



UNIVERSITY OF  
**GEORGIA**  
Facilities Management Division

***Universal Waste  
Management Plan***

*In compliance with*

**40 CFR 273**

*and*

**GA EPD 391-3-11**

*January 2018*

## **Universal Waste Management Plan**

The University of Georgia (UGA) will comply with U.S. Environmental Protection Agency (EPA) requirements for handling universal waste following the *Standards for Universal Waste Management*, (40 CFR 273), by setting up procedures to properly handle specified waste streams.

This plan applies to all campus locations including each department, building and/or construction sites where nickel-cadmium and other batteries, waste lamps, or mercury-containing equipment no longer serves its intended purpose and must be discarded or recycled. The Universal Waste Management Plan is intended to minimize the hazards to human health and the environment from improper disposal of these wastes in landfills. Waste pesticides also fall under the EPA Universal Waste program, and the policy for pesticide management is currently developed as a stand-alone document, per department, at UGA.

Written procedures for handling universal wastes set standard procedures for the campus as a whole which saves money by avoiding the more extensive disposal requirements of hazardous wastes and making a uniform recycling/management system.

Good written universal waste handling procedures can yield the following benefits:

- Lower operating costs due to cost savings from recycling.
- More efficient time management due to the organization of materials, records, and data.
- Improved control over resources and data due to better maintenance and organization of those resources.
- Conservation of resources, since resources can be better maintained and most efficiently used.

The UGA Environmental Safety Division (ESD) and the Facilities Management Division (FMD) are responsible for developing and maintaining this program. A copy of the plan may be reviewed by employees upon request or on-line at the following URL:

[https://www.fmd.uga.edu/sites/default/files/misc/fmd\\_universal\\_waste\\_management\\_plan\\_2018.pdf](https://www.fmd.uga.edu/sites/default/files/misc/fmd_universal_waste_management_plan_2018.pdf).

### **Sources of Waste**

It is the intent of this policy to ensure that accumulations of universal wastes are monitored so that they are stored and disposed of properly. On our campus, certain activities have a high potential for generating universal waste:

- Construction, renovation, and grounds/building maintenance operations
- Building services operations
- Research activities
- Transit maintenance operations

## **Material Inventory**

An important component of any recycling initiative is to minimize the amount of waste produced or purchased from the very beginning, by having only enough waste-generating stock as is absolutely necessary.

## **Handling Universal Wastes**

### *Battery Management*

The UGA campus generates waste batteries in activities such as transit maintenance, use of cordless power tools, portable electronics, and in electrical equipment, to name a few. Waste batteries should be recycled unless they are one time use batteries and meant for disposal. Alkaline batteries (e.g., AA, AAA, C, & D) are intended for one time use and should be disposed of through your regular building trash. Re-chargeable batteries cannot be placed in the trash and must be recycled through the UGA Universal Waste program.

On the main UGA campus, all Resident Instruction (RI) buildings should have a battery collection bucket in the building and you would just need to coordinate this with your building custodial staff. If you're not sure if your building is Resident Instruction (RI), or do not know who your custodial contact is, please contact FMD Building Services at 2-1818. Per the U.S. Environmental Protection Agency (EPA) regulations, the battery collection bucket must meet the following requirements:

- A closed container such as a bucket with a lid.
- A label with the words "Waste Battery" or "Waste Batteries".
- A date on the container indicating when the empty bucket was used for the initial collection (i.e., a "Start Date").

Waste batteries are funneled mainly through two routes. Automotive batteries are collected at the UGA Automotive Center for temporary storage and subsequent recycling. For the smaller rechargeable batteries, the building services department is available for battery collection in most campus buildings. If you are located in a building that is not considered a Resident Instruction (non-RI) building, but on the main UGA campus, you may call 2-7584, or submit a request for battery pick-up at [workrequest.fmd.uga.edu](mailto:workrequest.fmd.uga.edu). Battery collection containers must be recycled no later than six months after the initial start date.

Once waste batteries are collected, the FMD will handle spent universal waste batteries in a way that prevents releases to the environment. The FMD will:

- Verify and comply with the EPA's packaging requirements.
- Place universal waste batteries that show evidence of leakage, spillage, or damage in a container that closes, is structurally sound, and is compatible with the contents of the battery.
- Label/mark containers to identify the type of universal waste inside.

The waste batteries are then taken to a local recycling center by FMD Support Services.

### ***Mercury-containing Equipment Management***

Equipment such as thermostats, thermometers, button-cell batteries, tilt switches, gas flow regulators, fire alarm boxes, older TVs, blood pressure cuffs, lap-top computers, vacuum gauges, and many others, may contain harmful mercury components. Because of the potential for exposure, waste management of these devices is regulated by the EPA. For a full list of products that may contain mercury, please see <http://www.epa.gov/osw/hazard/tsd/mercury/con-prod.htm>

Before disposing of any potential mercury-containing equipment, please contact the Environmental Safety Division (ESD) at 706-542-5801. If you have a mercury spill, please call the Programs for Research, Environmental Health, and Safety (PREHS) at 706-542-5561. If there is a spill, do not attempt to clean it up, evacuate the immediate area, and do not let others in the area until the PREHS has approved re-entry.

The ESD will handle spent mercury-containing equipment in a way that prevents releases of mercury to the environment by:

- Placing leaking mercury-containing equipment with non-contained elemental mercury in containers that do not leak and are reasonably designed to prevent the escape of mercury into the environment by volatilization or any other means.
- Having implemented procedures to follow when removing mercury-containing ampules from universal mercury-containing equipment. Specifically, ESD will:
  - Remove and manage the ampules in a manner designed to prevent breakage of the ampules.
  - Remove the ampules only over or in a containment device (e.g., tray or pan).
  - Ensure that a mercury cleanup system is readily available to immediately transfer any mercury resulting from spills or leaks from broken ampules, from that containment device to a container that meets the requirements of 40 CFR 262.34
  - Ensure that the area in which the ampules are removed is well ventilated and complies with Occupational Safety and Health Administration (OSHA) Permissible Exposure Levels (PELs) for mercury.
  - Train workers removing ampules in proper waste mercury handling and emergency procedures.
  - Accumulate removed ampules in closed containers that are in good condition.
  - Pack the ampules in the container with enough packing materials to prevent breakage during accumulation, handling, and transport.

- Having implemented procedures to follow when removing the open original housing holding the mercury from mercury-containing equipment that does not contain an ampule. Specifically, ESD will:
  - Immediately seal the original housing holding the mercury with an air-tight seal to prevent the release of any mercury to the environment.
  - Follow all procedures for removing ampules and managing removed ampules.
  - Label/mark containers to identify the type of universal waste inside.

## Lamp Management

It is extremely important to recycle Compact Fluorescent Lamps (CFL's) or other fluorescent light bulbs, as those thrown into the trash are usually sent to a landfill or incinerated. These disposal methods could lead to releases of elemental mercury into the environment through breakage and/or leakage. There is also the potential for worker exposure to mercury from broken fluorescent light bulbs thrown in a dumpster, trash compactor, or trash can. On the UGA campus, we handle fluorescent, high intensity discharge, neon, mercury vapor, high-pressure sodium, metal halide, and other waste lamps.

To prevent release to the environment we:

- Contain any lamp in containers or packages that are structurally sound, adequate to prevent breakage, and compatible with the contents of the lamps. Such containers and packages remain closed and must lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.
- Immediately clean up and place in a container any lamp that is broken or shows evidence of breakage, leakage, or damage that could cause the release of mercury or other hazardous constituents to the environment. Containers must be closed, structurally sound, compatible with the contents of the lamps, and lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.
- Label or mark each lamp or container or package containing such lamps with "Waste Lamps" and the initial collection date for that container. The labels and collection boxes are available in the FMD Warehouse.

Once the collection box is full, or is approaching six months from the collection start date, the box should be delivered to the FMD Warehouse for recycling. Boxes containing waste lamps should be checked-in with the Warehouse staff. The boxes must be packaged and labeled correctly before they will be accepted.

## Accumulation of Universal Wastes

Although we take every precaution to prevent any spills of battery acid, pesticides, or mercury, we are prepared in the event one should occur. Careful consideration is given to the containers we select to store and ship our spent batteries, pesticides, or mercury-containing equipment. We have appropriate containment and the necessary personal protective equipment available for response personnel.

Universal waste handlers may accumulate:

- Less than 5,000 kg total of universal waste (batteries, pesticides, mercury-containing equipment, or lamps, calculated collectively) at any time during the calendar year and be classified as small quantity handlers.
- 5,000 kg or more total of universal waste (batteries, pesticides, mercury-containing equipment, or lamps, calculated collectively) at any time during the calendar year and be classified as large quantity handlers.

UGA falls under the Large Quantity Generator/Handler category.

## Shipping Universal Wastes

In order for our recycling efforts to succeed, we must follow stringent procedures for universal wastes being shipped to treatment/disposal facilities. The FMD Warehouse is responsible for coordinating shipments of universal waste lamps. The FMD Warehouse will only receive packed and appropriately labeled boxes in the staging area. Other responsibilities include:

- Storing the waste properly before shipment.
- Tracking the amount of waste accumulated (total of all universal waste generated during the course of a year).
- Preparing appropriate shipping papers.
- Tracking receipt of shipped waste from the disposal facility.

## Employee Training

The UGA campus needs to understand and comply with the regulatory requirements of the Universal Waste Program. As individual operational units, each division should have trained supervisors who understand the regulatory requirements and the UGA procedures for storage and handling of Universal Waste products. Under this plan, employees will be informed of appropriate handling techniques for universal waste during maintenance activities, packing

and storage before disposal, and shipping protocol. The appropriate personnel will then be trained to comply with UGA's operating plan and appropriate hazard communication training for the hazardous substances contained in the universal wastes found on-site.

### **Maintaining the UW Program**

UGA FMD will update the UW plan as needed by incorporating any necessary changes resulting from major changes in our facility's operation or maintenance.

UGA Environmental Safety Division is responsible for:

- Conducting periodic site audits.
- Helping UGA Departments (other than FMD) develop and maintain their Universal Waste Plan.
- Keeping records of all inspections and reports.
- Training for all UGA groups outside of the UGA Facilities Management Division.

### **UGA Campus Contacts**

<b>Name</b>	<b>Division</b>	<b>Website</b>	<b>Telephone</b>
UGA Environmental Safety Division	ESD	esd.uga.edu	706-542-5801
UGA Work Request	FMD	workrequest.fmd.uga.edu	706-542-7456
UGA FMD Warehouse	FMD		706-542-7449

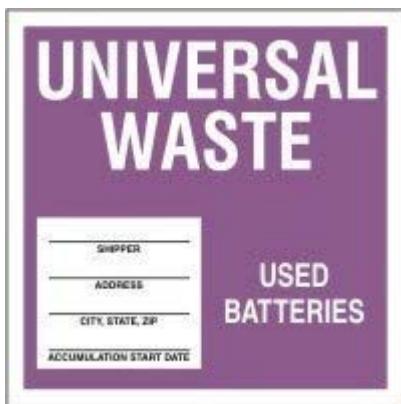
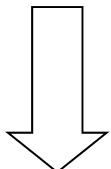


## **UNIVERSAL WASTE PROGRAM - WASTE BATTERIES**

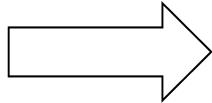


### ***Label Container***

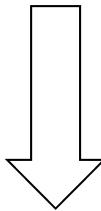
*Use the date you begin to  
fill the container*



### ***Pack and Seal Container***



*Ship*



**Resident Instruction (RI) Buildings - [workrequest.fmd.uga.edu](http://workrequest.fmd.uga.edu) for container pick-up.**

**Non - RI - Please deliver to the Support Services Warehouse on First Street (542-7584).**



*Notes: Container may be kept for up to one year from the accumulation start date, but must be kept closed at all times.*

*Non-rechargeable batteries may be put in the regular trash.*

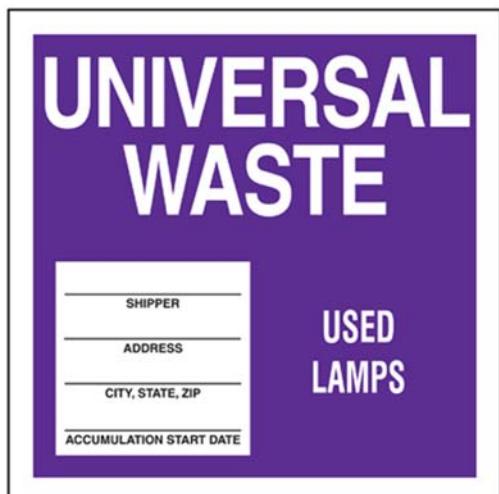
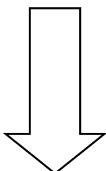


## **UNIVERSAL WASTE PROGRAM - WASTE LAMPS**

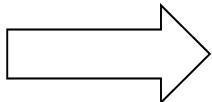


### **Label Box**

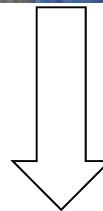
*Use the date you start to  
fill the box*



### **Pack and seal box**



### **Ship**



**Resident Instruction (RI) Buildings - Delivery by Building Services.**

**Non - RI - Deliver to the Facilities Management Warehouse on Vine Street (542-7446).**



*Note: Container may be kept for up to one year from the accumulation start date, but must be kept closed at all times.*