

**File No: Universal Waste Management**

**Orig. Date: 03/01/2006**

**Revision Date: March 2010**

**EPA: 40 CFR 273**

**PA: Code 266b Universal Waste Management**

Messiah College

## **Universal Waste Management Policy and Procedure**

**Policy:** It is the policy of Messiah College to provide proper methods of storage and handling of all Universal Waste materials generated or accumulated on campus.

**Objectives:** Proper handling, disposal, or recycling of products that may contain hazardous components. Removing such waste from municipal landfills and incinerators so that potential health threats to the public and environment are prevented.

**Definitions:** **Universal Waste:** *Universal Waste means any of the following hazardous waste that is subject to the universal waste requirements:*

**Battery:** *Battery means a device consisting of one or more electrically connected electrochemical cells which are designed to receive, store, and deliver electric energy. An electrochemical cell is a system consisting of an anode, cathode, and an electrolyte, plus such connections (electrical and mechanical) as may be needed to allow the cell to deliver or receive electrical energy. The term battery also includes an intact, unbroken battery from which the electrolyte has been removed. (See appendix A)*

**Thermostat:** *Thermostat means a temperature control device that contains metallic mercury in an ampoule attached to a bi-metal sensing element, and mercury containing ampoules that have been removed from these temperature control devices in compliance with the requirements of 40 CFR 273.13(c)(2) or 273.33(c)(2).*

**Lamp:** *Lamp, also referred to as "universal waste lamp" is defined as the bulb or tube portion of an electric lighting device. A lamp is specifically designed to produce radiant energy, most often in the ultraviolet, visible, and infra-red regions of the electromagnetic spectrum. 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 which includes CFL light bulbs.*

**Pesticide:** Pesticide means any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest, or intended for use as a plant regulator, defoliant, or desiccant.

**Video Display Terminals:** Computer monitors, televisions.

**Equipment:** Approved storage areas. Universal Waste Accumulation Areas (each building on campus) and Central Accumulation Area (Lenhart Building Room 122A). (Appendix B)

Appropriate containers, compatible with the universal waste and its contents

Tape

Boxes

Attachment A: Proper Battery Disposal Methods

Attachment B: Location of Universal Waste Storage Areas

*Procedure:*

Responsibility

Action

Campus Events/Facility Services Staff

- 1 Properly separate any universal waste and store in the Universal Waste Accumulation Areas (UWAA) as waste is generated. (Primarily light bulbs, ballast, batteries, pesticides, and items containing mercury). Green tips now are universal waste; they no longer go to trash. Also CFL light bulbs are universal waste. Assure that containers of Universal Waste are closed at all times, free of defects, have no leakage, spillage or other environmental releases, and that all universal waste containers are labeled with a Universal Waste label which must include type of waste and accumulation start date. When first item is added to empty container, mark that date on the label. Lamps must be packaged without separators, or any other packing materials. All Universal Waste Containers must be stored in a dry place.

Waste Coordinator

- 2 Notify the Waste Coordinator via e-mail or radio when accumulation areas need pick up for disposal.
- 1 Drop off new containers and remove the full containers. The full containers are to be taken to the Central Accumulation Area (CAA) at Lenhart Building.
- 2 Verify that items being disposed of are actually Universal Waste items. Secure full containers with tape.
- 3 Contact a licensed qualified contractor to schedule the disposal of Universal Waste.
- 4 With the help of the Environmental Health and Safety Manager, calculate cost and charge disposal cost back to the originating departments. (Example: Light bulbs & Ballast would be charged to Mechanical Services, Cleaning chemicals would be charged to Campus Events, computer monitors would be charged back to ITS, products from Nursing or Chemistry would be charged back to those departments).
- 5 During satellite accumulation area inspections, verify that containers are properly labeled, secured and dry. Verify that lamps are properly stored without tape, separators or any other packing materials.
- 6 Four times a year submit announcements to student news letters reminding students not to dispose of electronic equipment or appliances in the dumpsters (December, March, May, August)

## Inventory Specialist/ Special Project Coordinator

- 1 Provide monthly reports to the Safety Committee concerning issues related to Universal Waste.
- 2 Provide annual training on proper Universal Waste procedures to Campus Events Supervisors, Campus Events shift workers in the following buildings: Agape, Bowmansdale, Boyer, Climenhaga Fine Arts, ECC, Engle Health Center, Frey, Fry, Greenbrier, Hoffman, Hostetter Chapel, Kelly, Kline-Jordan, Larsen, Lenhert, Library, McBeth Alumni Center, Mellinger, Naugle, North Complex (Hess, Miller & Grantham), Old Main, Smith, Sollenberger Sports Center, South Complex (Sollenberger, Bittner & Mountain View), Witmer, and all Building and Property Service Employees. Training is to be conducted in March each year and reported to Risk Management in April each year.

## Fleet Services Mechanic

- 1 The following Waste Haulers are used in the Fleet Services area at the Lenhert building: Stoey's Trucking Inc., 45 Mt. Pleasant Road, Fayetteville, PA 17222

Stoey's collects waste oil at no charge. No payment for removal now for waste oil. Stoey's removes used anti-freeze for a charge.

Stoey's services the sludge tank (oil/water separator tank). The wash bay water drains into the sludge tank.

- 2 Swope's Salvage, Inc. 92 Hoffman Road, East Berlin, PA 17316; removes used oil filters. Stored in a 55 gallon drum.

- 3 Interstate Batteries of Harrisburg, 94 Orchard Road, Hummelstown, PA 17036; removal of lead acid car and fire alarm batteries
- 4 Zimmerman's Automotive Service Inc., 2234 South Market Street, Mechanicsburg, PA 17055; removal/disposal of used tires, \$2.50 per tire, \$50.00 per tractor tire

Chief Technology Officer

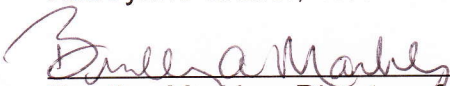
- 1 Currently ITS stores college owned equipment in the basement of Engle. The equipment is stored there until properly disposed of by a licensed qualified recycler. The equipment held in storage typically consists of computers, monitors, scanners, and printers.

Assistant Director of Media Services

- 1 Media Services will put all old batteries in an approved container located in Library Room 017. The bucket is taken to Radio Shack when it needs to be emptied.
- 2 Media Services will put all old lamps in a second bucket located in Murray Library Room 017.
- 3 Old non-working TV's will go to the Trash/Waste Coordinator for disposal as Universal Waste.

Approved  Reviewed  Revised

  
 Kathrynne Shafer, Vice President for Operations

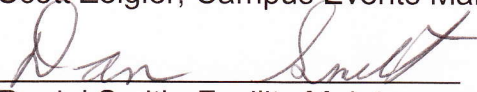
  
 Bradley Markley, Director of Facility Services



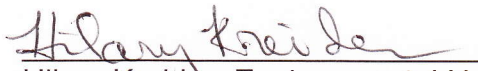
Robert Brubaker, Inventory Specialist / Special  
Project Coordinator



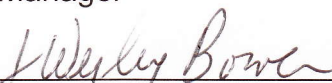
Scott Zeigler, Campus Events Manager



Daniel Smith, Facility Maintenance Service  
Manager



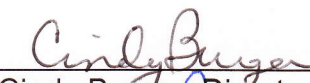
Hilary Kreider, Environmental Health & Safety  
Manager



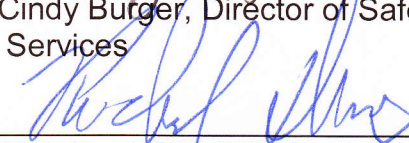
Wes Bower, Trash/Waste Coordinator



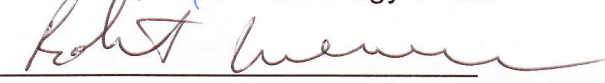
Jared Rudy, Grounds Services Manager



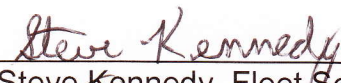
Cindy Burger, Director of Safety and Dispatch  
Services



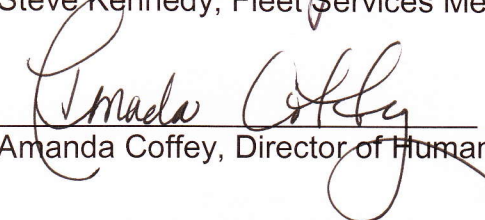
Rick Dent, Chief Technology Officer



Robert Weaver, Director of Media Services



Steve Kennedy, Fleet Services Mechanic



Amanda Coffey, Director of Human Resources

**"Note - The signed copy of this procedure is filed in the Facility Service  
Department. By signing this policy you have agreed to enforce the contents and  
adhere to standards".**

## Appendix A Battery Disposal Methods

Battery Type	Common Name	Sizes Available	Examples of Use	Proper Disposal
Alkaline Manganese	Coppertop, Alkaline	AAA, AA, C, D, 6V, 9V	Flashlights, calculators, toys, clocks, smoke detectors, remote controls, pagers	Take to Library Lobby
Button	Mercuric Oxide, Silver Oxide, Lithium, Alkaline, Zinc- Air	Sizes Vary	Watches, hearing aids, toys, greeting cards, remote controls	Dispose of as Universal Waste
Carbon Zinc	“Classic”, Heavy Duty, General Purpose, All Purpose, Power Cell	AAA, AA, C, D, 6V, 9V	Flashlights, calculators, toys, clocks, smoke detectors, remote controls, transistor radios, garage door openers	Take to Library Lobby
Lithium	Usually has “lithium” label on the battery, cylindrical and “coin” types	3V, 6V, 3V button	Cameras, calculators, computer memory back-up, tennis shoes, microphones, watches, telephones, pagers	Dispose as Universal Waste
Lithium Ion (Li-ion)	Not available “off the shelf”	3.6V cyl., 3.6V prismatic	A/V equipment cell phones, PDA’s, notebook PC’s	Take to Library Lobby
Nickel-Cadmium (Rechargeable)	Either unlabeled or labeled “Ni- Cd”	AAA, AA, C, D, 6V, 9V, 4/5A	Flashlights, toys, cellular phones, power tools, computer packs	Dispose of as Universal Waste
Reusable Alkaline Manganese (Rechargeable)	Renewal	AAA, AA, C, D	Flashlights, calculators, toys, clocks, radios, remote controls	Take to Library Lobby
Sealed Lead Acid	“Gel”, VRB, AGM, Cyclone,	Multiples of 2 Volts: 2V, 6V,	Video cameras, power tools,	Dispose of as Universal Waste

(Rechargeable) (aka, Valve Regulated Lead Acid	EI Power, Dynasty, Gates, Lithonia, Saft, Panasonic, Yuasa	12V	wheelchairs, ATV's metal Detectors, emergency lighting, clocks, cameras, alarm system's backup power, UPS's	
Lead Acid Vehicle Batteries	Autozone, Sears Die Hard, Yuasa	12V	Cars, trucks, Motorcycles	Dispose of as Universal Waste
Nickel Metal Hydride	Labeled "NIMH"	A, AA, AAA, 4/5A, L-fat-A, C, D	Cameras, cell phones, notebook PC's, PDA's, portable TV's and CD players, power tools	Dispose of as Universal Waste

Appendix B Universal Waste and Central Accumulation Areas

Universal Waste Accumulation Areas (UWAA)			
Building	Room Number	Room Description	Universal Waste Items
Bowmansdale	20	Generator Room	Light Bulbs
Boyer	B011	Mechanical Room	Light Bulbs
Climenhaga Fine Arts	021	Mechanical Room	Light Bulbs
ECC & SSC	113	Mechanical Room	Light Bulbs
Engle Health Center	04	Mechanical Room	Light Bulbs
Frey Academic	41	Mechanical Room	Light Bulbs
Frey Academic	256	Workshop	Lead based products
Fry Apartments	B2	Mechanical Room	Light Bulbs
Hoffman	23	Mechanical Room	Light Bulbs
Hostetter Chapel	019	Boiler Room	Light Bulbs
Kelly Apartments	C6A	Mechanical Room	Light Bulbs
Kline & Jordan	K103	Receiving Room	Light Bulbs
Larsen Student Union	113	Mechanical Room	Light Bulbs
Lenhert	110	Mechanical Shop	Light Bulbs, Batteries, & Items containing mercury
Lenhert	118	Electrical Shop	Ballasts & Capacitors
Mellinger Apartments	A2A	Mechanical Room	Light Bulbs
Murray Library	017	Mechanical Room	Light Bulbs
Naugle Dorm	125	Receiving Room	Light Bulbs
North Complex	B060	Mechanical Room	Light Bulbs
Old Main	B4	Mechanical Room	Light Bulbs
Schoolhouse	011		Light Bulbs
Smith Apartments	C4	Mechanical Room	Light Bulbs
South Complex	BB01	Mechanical Room	Light Bulbs
Witmer Dorm	014	Supply Room	Light Bulbs
All Areas without a designated UWAA	Universal waste items need to be taken to Lenhert as generated.		
Central Accumulation Area (CAA)			
Lenhert	122A	CAA Room	All Universal Waste

## Appendix C Staff to be Trained

Building Supervisor and 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> Shift workers for the following buildings: Agape, Bowmansdale, Boyer, Climenhaga Fine Arts Center, Eisenhower Campus Center, Engle Health Center, Frey, Fry, Greenbrier, Hoffman, Hostetter Chapel, Kelly, Kline-Jordan, Larsen, Lenhert, Library, McBeth Alumni Center, Mellinger, Naugle, North Complex (Hess, Miller & Grantham), Old Main, Smith, Sollenberger Sports Center, South Complex (Sollenberger, Bittner & Mountain View), Witmer.

All Facility Services workers.