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Waste Management Plan

Purpose

The purpose of this document is to provide guidance to Drake University personnel in the proper management of regulated waste, including identification, storage, recycling, and disposal. The procedures in this document are meant to ensure that Drake University disposes of all regulated wastes in accordance with applicable state and federal regulations.

Scope

This document covers all regulated waste generated on Drake University campus, including but not limited to: chemical, biohazard, universal, electronic, and sharps waste. This document does not cover non-regulated waste/recycling on campus.

Responsibilities

Drake Environmental Health and Safety: responsible for determining appropriate procedures for the disposal of regulated waste on Drake University campus. EHS is responsible for maintaining and updating this document to reflect current state and federal regulations.

Drake Facilities Planning and Management: responsible for following all procedures and guidelines set forth in this document. Managers and supervisors are responsible for ensuring that all employees are familiar with these guidelines and ensuring that procedures are being followed.

Departments: responsible for following the procedures and guidelines in this document. Each department should have basic understanding of the types of regulated wastes they may generate. All departments should seek guidance from Drake EHS for any issues or concerns they may have with regards to managing waste.

Waste Disposal Guidelines

ITEMS REQUIRING DISPOSAL	PROPER DISPOSAL METHODS		
SHARPS 	-Blades (scalpels, razors) -Hypodermic needles with attached syringes -Glass Slide Covers, -Microtome Blades -Lancets		Please complete a Chemical/Hazardous Waste Pickup & Container Request Form when full: This form can be found on our website at http://www.drake.edu/ehs/
AUTOCLAVED CULTURES & DISPOSABLES 	Autoclaves: -Petri Dish -Disposable Culture Flask/Tubes -Personal Protective Equipment -Pipettes NO AUTOCLAVED LIQUIDS	"Autoclave Bags"	Please complete a Chemical/Hazardous Waste Pickup & Container Request Form when full: This form can be found on our website at http://www.drake.edu/ehs/
LAB GLASS & PIPETS 	Broken & Unbroken Glass -Pipette Tips -Disposable Pipets -Broken Glassware		Please complete a Chemical/Hazardous Waste Pickup & Container Request Form when full: This form can be found on our website at http://www.drake.edu/ehs/
ANIMAL BODIES & TISSUES 	Contaminated -Animal carcasses & body parts Uncontaminated -Animal carcasses & body parts		Contact the Animal Vivarian Email: Donna.tuttle@drake.edu Or Call: X4933
BIOLOGICALLY CONTAMINATED WASTE <div style="background-color: #ffffcc; padding: 5px; border: 1px solid black; margin-bottom: 10px;">This waste generated in the Lab/Art/Athletics settings is contaminated and could appear hazardous to Non-Drake personnel</div>	-Absorbent materials contaminated with blood, vomit or other human fluids -Fully absorbed or dried blood (gauze, bandages, test strips, or swabs)		Please complete a Chemical/Hazardous Waste Pickup & Container Request Form when full: This form can be found on our website at http://www.drake.edu/ehs/
LAMPS 	-Straight Fluorescent Blubs -Compact Fluorescent -UV Lamps		Contact Drake Facilities Planning and Management for replacement and removal of Used Lamps: Call: X3955
BIOHAZARDOUS WASTE 	-Non-Autoclaved -Pathogenic -rDNA/RNA -“Dripping” human liquids/tissue		Please complete a Chemical/Hazardous Waste Pickup & Container Request Form when full: This form can be found on our website at http://www.drake.edu/ehs/
EMPTY CHEMICAL CONTAINERS 	-5 Gal Solid Waste Container (Carboy) -1/2 Gal (2.5L) Liquid Waste Container (Glass) -1 Gal (3.78L) Liquid Waste Container (Glass)		Please complete a Chemical/Hazardous Waste Pickup & Container Request Form : This form can be found on our website at http://www.drake.edu/ehs/
FLAMMABLE LIQUIDS 	-Oil based paint -Varnish -Paint Thinner -Solvent		Please complete a Chemical/Hazardous Waste Pickup & Container Request Form : This form can be found on our website at http://www.drake.edu/ehs/
BATTERIES 	-Rechargeable -Nickel Cadmium -Lithium Ion -Alkaline		Please complete a Chemical/Hazardous Waste Pickup & Container Request Form : This form can be found on our website at http://www.drake.edu/ehs/

CHEMICAL WASTE

Please complete a **Chemical/Hazardous Waste Pickup & Container Request Form** when full: This form can be found on our website at <http://www.drake.edu/ehs/>

Procedure to Request a Waste Pickup

EHS has designed a Qualtrics form for use throughout campus to assure that all regulated waste streams are being managed properly. The form can be found by visiting the Drake EHS website: drake.edu/ehs/. The types of waste that you can request disposal for using this form include the following:

Hazardous Chemical Waste (ex. from chemistry)	Solvents (ex: paint thinners, acetone from art)
Sharps (ex. syringes, lancets)	E-waste (ex: computer monitors, peripherals)
Biologically Contaminated Waste (ex. Absorbed vomit, blood containing towels, bandages, wraps)	Autoclaved Waste (ex. agar plates, pipettes)
Glass Waste (broken lab equipment, pipettes)	Non-hazardous liquid waste (glucose, bleach water/tissue)
Fluorescent Lamps (any size)	Batteries (rechargeable, lead acid)
Non-hazardous solid waste (ex: filter cartridges, agarose gels)	Biohazardous waste (ex: large quantities of human liquid)
Toner Cartridges	Residential Waste (from rental properties or neighborhood “dumping”)

To schedule a pick-up of waste or to request a container to collect waste you may have or be accumulating:

1. **Identify waste for disposal.** There are a variety of waste types listed on this form. All of these are regulated by EPA or IDNR and must be managed in a specific manner or Drake may receive environmental fines. Please identify the type and quantity of waste that you have and then complete the Qualtrics form. The more information you can provide, the easier it will be for EHS to coordinate a pickup and meet your needs. For information on ineligible waste management contact Drake EHS.
2. **Complete the Qualtrics form** documenting quantity, type of waste, and location. Make sure to submit the form so a pick-up can be scheduled.
3. **Request a new container** so that EHS can bring a replacement at the time disposal occurs.
4. **Ask for guidance** from EHS if you have any questions or concerns. For emergency situations where chemicals have spilled or there is an accident with injuries, contact Public Safety immediately for assistance at 515-271-2222.
5. Please make sure all waste containers are **LABLED, HAVE LIDS and ARE DATED** to comply with EPA regulations.

Procedure to Dispose of Chemical Waste

Used and unused chemicals from laboratories and other areas of campus may cause harm to persons or the environment if not disposed of properly. Drake University will comply with all applicable federal and state regulations for the proper disposal of chemical waste generated on campus. The following procedures are in place to ensure safety and compliance when disposing of chemical waste:

1. **Identify waste for disposal:** The user should determine when a chemical is no longer wanted. Unwanted chemicals can be used, unused, expired, or even unknown.

2. **Collect and Label Waste:** All used chemical waste should be collected in approved containers and labeled properly. Unused chemicals may remain in the original containers which they came in so long as the containers are in an acceptable condition. Approved containers for used chemical waste can be delivered upon request from Drake EHS by submitting a Qualtrics form. All used chemical waste from laboratory procedures will be treated as hazardous waste while being kept in laboratories; a waste determination will be made by EHS at the time of pick-up. Labeling and storage requirements for Satellite Accumulation should be followed (See procedures for Satellite Accumulation).
3. **Complete a Qualtrics Form:** Following the waste pick-up procedures (See “Procedures to Request a Waste Pick-up) fill out a Qualtrics form with all necessary information and submit the form. The form can be found on the EHS website: drake.edu/ehs/
4. **Request Guidance:** All questions on chemical waste should be directed to Drake EHS. For emergencies contact Drake Public Safety at 515-271-2222

Procedure for Sanitary Sewer Discharge

Some chemicals and chemical solutions which do not pose a hazard to human health or the environment may be discharged into the sanitary sewer system. Only chemicals and chemical solutions which meet the requirements of the “Sanitary Sewer Discharge Guidelines” may be discharged. All discharges from the University are regulated by the City of Des Moines Sewer Ordinance, the Iowa Department of Natural Resources, and the Environmental Protection Agency through a Sanitary Sewer Discharge Authorization Permit. The following procedures should be followed for discharging chemicals:

1. **Determine if the chemicals meet the requirements for discharge.** Refer to the document “Chemicals Generally Acceptable for Sanitary Sewer Disposal” on the Drake EHS website to determine whether chemicals or chemical solutions meet the requirements for discharge.
2. **Record the discharge in a log.** Prior to discharging of any chemicals or chemical solutions all necessary information should be recorded in a log (See sample log attachment on “Sanitary Sewer Discharge Guidelines”). Necessary information includes:
 - a. The contents being discharged. List all chemicals (if a solution), full chemical names are required.
 - b. The weight and amount (In gallons) of the chemical or solution being discharged.
 - c. The pH of the solution
 - d. The date and location of discharge
3. **Report the discharge to EHS.** EHS must be notified when a laboratory disposes of 4 or more liters of approved substances in a month. Discharges of approved substances for campus are not to exceed 100 gallons in a given month.
4. **Seek guidance from Drake EHS** for any issues or question regarding discharges of chemicals or chemical solutions. Never discharge any chemicals which are not approved for discharge. Contact Drake EHS to have non-approved chemicals picked up.

Satellite Accumulation Area Guidelines

This Document outlines the general requirements and guidelines for satellite accumulation areas for hazardous waste in Drake University facilities. The procedures and guidelines listed are meant to ensure compliance with 40 CFR Part 262.34 which allows generators to accumulate hazardous waste at or near the point where it is initially generated prior to being collected and brought to the Central Accumulation Area. Guidelines for satellite accumulation areas are as follows:

- Satellite accumulation areas are to be clearly marked with a university approved sign and should be kept free of unnecessary items. The area used for the satellite accumulation of hazardous waste should be used for only that purpose. Lab hoods are NOT acceptable storage areas for hazardous waste
- All containers must be compatible with the waste that they are holding. Contact EHS for waste containers.
- All incompatible waste types should be kept separate, consult the Safety Data Sheets (SDS) for specific information on chemicals; secondary containment can be used as a means for segregating incompatible waste
- All containers should be kept tightly closed except when adding waste
- All containers need to have some form of secondary containment, contact EHS for any questions about what is acceptable for secondary containment
- All containers need to be kept clean, all spills should be addressed immediately and all clean up materials disposed of properly
- All containers need to have “Hazardous Waste” labels attached with the date waste was first added to the container as well as the lab/room number the waste is being generated in
- All containers need to have the full contents listed, no chemical abbreviations can be used, and percentages of each chemical should be listed if possible. The list of contents can be attached separately as long as the contents are accurate and legible (preferably typed)
- Satellite accumulation areas should not accumulate more than 55 gallons of hazardous waste or 1 quart of acutely hazardous waste at any time. Requests to have full containers picked up should be filled out as soon as possible to prevent over accumulation.
- Hazardous waste should always be kept in an area that is within the control of the generator and should never be transferred to another room.
- Satellite accumulation areas will be inspected weekly to ensure compliance with the guidelines listed above

These guidelines are meant to aid in the safe accumulation and temporary storage of hazardous waste. Always remember to follow lab safety guidelines when handling hazardous waste including the use of Personal Protective Equipment. Hazardous waste pick-ups can be requested by visiting the EHS forms and procedures website: <http://www.drake.edu/ehs/formsprocedures/>.

Procedures to Dispose of Biohazard Waste

Biohazard waste is any waste that is potentially infectious and is uncontained or “dripping”. Biohazard waste must be treated prior to disposal (Typically through incineration) and should never be disposed of in the trash. Procedures for disposal of biohazard wastes are:

1. **Identify the waste** and determine if it should be disposed of as a biohazard waste. Some wastes may appear to be a biohazard but may be disposed of as Biologically Contaminated (See “Procedures to Dispose of Biologically Contaminated Waste”) or the waste may be treated by autoclaving and disposed of as Autoclaved Waste (See “Procedures to Dispose of Autoclave Waste”). Drake EHS can provide guidance on waste determinations.
2. **Use Universal Precautions** when handling items that may be potentially infectious.
3. **Collect the waste** in a red “Biohazard Box” lined with a red “Biohazard Bag”. The box and bag should have the biohazard symbol and the words “Biohazard” on them. Alternative methods for collection may be used such as red “Biohazard Buckets” so long as they adequately identify and contain the waste.
4. **Complete a Qualtrics Form:** Following the waste pick-up procedures (See “Procedures to Request a Waste Pick-up) fill out a Qualtrics form with all necessary information and submit the form. The form can be found on the EHS website: drake.edu/ehs/
5. **Seek guidance from EHS** for any question or concerns about disposal of biohazard waste. EHS will provide guidance on determining whether a waste should be disposed of as a biohazard waste.

Procedures to Dispose of Sharps

Used and unused sharps (i.e., razor blades, syringes, needles, etc.) pose risks, such as bodily injury and infection, to Drake Employees and students and need to be disposed of properly. The following procedures should be followed for disposal of sharps:

1. **Identify the waste.** Not all sharps will be disposed of in the same way so it is important to know what type of sharp item needs to be disposed of. The “Waste Disposal Guide” should be used as a reference to determine the type of sharps item.
2. **Collect in the proper container.** Never attempt to remove a sharp item from a containers once it has been placed there.
 - a. **Plastic sharps:** should be decontaminated prior to disposal using an effective decontamination method (i.e., autoclaving, chemical disinfectant, etc.). Once decontaminated plastic sharps should be placed in a cardboard box lined with a plastic bag (Biologically Contaminated Boxes).
 - b. **Unused/Non-infected metal sharps:** any sharps which have not been used or were used in processes which would not lead to contamination (i.e., chemical transfers) should be collected in a puncture proof container and labeled with the words: “Non-infectious Sharps”. Containers for disposal of non-infected sharps can be provided upon request by Drake EHS.
 - c. **Contaminated metal sharps:** all sharps which have been exposed to potentially infectious materials should be collected in red “Biohazard Sharps” containers.
3. **Complete a Qualtrics Form:** Following the waste pick-up procedures (See “Procedures to Request a Waste Pick-up) fill out a Qualtrics form with all necessary information and submit the form. The form can be found on the EHS website: drake.edu/ehs/
4. **Ask for guidance** from Drake EHS for information on proper disposal of sharps items.

Procedure to Dispose of Drake Biologically Contaminated Waste

Drake University generates waste that is biologically contaminated with human fluids (blood, vomit, etc.) but is in small quantities and is fully contained in absorbent materials. This waste is generated throughout campus and specifically in the following areas: Public Safety, Athletics, Student Residences, Facilities/Housekeeping, Biology, and Pharmacy. This waste is not in quantities or of the threat level that it meets the criteria to be managed as Biohazardous waste. To assure that all Drake staff, faculty and students are protected from potential infection by these materials, however, they will be collected and managed as Biologically Contaminated Waste and disposed of at a permitted landfill. This includes management of items including, but not limited to: gauze, cotton balls, Band-Aids, gloves/PPE, towels/rags used as absorbent media and pharmacological test strips. To properly manage this material:

1. **Identify waste chemicals for disposal.** This includes such items as gauze, cotton balls, Band-Aids, gloves/PPE, towels/rags used as absorbent media and pharmacological test strips. This does NOT include “dripping” blood products, vials/tubes of blood, pathogenic tissue samples or other infectious lab media that poses an imminent threat to Drake or the surrounding community. For information on ineligible waste management, contact Drake EHS.
2. **Collect waste** in the EHS provided sturdy cardboard boxes with plastic liners. Do not over-fill container.

3. **Complete a Qualtrics Form:** Following the waste pick-up procedures (See “Procedures to Request a Waste Pick-up) fill out a Qualtrics form with all necessary information and submit the form. The form can be found on the EHS website: drake.edu/ehs/
4. **Request a new container** so that EHS can bring a replacement at the time disposal occurs.
5. **Ask for guidance** from EHS if you have any questions or concerns. For emergent situations where large quantities of biohazardous materials are present, contact Public Safety immediately for assistance at 515-271-2222.

Procedure to Dispose of Drake Autoclaved Waste

Drake University generates waste that is autoclaved to assure that any biological pathogens present are destroyed through the heat/pressure process. This waste is generated throughout campus and specifically in the following departments: Chemistry, Psychology, Physics, Biology and Pharmacy. This waste does not meet the definition of hazardous waste and is not required to be managed through a TSDF facility. To assure that all Drake staff, faculty and students are protected from potential injury/cuts by these materials, however, they will be collected and managed as Autoclaved Waste and disposed of at a permitted landfill. This includes management of items including, but not limited to: glassware, petri dishes, tubes containing bacterial cultures, PPE/gloves, contaminated disposable lab ware, and pipette tips. To properly manage this material:

1. **Identify waste chemicals for disposal.** This includes such items as glassware, petri dishes, tubes containing bacterial cultures, PPE/gloves, contaminated disposable lab ware, and pipette tips. This does NOT include large quantities (>50ml) of autoclaved liquids or broth formulations. Large quantities of autoclaved, non-hazardous liquids should be managed as Non-hazardous Liquid waste. For information on ineligible waste management, contact Drake EHS.
2. **Autoclave items** following procedures for appropriate autoclaving according to instructions and place autoclave indicator tape on the containers to assure temperatures/pressures reached are adequate to destroy all pathogens. As an alternative to autoclave tape, you may also use indicator autoclave bags. Do NOT use red biohazard bags. The purpose of autoclaving is to destroy any threat of biohazardous material and if autoclaving will not meet this goal then the material must not be managed as “Autoclaved Waste” but must continue to be managed as Biohazardous Waste.
3. **Collect waste** in the EHS provided sturdy cardboard boxes with plastic liners. Do not over-fill container.
4. **Complete a Qualtrics Form:** Following the waste pick-up procedures (See “Procedures to Request a Waste Pick-up) fill out a Qualtrics form with all necessary information and submit the form. The form can be found on the EHS website: drake.edu/ehs/.
5. **Request a new container** so that EHS can bring a replacement at the time disposal occurs.
6. **Ask for guidance** from EHS if you have any questions or concerns. For emergent situations where large quantities of autoclaved waste require disposal, contact EHS for assistance.

Procedure to Dispose of Drake Glass Waste

Drake University generates intact and broken glass waste that poses a potential threat to staff, faculty and students if it is placed in “normal trash.” This waste is generated throughout campus and specifically in the following departments: Chemistry, Psychology, Physics, Biology, and Pharmacy. This waste does not meet the definition of hazardous waste and is not required to be managed through a TSDF facility. To assure that all Drake staff, faculty and students are protected from potential injury/cuts by these materials, however, they will be collected and managed as Glass Waste and disposed of at a permitted landfill. This includes management of items including, but not limited to: broken lab glassware, pipettes, glass tubes and glass test tubes. To properly manage this material:

1. **Identify waste for disposal.** This includes such items as broken lab glassware, pipettes, glass tubes and glass test tubes. This does NOT include glass waste that has resulted from a chemical spill and is chemically contaminated. Chemically contaminated glassware from a spill must be managed as “Chemical Spill Waste” to assure a complete hazardous waste determination is conducted prior to disposal and to assure the waste is managed correctly. For information on ineligible waste management, contact Drake EHS.
2. **Collect waste** in the EHS provided sturdy cardboard boxes with plastic liners. Do not over-fill container.
3. **Complete a Qualtrics Form:** Following the waste pick-up procedures (See ‘Procedures to Request a Waste Pick-up) fill out a Qualtrics form with all necessary information and submit the form. The form can be found on the EHS website: drake.edu/ehs/.
4. **Request a new container** so that EHS can bring a replacement at the time disposal occurs.
5. **Ask for guidance** from EHS if you have any questions or concerns. For emergent situations where large quantities of broken glass are present, contact Public Safety immediately for assistance at 515-271-2222.

Procedure to Dispose of Drake Residential Housing Chemical Waste

Drake University-owned housing meets the definition of a residential facility and chemical waste that is generated in this housing is exempt from the Environmental Protection Agency’s Resource Conservation and Recovery Act (EPA RCRA) according to 40CFR261.4(b)(1). To manage this waste responsibly, all chemical waste that is removed from University-owned housing should be disposed of through the Metro Waste Authority (MWA) Hazardous Waste Drop-Off located at 1105 Prairie Dr. SW, Bondurant, IA. Procedures for disposal of this waste are listed below:

1. **Identify waste chemicals for disposal.** This includes such items as latex paint, cleaners, aerosols/spray paint, construction chemicals, motor oil and unwanted fuel. This does NOT include fireworks, laboratory chemicals, industrial chemicals or containers that are larger than 5 gallons or 40 lbs. For information on ineligible waste management, contact Chris Nickell, Director EHS (515-271-3804) or Facilities Planning and Management (515-271-xxxx).

2. **Complete the attached form** documenting where the waste is from and what waste will be delivered to the Hazardous Waste Drop Off (See Attachment on EHS Website).
3. **Pack waste chemicals** in sturdy cardboard boxes or plastic totes. If a container is leaking, place it in a 5 gallon bucket with lid or a clear one gallon Ziploc bag for transport.
4. **Call the MWA Hazardous Waste Drop Off** at 515-967-5512 to schedule an appointment. APPOINTMENTS ARE REQUIRED.
5. **Deliver the waste** to the Hazardous Waste Drop Off at the scheduled time.
6. **Sign the CESQG exemption form** that will be given to you by MWA. The invoice for disposal should be billed to the Drake University residential waste account (******)
7. **Staple together** the CESQG exemption form (it will have invoice information on it) and the Drake Residential Waste form and deliver to Chris Nickell, Director EHS via campus mail.

Procedure to Dispose Electronic (Computer/Lab Equipment) Waste

Drake University generated electronics are regulated by the Environmental Protection Agency's Resource Conservation and Recovery Act (EPA RCRA) according to 40CFR261.4(b)(1). To manage this waste responsibly and in compliance, all computer waste and excess laboratory equipment that is removed from the University should be evaluated for re-use, recycling or proper disposal options. Additionally, Drake has relationships with many non-profit groups that may have a need for equipment that is no longer being used by Drake. Coordination of unwanted items with those that can use them is an integral part of Drake's commitment to environmental sustainability. Procedures for evaluation and disposal of these waste classes are listed below:

1. **Identify the waste for disposal.** This includes such items as computers, monitors, CPUs, apple products, tablets, laptops, printers, copiers, faxes, peripherals (mice, speakers, keyboards, cables, etc), projectors, ELMOs, cell phones and any chargers (please do NOT include batteries or appliances (microwaves, refrigerators, etc) as these are required to managed separately according to EPA). For information on types of electronics waste or for unique situations, contact Chris Nickell, Director EHS (chris.nickell@drake.edu or 515-271-3804).
2. **Complete the attached form** documenting where the waste is from and what waste is to be picked up by Facilities and transported to the Electronics Accumulation Area.
3. **Identify items with tape or signage** to indicate which equipment is usable and just being replaced to upgrade technology and which equipment is broken or not functioning properly. If you have questions about what is "usable" or other items that are not listed, or if you need further assistance please contact Chris Nickell, Director EHS (chris.nickell@drake.edu or 515-271-3804).
4. **Complete a Qualtrics Form:** Following the waste pick-up procedures (See "Procedures to Request a Waste Pick-up) fill out a Qualtrics form with all necessary information and submit the form. The form can be found on the EHS website: drake.edu/ehs/.
5. **Contact:** Chris Nickell at 515-271-3804 for questions or additional information

Procedure to Dispose of Used Oil

Used oil, which is primarily generated by Facilities Planning and Management, is managed in a manner consistent with federal regulations for used oil. Used oil is managed separately from other hazardous waste on campus. The following procedures apply to disposal of used oil:

1. **Collect used oil** in an acceptable container. Containers must be in good condition (i.e., no physical damage or rust) and should have no visible leaks. All containers must be labeled with the words “Used Oil”.
2. **Clean up leaks or spills immediately.** If a leak or spill is detected it should be addressed immediately. All leaks should be contained and repaired. All spilled or leaked used oil and all materials used for clean-up should be disposed of properly. EHS can provide guidance for proper disposal of clean-up materials.
3. **Schedule a pick-up.** When used oil containers are full or close to full a pick-up should be schedule with an outside vendor. Used oil does not need to be disposed of as hazardous waste per regulations; however, vendors selected for the disposal of used oil must still meet the requirements set forth in the regulations for off-site shipments (EPA and DOT regulations).
4. **Keep a Record of off-site shipments.** Make sure to keep a log of off-site shipments and get a receipt from the vendor. All records of off-site shipments should be kept for a minimum of three years.
5. **Ask for guidance.** Drake EHS can provide guidance on proper storage as well as vendor selection.

Procedures to Dispose of Universal Waste-Batteries

All rechargeable, Nickel Cadmium, Lithium Ion, Lead-acid, and Automotive batteries are managed as universal waste. These batteries are recyclable and should not be disposed of in a manner that could cause releases into the environment. Alkaline batteries may be disposed of in the regular trash or brought to a community collection center. The following procedures should be followed for disposal of universal waste batteries.

1. **Identify batteries which will be managed as universal waste.** Knowing which batteries can be disposed of as regular trash and which batteries need to be managed as universal waste is the first step. Drake EHS can assist with any questions about battery disposal.
2. **Collect batteries in an appropriate container.** Prior to being collected by Drake EHS, batteries which are managed as universal waste should be kept in containers which are in good condition and will prevent any releases into the environment. Drake EHS can provide guidance on acceptable storage containers. Containers should be labeled with the words “Universal Waste- Batteries” and the date which the first batteries were added.
3. **Complete a Qualtrics Form:** Following the waste pick-up procedures (See “Procedures to Request a Waste Pick-up) fill out a Qualtrics form with all necessary information and submit the form. The form can be found on the EHS website: drake.edu/ehs/.
4. **Ask for guidance.** Drake EHS can provide guidance on which batteries should be managed as universal waste and which batteries may be disposed of as regular trash.

Procedures to Dispose of Universal Waste-Lamps

Fluorescent lamps and high intensity discharge bulbs contain mercury and must be recycled. These lamps are managed according to federal regulations as “Universal Waste”. Drake Facilities Planning and Management are primarily responsible for the replacement, collection, and disposal of universal waste lamps. Below are the procedures for the management of universal waste lamps.

1. **Contact Facilities Planning and Management.** A work order should be submitted to have fluorescent lamps and high intensity discharge bulbs replaced. Work orders are available to each department on campus; the building manager should be contacted to have a work order submitted.
2. **Store in Appropriate Containers.** Universal waste lamps should be stored in containers that are in good condition and can be closed to prevent potential releases into the environment. Containers should have a “Universal Waste” label with the date on which the first lamp was added. Should a lamp break, it should be cleaned up immediately and managed as a hazardous waste containing mercury. Contact Drake EHS for assistance with cleanup.
3. **Contact a vendor for collection.** When containers are full or within one year of the first lamps being added, a collection should be scheduled with a vendor. This will be handled by Drake Facilities Planning and Management.
4. **Ask for assistance.** Drake EHS can assist in determining what lamps are required to be managed as universal waste as well as the procedures for submitting a work order to have lamps replaced and collected.

Procedures to Dispose of Universal Waste- Mercury Containing Equipment

Mercury containing equipment includes thermometers, thermostats, switches, barometers, etc. Mercury containing equipment is essentially any piece of equipment that contains metallic mercury. This equipment is managed as “Universal Waste” per federal regulations. Below are the procedures for disposing of mercury containing equipment.

1. **Identify mercury containing equipment for disposal.** Prior to disposal a determination should be made on whether a piece of equipment contains metallic mercury. Equipment containing mercury will be disposed of by Drake EHS.
2. **Submit a pick-up request form.** Fill out a Qualtrics form by visiting the Drake EHS website: drake.edu/ehs/. Be sure to note what type of equipment is being removed as well as a specific location of the equipment. Drake EHS may request that the equipment be marked with signage reading: “Universal Waste- Mercury Containing Equipment”. Equipment which is small enough may be placed in Satellite Accumulation Areas so long as all guidelines are followed (See “Satellite Accumulation Guidelines”).
3. **Clean up spills immediately.** If there is a spill which results in the release of mercury (i.e., equipment breaks open) it should be cleaned up immediately. All personnel not involved in clean-up should be removed from the area. For larger spills contact Drake Public Safety and/or Drake EHS for assistance.
4. **Ask for guidance.** Drake EHS can provide guidance on disposal of mercury containing equipment.