BASIC HAZARDOUS WASTE GENERATOR WORKSHOP

2014

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.

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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 in 2013
Why???

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Why???

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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

All hazardous waste 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
HAZARDOUS WASTE DETERMINATION

• Step one, determine if it is 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
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Inherently Waste Like

(And potentially very dangerous.)
HAZARDOUS WASTE DETERMINATION

• Step two, determine if it is 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

• Step three, determine if the waste is 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

• Step four, determine if the solid waste meets the definition of hazardous waste.

• 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, SDSs, 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!
Things that are **not** 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.
PREPAREDNESS & 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
PREPAREDNESS & 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
PREPAREDNESS & 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 an emergency.
  – Ensure personnel have immediate access to internal alarm or emergency communication device when handling hazardous waste.
FAILURE TO MAINTAIN AND OPERATE
FAILURE TO MAINTAIN AND OPERATE
PREPAREDNESS & 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

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

Not labeled with the words “Hazardous Waste”.

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SATELLITE CONTAINERS

Open funnel

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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 wastes 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

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GOOD STORAGE AREAS

Good outdoor storage (but recommend only 2 drums high)

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

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

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STORAGE AREAS

Open containers

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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
COMPLIANCE EVALUATION INSPECTION

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?
COMMON VIOLATIONS and HOW TO PREVENT THEM

• Waste Determinations
• Container Management
• Preparedness and Prevention
• Training
• Unlawful Acts
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.

• 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

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Questions
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