



Universal Wastes & Recycling X's

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Universal Wastes – 40 CFR 273

- **Federal Universal Wastes**
 - **Universal Waste Batteries**
 - **Universal Waste Lamps**
 - **Universal Waste Mercury Containing Equipment**
 - **Universal Waste Pesticides**

Universal Wastes – 40 CFR 273

- Small Quantity Handler (SQH) of universal wastes (UW) < 5,000 kg (< 11,000 lbs) total at any given time during the year
- Large Quantity Handler (LQH) of universal wastes (UW) ≥ 5,000 kg (≥ 11,000 lbs) total at any given time during the year

UW Requirement	Small Quantity Handler	Large Quantity Handler
Notification of UW activity and receipt of EPA ID No.	Not required.	Required.
One-year waste accumulation time limit	One year from date waste generated or received from another UW handler.	One year from date waste generated or received from another UW handler.
Releases to environment	Prevent releases of UW to environment and immediately contain releases, if any.	Prevent releases of UW to environment and immediately contain releases, if any.
Labeling: “Universal Waste - _____”	Required.	Required.
Training	Employees informed of proper waste handling and emergency response procedures.	Employees thoroughly familiar with proper waste handling and emergency response procedures.
Shipping Papers (haz waste manifest/LDR)	Bill of Lading sufficient (haz manifest/LDR not required).	Bill of Lading sufficient (haz manifest/LDR not required).
Waste tracking/recordkeeping	Not required.	Must keep a record of each shipment received or sent.

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Question: A manufacturing facility generated a total of 2,000 lbs of UW through May. In July, Operations generated 13,000 lbs of spent hazardous lamps as part of an energy efficiency relamping initiative. Is the facility a Small Quantity Handler or a Large Quantity Handler of UW during the year?

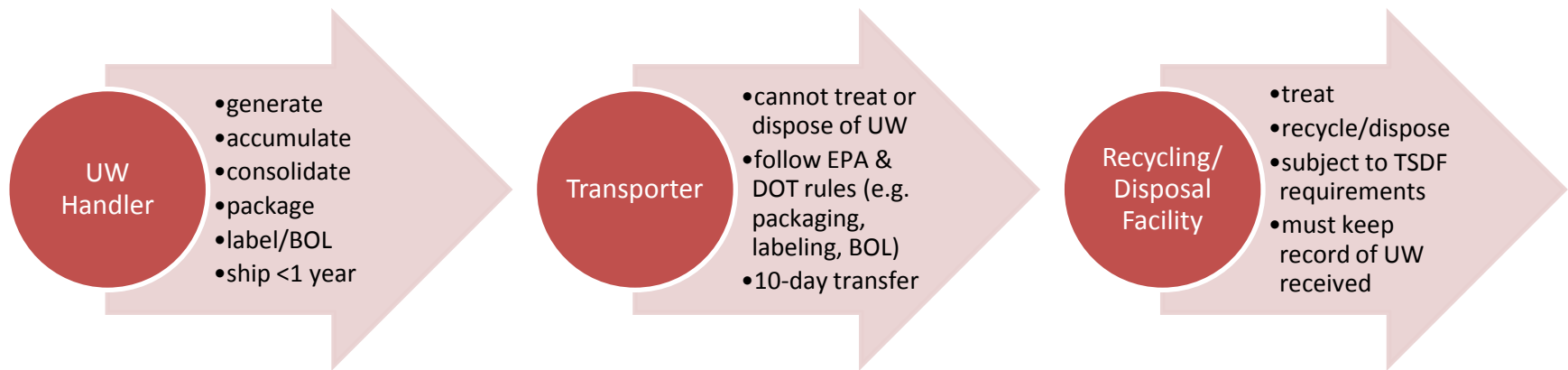
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- Consolidation – Transfer from one UW handler to another
- Recycling/Disposal Timeframe

Question: A distribution facility sent UW to its sister facility for consolidation. The sister facility's UW earliest generation date is February 1, and received the distribution facility's UW on May 1. What is the deadline for the sister facility to ship all the consolidated UW?

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- Packaging/Labeling – EPA requirements & DOT requirements
- Spill cleanup - immediate



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- Universal Waste Batteries**

Battery Type	DOT Shipping Description
Alkaline (e.g., AA, AAA, C, D, 9-volt, etc.)	Non-DOT Regulated Solid, or Battery, dry
Lead Acid	Batteries, wet, filled with acid, 8, UN2794, III
Lead Acid (non-spillable)	Batteries, wet, non-spillable, 8, UN2800, III
Lithium ion button (e.g., in watches or calculators)	Lithium battery, 9, UN3090, II
Lithium-manganese dioxide (e.g., in phones & digital cameras)	Lithium battery, 9, UN3090, II
Lithium (in equipment)	Lithium batteries, contained in equipment, 9, UN3091, II
Mercuric oxide	Non-DOT Regulated Solid, or Battery, dry
Nickel-cadmium (dry) (e.g., in appliances, toys, cordless phones)	Non-DOT Regulated Solid, or Battery, dry
Nickel-cadmium (wet)	Batteries, wet, filled with alkali, 8, UN2795, III
Nickel-metal hydride	Non-DOT Regulated Solid, or Battery, dry
Silver oxide (e.g., in watches)	Non-DOT Regulated Solid, or Battery, dry

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- **Universal Waste Batteries**

Question: Can you manage/handle a leaking lead acid battery that has a broken or cracked casing under the Universal Waste program?

<http://www.call2recycle.org/>

<http://www.biggreenbox.com/>

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- **Universal Waste Lamps**

- fluorescent, High Intensity Discharge (HID) lamps (mercury vapor, high-pressure sodium, metal halide), neon, etc.



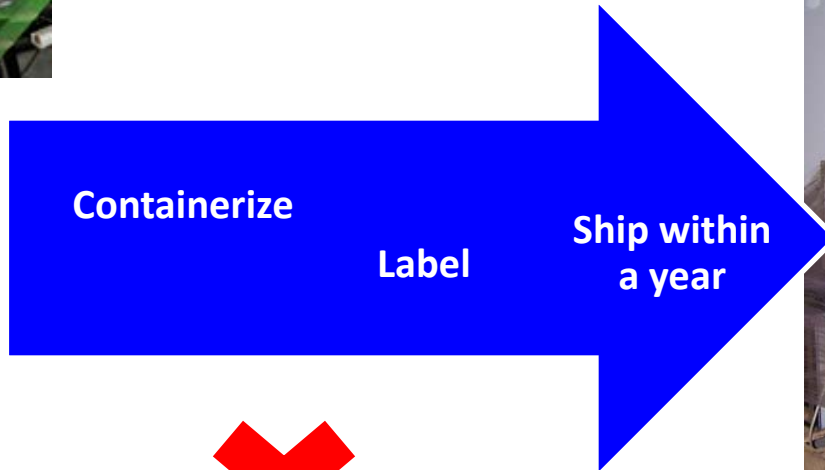
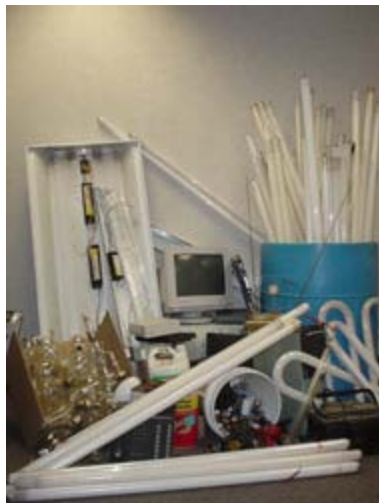
DOT Shipping Name: Mercury
contained in manufactured articles,
8, UN2809, III



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- **Universal Waste Lamps**

- It takes about 17, 000 four foot fluorescent lights to make 5,000 kg [11,000 lb]



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- **Universal Waste Mercury Containing Equipment**
 - Mercury valves, switches, gauges, manometers, thermostats, flow meters, regulators, gas safety relays, etc.
 - Excludes batteries and lamps

Question: A utility is upgrading all mercury containing equipment (gauges, switches, thermostats, etc.) to electronic type equipment. Do you include the weight of the entire equipment or just the mercury-filled component of the equipment in determining the amount of UW generated?

DOT Shipping Name: Mercury contained in manufactured articles, 8, UN2809, III

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- **Universal Waste Pesticides**

Question: If a recalled pesticide leaks or spills on to soil, can you still manage the contaminated soil as universal waste?

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- **Universal Waste in other States**

<http://www.epa.gov/osw/hazard/wastetypes/universal/statespf.htm>

Different Universal Wastes in States (Note: This list is not comprehensive.)	
These materials are classified Universal Waste...	...in these States.
Aerosol Cans	California, Colorado
Antifreeze	Louisiana, New Hampshire
Ballasts	Maine, Maryland, Vermont
Barometers	New Hampshire, Rhode Island
Cathode Ray Tubes (CRTs)	Arkansas, California, Maine, New Hampshire, Rhode Island
Electronics	Arkansas, California, Colorado, Connecticut, Louisiana, Michigan, Nebraska, New Jersey
Oil-based Finishes	New Jersey
Paint and Paint-Related Wastes	Texas
Hazardous Waste Pharmaceuticals	Michigan

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- EPA PROPOSED to add pharmaceuticals to universal waste categories on Dec. 2, 2008 (see link below)

<http://www.epa.gov/osw/hazard/wastetypes/universal/pharm-rule.htm>

- Proposed rule seeks to encourage disposal of pharmaceuticals as universal waste to prevent it from ending up in sewers (discharged to surface waters) and landfills (leach into groundwater)



Recycling Exemptions/Exclusions

<http://www.epa.gov/osw/hazard/recycling/regulations.htm>

*Recycled materials specifically excluded from the definition of solid waste**

- Pulping Liquors
- Spent Sulfuric Acid
- **Closed-Loop Recycling**
- Spent Wood Preservatives
- Coke By-Product Wastes
- Splash Condenser Dross Residue
- Hazardous Oil-Bearing Secondary Materials and Recovered Oil from Petroleum Refining Operations
- **Processed Scrap Metal**
- **Shredded Circuit Boards**

**Check “fine print” for each category*

Recycling Exemptions/Exclusions

<http://www.epa.gov/osw/hazard/recycling/regulations.htm>

*Recycled materials specifically excluded from the definition of solid waste**

- Condensates from Kraft Mill Steam Strippers
- **Comparable Fuels**
- **Mineral Processing Spent Materials**
- Petrochemical Recovered Oil
- Spent Caustic Solutions from Petroleum Refining
- Hazardous Secondary Materials Used to Make Zinc Fertilizers and Zinc Fertilizers Made from Recycled Hazardous Secondary Materials
- **Used Cathode Ray Tubes (CRTs)**
- **Hazardous Secondary Materials Generated and Reclaimed Under the Control of the Generator** – Revisions to Definition of Solid Waste Final Rule 10/30/08
- **Hazardous Secondary Materials Transferred Off-site for Reclamation** - Revisions to Definition of Solid Waste Final Rule 10/30/08

**Check “fine print” for each category*

Recycling Exemptions/Exclusions

<http://www.epa.gov/osw/hazard/recycling/regulations.htm>

*Recycled materials that are solid wastes but not hazardous wastes**

- **Agricultural Waste**
- **Spent Chlorofluorocarbon Refrigerants**
- **Used Oil Filters**
- **Used Oil Distillation Bottoms**

**Check “fine print” for each category*

Recycling Exemptions/Exclusions

<http://www.epa.gov/osw/hazard/recycling/regulations.htm>

*Solid and haz wastes not subject to haz waste regulation when recycled**

- Industrial ethyl alcohol
- **Scrap metal**
- Waste-derived fuels from refining processes
- Unrefined waste-derived fuels and oils from petroleum refineries

**Check “fine print” for each category*

Recycling Exemptions/Exclusions

*Materials Subject to Alternative Standards**

- **Universal Waste**
- **Used Oil**
- **Recyclable Materials Used in a Manner Constituting Disposal**
- **Materials Utilized for Precious Metal Recovery**
- **Spent Lead-Acid Batteries Being Reclaimed**
- **Hazardous Waste Burned in Boilers and Industrial Furnaces (BIFs)**

**Check “fine print” for each category*

Recycling Exemptions/Exclusions



Recycling Exemptions/Exclusions

[Nat Geo - How to Make a Car](#)



Recycling Exemptions/Exclusions



Recycling Exemptions/Exclusions

Check the “fine print” !!!!!