

Universal Waste and Waste Electronics



**ENVIRONMENTAL
QUALITY**

WASTE MANAGEMENT & RADIATION CONTROL

Universal Waste Rules are Alternative Management Practices for Specific Hazardous Wastes

Regulations: R315-273

Not Counted in Total Monthly Hazardous Waste Generation

Container Must Be Closed and Labeled

Cannot Be Accumulated Onsite for over One Year



**WASTE MANAGEMENT
& RADIATION CONTROL**

A rectangular label with a purple background and white text. The top section is purple with white text. Below that is a white section with purple text and lines for input.

**UNIVERSAL
WASTE**

CONTENTS _____

ACCUMULATION START DATE _____

SHIPPER _____

ADDRESS _____

CITY, STATE, ZIP _____

Six Categories of Universal Waste in Utah

- 1) Batteries
- 2) Pesticides
- 3) Mercury-Containing Equipment
- 4) Lamps
- 5) Antifreeze
- 6) Aerosol Cans



Battery Basics

- Provides Definition of Battery
- Spent Lead Acid Batteries
- Does Not Apply to Batteries Not Yet a Hazardous Waste
- Managed to Prevent Releases



Regulations Allow Specific Treatments for Batteries

- Removal of Electrolyte
- Sorting by Type and Mixing in Containers
- Removing Electrical Charge (Discharging)
- Regenerating
- Disassembling
- Removing from Consumer Products



Battery Labeling Requirements

- Individual Batteries or Containers of Batteries Must be Labeled
 - Universal Waste - Battery(ies)
 - Waste Battery(ies)
 - Used Battery(ies)





Universal Waste
Used Batteries
5-19-14

Universal Waste
Used Batteries
Sage





Lamps and Lamp Crushers Basics

- Defines Lamps
- Defines Drum-top Lamp Crusher
- Does Not Apply to Lamps Not a Waste or Hazardous Waste
- Managed to Prevent Releases
- Crushed Lamps Managed as Universal Waste



Drum Top Lamp Crushing is Generally Not Recommended

- Utah Specific Requirement
- Registration Required
 - Application Form
 - Multiple Regulated Operating Conditions
 - Additional Employee Training
 - Additional Record Keeping
 - Must Establish A Closure Plan
 - Must Establish Financial Assurance



Lamp Labeling

- Individual Lamps or Containers of Lamps Must be Labeled
 - Universal Waste-Lamp(s)
 - Waste Lamp(s)
 - Used Lamp(s)



UNIVERSAL WASTE
CONTENTS: Metal Halide Bulbs
ACCUMULATION START DATE: 12/1/16
SHIPPER: EDC, INC.
ADDRESS:
CITY, STATE, ZIP:

UNIVERSAL WASTE
CONTENTS:
ACCUMULATION START DATE:
SHIPPER:
ADDRESS:
CITY, STATE, ZIP:

~~07-01-2017~~
**MERCURY VAPOR
FLUORESCENT
LAMPS**



DIRECTIONS
Step 1 - Open on top & fill in
Step 2 - Seal bottom flap with 2"
with any packaging tape with
Step 3 - Seal bottom flap with 2"
with any packaging tape with
Step 4 - Seal top flap & sides with 2"
with any packaging tape with
Step 5 - Seal top flap & sides with 2"
with any packaging tape with
Step 6 - Seal top flap & sides with 2"
with any packaging tape with

**DO NOT CUT
FRAGILE
DO NOT DR**

**GLASS
HANDLE WITH CARE**

8-FOOT U.N. RATED BULB-PAK

CleanE
1-800-235-2352

**NON-REUSABLE
CONTAINER**
40 120 8 0 1 1
USA 148827

**U
FLU**



UNIVERSAL WASTE
MERCURY CONTAINING LAMPS FOR RECYCLING

ACCUMULATION DATE: 08/11/2015



Aerosol Cans Basics

- Previously Utah Specific Rule
- Defines Aerosol Can
- Does Not Apply to Aerosol Cans Not a Waste or Hazardous Waste
- Managed to Prevent Releases



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Puncturing Aerosol Cans

- Aerosol Cans may be Punctured
 - Manner Designed to Prevent Release
 - Written Procedures
 - Spill Kit Available
 - Can Contents Transferred to Proper Container
 - Area Well Ventilated
 - Employees Trained
- **Manage Generated Waste Properly**



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Aerosol Can Labeling

- Individual Cans or Containers of Cans Must be Labeled
 - Universal Waste-Aerosol Can(s)
 - Waste Aerosol Can(s)



96 Aerosol Can Recycler Installation and Use

Installation:

1. Remove the top cap of the recycler.
2. Insert the top cap into the recycler.
3. Tighten the top cap.

How to Use:

1. Place the aerosol can in the recycler.
2. Push down on the handle.
3. The can will be crushed and the contents will be recycled.

Safety:

- Do not use the recycler for anything other than aerosol cans.
- Do not use the recycler for cans that are damaged, leaking, or have a broken seal.
- Do not use the recycler for cans that are not labeled as aerosol.
- Do not use the recycler for cans that are not made of metal.
- Do not use the recycler for cans that are not made of aluminum.
- Do not use the recycler for cans that are not made of steel.
- Do not use the recycler for cans that are not made of plastic.
- Do not use the recycler for cans that are not made of glass.
- Do not use the recycler for cans that are not made of wood.
- Do not use the recycler for cans that are not made of paper.
- Do not use the recycler for cans that are not made of fabric.
- Do not use the recycler for cans that are not made of rubber.
- Do not use the recycler for cans that are not made of metal.

Maintenance:

- Clean the recycler regularly.
- Check the recycler for any damage.
- Check the recycler for any leaks.
- Check the recycler for any blockages.

Compliance:

- This recycler is compliant with all applicable regulations.
- This recycler is compliant with all applicable standards.
- This recycler is compliant with all applicable codes.



Documenting Compliance

Label Closed Containers with
Accumulation Start Date



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Waste Electronics

- No regulations specifically for the management of electronic waste, but...
- Always required to make an accurate waste determination per R315-261



Refresher on Waste Determination

- First determine if material is a Solid Waste, then
- Determine if Solid Waste is Hazardous Waste

- Speculative Accumulation (R315-261-1(c)(8))
 - Material is Viably Recyclable
 - 75% of Material is Recycled within Calendar Year



Scrap Metal Exclusion

R315-261-4(a)(13)

- **Scrap metal:** Scrap metal is processed scrap metal, unprocessed home scrap metal, and unprocessed prompt scrap metal (R315-261-1(c)(6))
- Excluded scrap metal (processed scrap metal, unprocessed home scrap metal, and unprocessed prompt scrap metal) being recycled is not a solid waste



Scrap Metal Exemption

R315-261-6(a)(3)(ii)

Scrap metal that is not already excluded from the definition of solid waste is exempt from hazardous waste regulations if sent for recycling/reclamation



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Solid Waste Table (R315-261-2(c))

	Use constituting disposal (261-2(c)(1))	Energy Recovery/fuel (261-2(c)(2))	Reclamation (261-2(c)(3)) except as provided in 261-4(a)(17), 261-4(a)(23), 261-4(a)(24) or 261-4(a)(27)	Speculative accumulation (R315-261-2(c)(4))
Spent materials	SOLID WASTE	SOLID WASTE	SOLID WASTE	SOLID WASTE
Sludges (listed in R315-261-31 or 261-32)	SOLID WASTE	SOLID WASTE	SOLID WASTE	SOLID WASTE
Sludges exhibiting a characteristic of hazardous waste	SOLID WASTE	SOLID WASTE	NOT SOLID WASTE	SOLID WASTE
By-products (listed on 261-31 & 261-32)	SOLID WASTE	SOLID WASTE	SOLID WASTE	SOLID WASTE
By-products exhibiting a characteristic of hazardous waste	SOLID WASTE	SOLID WASTE	NOT SOLID WASTE	SOLID WASTE
Commercial chemical products listed in 261-33	SOLID WASTE	SOLID WASTE	NOT SOLID WASTE	NOT SOLID WASTE
Scrap metal that is not excluded under 261-4(a)(13)	SOLID WASTE	SOLID WASTE	SOLID WASTE	SOLID WASTE

Circuit Boards

- Whole, unused circuit boards are off-specification commercial products and not solid waste if sent for recycling/reclamation (see Solid Waste table)
- Whole, used circuit boards meet the definition of scrap metal and are **exempt** from RCRA hazardous waste rules if recycled
 - Used circuit boards and equipment containing used circuit boards are solid waste but are not hazardous waste if they are recycled.



Shredded Circuit Boards

R315-261-4(a)(14)

Shredded circuit boards being recycled are not solid waste provided that they are:

- Stored in containers sufficient to prevent a release to the environment prior to recovery; and
- Free of mercury switches, mercury relays and nickel-cadmium batteries and lithium batteries.



Used Cathode Ray Tubes (CRTs)

R315-261-4(a)(22)

- Used, intact CRTs that are not disposed of or speculatively accumulated are not solid waste
- Used, intact CRTs that are **exported** for recycling are not solid waste provided they meet requirements at R315-261-40;
- Used, broken CRTs and glass removed from CRTs are not solid waste provided that they meet certain storage, segregation, labeling and other requirements at R315-261-39



Summary

- Electronic waste containing circuit boards, if recycled and not shredded by the generator are not hazardous waste
- Intact CRTs that are sent for recycling are not solid waste and no requirements apply to the generator unless the generator exports the CRTs
- Broken CRTs are subject to storage and labeling requirements



For More Information on CRTs
go to:

<https://www.epa.gov/hw/cathode-ray-tubes-crts-0>



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