- [Used Oil Transporter List](#)

Information

Disposal Without a Permit

[Generator Liquid Waste Profile Sheet](#)
[Kansas Open Records Request \(KORA\)](#)

[Request a Compliance Assistance Visit](#)

[Mausoleum Permitting](#)

[Solid & Hazardous Waste Compliance Documents](#)

[Special Waste Disposal Request](#)

Maps & Databases

[EPA's RCRAInfo Database](#)

[Old City Dump Locations](#)

[Solid Waste Facilities Database and Map](#)

Other Information

[Accredited Environmental Laboratories](#)

[Debris Management Plan](#)

[Ebola Waste is "Hazardous" - Secretary's Policy](#)

[Hazardous Waste Compliance Calendars](#)

[Land-Spreading Oil and Gas Drilling Waste](#)

[Medical Sharps Disposal for Livestock](#)

[Medication Disposal Options](#)



Hazardous Waste Permitting & Corrective Action

- [Hazardous Waste Fees](#)
- [HW Public Notices](#)
- [HW Fact Sheets](#)
- [HW Inflation for Gross Domestic Product](#)
- [PCB Information](#)
- [Permitting & Inspection Forms](#)

Household Hazardous Waste

- [FREE 24-Hour HHW Training](#)
- [HHW Facilities Listing](#)
- [HHW Permitting Forms](#)
- [HHW Training](#)
- [Kansas Medication Disposal Program](#)

Kansas Medication Disposal Program

- [Drop-off Location Map](#)
- [FAQs and Program Resources](#)
- [Medication Disposal Participant Survey](#)
- [Medication Disposal Reporting form](#)
- [Pharmacy Participation Application](#)

Regulations, Policies, & Technical Guidance

- [Policies](#)
- [Proposed Regulations](#)
- [Statutes and Regulations](#)
- [Technical Guidance Documents](#)

Reports, Publications, & Newsletters

- [2016 State Solid Waste Management Plan](#)
- [BWM Newsletters](#)
- [Kansas County SW Management Responsibilities Guide](#)
- [Quality Assurance Management Plan \(BWM\)](#)

Solid Waste Program

- [E-Waste Permit Application Forms](#)
- [Forms for Activities not Requiring a Permit](#)
- [SW Inflation for Gross Domestic Product](#)
- [KS Waste Disposal Sites Listing](#)
- [Landfill Permit Forms](#)
- [Post-Closure Care Forms, Policies, & Guidance](#)
- [Processing Facility Permit Forms](#)
- [SW Public Notices & Participation Meetings](#)

Waste Reduction, Public Education, & Grants

- [Grant Program & Awardees](#)
- [Grant Guidelines, Applications, & Forms](#)
- [Currently Featured Video Showcase](#)
- [Fact Sheet - Rubber Mulch](#)

Waste Tire Program

- [Orphaned Waste Tire Clean-Up Reimbursement Form](#)
- [Orphaned Waste Tire Program Information](#)
- [Permitted Waste Tire Facilities & Transporters](#)
- [Waste Tire Permitting Forms](#)
- [Waste Tire Grants](#)

[Safe Disposal of Medical Sharps](#)
[Solid Waste Tonnage Reporting](#)
[Stormwater Rules at SW Facilities](#)

Websites

[Get Caught Recycling](#)
[Kansas E-Waste](#)
[Kansas Recycles](#)
[Kansas Organization of Recyclers](#)
[Video Showcase](#)



[Video/Slideshows](#)

Where to start?

Hazardous Waste Generator Handbook

- Available on our website
- Contains
 - Guide to complying with the regulations
 - Technical Guidance Documents
 - Example forms
 - Training Guide/Manual

Hazardous Waste Generator Handbook

May 1, 2011
Revised April 16, 2014

A Guide to Complying with
Kansas Hazardous Waste
Generator Regulations

Kansas Department of Health and Environment

Division of Environment
Bureau of Waste Management
1000 SW Jackson, Suite 320
Topeka, KS 66612-1366
(785) 296-1600
www.kdheks.gov/waste/

Where to start?

Waste Determinations

- Identify waste streams
- Is it a solid waste?
- Exemptions
- Is it hazardous?
- How much are you generating?
- Generator Classification?

On-Site Management

- Notification
- Container Management
- Training
- Emergency Preparedness
- Record Keeping

Disposal

- Disposal Options
- Transportation
- Manifests
- Land Disposal Restrictions (LDRs)

Waste Determinations

Required at the point of generation, prior to any dilution, mixing, or other alteration of the waste occurs, and any point thereafter where exposure or other factors may have changed the properties of the waste.

This includes any process changes that occur after a determination has been made.

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?

Waste Determinations

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)

40 CFR §261.2

Waste Determinations

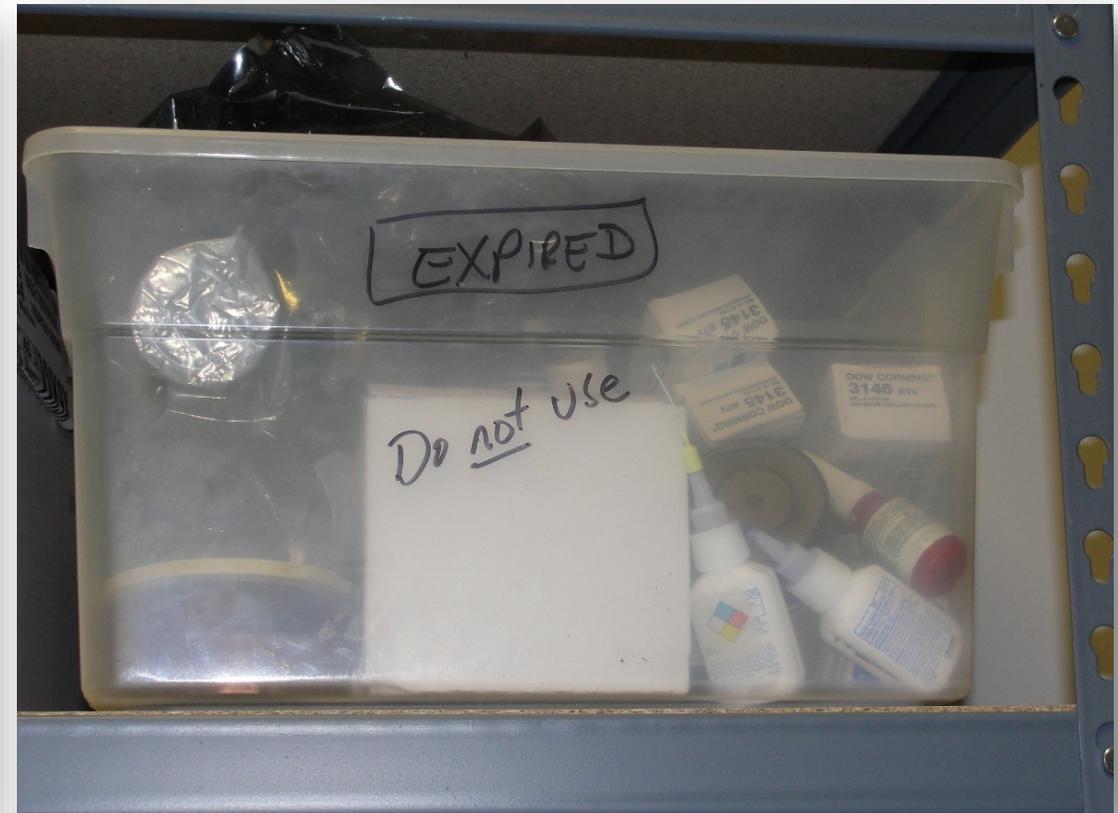
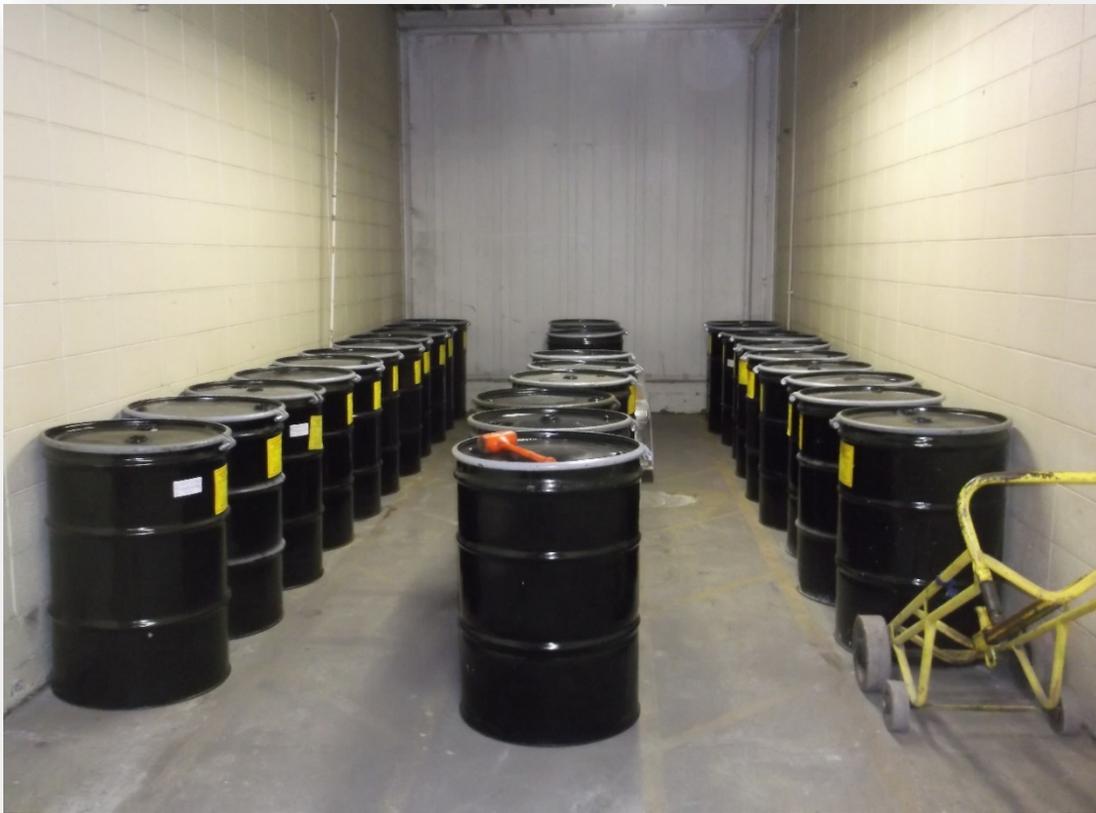


Burned (Furnace, Energy Recovery, etc.)



40 CFR §261.2

Accumulated or Stored



Recycled



Generated

- Out of Process
- Unusable/Off-Spec



Accumulated and Stored



Recycled

- Regenerated into usable product

TABLE 1

	Use constituting disposal (§261.2(c)(1))	Energy recovery/fuel (§261.2(c)(2))	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)	Speculative accumulation (§261.2(c)(4))
	1	2	3	4
Spent Materials	(*)	(*)	(*)	(*)
Sludges (listed in 40 CFR Part 261.31 or 261.32)	(*)	(*)	(*)	(*)
Sludges exhibiting a characteristic of hazardous waste	(*)	(*)	-	(*)
By-products (listed in 40 CFR 261.31 or 261.32)	(*)	(*)	(*)	(*)
By-products exhibiting a characteristic of hazardous waste	(*)	(*)	-	(*)
Commercial chemical products listed in 40 CFR 261.33	(*)	(*)	-	-
Scrap metal that is not excluded under 40 CFR 261.4(a)(13)	(*)	(*)	(*)	(*)

NOTE: The terms "spent materials," "sludges," "by-products," and "scrap metal" and "processed scrap metal" are defined in §261.1.

RCRA Regulated Recycled Materials

TABLE 1

Waste Materials

- Spent Material
- Sludge
- By-Products
- Commercial Chemical Products
- Scrap Metal

Processes

- Use Constituting Disposal
- Energy Recovery/Fuel
- Reclamation
- Speculative Accumulation

	Use constituting disposal (§261.2(c)(1))	Energy recovery/fuel (§261.2(c)(2))	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)	Speculative accumulation (§261.2(c)(4))
	1	2	3	4
Spent Materials	(*)	(*)	(*)	(*)
Sludges (listed in 40 CFR Part 261.31 or 261.32)	(*)	(*)	(*)	(*)
Sludges exhibiting a characteristic of hazardous waste	(*)	(*)	-	(*)
By-products (listed in 40 CFR 261.31 or 261.32)	(*)	(*)	(*)	(*)
By-products exhibiting a characteristic of hazardous waste	(*)	(*)	-	(*)
Commercial chemical products listed in 40 CFR 261.33	(*)	(*)	-	-
Scrap metal that is not excluded under 40 CFR 261.4(a)(13)	(*)	(*)	(*)	(*)

NOTE: The terms "spent materials," "sludges," "by-products," and "scrap metal" and "processed scrap metal" are defined in §261.1.

RCRA Regulated Recycled Materials

TABLE 1

How to use:

- Find the intersection for the waste and the process
- Asterisk – May be a solid waste
- Dash – May be excluded from the definition of a solid waste

	Use constituting disposal (§261.2(c)(1))	Energy recovery/fuel (§261.2(c)(2))	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)	Speculative accumulation (§261.2(c)(4))
	1	2	3	4
Spent Materials	(*)	(*)	(*)	(*)
Sludges (listed in 40 CFR Part 261.31 or 261.32)	(*)	(*)	(*)	(*)
Sludges exhibiting a characteristic of hazardous waste	(*)	(*)	-	(*)
By-products (listed in 40 CFR 261.31 or 261.32)	(*)	(*)	(*)	(*)
By-products exhibiting a characteristic of hazardous waste	(*)	(*)	-	(*)
Commercial chemical products listed in 40 CFR 261.33	(*)	(*)	-	-
Scrap metal that is not excluded under 40 CFR 261.4(a)(13)	(*)	(*)	(*)	(*)

NOTE: The terms "spent materials," "sludges," "by-products," and "scrap metal" and "processed scrap metal" are defined in §261.1.

Inherently Waste-Like



40 CFR §261.2

What About These?



Other Examples

- Floor Sweepings
- Sandblast Media
- PPE/Uniforms/Aprons/Rags
- Paint filters
- Masking Media (e.g., tape and paper)

Waste Determinations

Step 3: Exemptions

§261.4(a) – Solid Waste

§261.4(b) – Hazardous Waste

- Industrial Wastewater (Clean Water Act)
- Agricultural Wastes
- Excluded Scrap Metal (process, unprocessed home, and unprocessed prompt) being recycled
- Mining overburden when returned to the mine site
- 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)

Characteristic Waste

Wastes that are hazardous because they exhibit a hazardous characteristic.



D001



D002



D003



D004-D043

Characteristic Waste



D001 – Ignitibility

- Flashpoint < 140° F (60° C)
- §261.21



D002 – Corrosivity

- pH ≤ 2 or ≥ 12.5
- §261.22

Characteristic Waste



D003 – Reactivity

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

Characteristic Waste



D004-D043 – Toxicity

- §261.24

Table 1 - §261.24			
EPA HW No.	Contaminant	CAS No.	Regulatory Level (mg/L)
D018	Benzene	71-43-2	0.5
D008	Lead	7439-92-1	5.0

Characteristic Waste

Toxicity Characteristic Leaching Procedure (TCLP)

- Soil sample extraction method for chemical analysis employed as an analytical method to simulate leaching through 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?**
- **EPA clarified what constitutes process knowledge in the 2017 CFRs.**

Laboratory Analysis from a KDHE-Certified Laboratory

- **TCLP analysis by Method 1311 (SW-846)**
- **<http://www.kdheks.gov/envlab/disclaimer.html>**

Document the Determination

- Document how each waste determination was made.
- Include copies of all supporting documentation (analytical reports, design plans, SDSs, etc.)
- Waste profiles by themselves are not generally sufficient determinations or documentation.
- Do not rely on your contractor/waste disposal company.
- Retain all documentation until three years after waste was last shipped off site.

Waste Determination

“Kansas Waste Determination” App

Developed through a partnership between KDHE-BWM and SBEAP

Available on both Android and Apple app stores. Working on port to Microsoft Store.

Will generate a sufficient waste determination document; however,

- Only as accurate as the information you provide.
- Will need to attach all supporting documentation.



Things That Are Not Hazardous Wastes

Used Oil – Used oil that is recycled for energy or material recovery is not subject to the hazardous waste regulations.

Medical Waste – waste generated in connection with human or animal care, which is potentially capable of causing disease or injury. Not necessarily a hazardous waste, but probably a “special waste.”

“Special Waste” – any solid waste that, because of physical, chemical, or biological characteristics, requires special management standards due to concerns for safety regarding handling, management, or disposal.

Waste Determination

Step 5: What is your monthly generation?

Each calendar month:

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

The total tells you which class you fall into.

Waste Determination

Example:

Paint Booth

15 pounds waste paint (D007)

10 pounds spent solvent (D001/D007/F003)

Maintenance

40 pounds solvent-contaminated wipes (F002)

150 pounds spent blast media (D007)

215 pounds of waste generated this month.

Waste Determination

If your monthly generation rate varies routinely, you must use the highest value.

In addition, some waste streams may only be generated every other month or only a couple times per year. Don't forget to count these!

Generator Classifications

Permit exempt classification system based on your monthly generation rate.

Designed to account for the amount of waste generated and apply appropriate regulatory standards to protect human health and the environment.

Most classes are permit exempt as long as regulations are followed.

Federal	Kansas
Large Quantity Generator	Large Quantity Generator
Small Quantity Generator	Small Quantity Generator
Very Small Quantity Generator (Formerly Conditionally Exempt Small Quantity Generator)	Kansas Small Quantity Generator
	Conditionally Exempt Small Quantity Generator

40 CFR §261.5 and K.A.R. 28-31-262/262a

Conditionally Exempt Small Quantity Generator

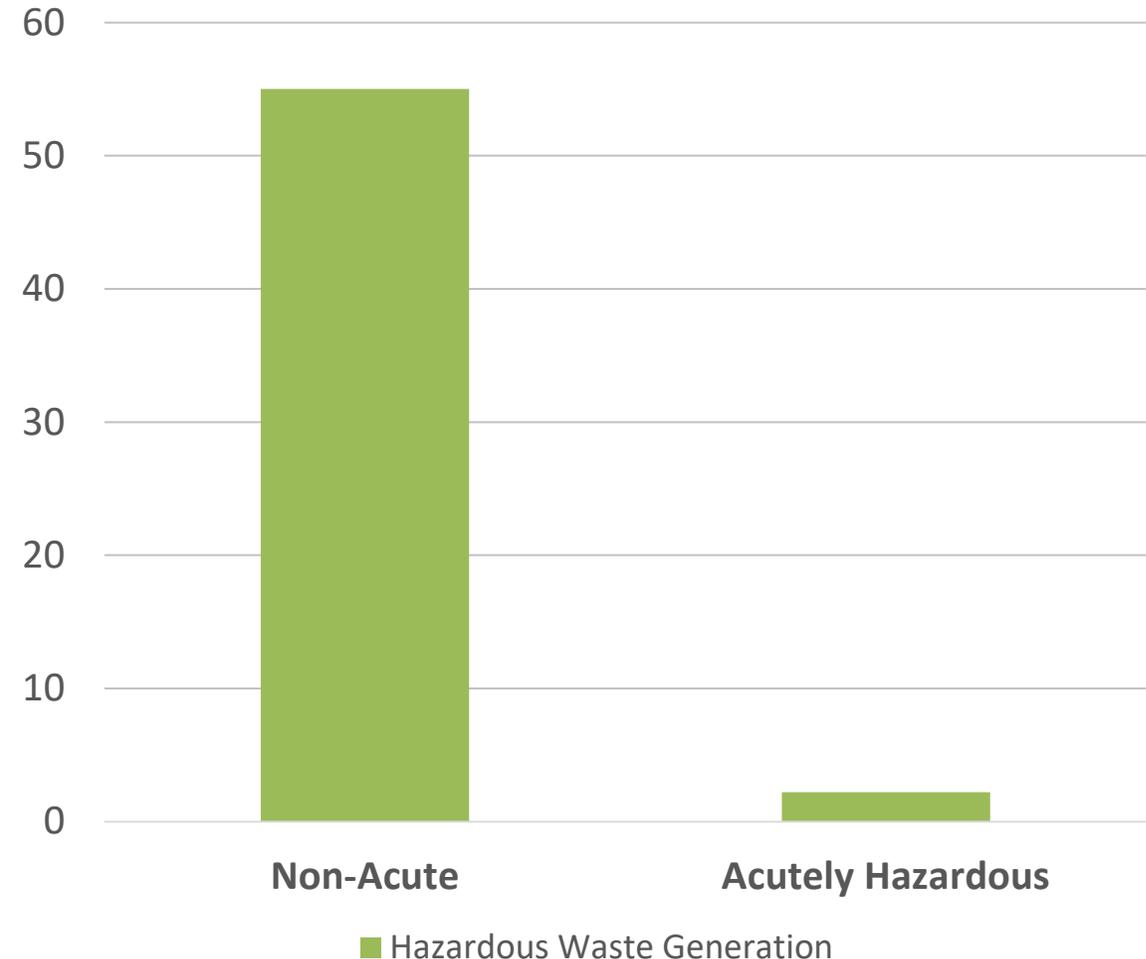
Hazardous Waste Monthly Generation:

Non-Acute Hazardous Wastes:

- Less than 55 pounds

Acutely Hazardous:

- Less than 2.2 pounds of P-Listed Hazardous Waste and F-Listed Dioxins:
 - F020
 - F021
 - F022
 - F023
 - F026
 - F027
- 220 pounds of spill cleanup residues and debris



55 Pounds of Water

This is only an approximation based on **water** weight.

Your weights/volumes will vary!



55 gallons

Kansas Small Quantity Generator

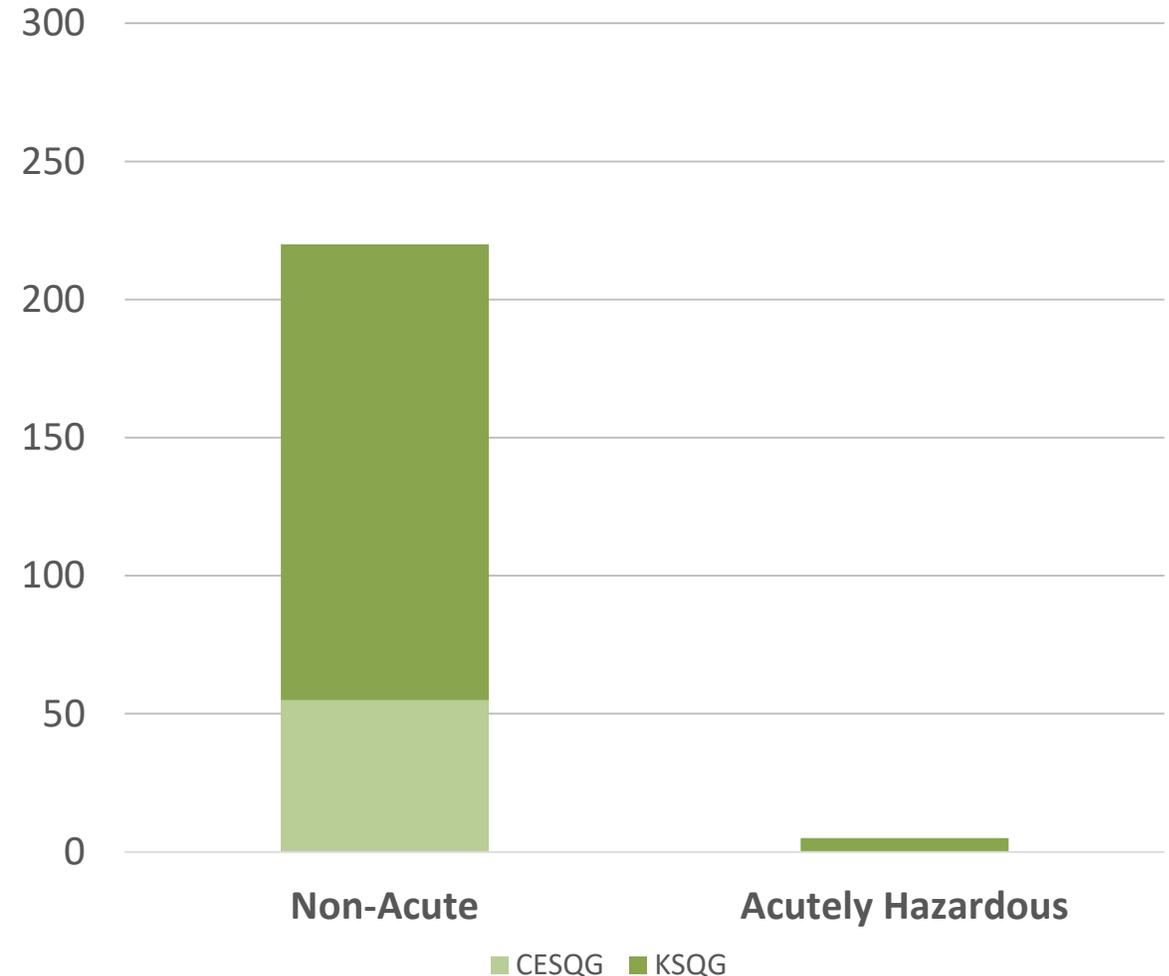
Hazardous Waste Monthly Generation:

Non-Acute Hazardous Wastes:

- 55 pounds or more
- Less than 220 pounds

Acutely Hazardous:

- Less than 2.2 pounds of P-Listed Hazardous Waste and F-Listed Dioxins:
 - F020
 - F021
 - F022
 - F023
 - F026
 - F027
- 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!



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

Small Quantity Generator

Hazardous Waste Monthly Generation:

Non-Acute Hazardous Wastes:

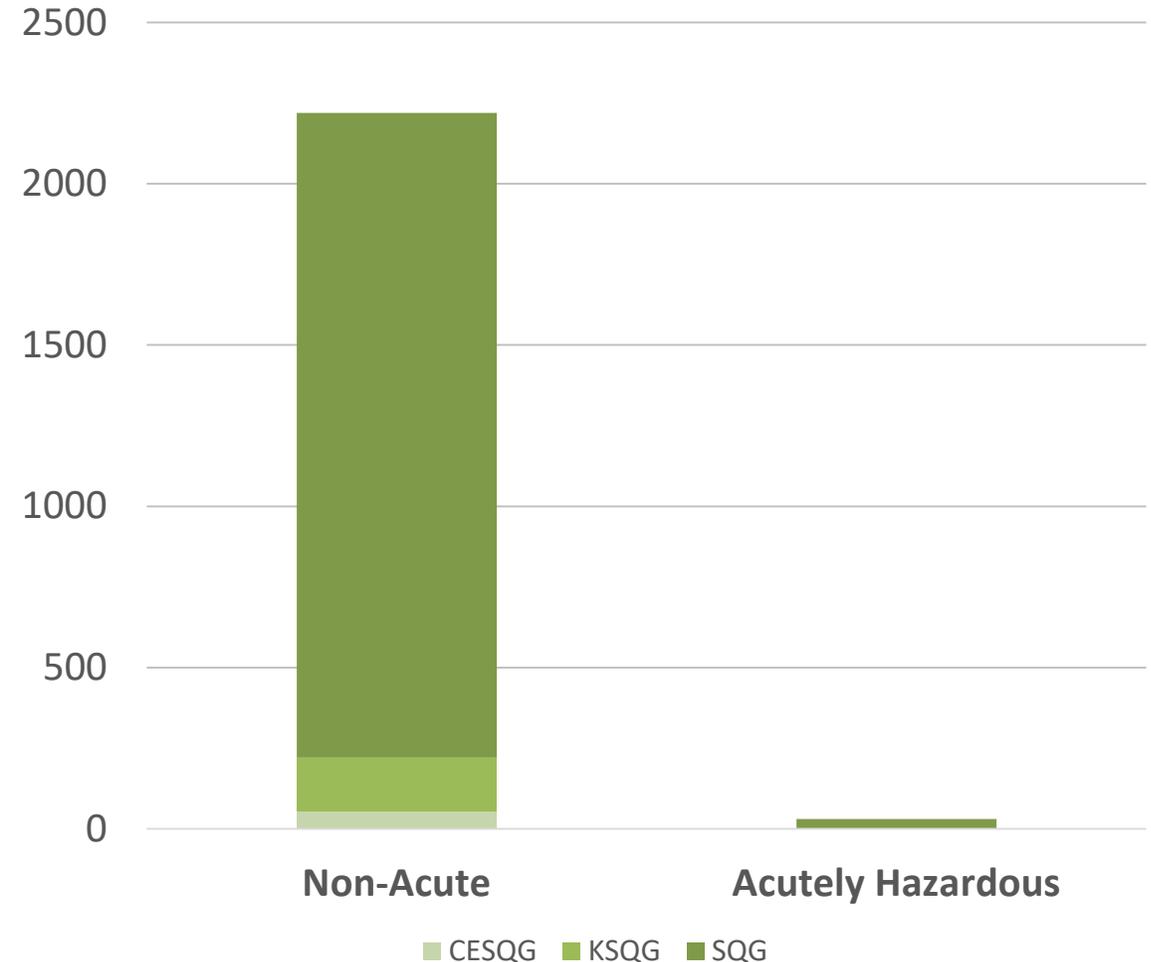
- 220 pounds or more
- Less than 2,200 pounds

Acutely Hazardous:

- Less than 2.2 pounds of P-Listed Hazardous Waste and F-Listed Dioxins:

- | | |
|--------|--------|
| • F020 | • F021 |
| • F022 | • F023 |
| • F026 | • F027 |

- 220 pounds of spill cleanup residues and debris



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

Large Quantity Generator

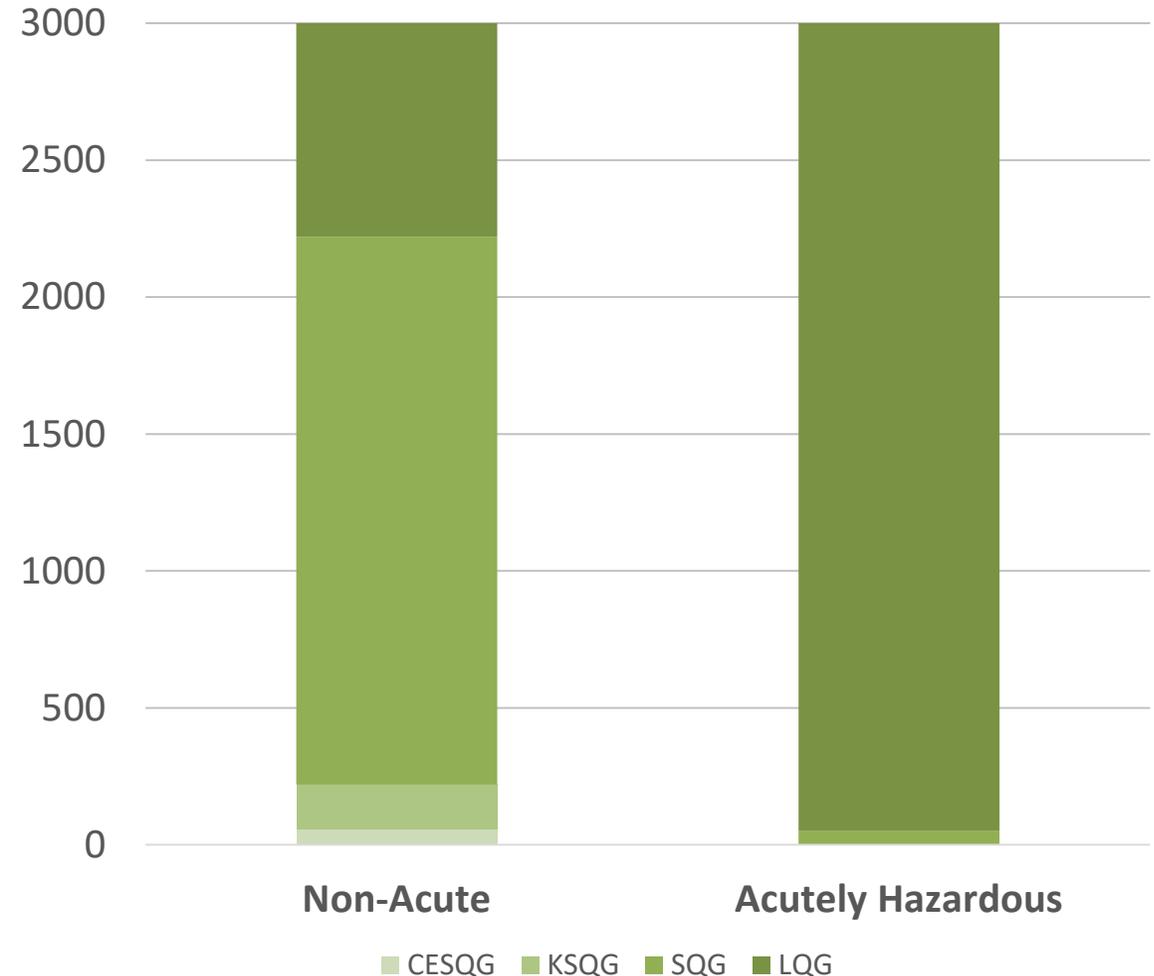
Hazardous Waste Monthly Generation:

Non-Acute Hazardous Wastes:

- 2,200 pounds or more

Acutely Hazardous:

- 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



On-Site Management



General Requirements

KSQGs, SQGs, and LQGs are required to:

- Notify KDHE of generator activity and obtain an EPA ID number (Form 8700-12)
- Update the notification within 60 days of any change in information
- Pay an annual monitoring fee to KDHE

Revised 2015-07-31

		Kansas Department of Health and Environment Notification of Regulated Waste Activity (RCRA Subtitle C Site Identification Form) Form 8700-12 and 8700-23		<u>Send Completed Form To:</u> KDHE-BWM 1000 SW Jackson, Suite 320 Topeka, KS 66612	
1. Reason for Submittal Mark All Boxes That Apply	Reason for Submittal:				
	<input type="checkbox"/> To provide an Initial Notification (to obtain an EPA ID Number for hazardous waste or used oil activities) <input type="checkbox"/> To provide a Subsequent Notification (to update site identification information) <input type="checkbox"/> As a component of a First RCRA Hazardous Waste Part A Permit Application <input type="checkbox"/> As a component of a Revised RCRA Hazardous Waste Part A Permit Application (Amendment # _____) <input type="checkbox"/> As a component of the Hazardous Waste Report (if marked, see sub-bullet below) <input type="checkbox"/> Site was a TSD facility and/or generator of >1,000 kg of hazardous waste, >1 kg of acute hazardous waste, or >100 kg of acute hazardous waste spill cleanup in one or more months of the report year.				
2. Site EPA ID Number	<input type="text"/>				
3. Site Name	Name: <input type="text"/>				
4. Site Location	Street Address: <input type="text"/>				
	City, Town, or Village: <input type="text"/>			County: <input type="text"/>	
	State: Kansas		Country: USA		Zip Code: <input type="text"/>
5. Site Land Type	<input type="checkbox"/> Private <input type="checkbox"/> County <input type="checkbox"/> District <input type="checkbox"/> Federal <input type="checkbox"/> Tribal <input type="checkbox"/> Municipal <input type="checkbox"/> State <input type="checkbox"/> Other				
6. NAICS Code(s) (at least 5-digit codes)	A. <input type="text"/>	B. <input type="text"/>	C. <input type="text"/>	D. <input type="text"/>	
	7. Site Mailing Address				
	Street or PO Box: <input type="text"/>				
	City, Town, or Village: <input type="text"/>			Country: <input type="text"/>	
8. Site Contact Person	State: <input type="text"/>		Zip Code: <input type="text"/>		
	First Name: <input type="text"/>	MI: <input type="text"/>	Last: <input type="text"/>		
	Title: <input type="text"/>				
	Street or PO Box: <input type="text"/>				
	City, Town or Village: <input type="text"/>			Country: <input type="text"/>	
	State: <input type="text"/>		Zip Code: <input type="text"/>		
	Email: <input type="text"/>				
9. Legal Owner and Operator of the Site	Phone: <input type="text"/>		Ext: <input type="text"/>		Fax: <input type="text"/>
	A. Name of Site's Legal Owner: <input type="text"/>			Date Became Owner: (mm/dd/yyyy) <input type="text"/>	
	Owner Type: <input type="checkbox"/> Private <input type="checkbox"/> County <input type="checkbox"/> District <input type="checkbox"/> Federal <input type="checkbox"/> Tribal <input type="checkbox"/> Municipal <input type="checkbox"/> State <input type="checkbox"/> Other				
	Street or PO Box: <input type="text"/>				
	City, Town or Village: <input type="text"/>			Phone: <input type="text"/>	
	State: <input type="text"/>		Country: <input type="text"/>		Zip Code: <input type="text"/>
	B. Name of Site's Operator: <input type="text"/>			Date Became Operator: (mm/dd/yyyy) <input type="text"/>	
Operator Type: <input type="checkbox"/> Private <input type="checkbox"/> County <input type="checkbox"/> District <input type="checkbox"/> Federal <input type="checkbox"/> Tribal <input type="checkbox"/> Municipal <input type="checkbox"/> State <input type="checkbox"/> Other					

A to Z Topic Listing

- [Waste Home](#)
- [Compliance, Assistance, & Enforcement](#)
- [Composting](#)
- [Hazardous Waste Generator Program](#)
- [Hazardous Waste Permitting](#)
- [Household Hazardous Waste](#)
- [Regulations, Policies, & Technical Guidance](#)
- [Reports, Publications, & Newsletters](#)
- [Solid Waste Permitting](#)
- [Waste Reduction, Public Education, & Grants](#)
- [Waste Tire Program](#)

Bureau of Waste Management Forms

Solid Waste Forms

- [Solid Waste Landfill](#)
- [Solid Waste Processing & Planning](#)
- [Solid Waste Closure/Post-Closure Cost Estimating Worksheets](#)
- [Solid Waste Activities not Requiring a Permit](#)
- [Disaster Response Forms and Information](#)
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- [Orphaned Waste Tire Program](#)

Hazardous Waste Forms

- [Hazardous Waste Permits](#)
- [Hazardous Waste Generator Forms](#)
- [Orphan Hazardous Waste Disposal](#)

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

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:

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

NATIONAL RESPONSE CENTER 1-800-424-8802
KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT (785) 296-1679



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

Preparedness and Prevention KSQGs and SQGs

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

Ensure personnel have immediate access to an internal alarm or emergency communication device when handling hazardous waste.

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

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

Good Container:



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

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.**

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

Poor Condition:



Containers are dented, preventing them from closing properly.

Management of Waste

Poor Condition:



Lid is cracked and will no longer completely contain contents if knocked over.

Management of Waste

**Not Compatible with
Container:**



**Corrosive wastes
should not be
placed in metal
containers.**

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.**

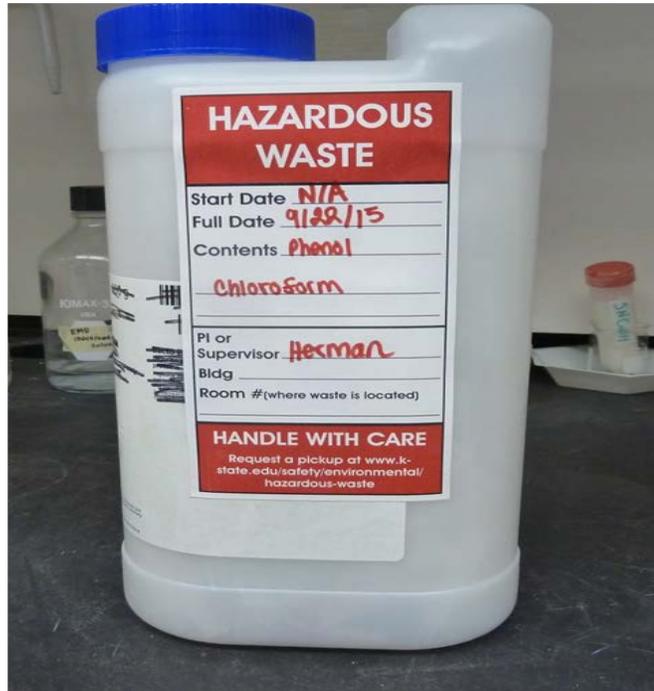
Management of Waste

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.**

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.**

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.**



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

Management of Waste

Inspections

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

What to look for

- **Deterioration and Leaks**
- **Container Requirements (closed, labeled, dated)**

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”.

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
- Labels on lamps?

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).

Management of Waste

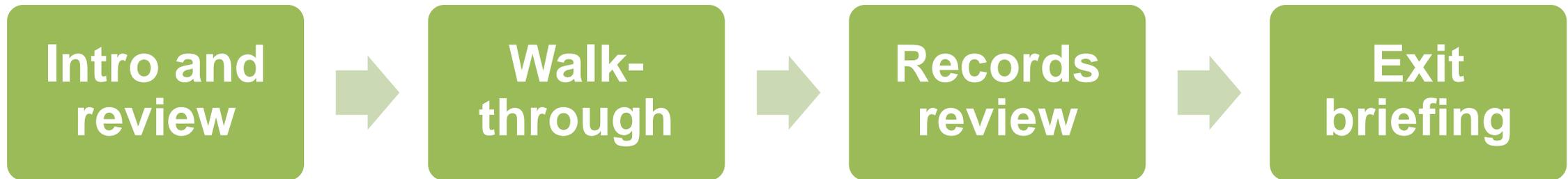
Inspections are unannounced

- **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**

Complaints can result in a full RCRA inspection

Compliance Assistance Visits (CAV) are available

Compliance Evaluation Inspections



Compliance Evaluation Inspections

Questions the inspector will ask about your waste streams:

- How much of each waste stream is generated in a month?
- How is each managed/contained/stored?
- How is each disposed?
- Is it hazardous waste?
- How did you determine whether or not it is hazardous?
- What documentation do you have for your determination?

Inspection Checklists

A Waste Compliance Inspection Report:

- **Basic information about the facility**
- **Name and Address**
- **Participants**
- **Number of Employees**
- **Site Contact**
- **Any Recent Changes**
- **Other Pertinent Information Not Mentioned Elsewhere**

Inspection Checklists

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

Waste Determinations

- **Ensure you evaluate all waste streams, including any new, changing, or one-time wastes.**
- **Ensure you maintain documentation for your determinations in an easy to find location.**

Common Violations

Container Management

- **Pay attention during your inspections; don't inspect on autopilot.**
- **Time off does not mean inspections do not need to be conducted. The waste is still there.**
- **Ensure employees understand container requirements.**

Common Violations

Preparedness and Prevention

- **Ensure you have your emergency information posted, preferably in a common area such as the plant floor.**
- **Ensure any updates to the facility contingency plan is addressed in a timely manner. If the emergency contact leaves, try to make the update in the contingency plan part of the transition process.**

Common Violations

Training

- **Maintain your documentation. This is your proof the training was conducted.**
- **Ensure all employees who handle hazardous waste containers receive the training.**

Additional Resources

KDHE wants to help all generators achieve compliance. Please call us with any questions at [785-296-1600](tel:785-296-1600).

Small Business Environmental Assistance Program (SBEAP) operated by the Pollution Prevention Institute (PPI) at KSU [1-800-578-8898](tel: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/services-programs/hazwaste>
- Contains information and helpful links:
 - Waste Determination App
 - Hazardous Waste Compliance Calendars
 - YouTube Compliance Video – Container Management (**New**)
 - Training Module (**New**)

Facility name

EPA I.D. #

Generator category

Hazardous Waste

- The Resource Conservation and Recovery Act (RCRA) directs the U.S. Environmental Protection Agency (EPA) to develop rules and regulations for the management of solid and hazardous waste.

2018 Hazardous Waste Compliance Calendar

Developed and published by the Kansas Small Business Environmental Assistance Program

Inspection Logs and Tips

Tip:
 If a waste needs to be tested to conduct or confirm a determination, generators must use a KDHE-certified lab. A list of certified labs may be found at kdheks.gov/envlab/disclaimer.html.

Note:
 The "Kansas Waste Determination" app offers an electronic option for recording determinations. It is free, and available for both Apple and Android products.

Weekly/Monthly Inspection Log						
Date (enter date a weekly or monthly inspection was conducted)						
Time						
Each container clearly marked with the words "Hazardous Waste"	Y	N	Y	N	Y	N
Marked with accumulation start date	Y	N	Y	N	Y	N
Containers properly closed	Y	N	Y	N	Y	N
Containers in good condition	Y	N	Y	N	Y	N
Incompatible wastes segregated	Y	N	Y	N	Y	N
If anything needed to be fixed, explain here and list date it was fixed.						

Accumulating CESQG and KSOQ are required to conduct monthly inspections of hazardous waste storage areas. SOG and LOQ are required to conduct weekly inspections of hazardous waste storage areas.

Please print full name of person who performed the weekly or monthly inspection.

Week 1 inspected by _____

Week 2 inspected by _____

Week 3 inspected by _____

Week 4 inspected by _____

FEBRUARY 2018

Documenting Hazardous Waste Determinations

Most generators can use their "knowledge of process" and SDS, rather than testing when making a hazardous waste determination. These must be documented and the documentation should be maintained on-site for a minimum of three years from date you last shipped that particular waste off-site. A sample "waste determination" form can be found at the back of this calendar. Make copies of it, or use the new "Kansas Waste Determination" app available in the Play stores for Apple and Android, to document your waste determinations. The technical guidance document at kdheks.gov/waste/techguide/hw-2011-G1.pdf provides detailed instructions.

Sun	Mon	Tues	Wed	Thur	Fri	Sat
28	29	30	31	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	1	2	3

Mark on the calendar—

- each day a hazardous waste storage inspection was conducted
- each day hazardous waste was shipped

Things to consider —

- How much hazardous waste was generated this month?
- How much hazardous waste is currently in storage?
- What is the oldest accumulation start date in storage?

Tip:
 Hazardous waste determinations should be made for each waste generated at your facility.

Description of training topics covered:

Date: _____

Time: _____

List of employees attending:

For additional assistance, call KDHE at 785-296-1600 or SBEAP at 800-578-8898.

Waste Determination

“Kansas Waste Determination” App

Developed through a partnership between KDHE-BWM and SBEAP

Available on both Android and Apple app stores. Working on port to the Microsoft Store.

Will generate a sufficient waste determination document; however,

- Only as accurate as the information you provide.
- Will need to attach all supporting documentation.



Contact Information

- BWM web site:

<http://www.kdheks.gov/waste>

- Ken Powell

785-296-1121

ken.powell@ks.gov

- Brian Burbeck

785-296-1613

brian.burbeck@ks.gov

Thank you/Questions



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