UCF Environmental Health and Safety	Effective Date: 09/25/2023	Procedure Number: EMP-09-UW-1
	Revision: 1	**Page** 1 of 5
TITLE: Universal Waste and Ballasts Handling and Disposal Procedures	**Approved by** Director, Environmental Health & Safety	

1. APPLICABILITY/ACCOUNTABILITY

The procedure described here is to be used for the handling, disposal and/or recycling of Universal Waste by University of Central Florida (UCF) employees. Each Department is responsible for ensuring that all personnel follow these procedures. Departments are ultimately responsible for the clearance of equipment.

2. PROCEDURE STATEMENT

UCF Environmental Health and Safety has established Universal Waste handling procedures in order to be in compliance with Subtitle C of the Resource Conservation and Recovery Act (RCRA), Florida Administrative Code 62-737, the Florida Statutes and the Department of Transportation. In addition to complying with regulations, UCF EHS has established this program to ensure safe handling and transportation of lamps, ballasts, batteries and mercury containing devices for recycling.

All handlers must have basic training aimed towards employee responsibility. EHS will provide this training.

Universal wastes can be stored for one year, starting from the accumulation start date.

3. PROCEDURE

Lamps:

Examples of common universal waste electric lamps include, but are not limited to; fluorescent, high intensity discharge, neon, mercury vapor, high pressure sodium, and metal halide lamps.

- Do not place lamps in the regular trash.

- Lamps should be packaged in containers that protect them during storage and transport. Acceptable containers include; cardboard boxes, fiber drums, or containers with polyliner. Place lamps carefully to prevent breakage. Egg crate inserts are not required.

- Fill boxes and drums to capacity.

- 4’ lamps will be packaged in fiber tubes.

- Lamps greater than 4’ will be packaged in boxes

- Miscellaneous lamp will be placed in a cardboard box, tape closed, and placed on a pallet. Boxes must be placed by stacking 5 boxes across and no more than 5 boxes high, not exceeding 48” in height.

- Broken lamps must be placed in a drum and marked as “broken lamps”

- Box ends must be secured with tape.

- Do not tape lamps together.

- Label the closed container “Universal Waste Lamps” with an “Accumulation start date”

On campus guidance for lamp management:

- Lamps should be stored indoors and protected against the elements. Boxes must be protected from rain and moisture. Storage area cannot be occupied by personnel and itmust be locked.

- Containers/boxes should be labeled “Spent Mercury-Containing Lamps for Recycling.”

- If a mercury containing lamp is broken and visible mercury spills on the floor, do not attempt to clean the spill yourself. Contact EHS immediately to assess and clean the area.

- If no mercury is visible the broken lamp should be cleaned up and placed in a sealed container/box.

- Containers/boxes should be labeled “Broken Spent Mercury-Containing Lamps for Recycling.”

Ballasts:

- Remove ballasts from lighting fixtures with care, so as not to cause any leakage as aresult of removal. Snip all wires as close to the body of the ballast as possible.

- Ballasts must be packed into the drums with care, so as not to cause any leakage as a result of packing.

- Any ballast that exhibits leakage MUST be handled with heavy rubber gloves.

- All leaking ballasts must be segregated from intact, non-leaking ballasts. Leaking ballasts should be packaged in double plastic bags and placed in a separate drum labeled as containing leaking fluorescent lighting ballasts.

- If the Ballasts are marked as **No PCB** on the ballast label, then they go into the drum marked **Non-PCB** ballasts.

- If the ballasts are not marked **No PCB**, then assume they are **PCB** and place them in the drum marked **PCB** ballasts.

Batteries:

Types of batteries to be recycled – Lithium Ion (LI-ion), Small Sealed Lead Acid (SSLA), Wet Cell Lead Acid, Portable Power Tool batteries, old-style cell phone batteries, button batteries, nickel-cadmium (NiCd), nickel metal hydride (NiMH) and battery packs (rechargeable).

Batteries that we do not recycle include alkaline and non-rechargeable lithium. At this time it is not environmentally cost effective to recycle alkaline batteries. Under state law and regulations, alkaline batteries can be disposed of in the trash. Non-rechargeable lithium batteries should be completely discharged and the terminals be securely taped before disposing of them in the trash.

- Campus Collection Sites - collect batteries in a plastic bucket, plastic bin or Call2recycle collection box. Each individual battery shall be placed in a clear sealed plastic bag or shall have it's terminals taped with electrical or non-conductive duct tape prior to being placed in the collection bin. Do not tape over the battery type identification. Once the plastic collection bin is ¾ full request EH&S to pick up the container. EH&S will then segregate the battery by type prior to recycling with an off-site vendor.

- Delivery of batteries to Building 48 - Tape all terminals of each battery or place each battery in a separate clear sealable plastic bag prior to transporting to EH&S Building 48. Transport the batteries in a plastic bucket.

Mercury Containing Materials:

Acceptable wastes are varied and may include: barometers, hermometers, regulators, relays, switches, devices, thermostats, esophageal bougies, Miller Abbott Tubes, ignitron tubes and other glass and metalware.

- Mercury containing equipment that has been broken will be disposed of through hazardous waste vendors and not be picked up by our recycling vendor.

- Device drains and portals must be plugged to prevent leakage of metallic mercury.

- Any free flowing mercury must be packed separately within the lab pack container.

- Organic debris (gloves, tyvek, plant scraps, paper and wood) may be packaged with metal-ware and glassware. Create a waste pick up request through the EHS website.

- Label Container “Waste Mercury Containing Equipment for Recycling”

Pesticides:

Use all pesticides on treated areas. Dispose of pesticide container rinse water on treated areas. Unused pesticides that are determined to be a waste must be disposed of by EHS as a Universal Waste. Apply a label to the closed container that states “Universal Waste – Pesticides” or “Waste Pesticides” and submit a waste pick up request through the EHS website. EHS will then pick up the waste and store and dispose of it as universal waste.

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5. REVIEW

	Name	Signature	Date
EHS Manager			
EHS Director			

6. DOCUMENT HISTORY

Date	**Revision number**	**Author**	**Modifications**
09/19/2023	0	Franco Del Pino	New format based on EHS_SOP001
09/25/2023	1	Renee Michel	Annual Review