BASIC HAZARDOUS WASTE GENERATOR WORKSHOP 2013

Kansas
Department of Health and Environment

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

BASIC 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)
  - Generator Requirements
  - Managing Containers
  - Compliance and Enforcement Overview
- Opportunity for questions.

REGULATORY BACKGROUND

- Resource Conservation and 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
- Technical revisions and adoption of RCRA Corrective Action 2013

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 the quantity of each hazardous waste generated over time (no averaging)
- Ensure proper handling and disposal of all wastes

WASTE STREAM OVERVIEW

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?

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?

Inherently Waste Like?

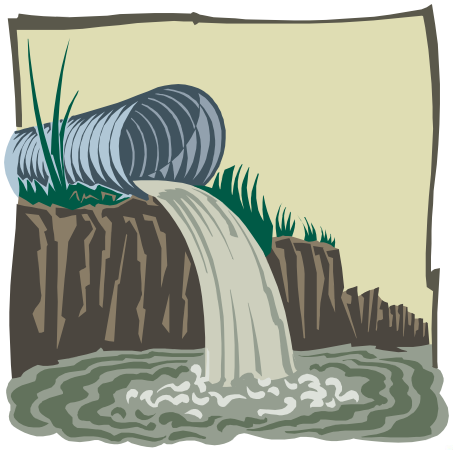
(And potentially very dangerous.)

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
  - Oil and gas 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?

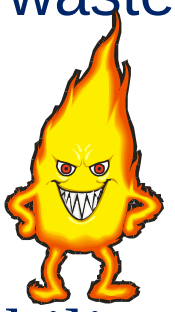
LISTED HAZARDOUS WASTE

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)

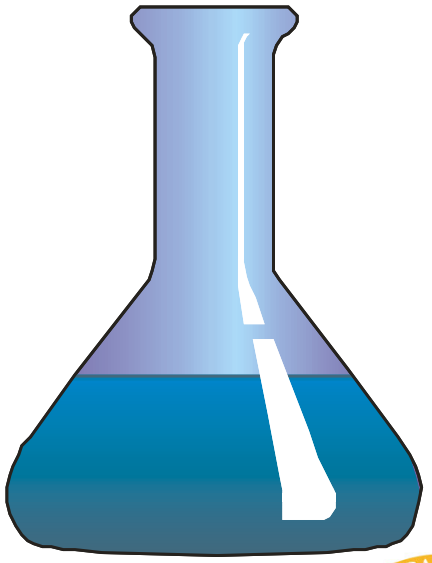
Reactivity (D003)

Toxicity (D004 –D043)

TOXICITY

Analyze using the 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 your (the 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.

GENERATOR CLASSIFICATIONS

Kansas has four generator classes:

- Conditionally Exempt Small Quantity Generator (CESQG)
- Kansas Small Quantity Generator (KSQG)
  - Unique to Kansas
- Small Quantity Generator (SQG)
- Large Quantity Generator (LQG)

GENERATOR CLASSIFICATIONS

CESQG – Conditionally Exempt Small Quantity Generator

- Generates less than 55 pounds (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 not more than 220 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

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

LQG – Large Quantity Generator

- Generates 2,200 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 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 & PREVENTION

- KSQGs and SQGs 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 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.

PREPAREDENESS & PREVENTION

- KSQGs and SQGs (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 & 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

PREPAREDENESS & PREVENTION

- All KSQGs, SQGs, and LQGs must:
  - Equip the facility with:
    - 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 & 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 & 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.

PREPAREDENESS & PREVENTION

- LQGs must:
  - 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.

MANAGEMENT ON-SITE

- On-site accumulation of hazardous waste can occur in:
  - Satellite Accumulation Containers (satellite containers)
  - Storage Containers (less than 90-day or less than 180-day accumulation containers)
  - Tanks

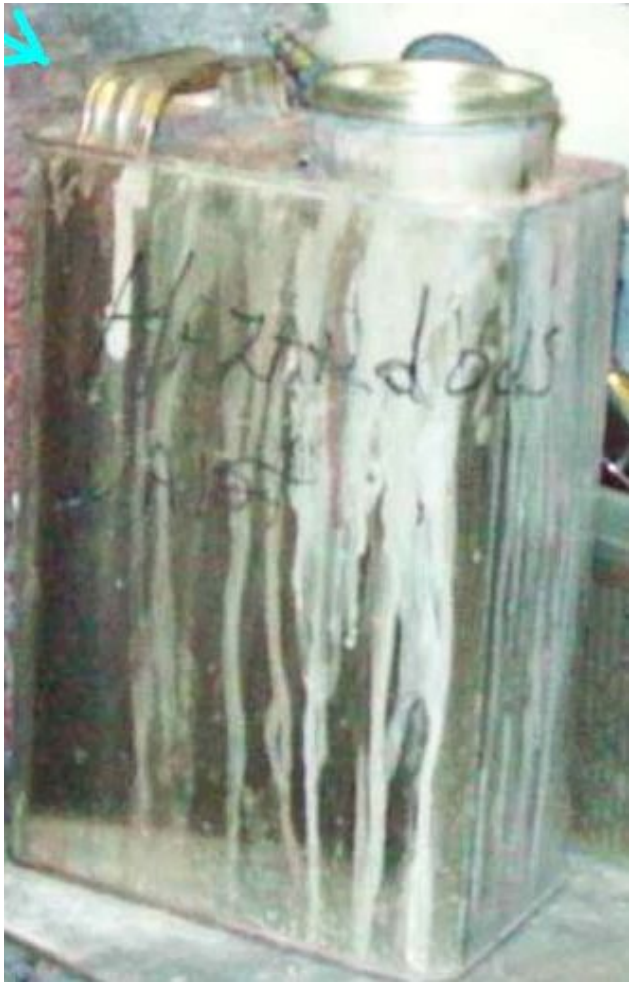
MANAGEMENT ON-SITE

- 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 (different than EPA)
  - 55 gallons or less in size
  - Marked with the words “Hazardous Waste” (more specific than EPA)
  - Closed and in good condition.

SATELLITE CONTAINERS



Although handwritten, this container is marked with the words "Hazardous Waste" and is thus properly labeled.

GOOD SATELLITE CONTAINERS

This container meets satellite container requirements:

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

SATELLITE CONTAINERS

SATELLITE CONTAINERS

Open funnel probably due to poor maintenance.

SATELLITE CONTAINERS

Open containers can be very difficult to close.

SATELLITE CONTAINERS

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

STORAGE CONTAINERS

- There is no state or federal limit to the number of storage areas at a 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

GOOD STORAGE AREAS

Good aisle space

GOOD STORAGE AREAS

Good outdoor storage (but recommend only 2 drums high)

STORAGE AREAS

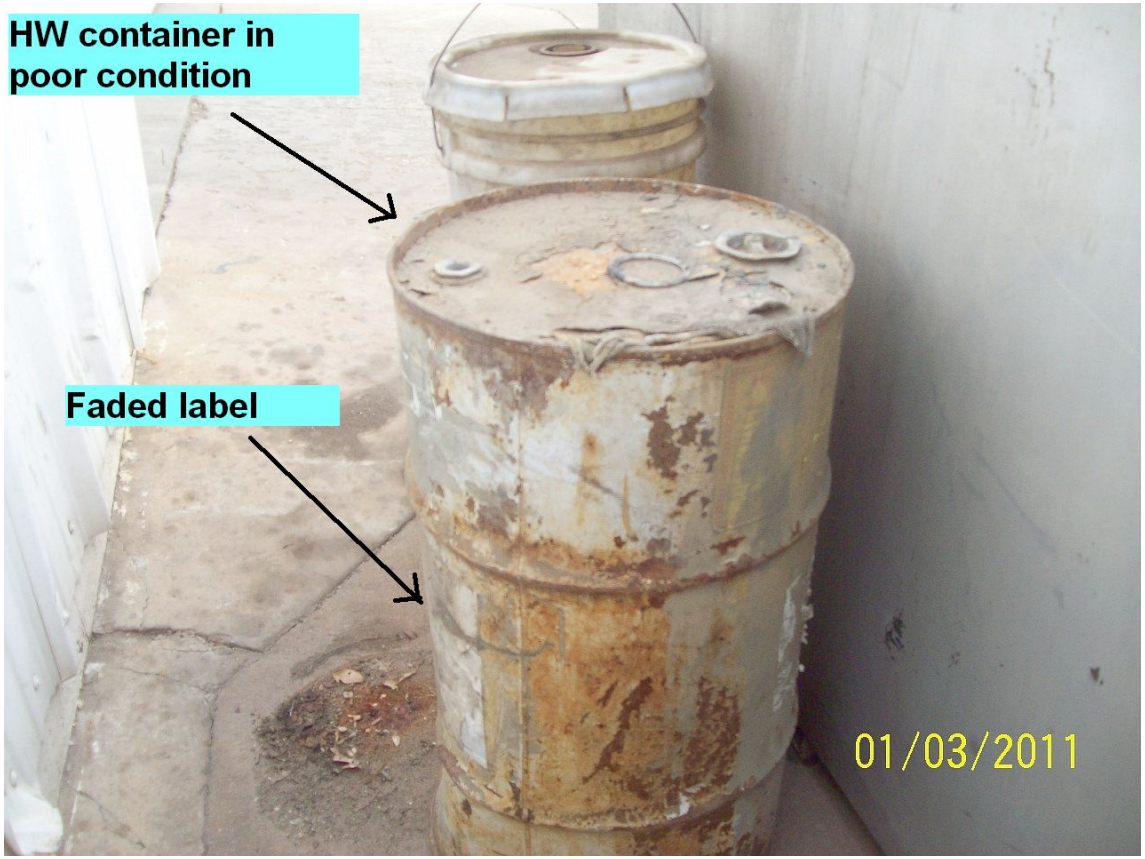
Aisle space is a problem

STORAGE CONTAINERS

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

STORAGE AREAS

Condition of container is a problem



STORAGE AREAS

Open containers

STORAGE AREAS

Not clearly marked “Hazardous Waste”

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

STORAGE CONTAINERS

- 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.

COMPLIANCE EVALUATION INSPECTION

- 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 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
- Website

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

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