



Connecticut Department of Energy and Environmental Protection



Hazardous Waste Advisory Committee

Small Quantity Generator RCRA Training

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Connecticut Department of Energy and Environmental Protection

Topics covered

- Inspections
- Universal Waste Management
- Used Oil Management
- Generator Closure
- Recycling



Inspection Requirements

- Generators are required to inspect their facility for any deficiencies that may cause or lead to a release of hazardous waste or which may pose a threat to human health or the environment
- Develop & follow a written schedule
- Inspection schedule and program should be facility specific
- Inspections must be recorded in a log or summary



What do I Need to Inspect?

- Written Inspection Schedule/Log
 - Monitoring equipment
 - Safety equipment
 - Emergency equipment
 - Security devices
 - Operating & structural equipment
 - Containers, storage areas, & containment systems
 - Tanks & ancillary equipment
 - Loading & unloading areas

NOTE: DEEP Recommends inspecting containers holding CT Regulated Wastes, Universal Waste and Used Oil



Examples of what to look for

- Fences
- Warning Signs
- Gates
- Lighting
- Locks

Security Equipment



- Liquid Level Alarms/Meters
- Conservation Vents
- Leak Detection Systems
- Fire Detection Systems
- Groundwater Monitoring System

Monitoring Equipment



- Loading Areas
- Unloading Areas
- Storage Areas
- Main Roadway
- Gate Area
- Periphery

Areas



- Telephone
- Pagers
- Two-Way Radios
- Intercoms
- Public Address System
- TV Monitoring System

Communication Equipment



- Emergency Shower
- Face Shields
- Protective Gloves
- Disposable Respirators
- First Aid Equipment/Supplies
- Protective Clothing
- Air Purifying/ Chemical Respirators
- Signs

Safety Equipment



- Fire Blankets
- Fire Extinguishers
- Fire Alarm Systems
- Generators
- Emergency Lights
- Portable Pumps/Hoses
- Fire Fighting Wagons/Hoses
- Self-Containing Breathing Apparatus
- Absorbents
- Containment Booms
- Spill Response Carts/Wagons

Emergency Equipment



- Dikes/Berms
- Troughs/Sumps
- Ramps
- Elevators/Lifts
- Tank Supports
- Containment Vault
- Bases/Foundation
- Roofs
- Walls

Structures



- Waste Feed Cut-off/Bypass
- Discharge Control Equipment
- Drainage Systems
- Monitoring Equipment Data (i.e., temperature, pressure, etc.)
- Waste Levels
- Tank Materials/Seams (i.e., corrosion, leaking, etc.)
- Plumbing/Sumps
- Labeled/Marking with words "Hazardous Waste" & Chemical name/Description

Tanks



- Condition (i.e., leaking, bulging, rusted or corroded, etc.)
- Closed when not in use
- Labeled/Marking with words "Hazardous Waste" & Chemical name/Description
- Accumulation start date
- Containers onsite for less than 90 days for LQGs or less than 180 days for SQGs
- Adequate Aisle space
- No smoking signs present

Containers



- Tires/Tracks
- Brakes
- Hydraulics
- Trailer Hitches
- Lights
- Horns/Sirens
- Engine Condition

Mobile Equipment




(Example) What to look for?

- Container Storage Area

- Condition of Drums

- Leaking
- Bulging
- Rusted/corroded

- Closed when not in use?

- Marked with:

- Words Hazardous Waste
- Chemical name/Description
- Accumulation Start Date

- Verify onsite for onsite for <90 days for LQG or <180 for SQG

- Appropriate Containment System in place?



(Example) What to look for?

- Safety Equipment

- Emergency Shower (Is it working?)

- Adequate Quantity of:

- Face Shields
- Protective Gloves
- Protective Clothing

***NOTE: Inspection logs should be facility specific.**

- Unexpired first aid equipment?

- Emergency lighting working?

- Spill Kit containing adequate quantities of supplies?



How Often do I Need to Inspect?

- Inspection Schedule
 - Daily: tanks & ancillary equipment
 - Weekly: container, container storage area, & containment systems
 - Monthly: safety & emergency equipment
 - When used: loading & unloading areas



How do I Document Inspections?

- Inspection Log
 - Date & time of inspection
 - Full name of inspector
 - Notation of observations
 - Date & nature of repairs
 - Follow up and record corrective actions
 - Keep on file for 3 years from date of inspection



Blank Weekly Inspection Form

Example



State of Connecticut
Department of Environmental Protection

Sample Inspection Log for Hazardous Waste Containers

Instructions: Please use ink. Results of weekly inspections of hazardous waste containers and container storage areas must be recorded in this log. If any deficiencies are found, a description of the deficiencies must be recorded in the "Observation" column. Prompt and immediate action must be taken to correct any deficiencies observed. The date and the nature of all corrective actions must be recorded in the "Corrective Actions" column. Once this log is completed, it should be maintained in a binder and must be kept for at least three years from the date of the inspection. These inspection logs must be made available for inspection by State DEP inspectors.

Date of Inspection: _____ Time of Inspection: _____ a.m./p.m. Name of Inspector: _____

Item/Condition to be checked	Yes	No	Observation/Deficiency	Corrective Actions and Date
Are all containers closed?				
Are all containers in GOOD condition (NOT leaking, rusted, bulging or otherwise in poor condition)?				
Are all containers marked?				
Does the marker include the words "Hazardous Waste" and the chemical name?				
Are all markers legible and visible for inspection?				
Are all containers marked with accumulation dates?				
Are dates less than 90 days (180 days for SQGs)?				
If an SQG, is the amount of waste on site less than 1000 kg (2200 lbs)?				
Is there adequate aisle space?				
Are the containers stored on an impermeable base that is bermed?				
Are the base and berm free of gaps, cracks and damage?				
Is the base free of spills, leaks, or other accumulation?				
Are incompatible materials separated by a wall or a berm?				

Note: If the "NO" column is checked, corrective action must be taken and the "Observation" and "Corrective Action" columns must be completed.

Additional Comments: _____



Blank Monthly Inspection Log

Monthly Safety and Emergency Equipment Inspection Log

Instructions: Please use ink. Results of monthly inspections of safety and emergency equipment must be recorded in this log. If any deficiencies are found, a description of the deficiencies must be recorded in the "Observation" column. Prompt and immediate action must be taken to correct any deficiencies observed. The date and the nature of all corrective actions must be recorded in the "Corrective Actions" column. Once this log is completed, it should be maintained in binder and must be kept for at least three years from the date of the inspection. These inspection logs must be made available for inspection by State DEP inspectors.

Date of Inspection: _____ Time of Inspection: _____ a.m./p.m. Name of Inspector (Full Name): _____

Example

Item/Condition to be checked	Required Quantity	Yes	No	Observation/Deficiency	Corrective Actions and Date
Personal Protective Equipment					
Safety Glasses?	5				
Face Shields?	2				
Rubber Gloves (Nitrile)?	50 pairs				
Leather Gloves?	4 pairs				
Cotton Gloves?	40 pairs				
Dust Masks?	24				
Rubber boots?	5 pairs				
Disposable coveralls?	5				
Safety Equipment					
Emergency showers in good operating condition, and marked?	Ink Room R&D Area				
All fire extinguishers fully charged, clear, expiration date marked?	38				
Emergency lights in good working order?	8				
Emergency Equipment					
Sealed 20 Gallon Spill Kit Contents: 20 pads, Heavy Wt; 4 Socks, 3"x48"; 1 Sock, 3"x8"; 2 Pillows, 18"x18"; 1 Bag Ultrasorb, Granular 5#; 3 Temporary Disposal Bags; 3 Plastic Zip Ties, 12"; 1 Pair, Nitrile Gloves; 1 Pair Safety Goggles; 1 Instruction Sheet.	3 spill kits with seals intact				
<i>Mix Room</i>					
3" X 10' sock	4				
Pillows	4				
Mats	60				
Disposable Bags/Ties	8/8				
<i>Loading Dock</i>					
3" X 10' sock	6				
Pillows	4				
Mats	30				
Disposable Bags/Ties	8/8				
Are the salvage drums empty, clear, and marked?	2				

Note: If the "NO" column is checked, corrective action must be taken and the "Observation" and "Corrective Action" columns must be completed.

Additional Comments: _____





Connecticut Department of Energy and Environmental Protection



Hazardous Waste Management Training Course



Chapter 12: Universal Waste



- Chapter 1: RCRA
- Chapter 2: Identification
- Chapter 3: Generator Status
- Chapter 4: Container Storage
- Chapter 5: Tank Storage
- Chapter 6: Pre-Transport
- Chapter 7: Manifest
- Chapter 8: LDR
- Chapter 9: Emergency Preparedness
- Chapter 10: Inspection Requirements
- Chapter 11: Personnel Training
- Chapter 12: Universal Waste
- Chapter 13: Used Oil
- Chapter 14: Closure
- Chapter 15: Recycling
- Chapter 16: Air Emissions Standards

Welcome to Chapter 12! Please select the audio player for more information on what to expect from this chapter.





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Chapter Objectives:

Upon completion of this chapter that includes interactive activities, reading, and the successful completion of the chapter review, you will be able to:

- Determine what constitutes universal waste
- Identify the six waste streams that can be managed
- Determine accumulation limits for small and large quantity handlers
- Follow proper labeling and marking requirements for universal waste
- Implement proper container storage of universal waste
- Prepare accurate record keeping for large quantity handlers





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Universal Waste Rule:

The universal waste rule provides a set of streamlined regulations to reduce the regulatory burden by allowing longer time for the storage of the wastes, reduced record-keeping requirements and consolidation off-site without a permit.

Universal wastes are:

- Generated in a wide variety of settings other than the industrial settings usually associated with hazardous wastes
- Generated by a vast community
- May be present in significant volumes in non-hazardous waste management systems





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Universal Waste Rule - continued



There are six waste streams that can be managed as a universal waste in Connecticut. These universal wastes are:

- Batteries
- Mercury-Containing Thermostats
- Mercury-Containing Equipment
- Certain Pesticides
- Lamps
- Used Electronics





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Hazardous Waste Management Training Course



Chapter 12: Universal Waste



Management Requirements:

Companies which generate and/ or store universal waste are divided into two specific categories based on accumulation limits; Small Quantity Handlers and Large Quantity Handlers.

Small Quantity Handlers - Accumulate no more than 5,000 kilograms total of universal waste at any time. For example, this is equivalent to approximately 17,600, 48-inch lamps or approximately 450 computers.

Large Quantity Handlers - Accumulate 5,000 kilograms or more of universal waste at any time.





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Accumulation Time Limit:

Mark each universal waste container and/or item with an accumulation start date, or maintain an inventory system on-site that identifies the date each universal waste became a waste.

A universal waste handler can store universal waste on site for no longer than one (1) year from the date the universal waste is generated.

This time limit begins when the handler first determines that the universal waste is a waste. It must be marked, labeled and dated at that time.





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Labeling and Marking:

A universal waste handler must follow the labeling and marking requirements outlined below:

- The words "Universal Waste", "Waste" or "Used" must precede the descriptor "batteries", "mercury thermostats", "mercury-containing equipment", "lamps", and "electronics" when labeling their respective containers.
- Recalled pesticides should be marked with the manufacturer's label and one of the markings from above. Unused pesticides should be marked with the manufacturer's label, DOT label, or other approved label and one of the markings from above.

UNIVERSAL WASTE	
CONTENTS	Universal Waste Batteries
ACCUMULATION START DATE	Jan. 1, 2009
SHIPPER	Battery Recycling, Inc.
ADDRESS	1 Battery Road
CITY, STATE, ZIP	Hartford, CT 06106





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Storage:

A universal waste handler must manage universal waste in a way that prevents releases of any universal waste or component or constituent of a universal waste to the environment.

Universal waste pesticides, lamps, thermostats, mercury-containing equipment, and damaged batteries/Cathode Ray Tubes (CRT) must be stored in a container that is:

- Closed
- Structurally Sound
- Compatible with contents of the universal waste
- Capable of preventing leakage, spillage or damage

Used Electronics must be stored in a building with a roof and four walls or in a cargo carrying portion of a truck, in a manner to prevent used electronics from being exposed to the environment.

Adequate aisle spacing should be maintained around universal waste containers to allow unobstructed movement of personnel and emergency response equipment. A minimum of 36-inch aisle space is recommended.





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Off Site Shipments:

Universal waste handlers may ship their universal waste to one of the following facilities:

- Another universal waste handler
- Destination facility (including a RCRA TSDF)
- Foreign destination

Universal waste handlers may either ship their universal waste off site by contracting with a universal waste transporter or they may self-transport. In both instances, the transporter shall comply with the universal waste transporter requirements in Connecticut's Hazardous Waste Management Regulations.

If the universal waste meets the definition of a hazardous material by the Department of Transportation (DOT), the shipper must comply with applicable DOT regulations.

Before sending Universal Waste off-site, a generator must ensure that the receiving handler or destination facility agrees to accept it. If a shipment is rejected, the generator must either take the waste back, or make arrangements to have it sent to another facility that has agreed to take it.





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Off Site Shipments - continued

Universal waste tracking requirements include:

Small Quantity Handlers

A small quantity handler of universal waste is not required to keep records of shipments of universal wastes unless the waste is being exported to a foreign destination.

Large Quantity Handlers

Must keep a record of each universal waste shipment in the following fashion:

- May be in the form of a log, invoice, or shipping document
- Must include the following information: the name and address of the Universal Waste handler or destination facility that the waste was sent to, the quantity of each type of universal waste, and the date of shipment
- Records must be retained for three years from the date of shipment

Note: Universal wastes do not need to be shipped on a manifest





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Employee Training:

Training content must describe the proper handling and emergency procedures appropriate to the types of universal waste handled at the facility. The training requirements are as follows:

A **small quantity handler** of universal waste must inform all employees who handle or have responsibility for managing universal waste. The information must describe proper handling and emergency procedures appropriate to the type(s) of universal waste handled at the facility.

A **large quantity handler** of universal waste must ensure that all employees are thoroughly familiar with the proper waste handling and emergency procedures, relative to their responsibilities during normal facility operations and emergencies





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Chapter 12: Universal Waste

Spills and Releases:

The following procedures must be followed in the event of a release of universal waste:

1. Immediately contain any releases of Universal Waste and other residues.
2. Determine whether any material resulting from the release is a hazardous waste, and if it is, manage it under full hazardous waste requirements (e.g., hazardous waste container management requirements, etc.)
3. Handle any materials which are still Universal Waste under Universal Waste requirements. Materials eligible for continued management as Universal Waste would include "inadvertent breakage" (i.e. small amounts of Universal Waste that were broken or released accidentally), and intact items that can be separated from spill residues and containerized, such as intact thermostats and mercury-containing equipment, intact lamps, and intact used electronics.



Used Oil – What is it?

- Oil that is no longer fit for its original use
- Examples include:
 - Crankcase oil & motor vehicle oils
 - Gear, chain, and ball bearing lubricants
 - Hydraulic & compressor oils
 - Drawing & Stamping Oils
 - Metalworking fluids & oils
 - Heat transfer oils
 - Dielectric fluid



How Do I Manage Used Oil Onsite?

- Used Oil Management (Tanks & Drums)
 - Marked with “Used Oil”
 - Good condition
 - Sealed unless adding or removing oil
 - Located indoors or under roof with containment
 - Suitable impervious surface
 - Outdoor storage allowed if :
 - Secondary Containment with 100% capacity. If uncovered take into account buildup of snow and rain.



Used Oil – Options for Disposal

- How do I ship my used oil?
 - CT DEEP Licensed Transporter
 - CT DEEP Licensed Used Oil Facility
- Onsite combustion in a space heater
 - Oil must be generated onsite or from household DIYs
 - Heater < 0.5 million Btu/hr capacity
 - Exhaust is vented outside



Generator Closure Requirements

What to do if you no longer store hazardous waste on site or relocate storage area:

- Characterize the waste
- Properly dispose of waste
- Properly dispose or decontaminate any equipment or structures
- Identify constituents of concern list, based on wastes managed
- Assess if releases occurred, consider migration pathways
 - Concrete sampling
 - Wipe sampling
 - Soil sampling
- Records/Documentation
 - Maintain closure records onsite
 - File DEEP/EPA forms to change or renew generator status



Recycling

Items that are required to be recycled “Designated Recyclables”:

- glass and metal food containers
- HDPE & PETE Plastic Containers
- high grade white office paper
- Colored Ledger
- old newspaper
- Magazines
- scrap metal
- Boxboard
- old corrugated containers
- lead acid storage batteries
- Ni-Cd rechargeable batteries
- waste oil
- Leaves
- grass clippings (should be left on lawn or composted)



Recycling: what should my company be doing?

Solid Waste Audit (What's in the trash?)

Ensure contract in place for recyclables collection

Use reusable or reduced transport packaging

Identify materials currently being disposed that have recycling markets

-Ex. Paper beverage cartons, used textiles, other types of plastics, other types of paper, yard waste, clean wood, electronic devices, etc.

Consider changing processes to reduce waste



Recycling: What should my company be doing? (continued)

- Purchase environmentally-preferable products
 - Ex. Products with recycled content, recyclable, durable and reusable rather than disposable
- See Business Recycling Assistance page linked from DEEP's Recycling Homepage:

www.ct.gov/deep/recycle



CT DEEP's Hazardous Waste Online Training Course (FREE)

Go to <http://www.ct.gov/DEEP>

Click on “Environmental Quality” Dropdown and choose “Waste Management”

From the Quick Links drop down, choose “Hazardous Waste”

Scroll down and Click on “Hazardous waste On-line Training Course” link.

OR

Go to : <http://www.ct.gov/deep/hazardouswaste>

and Click on the link for “Hazardous waste On-line Training Course”.



Any Questions?



DEEP's toll-free Hazardous Waste
Compliance Assistance (COMPASS)
hotline at 1-888-424-4193

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