

Bard College Universal Waste Management Plan

Copies of this plan will be made available to all members of the campus community with the potential to generate universal waste.

Purpose

The purpose of this document is to present procedures to be followed in complying with the Resource Conservation and Recovery Act (RCRA) as it applies to Universal Wastes. This document compiles in one location many of the items necessary to document compliance with RCRA.

General Responsibilities

Bard College administrators, faculty, staff, students, contractors and other parties on campus who handle or generate universal wastes are required to properly handle, store and label these wastes and to comply with applicable federal and state regulations.

Universal waste management

Universal waste generation and identification

The success of the universal waste management program begins with how well individuals that generate universal wastes are aware of their responsibilities. Universal wastes must be properly packaged, labeled, and then stored at the on-site storage area. If in doubt with any aspect of the waste identification, call BERD Ext. 7180 for guidance.

Waste identification

A wide community, including colleges and businesses, generate universal wastes in a variety of settings. Universal wastes are a subset of hazardous wastes. Universal wastes consist of:

- **Pesticides** that have been recalled or banned from use;
- **Batteries** such as nicked-cadmium, mercury, and lead-acid;
- **Lamps** that contain mercury and sometimes lead such as fluorescent, metal halide, HID and neon; and
- **Thermostats and other equipment** that contain mercury such as switches.
- **Used electronics**, including but not limited to Computer Monitors/Televisions and CPU's (Lead, possibly Cadmium, Chromium, Barium and Mercury)

Before the universal waste rule these materials had to be managed as hazardous waste. The rule eases the regulatory burden by streamlining the requirements for notification, labeling, packaging, accumulation time limits, employee training, and reporting.

Small quantity handlers of universal wastes

A small quantity handler of universal wastes is one where there is less than 5,000 kilograms (11,000 pounds) of universal wastes is on site at any time. Bard College is a small quantity handler. Small quantity handlers do not have to register or notify the USEPA or NYSDEC regarding universal waste activity.

Universal waste labeling

The universal waste or the container of universal waste must be labeled or clearly marked with the words (select one, and be consistent):

- Universal Waste – [batteries] [lamps] [thermostats] [pesticides] [electronics] (as applicable); **or**
- Waste - [batteries] [lamps] [thermostats] [pesticides] [electronics] (as applicable); **or**
- Used - [batteries] [lamps] [thermostats] [pesticides] [electronics] (as applicable).

Also, the date that the universal waste was generated or the date that the first universal waste was placed in a container should be included on the label.

Universal waste accumulation time limit

Universal waste may not be accumulated for more than one year from the date that the universal waste is generated or received from another handler. Federal regulations require that the handler be able to demonstrate the length of time the universal waste has been accumulated. Personnel responsible for the generation and handling of universal wastes, such as lampers, must label each universal waste, or alternatively, each container of universal waste with the date that the universal waste was placed in the container. Universal waste or containers of universal waste shall be managed such that the universal waste is not accumulated for more than one year.

Batteries

Universal waste batteries must be managed in a way that prevents releases of any universal waste or component of a universal waste to the environment, as follows:

- A small quantity handler of universal waste must contain any universal waste battery that shows evidence of leakage, spillage, or damage that could cause leakage in a container. The container must be closed, structurally sound, compatible with the contents of the battery.
- The following activities may be conducted as long as the casing of each individual battery cell is not breached and remains intact and closed (except that cells may be opened to remove electrolyte but must be immediately closed after removal):
 - sorting batteries by type;
 - mixing battery types in one container;
 - discharging batteries so as to remove the electric charge;
 - regenerating used batteries;
 - disassembling batteries or battery packs into individual batteries or cells;
 - removing batteries from consumer products; or
 - removing electrolyte from batteries.

If the electrolyte is removed from batteries, or other solid waste (e.g., battery pack materials, discarded consumer products) is generated as a result of the activities listed above, a determination must be made whether

the electrolyte and/or other solid waste exhibit a characteristic of hazardous waste identified in 40 CFR part 261, subpart C.

- If it exhibits a hazardous characteristic, the waste must be managed as a hazardous waste.
- If the electrolyte or other solid waste is not hazardous, the waste may be managed in any way that is in compliance with applicable federal, state or local solid waste regulations.

Containers of universal waste batteries must be marked with the words:

- Universal Waste – Batteries; **or**
- Waste – Batteries; **or**
- Used – Batteries; **and**
- the date the batteries were first placed in the container.

Thermostats and other mercury-containing equipment

Universal waste thermostats. Universal waste thermostats must be managed in a way that prevents releases of any universal waste or component of a universal waste to the environment, as follows:

- Any universal waste thermostat that shows evidence of leakage, spillage, or damage must be placed in a container. The container must be closed, structurally sound, compatible with the contents of the thermostat, and must lack evidence of leakage, spillage, or damage that could cause leakage.

Containers must be labeled with the words

- Universal Waste – Thermostats; **or**
- Waste – Thermostats; **or**
- Used – Thermostats; **and**
- the date of the first thermostat was placed in the container.

Lamps

Lamps. Universal waste lamps must be managed in a way that prevents releases of any universal waste or hazardous waste to the environment, as follows:

- Lamps must be placed in containers or packages that are structurally sound, adequate to prevent breakage, and compatible with the contents of the lamps. The original packaging, if sound, meets these requirements. Such containers and packages must remain closed and must lack evidence of damage that could cause leakage.
- Any lamp that shows evidence of breakage, leakage, or damage that could cause the release of mercury must be immediately cleaned up and placed in a container. Containers must be kept closed, be structurally sound, be compatible with the contents of the lamps and must lack evidence of leakage, spillage or damage that could cause leakage or releases of mercury.

The lamp container must be labeled or clearly marked with the words:

- Universal Waste – Lamps; **or**
- Waste – Lamps; **or**
- Used – Lamps; **and**
- the date that the first lamp was placed in the container.

Fluorescent lamps should not be placed in the regular trash. Lamps must be disposed of by contacting Buildings and Grounds for lamp replacement or disposal of used fluorescent lamps.

Used Electronics

Used Electronics. Universal waste electronics must be managed in a way that prevents releases of any universal waste or hazardous waste to the environment, as follows:

- Electronics must be placed in containers that are structurally sound

The container must be labeled or clearly marked with the words:

- Universal Waste – Used Electronics; **or**
- Waste – Used Electronics; **or**
- Used – Used Electronics; **and**
- the date that the first lamp was placed in the container.

Used electronics should not be placed in the regular trash. They must be disposed of by contacting the Audio Visual Department, Buildings and Grounds or Henderson (depending on the type of equipment). See Policy No. F-BERD-006: Proper Disposal of E-Waste at the B&G website for more information.

Spill control

In the event of a universal waste oil spill or leak, the person discovering the release must immediately initiate the following actions:

- Extinguish all sources of ignition and isolate incompatible or reactive chemical substances.
- If there is an immediate threat to human health, evacuate the immediate area.
- Attempt to stop or contain the spill/release at the source (provided there are no health or safety hazards and there is a reasonable certainty of the origin of the leak).
- Isolate all potential environmental receptors such as floor drains, catch basins, sumps, exposed soil, and runoff areas (provided there are no health or safety hazards and there is a reasonable certainty of the origin of the leak).
- If the spill is oil or a petroleum product, contact Security to provide information regarding a spill event.
- If the spill is mercury from lamps, thermostats or other mercury-containing devices, or any other Universal waste:
 - contact Security immediately;
 - evacuate everyone from the area;
 - if possible, open windows and doors to ventilate the area during cleanup; otherwise, seal off the area as well as possible;
 - DO NOT use a vacuum cleaner to clean up a mercury spill. A vacuum cleaner will spread the mercury vapors throughout the area, increasing the chance of exposure.

Security will contact the Director of Buildings and Grounds to direct and coordinate the spill clean-up activities and evaluate if an environmental contractor will be required to perform the clean-up activities. The Director of Buildings and Grounds will then initiate any notification procedures.

In the event of a bulb break – mercury has been released, exercise caution as follows:

Keep all people and pets away from breakage area so mercury-containing powder is not tracked into other areas. Mercury may be bound to the broken glass and powder.

Ventilate area for 15 minutes, and keep area well ventilated. This allows mercury vapors to dissipate.

Assemble necessary supplies: latex gloves, tweezers, tape and a puncture resistant (ex. plastic) container.

Wearing the gloves, carefully pick up any broken glass and place in puncture resistant container. Tweezers can be used to safely pick up broken glass. Tape can be used to pick up small pieces of glass and powder residue left on spill surface.

Use two pieces of cardboard to push together remaining powder and fragments of glass. Finish clean up by sweeping if necessary.

Important: **Do Not Vacuum!!** If you do, mercury residue in the vacuum is heated up and vaporized when the vacuum is used again.

After clean up is complete, place contaminated clean-up equipment along with any other materials that came in contact

with the mercury powder into the puncture resistant container or a sealable plastic bag.

Label all containers “Hazardous Waste-contains Mercury” and take to Hazardous Waste Storage Area (north storage barn)

Training

General

Bard College personnel who generate universal waste will have training *appropriate to their level of responsibility*. This training will be provided initially at their time of employment by their Supervisor. Special training will also be provided by BERD upon request to areas with unusual universal waste management requirements. Training for universal waste management on campus will be updated to reflect the most current regulatory requirements. Training materials include the following topics at a minimum:

- identification of universal waste;
- container use, marking, labeling, and on-site transportation; and
- storage area requirements

Recordkeeping

Small quantity handlers of universal waste are not required to maintain records; however, Bard maintains Universal Waste documents in the BERD trailer.

Appendix Signs

Packaging and Storage of Fluorescents for Recycling

Storage area should be labeled with “UNIVERSAL WASTE” sign

Lamps should be stored in a way that avoids breakage.

Place bulbs in box similar to the one they were shipped in, or in a specially manufactured container for recycling. Shipping containers can be saved and reused for recycling spent bulbs.

Box should be filled and closed. Do NOT tape lamps together; simply fill box until it is full.

When full, close and seal the box with tape.

Label box with one of the following: “Used Mercury-Containing Lamps”

Store boxes no more than 5 feet high.

Store for no longer than one year.

Procedure for Cleaning Up Broken Bulbs

Try and avoid breaking bulbs, as mercury will be released into the atmosphere. But, if a bulb does break:

Keep all people and pets away from breakage area so mercury-containing powder is not tracked into other areas. Mercury may be bound to the broken glass and powder.

Ventilate area for 15 minutes, and keep area well ventilated. This allows mercury vapors to dissipate.

Assemble necessary supplies: latex gloves, tweezers, tape and a puncture resistant (ex. plastic) container.

Wearing the gloves, carefully pick up any broken glass and place in puncture resistant container. Tweezers can be used to safely pick up broken glass. Tape can be used to pick up small pieces of glass and powder residue left on spill surface.

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