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

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

Our Mission: To protect and improve the health and environment of all Kansans.
Abandoned? Is this how you manage your raw materials?

Contents has leaked onto concrete

Corroded and leaking 06/23/2009

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

Corrosivity (D002)
(pH \leq 2 or \geq 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

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

Good funnels, signage, and use of KDHE poster

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

• Not marked “hazardous waste” and open

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

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

SATELLITE CONTAINERS

- Open container
SATELLITE CONTAINERS

• Open containers - some cannot be closed.
SATELLITE CONTAINERS

• Open containers very difficult to close.

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

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

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

www.kdheks.gov