Universal Waste Management Plan

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Universal Waste Management Plan

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Universal Waste Management Plan

I. Introduction

The University of Northern Colorado collects and disposes of Universal Waste in accordance with the United States Environmental Protection Agency (EPA) and the Colorado Department of Public Health and Environment (CDPHE) regulations. Universal Wastes are a sub-category of Hazardous Wastes, but the Universal Waste rule provides for reduced management and record keeping requirements for those specific wastes. While the majority of hazardous waste is generated by industry and laboratories, universal wastes are generated by nearly every business as well as private residents. Although the regulation of Universal Wastes is simplified and streamlined, Universal Waste materials cannot be placed in regular trash, tossed on the ground, or poured down the drain.

The Universal Waste Management Plan provides one process for written documentation of Universal Waste records for the University of Northern Colorado (UNC). It will also inform interested persons, including university and contracting employees, of UNC’s compliance with the EPA requirements for Universal Waste generators.

II. Regulatory Authority

Universal waste is regulated by the EPA under 40 CFR 273 (Standards for Universal Waste Management) and the CDPHE Universal Waste Rule [Colorado Hazardous Waste Regulations 6 CCR 1007-3 Part 273].

Campus Policy
UNC Board of Trustees has adopted a policy (1-1-507 Hazardous Materials) which states:
Employees who handle toxic or hazardous substances on behalf of the University are required to maintain, use and dispose of such substances in accordance with applicable UNC Hazardous Material Management Plan procedures, state, federal and local laws/regulations as a condition of their employment. The employee should obtain assistance in ascertaining his/her obligations under these laws and regulations from the
Director of Environmental Safety or his/her designee. Any employee who violates any such laws or instructions given by the University Environmental Health and Safety Office shall be deemed to have acted outside the scope of his/her authority.

III. UNC Universal Waste Handler Status

The University of Northern Colorado is a large quantity handler of universal waste, defined as the accumulation of 5,000 kilograms (11,023 pounds) or more of total universal waste per year. Elemental mercury is not to exceed 35 kilograms (77 pounds) at one time.

IV. Universal Waste Accumulation Area

Universal wastes must be stored in a designated waste storage area with sufficient space to accumulate and store the quantity of Universal Wastes generated. UNC’s Universal Waste Accumulation Area is located at Parsons Hall. The accumulation and storage of universal wastes must be managed in a manner that prevents the release of waste or waste constituents. All waste should be immediately containerized into the appropriate designated vessel when placed in the Universal Waste Accumulation Area. Materials that do not have a designated vessel/storage location should never be left in this area, contact EHS for proper disposal.

V. Universal Wastes Types

Universal waste that is handled at UNC includes: batteries, mercury containing devices, lamps, pesticides, aerosol cans, and electronic devices and Light Emitting Diode, better known as LED.

A. Batteries
Batteries collected at the University of Northern Colorado have a battery chemistry that includes lead acid, Nickel Metal Hydride (NiMH), and Nickel Cadmium (NiCd). Varying shapes, sizes, and styles can include: cylindrical, rectangular, flat cells, button cells, lanterns, nine volts, and battery packs. A battery becomes universal waste when it is removed from service. Automotive lead acid batteries must be handled as universal waste and shall be disposed of through Facilities Management. For proper documentation see Section VII, Proper Labeling of Containers.

Batteries that are not regulated as a Universal Waste include Alkaline, zinc carbon, zinc chloride, lithium-ion and non-automotive lead acid. These types of batteries are disposed of through recycling.

B. Mercury Containing Devices
Thermostats, thermometers, manometers, barometers, sphygmomanometers, relays, and switches are all examples of devices that may contain mercury. These devices can be managed under the universal waste rule provided they are intact.
C. Lamps/Bulbs
Lamps, bulbs or tube portions of electrical lighting devices, may contain small amounts of mercury. There may also be small amounts of cadmium in some types of lamps. Lamps considered to be universal waste can be fluorescent, metal halide, or mercury vapor. Small compact, U-tube, straight, and standard light bulb shapes are all very commonly found in universal waste.

Non-mercury containing lamps that are utilized by the University campus can be disposed of in the solid waste dumpster. Always verify that the bulb is a non-mercury or low-level mercury bulb before disposal. See Appendix B for a pictorial reference guide of the low-level mercury containing bulbs that may be found on campus. Low-level mercury bulbs that could be used on campus may include the following:

- General Electric Bulbs
  - Ecolux
  - Ecolux Starcoat
  - Ecolux UltraMax
  - Ecolux Biax
  - Ecolux Lucalox
  - Ecolux Mod-U-line
- Sylvania Bulbs
  - Ecologic
  - OCTRON Ecologic
  - PENTRON Ecologic
  - Lumalux (Plus) Ecologic
  - ICETRON Ecologic
  - Powerball CRI Ecologic
- Phillips Bulbs
  - ALTO
  - Ceramalux ALTO
  - Universals ALTO
  - U Bent ALTO
  - PL-C Cluster ALTO
  - PL-S Short ALTO
  - PL-T Triple ALTO
  - MasterColor CDM ALTO
  - Dim Alto

In the case of a Universal Waste spill, see Section XIII, Emergency Procedures.

D. Light Emitting Diode
Light Emitting Diode, also known as LED is recognized and categorized as e-waste (Colorado Hazardous Waste Regulation Part 273.2) and are considered Universal Waste. LED’s will be disposed of through Facilities Management. For proper documentation see Section VII, Proper Labeling of Containers. Colorado Hazardous
Waste Regulations Part 273 states that all LED's will be disposed as e-waste because of the electronic component in the lamp. Regulations are designed to reduce the regulatory burden on facilities that generate these wastes while at the same time reducing the amount of hazardous waste illegally sent to municipal solid waste landfills.

E. Pesticides
Pesticides that have been recalled or banned from use, are obsolete, have become damaged, or are no longer needed due to changes in procedures or other factors, are considered a universal waste.

F. Computers and Electronic Devices
Electronic devices considered to be universal waste include computer monitors and circuit boards. University computers that are no longer in service should be turned in to the Information Management and Technology (IMT) department. IMT will assess electronic and computer equipment prior to disposal. Proper recycling and disposal will be coordinated through Facilities Management.

VI. Accumulation Time Limits

Universal waste can be accumulated for up to one year from the date it became a waste. The amount of time that a universal waste has been accumulated must be demonstrated, in any one of the following ways:

1. Directly marking the universal waste with the date that it became a waste;
2. Marking the container with the earliest date that waste began accumulating in that container;
3. Marking a designated accumulation area with the earliest date that waste began accumulating in that area;
4. Keep an inventory that identifies the date that each universal waste became waste;
5. Keeping an inventory that identifies the earliest date that a universal waste became a waste in the designated accumulation area.

VII. Proper Labeling of Containers

All Universal Waste containers must be labeled at the time the first waste is generated in the container. Either attach a label (see Appendix A) or write on the container the following information: Universal Waste and name/type of waste, Date (Enter the date waste is first generated).

VIII. Inspections

At this time there are no inspection requirements for large quantity handlers of universal waste. Environmental Health and Safety will monitor the designated Universal Waste storage area to ensure the waste is segregated, containers are in good condition, the
area is organized, and good housekeeping is being performed. If a container is full or damaged notify the EHS Department.

IX. Hazardous Materials Release

Spills or residues from universal waste may be considered hazardous materials / waste if any or all of the released material or residue is hazardous. Spills should be reported to UNC Police Department (970) 351-2245 or the Facilities Management Service Center (970) 351-2446 immediately. If the materials released in the spill are considered hazardous, it must be managed as hazardous waste rather than universal waste.

X. Offsite Shipment/Transportation

Universal waste can only be shipped to a certified universal waste handler, or a Transfer, Storage, Disposal, or Recycling Facility (TSDRF). Prior to shipping universal waste off-site, the generator of the waste must obtain approval from the destination facility. The EHS department is responsible for scheduling and approving all waste shipping documents.

XI. Record Keeping

All universal waste management activities shall be documented. The following are documentation requirements that will be maintained by EHS.

- All universal waste documentation related to transportation, shipment, regulatory reporting, etc.
- Hazardous Material / Waste tags
- Universal Waste Management release records
- Initial / Annual universal waste management training records
- All other universal waste management documentation

These records must be kept for a minimum of three years.

XII. Training

As a large quantity waste handler of universal waste, UNC must ensure that employees who manage or handle universal waste are thoroughly familiar with waste handling methods and emergency procedures applicable to the waste they are handling, and relative to their responsibilities during normal University operations and emergencies. All training records must include the dates of training sessions, contents or a summary of the training session, name of the trainer, and names of the individuals attending the training session. Training that is conducted by departments should send a copy of the training roster to EHS.

XIII. Emergency Procedures
The University is committed to the management of Universal Waste so as to minimize the possibility of an accidental release into the environment. As part of this commitment, UNC maintains equipment on-site to facilitate spill cleanup.

The University has a Spill Prevention, Control, and Countermeasure (SPCC) Plan and Hazardous Materials Incidents Emergency Response Plan that is maintained by the EHS department. These plans support spill response and emergency situations related to the Universal Waste Management Program. In case of a spill or release immediately contact UNC Police Department at 351-2245 immediately. The Hazardous Materials Incident Emergency Response Plan shall be used as a guide during any release, spill, or incident.
**Appendix A**  
**Hazardous Material / Waste Tag**

![Hazardous Material/Waste Tag Image]

### HAZARDOUS MATERIAL/WASTE

- **Pure for Redistribution**
- **Ready for Pick-up**
- **Environmental Health & Safety**  
  Gray Hall 351-1963  
  Fax 351-4718  
  http://www.unco.edu/safety/EHS

**PRESS HARD USING INK - MULTIPLE COPIES**

<table>
<thead>
<tr>
<th>Dept</th>
<th>Bldg</th>
<th>Rm#</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Generator Name</th>
<th>Phone</th>
</tr>
</thead>
</table>

**Exact Container Location**

**% (must total 100)**

<table>
<thead>
<tr>
<th>Container Contents</th>
<th>DOT/EPA Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use Complete Chemical Names</td>
<td>EH&amp;S Use Only</td>
</tr>
</tbody>
</table>

**Continued next tag? no yes (tag ___ of ___) Do not write on back**

**Container Size and type:**

**pH**

**Net Quantity Contained:** liters (liquid) or kilograms (solid)

**How was product(s) used?**

**Hazards/Precautions:**

(I certify the accuracy of this record.)

**Generator Signature**

**CONTAINER TRACKING #** 004501

**EH&S Use Only**

**Characteristic Hazard:**

**Classification:**

**Container Designation:**

Submit top white copy to EH&S, middle copy & bottom card remain with container.
Appendix B  Low-level Mercury Bulb Picture Reference Guide

General Electric Bulbs

Ecolux  Ecolux Starcoat  Ecolux Ultramax  Ecolux Biax

Ecolux Lucalox  Ecolux Mod-U-line

Sylvania Bulbs

Ecologic/OCTRON Ecologic  PENTRON Ecologic  Lumalux (Plus) Ecologic
**Phillips Bulbs**

- ALTO
- Ceramalux ALTO
- Universals ALTO
- U Bent Alto

- PL-C ALTO
- PL-S ALTO
- PL-T ALTO
- MasterColor Alto
- Dim Alto