Small Quantity Generator Training For Employees Who Handle Hazardous Waste



WASTE TRAINING

 US EPA and Ohio EPA regulate how waste is managed under the Resource Conservation and Recovery Act (RCRA).

 All employees must be thoroughly familiar with proper waste handling and emergency procedures relevant to their responsibilities.

OBJECTIVES

- Waste Identification
- Waste Minimization and Segregation
- Waste Management
- Spill Response



WHAT WILL I LEARN?



It is important that every waste stream be identified and properly characterized



• Types of waste: Solid waste/nonhazardous waste. This waste goes in the normal trash Hazardous Waste • Used Oil • Bio-Hazard Waste

HAZARDOUS WASTE

- Hazardous waste may consist of the following types of waste:
 - Ignitable
 - Corrosive
 - Reactive
 - Toxic
 - EPA listed waste (process waste or off-spec chemicals)



HAZARDOUS WASTE

• The amount of hazardous waste we generate each month determines our EPA compliance obligations. The less hazardous waste we generate, the fewer requirements (see Ohio EPA Generator Requirements Table).





• Paint waste from punctured aerosol cans



• Nitric acid from cut and etch process



• Batteries

 Take used batteries to tool crib or office for recycling



• Normal Trash



Used oil
Used oil is collected in tanks and totes for recycle.



Machining Fluids



• Used antifreeze (tow motor mechanics bay)





 Bio-hazard waste Red biohazard bags are included in the first aid kits and bloodborne pathogen kits. Contact EHS for pickup and disposal.





WHAT OTHER TYPES OF WASTE MIGHT BE GENERATED?

Obsolete chemicals
Waste from spills (this could be hazardous or non-hazardous)

• What else?

WASTE MINIMIZATION AND SEGREGATION

WASTE MINIMIZATION

 It is important that we try to minimize waste wherever possible

- Replace
- Reduce
- Reuse
- Recycle



WASTE SEGREGATION

- It is also critical that wastes be properly segregated
 - Keep trash segregated from recyclables



WASTE MANAGEMENT

WASTE MANAGEMENT - CRADLE TO GRAVE

• We are responsible for our waste from "cradle to grave"



WASTE MANAGEMENT – CRADLE TO GRAVE

- The EPA established regulations to govern hazardous materials from "birth" through "death".
 - Identification
 - Management
 - Labeling
 - Storage
 - Tracking
 - Disposal





WASTE MANAGEMENT – CONTAINERS

Hazardous waste containers:

- Can only be used for Hazardous Waste
- Clearly labeled with label visible (not turned towards the wall)
- Closed when not in use
- Keep the outside barrel as clean as possible
- Separate them from other drums or containers

WASTE MANAGEMENT – FLAMMABLE LIQUID TRANSFER

 It is critical that containers are grounded and transfer containers are bonded or a funnel with a flame arrestor is used. flammable liquids tote to tote gravity transfer static

Fire caused by static electricity during gravity transfer of flammable liquid between plastic totes.

WASTE MANAGEMENT – NO SMOKING

• No smoking near ignitable or reactive waste!





Satellite accumulation is where hazardous waste drums are kept while they are still being filled:

• Containers must be closed when not in use. Funnel must be closed and latched when not in use.



Satellite accumulation is where hazardous waste drums are kept while they are still being filled:

• Funnel with flame arrester must be used when adding ignitable waste



Satellite accumulation is where hazardous waste drums are kept while they are still being filled:

• Have up to 3 days to move the barrel to hazardous waste storage after it is full



Satellite accumulation is where hazardous waste drums are kept while they are still being filled:

• Must be stored in approved containers and properly labeled



Satellite accumulation is where hazardous waste drums are kept while they are still being filled:

• Tops must be clean and waste free



Satellite accumulation is where hazardous waste drums are kept while they are still being filled:

• No drips or splatters



WASTE MANAGEMENT -LABELS

- Labels must be:
 - clear and neat
 - legible printing
 - cannot be damaged
 - must be visible
 - must be turned where they can be seen



WASTE MANAGEMENT -LABELS

• Use the previous waste label as a template to fill out the new label. Contact EHS for assistance



WASTE MANAGEMENT -LABELS

 The accumulation start date should not be filled out on a hazardous waste label until the drum is full and moved to the hazardous waste storage area.



WASTE MANAGEMENT – UNKNOWN CHEMICALS

- The EPA and OSHA consider unknown chemicals to be a serious violation
- It is your job to prevent unknown chemicals by maintaining legible labels
- Replace damaged or missing labels



WASTE MANAGEMENT – PERSONAL HYGIENE

- Wash hands before eating or smoking
- Remove contaminated clothing
- Wash thoroughly at the end of the day

SPILL RESPONSE

SPILL RESPONSE

 In the event of a release of hazardous waste, use the following 7 step procedure to respond



SPILL RESPONSE – 7 STEPS

• Step One: Assess the Risk • Step Two: **Protect Yourself** • Step Three: Stop the Source • Step Four: **Contain the Spill** • Step Five: **Evaluate and** Implement Cleanup • Step Six: Decontamination • Step Seven: Reporting

SPILL RESPONSE – STEP ONE: ASSESS THE RISK

Life safety is the No. 1 priority in any spill response. Stop, look and listen before responding

- Check the SDS or other markings and labels
- Look for victims, but don't rush in.
- Communicate the hazard to nearby personnel, and control access to the area.





SPILL RESPONSE – STEP ONE: ASSESS THE RISK

- Let a supervisor know
- Contact the EHS Department
- Advise spill response team of situation
- Ask co-workers to help with spill or send them for help

Look at Safety Data Sheet for instructions (first aid, PPE)



SPILL RESPONSE – STEP TWO: PROTECT YOURSELF

Wear appropriate PPE
Safety glasses/goggles
Rubber/chemical resistant gloves

- Rubber over boots
- Tyvek suit or coat

SPILL RESPONSE – STEP TWO: PROTECT YOURSELF

- Wear appropriate PPE
 A large acid spill is going to require much different PPE than a small oil spill
 - Basic PPE for spills can be found in the spill kits



SPILL RESPONSE – STEP THREE: STOP THE SOURCE

- Spill Kit Contents
 - Absorbent clay, socks and mats
 - Repair putty
 - Trash bags
 - Basic PPE (goggles, over boots, rubber gloves, Tyvek suits, dust mask)
 - Gel mat for drain cover
 - Spill kit drum can be used to contain a leaking drum



SPILL RESPONSE – STEP THREE: STOP THE SOURCE

Where safe and appropriate:

- Stand a tipped drum back up
- Use putty in spill kit to plug holes
- Place leaking drum in over pack
- Shut valve off to equipment
- Shut machine down

Use a spill kit in your area or absorbent mats to contain the spill



SPILL RESPONSE – STEP FOUR: CONTAIN THE SPILL

Where safe and appropriate:

- Make sure spill is contained using sock absorbents, mat absorbents, or dig an earthen berm.
- Rope off the area
- Use caution tape
- Divert the flow of the spill
- Prevent from going into any drain



SPILL RESPONSE – STEP FIVE: CLEAN UP THE SPILL

- Clean the spill and affected surfaces by sweeping, vacuuming, and/or absorbing
- Acids or caustics may need to be neutralized before removal
- Place recovered material and absorbents in approved containers for disposal
- Use proper cleanup techniques as the situation calls
 - Example: Never use a vacuum on a mercury spill





SPILL RESPONSE – STEP SIX: DECONTAMINATION

 Decontaminate equipment and any reusable PPE used in the spill response



SPILL RESPONSE – STEP SEVEN: REPORTING

Complete an accident / incident report
Report to Environmental, Health, and Safety

• EHS will make sure any necessary reports to state or federal agencies are submitted and used materials restocked If you have any questions, contact your supervisor or the EHS Team. Thank you

