BASIC HAZARDOUS WASTE GENERATOR WORKSHOP

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

WORKSHOP OVERVIEW

- Will not be a substitute for training your employees (job specific training is still required).
- Will introduce you to the basics of RCRA.
  - Waste Classification (waste determination)
  - Managing Containers
  - Generator Requirements
  - Compliance and Enforcement Overview
- Opportunity for questions.

REGULATORY BACKGROUND

- Resource Conservation & Recovery Act (RCRA) enacted in 1976
- EPA implemented hazardous waste regulations in 1980
- Kansas Hazardous Waste Program began in 1982
- Major revisions to Kansas Hazardous Waste Program effective April 29, 2011

Why???

Why???

RCRA OVERVIEW

- The Resource Conservation and Recovery Act, or RCRA, is a cradle to grave law.
  - All waste must be evaluated and properly managed from the point of generation until final disposal.
  - Everyone handling, managing, and otherwise being in possession of that waste at the point of generation until final disposal can be held responsible for that waste.
  - Ignorance of the law is not an excuse for not following the law.

GENERATOR'S RESPONSIBILITY

- Generators must:
  - Identify all solid and hazardous waste streams
  - Determine quantity of each hazardous waste generated over time (no averaging)
  - Ensure proper handling and disposal of all wastes

WASTE STREAMS

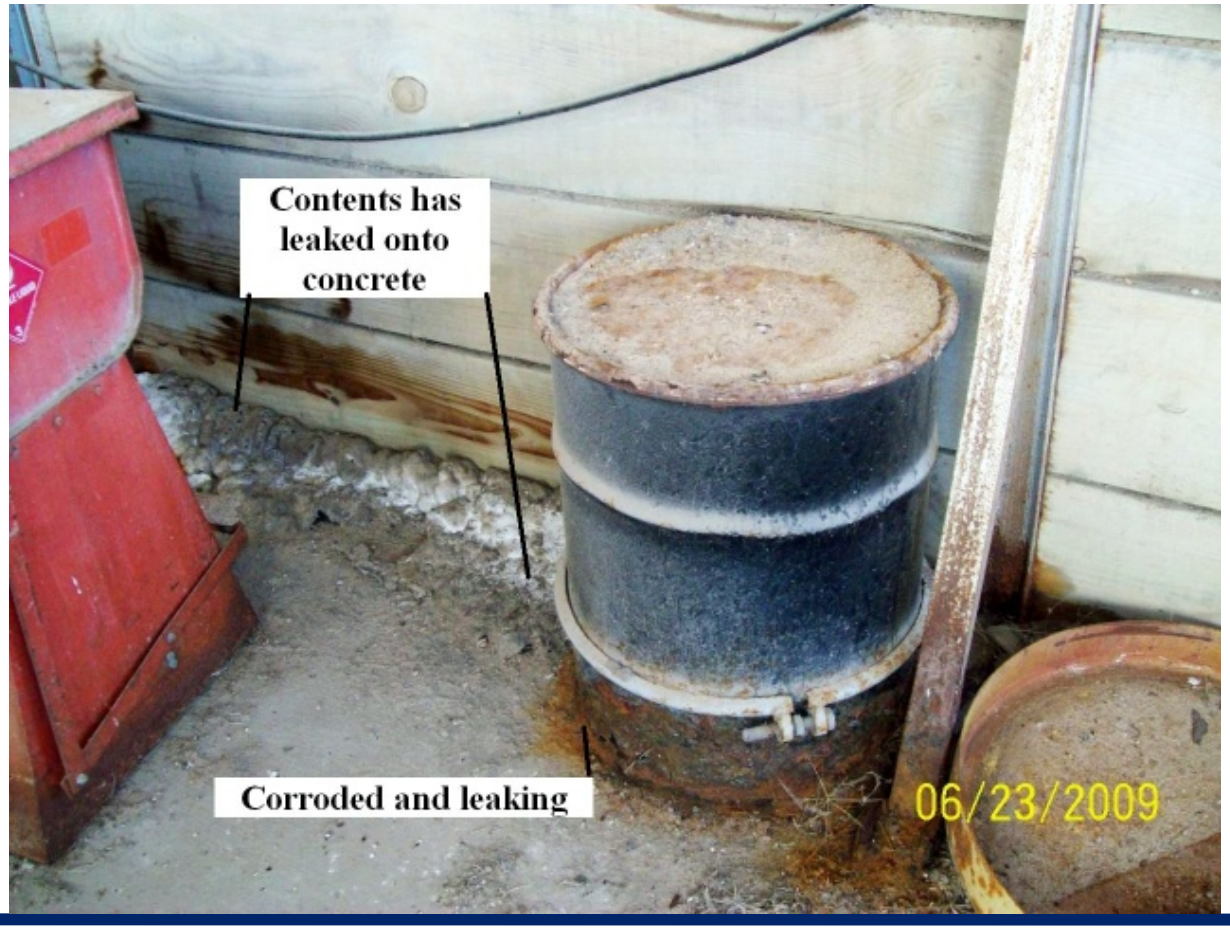
- Waste Streams:
  - How much of each waste stream is generated in a month?
  - How is each managed/contained/stored?
  - How is each disposed?
  - Is it hazardous waste?
  - How did you determine whether or not it was hazardous?
  - What documentation do you have for your determination?

HAZARDOUS WASTE DETERMINATION

- First, is it a discarded material? A material is considered discarded if it is:
  - Abandoned (disposed, burned, accumulated, treated, or stored)
  - Recycled (spent solvent in distillation system)
  - Considered inherently waste-like

Abandoned?

Abandoned? Is this how you manage your raw materials?

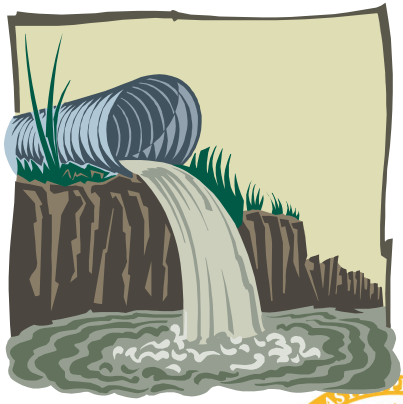


HAZARDOUS WASTE DETERMINATION

- Second, is it a SOLID WASTE ?
  - Solid waste can be:
    - Liquid
    - Semi-Solid
    - Gas
  - Materials are solid waste even if they are recycled or are accumulated, stored, or treated prior to recycling.

HAZARDOUS WASTE DETERMINATION

- Third, is the waste specifically excluded **(40 CFR 261.4)**?
  - Discharged to the POTW or a permitted NPDES outfall
  - Mining overburden
  - Household waste
  - Agricultural waste



HAZARDOUS WASTE DETERMINATION

- Determinations can be made in two ways:
  - Knowledge of process (or Generator Knowledge)
  - Testing by KDHE certified laboratory

    http://www.kdhe.state.ks.us/envlab/
- All waste determinations must be documented.

HAZARDOUS WASTE DETERMINATION

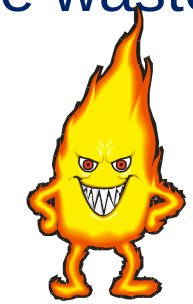
- Is it "listed" hazardous waste?
- Is it "characteristic" hazardous waste?

LISTED HAZARDOUS WASTE

- Does the waste appear on the F, K, P, or U lists?
  - F-Listed (non-specific sources)
  - K-Listed (specific sources)
  - P-Listed (acutely hazardous discarded commercial chemicals-regulated at 2.2 lbs)
  - U-Listed (discarded commercial chemicals)

CHARACTERISTIC HAZARDOUS WASTE

- Does the waste meet one of the four characteristics?



Ignitability (D001)

(Flashpoint less than 140 ºF)

Corrosivity (D002)

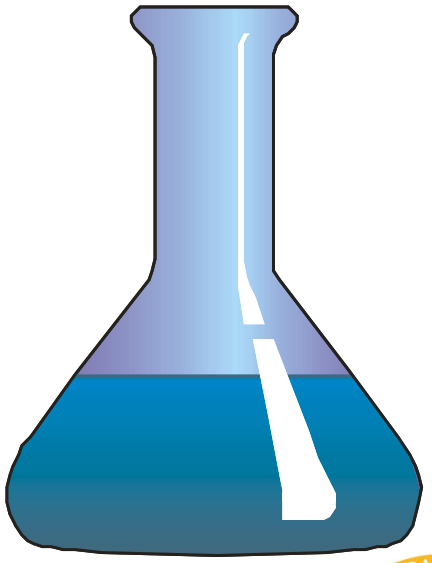
(pH ≤2 or ≥ 12.5)

Reactivity (D003)

Toxicity (D004 –D043)

TOXICITY

- Analyze using Toxicity Characteristic Leaching Procedure (TCLP) for one or more of the following:
  - Heavy Metals
  - Volatile Compounds
  - Pesticides/Herbicides
  - Base Neutral Acids



DOCUMENT THE DETERMINATION

- Document how each waste determination was made.
- Required for hazardous and non-hazardous waste.
- Include copies of all supporting documentation that was used (analytical reports, design plans, MSDSs, etc.).
- Waste profiles by themselves are not generally sufficient waste determinations or documentation.
- Keep documentation for 3 years from the date the waste was last shipped off site.

DOCUMENT THE DETERMINATION

- Don’t rely entirely on your contractor and/or waste disposal company.
  - It is the your (generator’s) responsibility to make the waste determination;
  - You (the generator) sign the manifest confirming that the information is correct;
  - The contractor may not know very much about your processes and may miss listed and characteristic hazardous waste (HW);
  - You receive the violations, not the contractor!

HAZARDOUS MATERIALS VS HAZARDOUS WASTES

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

MANAGEMENT ON-SITE

On-site accumulation can occur in:

- Satellite Accumulation Containers (satellite containers)
- Storage Containers (less than 90-day or less than 180-day accumulation containers)
- Tanks

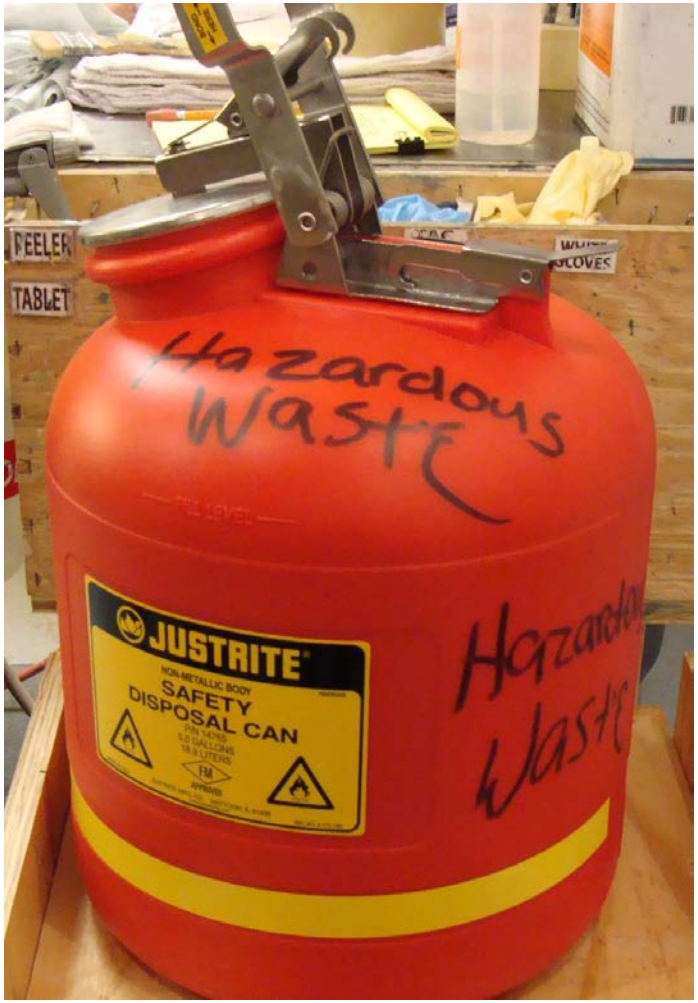
MANAGEMENT ON-SITE

- All containers and tanks must be:
  - labeled with the words “Hazardous Waste”
  - in good condition and compatible with the contents of the container or tank
  - kept closed unless actively adding or removing waste

SATELLITE CONTAINERS

- Satellite containers must meet the following requirements:
  - Be at or near the point of generation
  - Under the control of the operator
  - Only 1 container for each waste stream at each point of generation (more stringent than EPA)
  - 55 gallons or less in size
  - Marked with the words “Hazardous Waste”
  - Closed and in good condition

GOOD SATELLITE CONTAINERS



GOOD SATELLITE CONTAINERS

Good funnels, signage, and use of KDHE poster

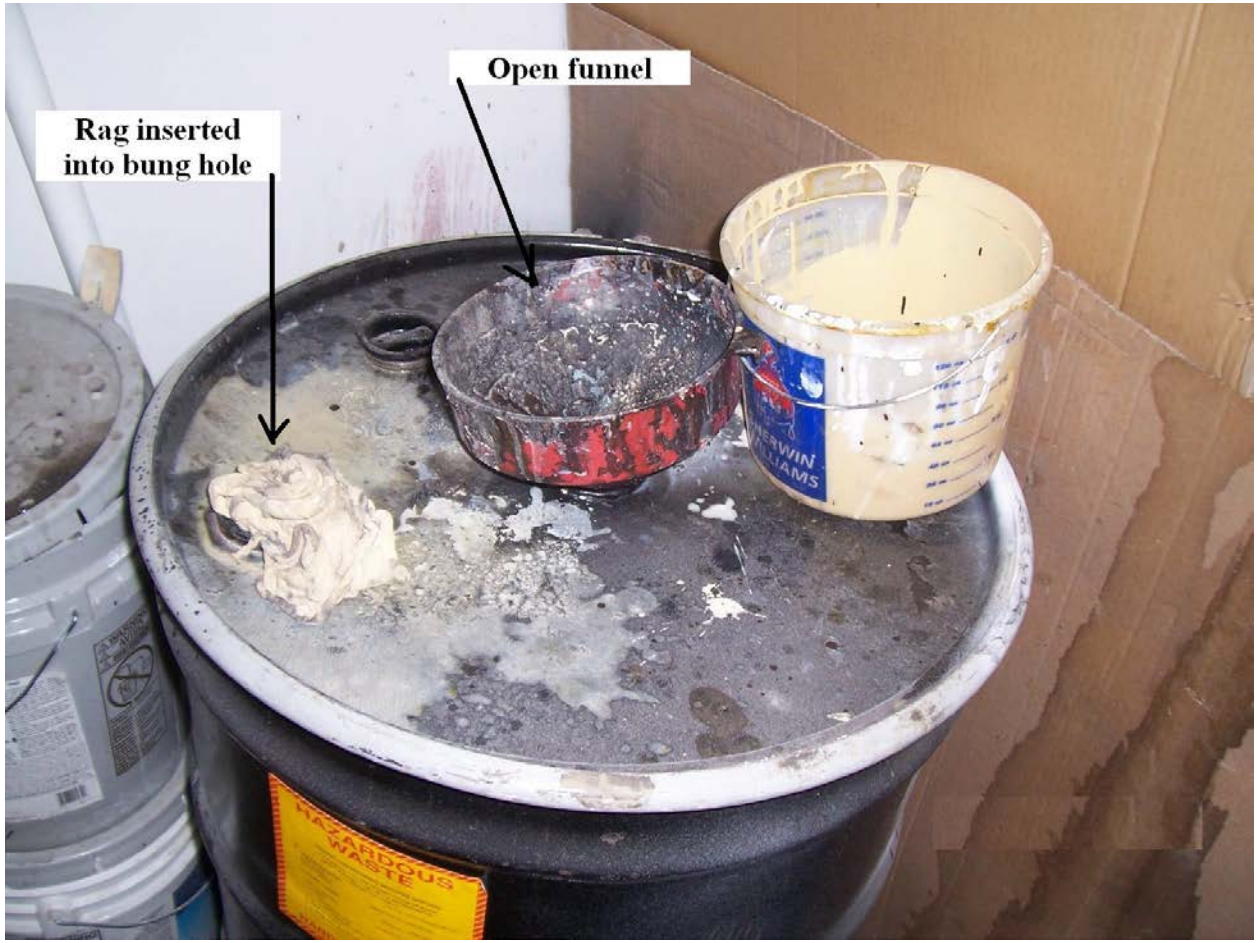
SATELLITE CONTAINERS

- Not marked “hazardous waste” and open

SATELLITE CONTAINERS

- Open containers

SATELLITE CONTAINERS



- Open container

SATELLITE CONTAINERS

- Open containers - some cannot be closed.

SATELLITE CONTAINERS

- Open containers very difficult to close.

SATELLITE CONTAINERS

- Does not meet the definition of satellite (more than 55 gallons)

STORAGE CONTAINERS

- Can have as many storage containers and storage areas as necessary at the facility.
- Can be located indoors or outside (we recommend that they be under cover, and/or on pallets, but it is not required).
- Secondary containment is recommended but is not required.
- LQGs must store ignitable hazardous waste at least 50 feet from the property line.

STORAGE CONTAINERS

- Storage containers must meet the following requirements:
  - Incompatibles must be separated (this includes separating waste from products to which they are incompatible)
  - Aisle space must be adequate to allow unobstructed movement of people and equipment in case of an emergency

STORAGE CONTAINERS

- Requirements for storage containers (cont.)
  - Marked with the words “Hazardous Waste”
  - Marked with the accumulation start date (date that storage began)
  - Closed and in good condition

STORAGE CONTAINERS

- Must be inspected weekly (LQG and SQG) or monthly (KSQG and accumulating CESQG).
  - Should include review of all storage container requirements
  - Must inspect for deterioration and leaks
- Inspections must be documented and records maintained on-site for 3 years. Must document all of the following:
  - Date and time of the inspection
  - Name of the inspector (not initials)
  - Notation of the observations made
  - Date and nature of any repairs or other remedial actions

STORAGE CONTAINERS

- Accumulation time limits:
  - LQGs – 90 days or less
  - SQGs – 180 days or less (or 270 days or less if the waste is transported more than 200 miles)
    - If exceed 13,200 lbs (6,000 kg) of hazardous waste on-site or exceed time limit, then must meet **TSDF** requirements (obtain a permit).
  - KSQGs and CESQGs – No accumulation time limit (unless you accumulate more than 2,200 pounds on-site, then you become a SQG and the 180-day limit starts)
  - Exceeding time limits could require a permit and/or paying fees for the higher generator class or TSDF.

GOOD STORAGE AREAS

- Good aisle space

GOOD STORAGE AREAS

- Good outdoor storage (prefer only 2 drums high)

STORAGE AREAS

- Aisle space is a problem

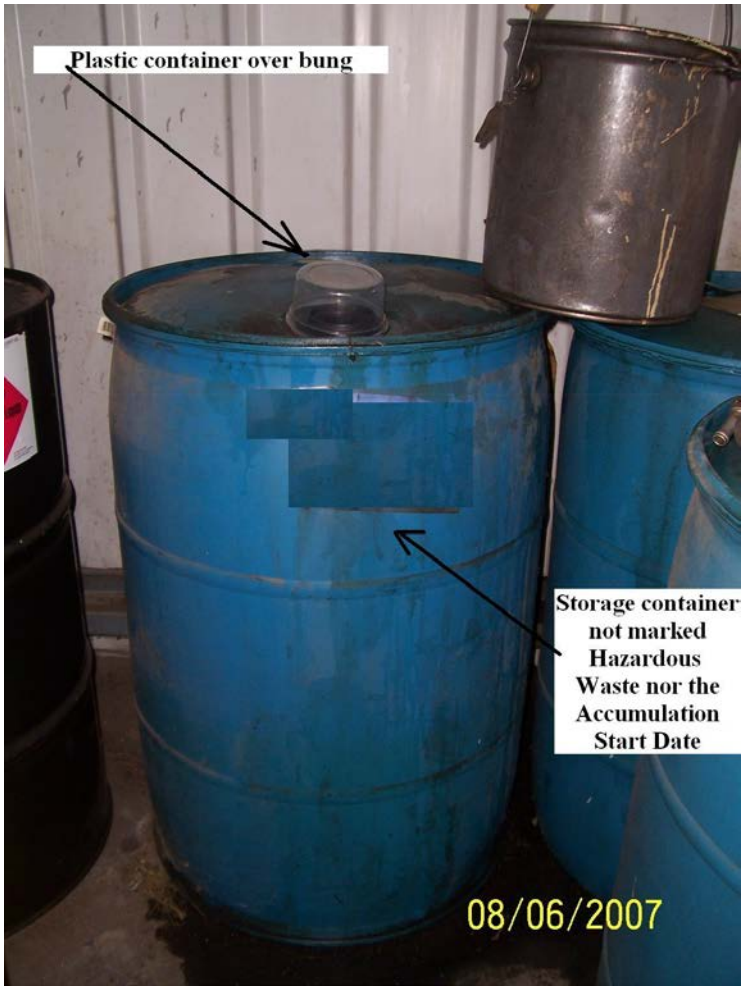
STORAGE AREAS

- Can these be properly inspected?

STORAGE AREAS

- Condition of container is a problem

STORAGE AREAS



- Open container

STORAGE AREAS

- Not clearly marked “Hazardous Waste”

GENERATOR CLASSIFICATIONS

- LQG – Large Quantity Generator
  - Generates 2,200 pounds (lbs) or more of HW per month; and/or
  - Generates 2.2 lbs or more of acutely HW per month; and/or
  - Accumulates more than 2.2 lbs of acutely HW on-site at any time.
- SQG – Small Quantity Generator
  - Generates more than 220 lbs but less than 2,200 lbs of HW per month; and
  - Generates less than 2.2 lbs of acutely HW per month; and
  - Accumulates less than 2.2 lbs of acutely HW at any time.

GENERATOR CLASSIFICATIONS

- KSQG – Kansas Small Quantity Generator
  - Generates 55 lbs or more but 220 lbs or less of HW per month; and
  - Generates less than 2.2 lbs of acutely HW per month; and
  - Accumulates less than 2.2 lbs of acutely HW at any time.
- CESQG – Conditionally Exempt Small Quantity Generator
  - Generates less than 55 lbs of HW per month; and
  - Generates less than 2.2 lbs of acutely HW per month; and
  - Accumulates less than 2.2 lbs of acutely HW at any time.

GENERAL REQUIREMENTS

- KSQGs, SQGs, and LQGs must meet the following requirements:
  - Obtain an EPA ID number;
  - update Notification form within 60 days of information changing
  - pay an annual monitoring fee to KDHE

PREPAREDENESS AND PREVENTION

- SQGs and KSQGs must meet all of the following requirements if they accumulate hazardous waste on-site:
  - Have an emergency coordinator available 24/7
    - They should be able to reach the facility within 30 minutes.
    - They should be familiar with emergency procedures and locations of waste.
  - Post the following 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.

PREPAREDENESS AND PREVENTION

- SQGs and KSQGs (Continued)
  - Provide training to employees to ensure that all personnel are thoroughly familiar with proper waste handling and emergency procedures, relevant to their responsibilities during normal facility operations and emergencies
    - Provide training within 6 months of hire or transfer to a new position;
    - Provide annual training;
    - Document the training and maintain records for 3 years.

PREPAREDENESS AND PREVENTION

- LQGs
  - Prepare and maintain (update) a contingency plan that meets all of the requirements of 40 CFR 265 Subpart D.
  - Ensure that the contingency plan is available in case of an emergency.
  - Train employees and maintain required training records.

PREPAREDENESS AND PREVENTION

- All KSQGs, SQGs, and LQGs must:
  - Equip the facility with:
    - Internal communications or alarm system
    - A device such as a telephone or hand-held two-way radio 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, or foam producing equipment, or automatic sprinklers, or water spray systems

PREPAREDENESS AND PREVENTION

- All KSQGs, SQGs, and LQGs:
  - Must attempt to make arrangements with local emergency organizations including:
    - Familiarize police, fire departments, and hospitals with facility, hazardous waste handled, etc.
    - Where more than one department might respond, designate one as the primary emergency authority.
    - Maintain agreements with state emergency response teams, emergency response contractors, and equipment suppliers as necessary.

PREPAREDENESS AND PREVENTION

- All KSQGs, SQGs, and LQGs, must:
  - Maintain and operate the facility to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste.
  - Test and maintain all emergency and communications equipment to assure proper operation in emergency.
  - Ensure personnel have immediate access to internal alarm or emergency communication device when handling hazardous waste.

COMPLIANCE EVALUATION INSPECTION

- Inspections are unannounced (unscheduled)
- 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 INSPECTION

- Inspections can be broken into four basic parts:
  - Introduction and review of information
  - Walk-through inspection of facility
  - Records review
  - Exit briefing

RESOURCES AVAILABLE

- Hazardous Waste Generator Handbook
- Compliance/Training Manual
- Inspector Checklists
- Technical Guidance Documents and Policies
- CD
- Website
- Miscellaneous other resources

RESOURCES AVAILABLE

- KDHE wants to help all generators achieve compliance. Please call us with any questions. (We don't have caller ID.)
- Small Business Environmental Assistance Program (SBEAP) operated by the Pollution Prevention Institute (PPI) at KSU 1-800-578-8898 (free anonymous assistance).

CONTACT INFORMATION

- BWM web site:
  http://www.kdheks.gov/waste
- Rebecca Wenner
  785-296-1604
  rwenner@kdheks.gov

Questions

www.kdheks.gov

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