

Applies to: (examples; Faculty, Staff, Students, etc)

Faculty , Staff , Students

Policy Overview:

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The primary purpose of this program is to help St. Louis College of Pharmacy, a small-quantity generator of hazardous wastes, comply with federal and state laws pertaining to proper hazardous waste management procedures. Small Quantity Generators are institutions that produce between 220 and 2,200 pounds of hazardous waste monthly, or that accumulate such amounts. Hazardous waste regulations often are complex and difficult to interpret. A six-step compliance procedure has been chosen for the program. These steps include:

1. Identification of hazardous waste;
2. Registration of waste streams;
3. Storing and labeling hazardous waste;
4. Safety requirements;
5. Transportation, management and disposal of hazardous waste;
6. Payment of fees and taxes and penalties or violations;

Applies to St. Louis College of Pharmacy laboratory personnel that generate hazardous waste.

Definitions:

Term	Definition
Accumulation Start Date	The day, month and year that the first drop of waste is placed in storage.
CFR	Code of Federal Regulations
CSR	Missouri Code of State Regulations
Container	Any easily and readily movable enclosure constructed of manmade materials that may be used for hazardous waste storage, treatment, transport, or disposal
DNR (the department)	Missouri Department of Natural Resources
EH&S/Waste professional	Any person internal or external to the College who is responsible for making all final waste determinations.
EPA	United States Environmental Protection Agency
Flashpoint	The minimum temperature at which a liquid or solid gives off sufficient vapor to form an ignitable vapor-air mixture near the surface of the material as determined by a specific method
Generator	Any person, by site, whose act or process produces hazardous waste identified or listed in the regulations, or, any person whose act first causes a hazardous waste to become subject to regulation
Hazardous Waste	Any waste or combination of wastes as defined or listed by regulation, which, because of its quality, concentration, physical, chemical, or infectious characteristics, may cause or significantly contribute to an increase in mortality or an increase in serious, irreversible, or incapacitating reversible illness, or pose a threat to the health of humans or other living organisms.
Manifest	The shipping document required to accompany all hazardous waste shipments of a regulated quantity
RCRA	Resources Conservation and Recovery Act
Recycle	To reclaim or reuse a spent material

Regulated Quantity	The generation or accumulation of a minimum amount of hazardous waste, as defined by regulation, which subjects the generator to following certain regulatory requirements
Resource Recovery	The reclamation of energy or materials from waste, its reuse, or its transformation into new products, which are not wastes
RSMo	Revised Statutes of the State of Missouri
Tank	A stationary device designed to contain an accumulation of hazardous waste and is constructed primarily of non-earthen materials (e.g. concrete, steel, plastic) that provides structural support.
Waste	Any material for which no use or sale is intended and that will be discarded, or any material that has been or is being discarded. Waste also includes certain residual materials that may be sold for purposes of energy or materials, reclamation, reuse, or transformation into new products that are not wastes.
Waste Generators	Personnel that generate materials as a function of a process that could be deemed "waste" by the professional staff. Waste generators are responsible for providing the professional staff with specific generator knowledge so that a final waste determination can be made.
Working Container	A temporary container that is used for daily collection of hazardous materials that have not yet been deemed "waste". The materials in this container are intended to be emptied into a properly managed waste container at the end of each day if they are not needed at the end of a process period. The temporary container must be appropriately labeled and remain closed when not in use.

Details:

1. Missouri Legislation

- a. Missouri generators of hazardous waste who produce 220 pounds or more per month, or who accumulate such an amount through storage, have been liable under the regulatory statutes of the Missouri Hazardous Waste Management Law since 1980.
- b. For selected very toxic or acute hazardous wastes, the regulated quantity is as small as 2 pounds per calendar month.
- c. Those generators who produce greater than 220 pounds but less than 2200 pounds of hazardous waste per month or accumulate within that range are classified as Small Quantity Generators.
- d. Continued public concern and legislative activity are bringing about more vigorous enforcement by regulatory agencies. Many small business firms in the private sector, as well as public and private institutions, are finding themselves confronted with the problems of how to properly manage hazardous waste.
- e. Copies of the Revised Statutes of Missouri are available through the Reviser of Statutes at 573-526-1288, or at www.moga.mo.gov.
- f. Copies of the Missouri Code of State Regulations are available through the Missouri Secretary of State at 573-751-4015, or at www.sos.mo.gov/adrules/csr/csr.asp.

Procedures:

1. a. Identifying Waste

- i. The Compliance Process
- ii. Any material a facility produces other than products used for its intended purpose, gaseous emissions and materials listed in 40 CFR 4(a) are considered to be solid wastes. After a facility determines it generates a solid waste, and it is not excluded from the definitions of solid or hazardous waste, it must determine if the waste is hazardous.
- iii. Wastes are considered hazardous if they meet one or both of the following criteria:
 - i. The name of the substance is included on any of the hazardous waste lists found in the regulations.
 - ii. The waste exhibits any one, or a combination of the following four characteristics:
 - i. **Toxic** – A waste is toxic if when tested using the Toxicity Characteristic Leaching Procedure, the extract from the representative sample of the waste contains any of the contaminants included in the EPA D-Listed Hazardous Waste Table at concentrations equal to or greater than the listed Regulatory Level.
 - ii. **Reactive** – A waste is reactive if the waste is normally unstable, reacts violently with water, has explosive potential or is capable of releasing poisonous gases.
 - iii. **Ignitable** – A waste is ignitable if the waste material is a liquid that has a flash point of less than 140° F., or a solid that catches fire easily and burns so rapidly that it creates a serious health hazard.

- iv. **Corrosive** – A waste is corrosive if the waste material is a liquid that has a pH value less than or equal to 2.0 or greater than or equal to 12.5.
 - iii. If unable to identify the waste materials using these methods, seek assistance from the chemical supplier. The supplier will be able to provide a Material Safety Data Sheet. This will help to determine if any of the materials used in the process contain hazardous materials. The regional or national trade association or the department may also be able to provide guidance.
 - iv. In some cases, it may be necessary to submit a representative sample of the waste to a reputable environmental laboratory for testing. Even if a waste is a listed waste, the facility must still determine if the waste demonstrates a hazardous characteristic. Determination may be made through knowledge of the generation process or by testing.
 - v. Periodic evaluations of waste materials should be performed. Retain all records of any results obtained. Pl's are required to reevaluate waste streams when a change in raw materials or a change in the process occurs. If waste streams are determined to not be hazardous, do not discard records. The information may be needed at a future date to verify the results.
 - iv. **Hazardous Waste Mixtures** - In general, mixing a hazardous waste with a non-hazardous waste will result in the entire volume being regulated as a hazardous waste. This includes mixing liquids with liquids and mixing solids with liquids. It is a good management practice to keep hazardous and non-hazardous waste separated while in storage.
 - v. **Characteristic Hazardous Waste Definitions**
 - i. **Ignitable Wastes – D001 - 40 CFR 261.21**
 - i. The ignitability characteristic identifies wastes that can readily catch fire and sustain combustion. Most ignitable wastes are liquid in physical form. EPA uses one of two flash point tests (see 40 CFR 261.21) as a method to determine whether a liquid is combustible enough to deserve regulation as hazardous. A liquid is considered an ignitable hazardous waste if it exhibits a flash point less than 60°C (140°F).
 - ii. Some wastes in solid or non-liquid physical form can also readily catch fire and sustain combustion. Non-liquid waste is considered ignitable if it can spontaneously catch fire or catch fire through friction or absorption of moisture under normal handling conditions. Some compressed gasses and substances meeting the Department of Transportation definition of oxidizer are classified as ignitable wastes. Ignitable wastes carry the waste code D001 and are among the most common hazardous waste.
 - ii. **Corrosive Wastes – D002 - 40 CFR 261.22** The corrosivity characteristic identifies wastes are either strong acids, alkalines or are liquids with capabilities to corroding steel and other materials.
 - i. Corrosive wastes that are strong acids or alkalines can readily corrode or dissolve flesh, metal or other materials. To be classified as corrosive the waste must have a pH less than or equal to 2 or greater than or equal to 12.5 as determined by a pH meter or other approved method (see 40 CFR 261.22).
 - ii. Corrosive wastes that can corrode steel at a rate of 6.35 mm (0.25 inch) per year are also classified as corrosive wastes.
 - iii. Physically solid, non-liquid, wastes are not evaluated for corrosivity. Corrosive wastes carry the waste code D002, and they are also some of the most common hazardous wastes.
 - iii. **Reactivity – D003 - 40 CFR 261.23**
 - i. The reactivity characteristic identifies wastes that readily explode or undergo violent reactions. Reactive hazardous wastes are relatively uncommon and are defined largely by criteria from the EPA. Waste handlers are required to use their best judgment in determining if a waste is sufficiently reactive to be regulated.
 - ii. Criteria of reactive wastes include:
 - i. It can explode or violently react when exposed to water or under normal handling conditions.
 - ii. It can create toxic fumes or gasses when exposed to water or under normal handling conditions.
 - iii. It meets the criteria for classification as an explosive under Department of Transportation regulations (see 49CFR §§ 173.51, 173.53 and 173.88).
 - iv. It generates toxic levels of sulfide or cyanide gas when exposed to a pH range of 2 through 12.5.
 - iii. Reactive wastes carry the hazardous waste code D003
 - iv. **Toxicity – D004 to D043 - 40 CFR 261.24**
 - i. The toxicity characteristic identifies wastes likely to leach dangerous concentrations of toxic chemicals and constituents. To predict whether any particular waste is likely to leach chemicals or elements into the groundwater at dangerous levels, EPA designed a lab procedure to replicate the leaching process. The lab procedure is known as the Toxicity Characteristic Leaching Procedure.
 - ii. The Toxicity Characteristic Leaching Procedure method must be used to create a leachate similar to the leachate generated by a landfill containing the tested waste. Once created, it must be determined whether it contains any of the toxic chemicals or elements in amounts above the specified regulatory levels in Table I. Toxic wastes carry the hazardous waste code that corresponds to the toxic contaminant causing it to be hazardous. These waste codes are found in Table I in Appendix C.
 - vi. **Hazardous Waste Listings**
 - i. The following pages contain listings of hazardous waste reprinted from federal and state regulations. Regulated quantities are given for each waste list.
 - i. EPA "P" Listed Hazardous Wastes – Acutely Toxic Wastes Listed in Appendix D.
 - ii. EPA "K" Listed Hazardous Wastes – Hazardous Wastes from Specific Sources listed in Appendix H.
 - iii. EPA "U" Listed Hazardous Wastes listed in Appendix E.
- b. Waste Registration

i. Waste Registration -

There are also penalties for non-compliance with the Missouri Hazardous Waste Management Law.

- i. The generation of waste creates a waste stream. College operations producing more than one kind of waste may generate more than one waste stream. Each waste stream that is different in character must be identified.
- ii. Any waste stream in a regulated quantity must be registered with the Department of Natural Resources. A regulated quantity of hazardous waste is any waste stream or combination of two or more waste streams generating 220 pounds or more within a calendar month, or accumulated at any one time.
- iii. Any one waste, or combination of wastes from the K-List, F-List, U-List, D-List or characteristic waste group (Ignitable, Corrosive or Reactive) totaling 220 pounds or more, generated in the time period specified, is a regulated quantity and triggers the requirement for registration with the department.
- iv. In a similar manner, any one waste or combination of wastes from the P-List totaling 2.2 pounds or more, and generated in the time period specified, also requires registration with the department.
- v. Waste generation totals are registered on a per-site basis. If the operation is conducted at more than one location within the city, county or state, each individual site producing a regulated quantity of hazardous waste will require a separate registration with the department. A business having more than one source of hazardous waste generation may be considered an individual site only if all generation occurs on a single, or contiguous, property.
- vi. All small quantity and large quantity generators of hazardous waste must register with the Missouri Department of Natural Resources by completing and filing a Notification of Regulated Waste Activity form. Conditionally exempt generators of hazardous waste (those facilities generating less than 220 pounds of hazardous waste per month or accumulating less than 220 pounds of hazardous waste at any one time) may choose to register also but are not required to do so. A \$100 registration fee to the department is required at the time of initial registration. If a particular site has already been issued identification numbers at some time in the past but the registration has been inactive, or if the registration is being transferred to another department or individual, then an updated registration form is required to make the re-activation or transfer. A \$100 registration fee may also be required depending on the specific circumstances of the re-activation or transfer. Registered generators are also required to file an updated registration form if any of the information previously filed with the department changes.
- vii. The Missouri Generator Identification Number and the Federal (EPA) Identification number are used as a continuing part of the hazardous waste management system and are unique to the identity of the facility.
- viii. Tonnage Fee
 - i. Operations generating regulated quantities of hazardous waste are assessed a tonnage fee based on the amount of waste generated or shipped off-site for treatment, storage or disposal. This fee is \$5 per ton, with a minimum of \$150 and a maximum of \$52,000 annually per site. There are no exemptions from this fee. The fee is outlined in section 260.380.1.(10) of the Missouri statutes.

c. Storing and Labeling

The safe handling and storage of hazardous waste is important. Storage and labeling standards have been established by law. This section discusses the two basic types of storage used for hazardous waste, labeling requirements and storage time limits.

i. Hazardous Waste Storage

- i. A container is defined as "any portable device in which a material is stored, transported, treated, disposed of or otherwise handled." Containers are constructed of various materials and come in sizes ranging from a few gallons to the larger 55-gallon drums. During the entire time hazardous waste is accumulated and stored on site you must comply with the following rules.
 - i. All storage containers must meet U.S. Department of Transportation requirements.
 - ii. The container must be compatible with the waste stored in it. Wastes that might react with each other should not be stored in the same container. A berm, dike, or other device must separate in compatible wastes stored in the same area.
 - iii. Containers must be in good condition, undamaged and free of rust and leaks. Any container found to be leaking must be replaced immediately.
 - iv. Any container holding hazardous waste must be kept closed at all times except when you are adding or removing waste. Closed can be defined that the container will not spill if it is tipped and will not allow the escape of flammable vapors.
 - v. You must inspect the storage area and all hazardous waste containers at least once each week, checking for signs of corrosion and leaking.
 - vi. Ignitable or reactive wastes must be located at least 50 feet from property lines.
 - vii. Adequate aisle space must be maintained between containers.
 - viii. "No Smoking" signs must be conspicuously placed by ignitable or reactive wastes.

ii. Labeling

- i. Small quantity generators must comply with the following rules for marking and labeling during the entire time hazardous waste is accumulated and stored:
 - ii. From the time the storage begins, the container must be labeled with:
 - i. "HAZARDOUS WASTE – Federal Law Prohibits Improper Disposal. If found, contact the nearest police or public safety authority or the U.S. Environmental Protection Agency
Generator's Name and Address

Manifest Document Number

- iii. The manifest document number does not have to be marked on the container until the container is prepared for shipment off site.
 - iv. From the time waste accumulation and storage begins, each container label must show the accumulation starting date. This is the day, month and year that you placed the very first drop of waste inside the container.
 - v. From the time waste accumulation and storage begins, each container must be labeled with the appropriate U.S. Department of Transportation hazardous material warning label. Examples include “flammable liquid,” “corrosive” and “poison”. You will also need to check the Department of Transportation regulations at 49 CFR 172.101 (hazardous waste materials table) to determine the hazard class designated for the particular chemical substance(s) you are labeling.
 - vi. To satisfy the labeling requirements, pre-printed labels may be purchased from numerous sources. Contact the transporter for information on the availability of these labels and placards. When recording information on these labels use waterproof ink.
- iii. Satellite Storage
- i. The satellite storage provision, which has more lenient standards, permits a generator to accumulate and store up to 55 gallons of a hazardous waste (one quart only of an acutely hazardous wastes) in a single container at or near the point of initial generation. Under this regulation, while the waste is accumulating in satellite storage, the quantity of satellite waste is not considered in calculating the total amount of waste stored at the facility.
 - ii. The following conditions must be met when accumulating hazardous waste at satellite sites:
 - i. The hazardous waste must be in a container that is in good condition, free of rust, damage and leaks.
 - ii. Only compatible wastes may be stored in the same container.
 - iii. The container must remain closed except when you are adding or removing waste. Closed can be defined that the container will not spill if it is tipped and will not allow the escape of flammable vapors.
 - iv. The container must be marked with the words HAZARDOUS WASTE or other words that adequately describe the contents.
 - v. Containers must be marked with the accumulation starting date.
 - vi. Within three days filling a container of 55 gallons or less of hazardous waste or one quart of an acutely hazardous waste, the waste must be transferred to the primary storage area. If the container(s) is transferred to the primary storage area, a new beginning accumulation date is marked on the container(s). If the container(s) is emptied into another container already in the primary storage area the beginning accumulation date on the satellite container is removed and a new date marked when the first hazardous waste is added to that container.
 - vii. Regardless of how small the quantity may be, the satellite storage waste must be transferred to the primary hazardous waste storage area for the College within one year of the starting accumulation date.
- iv. Reuse of Containers
- i. A container may be reused for the storage and shipment of a hazardous waste if it meets the following criteria:
 - i. The container must be in its original good condition.
 - ii. The container must be tested for leaks.
 - i. Leak test protocol includes inspection of container for leaks, cracks, or damage. The container must be removed from service if container does not pass visual inspection for leaks.
 - iii. The container must have the proper hazard class labeling affixed.
 - ii. Refer to the Department of Transportation regulations at 49 CFR 173.28 for specific information.
- v. Storage Time Limits
- i. Time limits have been established for the storage of hazardous waste. The storage time begins with the accumulation starting date, which is the day, month and year when the very first drop of waste is placed in the container. Hazardous waste may be stored in a container in the satellite accumulation area for a period of up to one year. Once accumulation of waste has begun in the hazardous waste storage area of the facility, a small quantity generator may store the waste up to the maximum of one of two time limits:
 - i. Up to 180 days if the waste is shipped offsite to a facility 200 miles or less from the College’s address.
 - ii. Up to 270 days if the waste is shipped offsite to a facility more than 200 miles away from the College.
 - iii. Note: The College waste facility is within 200 miles of campus so the time limit for storage is 180 days.
- vi. Storage of More Than 1,000 Kilograms
- i. If the department produces hazardous waste at the Small Quantity Generator level and stores 1,000 kilograms (2,200 pounds) or more of hazardous waste, then the College can keep its Small Quantity Generator status but would also need to meet some Large Quantity Generators requirements. These requirements include creating and maintaining a personnel-training program like those required for Large Quantity Generators, and preparing and maintaining a contingency plan.
 - ii. Usually Small Quantity Generator Operations decide it is not cost-effective to store hazardous waste because of the additional standards. It is also important to remember that a Small Quantity Generator cannot store more than 6,000 kilograms of hazardous waste, according to 40 CFR 262.34 (d)(1) without applying for a permit for hazardous waste storage.

- iii. Operations that store over 1,000 kilograms of liquid hazardous waste, regardless of whether they are a Small Quantity Generator or a Large Quantity Generator, must provide a containment system.
 - iv. The containment system must have an impervious base and be free of cracks and gaps. The base of the containment system must be either sloped or the hazardous waste containers must be elevated off the base so that they are protected from contact with accumulated liquids. The containment system must have a capacity equal to ten percent of the volume of all the liquid containerized hazardous waste, or ten percent of the largest container, whichever is greater. Finally, operations must prevent liquids from entering the containment system, and remove liquids as necessary to prevent overflow of the collection system.
- d. Safety Requirements
- i. Generators of regulated quantities of hazardous waste are required to meet safety standards as prescribed by Missouri and Federal Regulations. An emergency coordinator must be available at all times to respond to an emergency at the College. This individual is usually the owner or manager but also may be an appointed assistant. The emergency coordinator must be thoroughly familiar with the operations and all emergency procedures.
 - ii. Mandatory Safety Requirements
 - i. The facility must be operated and maintained to minimize the possibility of an explosion, fire or accidental release of a hazardous waste. A clean and orderly work place is the best policy.
 - ii. Adequate water supply, fire extinguishers, hoses or other appropriate equipment must be available at all times. The equipment is to be regularly tested and maintained in good working order.
 - iii. Appropriate spill-control equipment, decontamination and safety equipment (fire blankets, respirators, self-contained breathing apparatus, absorbents, shovels, etc) must be available, tested and maintained on site.
 - iv. If no direct alarm is available, the telephone number of the fire department and police must be posted by the phone.
 - v. The emergency coordinator's name and phone number must be posted near the phone. All employees must be thoroughly familiar with the proper waste-handling and emergency procedures.
 - vi. The locations of all fire extinguishers and control equipment must be posted by the telephone.
 - vii. A working alarm system, intercom, telephone or other communication, alert or safety device must be convenient and available for all employees to use in the event of an emergency.
 - viii. Employees must be familiar with waste handling and emergency procedures.
 - ix. Arrangements with local emergency agencies must exist.
 - iii. Spills
 - i. In the event of a fire, explosion or spill involving hazardous waste, the emergency coordinator must contact the EPA National Response Center at 800-424-8802 and the Missouri Emergency Response Center at 573-634-2436 if the spill endangers surface water, human health or the environment. If in doubt it is better to call, because serious penalties exist for failure to report emergencies.
 - ii. The College has formalized contracts with Woodard Restoration to be utilized in the event of water cleanup or incidental use. A formal contract also exists with Heritage Environmental for DEA drug disposal and HazMat cleanup.
- e. Transportation, Management, and Disposal of Hazardous Wastes
- Some types of waste may be managed properly and legally at the College. Other types require specialized handling and shipment to the College that specialize in storage, recycling, treatment and disposal technologies. It is the responsibility of the small-quantity hazardous waste generator to decide which method of management is the best for the facility in terms of future liability, potential adverse environmental impact and cost. This section covers waste-management options available to small-quantity generators, options such as recycling, sanitary sewer systems and disposal facilities. Transportation requirements and use of the hazardous-waste manifest also are found in this section.
- i. Management and Disposal Options
 - i. Recycling
 - i. If the process cannot be made non-hazardous, waste recycling (reuse of materials) may be an acceptable method of management. This recycling process sometimes can be accomplished at the College through the use of a resource recovery unit. Refer to the "Requirements for Resource Recovery Facilities" in Step 2 — Registering Waste.
 - ii. Sanitary Sewer System
 - i. Since the College is located in an area serviced by a public sanitary sewer system, you may be able to legally discharge the hazardous waste into it.
 - ii. Before attempting any discharge of a hazardous waste into a sanitary sewer system, you must obtain permission from the local public sewer district. Because of their chemical characteristics, many wastes are capable of destroying the biological activity of a wastewater-treatment process. Do not discharge hazardous waste into a storm-water sewer, septic tank, aerated septic tank, or other similar device. To do so is a serious violation of state and federal law and may result in substantial penalties being assessed against the College.
 - iii. [For more information on the STLCOP policy on drain disposal of materials, please reference it here.](#)
 - iii. [For disposal of DEA Regulated wastes, please reference the policy here.](#)
 - ii. Treatment, Storage, and Disposal Facilities
 - i. In the event that you cannot recycle or discharge the regulated quantities of hazardous waste, it will be necessary to use a company that can manage the waste for you. Thirteen commercial facilities can be found in the state of Missouri. You may contact one of these facilities to help in handling, managing, transporting and disposing of hazardous waste. Brokering facilities are also available throughout the state.

- ii. The facility the College chooses must be properly licensed by the Missouri Department of Natural Resources and the U.S. Environmental Protection Agency. For facilities outside of the state, you should contact the appropriate out-of-state environmental agency.
 - iii. These facilities are restricted in the kinds and amounts of wastes they can legally accept. Be certain that the facility is allowed to accept that particular waste.
 - iv. For non-regulated amounts of hazardous waste (Conditionally Exempt Generators of Hazardous Waste), the generator may transport their own hazardous waste without using a manifest or licensed hazardous waste transporter. You will need to follow U.S. Department of Transportation requirements for the wastes being shipped. The waste must be transported to a facility that is permitted or certified to accept the specific hazardous waste.
- iii. Transportation Requirements for Hazardous Waste
- i. Hazardous waste from a small or large quantity generator must be transported by a waste hauler who has a valid EPA identification number and a Missouri hazardous-waste transporter license. To locate a licensed transporter, refer to the list of licensed hazardous waste transporters located on the Missouri Department of Natural Resources' Hazardous Waste Program website at: www.dnr.mo.gov/env/hwp/enf/translist.htm. For information on how to obtain a hazardous waste transporter license contact the Missouri Department of Transportation, Motor Carrier Services Unit.
- iv. Hazardous Waste Manifests
- i. Before offering hazardous waste for transportation, the generator must prepare a shipping document known as a "Uniform Hazardous Waste Manifest." This document is similar to a bill of lading and is one of the essential pieces of paperwork used in a hazardous waste management system.
 - ii. The manifest accompanies the shipment of hazardous waste to the designated treatment, storage and disposal facility. During this time, three individuals will sign the document. Those signing include:
 - i. The generator's authorized representative.
 - ii. The transporter (multiple transporters must use the Continuation Form and each transporter must sign the documentation)
 - iii. An authorized representative of the designated facility.
 - iii. These signatures provide written proof of the waste's mode of travel and destination.
 - iv. It is the designated facility's responsibility to ensure the original copy of the manifest is submitted to the department. The generator must retain an additional copy of each manifest in the files at the generating site. The generator must retain those records for a minimum of three years. The generator must receive a copy of the original manifest from the designated facility within 35 days of the date the waste was accepted by the initial transporter. If the generator does not receive the copy of the manifest within the timeframe, the generator must file a Hazardous Waste Generator's Exception Report. The generator must file the report with the department within 45 days of the date of the original shipment.
 - v. Manifests are available for sale by vendors designated by the U.S. Environmental Protection Agency.
 - vi. For questions related to manifests, please contact the Missouri Department of Natural Resources' Hazardous Waste Program at 573-522-5665 or visit the department's Web site at www.dnr.mo.gov/env/hwp/enf/manifests.htm.
- v. Universal Wastes
- i. Universal wastes are hazardous wastes, but may be managed under less-stringent requirements if certain criteria are met. Universal wastes in Missouri include:
 - i. Batteries, such as nickel-cadmium batteries, mercury, silver or lithium "button" batteries and small, sealed lead-acid batteries found in electronic equipment, mobile telephones, portable computers and emergency backup lighting. Lead acid batteries may also be managed as a Universal Waste.
 - ii. Thermostats, mercury switches and mercury containing thermometers and manometers found in homes and commercial, industrial, agricultural and community buildings.
 - iii. Mercury containing lamps including fluorescent, high-pressure sodium, mercury vapor, metal halide and high intensity discharge lamps.
 - iv. Pesticides that have been recalled or banned from use, are obsolete, have become damaged or are no longer needed due to changes in cropping patterns or other factors.
 - ii. The universal waste rule is a set of federal environmental regulations adopted with modifications by Missouri. The effective date of the rule in Missouri was Jan. 31, 1999. The rule can be found in Chapter 16 of the Missouri Hazardous Waste Management Regulations; which references portions of 40 CFR Part 273. This rule identifies all universal wastes in Missouri and states how they can be handled in a lawful manner. In general, the Universal Waste Rule is less stringent than existing hazardous waste regulations.
 - iii. Small quantity handlers of universal wastes would generate or accumulate less than 1,000 pounds. Small quantity handlers generating only universal wastes that they manage under this rule do not need to register or obtain an EPA identification number or keep records of universal wastes received or shipped.
- vi. Radioactive Wastes
- i. Radioactive wastes will be managed under the guidelines of Washington University in St. Louis. [For more information on their policy, please reference it here.](#)
- vii. Biological Wastes
- i. Biological Waste is defined and a waste capable of producing an infectious disease. Other terms are "medical waste", "biohazardous waste", "pathological waste", or "infectious waste".

- ii. Regulated Biological Waste is defined by law as a waste capable of producing an infectious disease because it contains pathogens of sufficient virulence and quantity so that exposure to the waste by a susceptible human host could result in an infectious disease. You may hear terms such as “medical waste,” “biohazardous waste,” “pathological waste,” or “infectious waste”, Environmental Health & Safety (EH&S) treats all of these types of waste as Regulated Biological Waste.
 - iii. [For more information please reference the Disposal and recycling of hazardous wastes policy here.](#)
 - viii. Small Quantity Handlers
 - i. Must not dispose of a universal waste into the environment.
 - ii. Must not dilute or treat a universal waste or break or crush mercury containing lamps without a Missouri Resource Recovery Certification or permit.
 - iii. Must follow the waste management requirements stated in the rule for the particular waste(s) being managed.
 - iv. Must prevent releases to the environment.
 - v. Must label waste as a “universal waste” as described in the rule.
 - vi. Must train employees on proper handling and emergency procedures.
 - vii. Must respond to spills and manage the spill residue as hazardous waste.
 - viii. May accumulate universal waste on-site for up to one year.
 - ix. May accumulate universal wastes for more than one year for the sole purpose of facilitating proper recovery and disposal.
 - x. May accept universal wastes from off site and keep them for up to one year (excluding pesticides).
 - xi. May self-transport the universal waste to an authorized destination facility or Missouri Certified Resource Recovery Facility (for pesticides, to a Missouri Pesticide Collection Program).
 - ix. If self-transporting, the handler is required to meet universal waste transporter requirements in the rule.
 - x. In Missouri, this rule does not apply to any operation that generates and accumulates less than 100 kilograms (220 pounds) of hazardous wastes per month or at any one time. However, these small operations are encouraged to participate voluntarily by using handlers and collection centers that legitimately recycle/dispose their universal wastes.
 - f. Fees, Summary Report, and Penalties and Interest
 - i. Hazardous Waste Fees, Summary Report, and Penalties and Interest
 - i. As a generator of hazardous waste, you are required by law to pay certain fees each year based on the amount of hazardous waste you generate. These fees are deposited to the Hazardous Waste Fund and used to help insure compliance with requirements for proper handling of hazardous waste as well as cleanup of sites already contaminated.
 - ii. All generators pay the In-State Tonnage Fee of \$5 per ton fee on their hazardous waste. There is a \$150 minimum fee and a \$52,000 maximum annually.
 - iii. If the waste is disposed of into or on the land, there is also a Land Disposal Fee of \$25 per ton. However, this fee is not charged unless you land dispose of 10 tons or more.
 - ii. Generator’s Hazardous Waste Summary Report Form
 - i. You will be billed for the appropriate fees by the first of December of each year based upon the amount of hazardous waste generated during the previous state fiscal year (July 1 to June 30). Payment is due before January 1 of the next calendar year. In order to be properly assessed, you must complete and submit to the department the Generator’s Hazardous Waste Summary Report Form. Small quantity generators need to submit these forms annually, not quarterly. If at any time the facility generates or stores enough waste to be classified as a large quantity generator, they must file a Notification of Regulated Waste Activity form indicating the change and begin filing the Summary Report Form quarterly. For small quantity generators these reports must be submitted within 45 days of the end of the fiscal year. It is recommended that you keep this copy of the form as a master and photocopy them as needed for the College.
 - ii. This report may also be completed and filed electronically. The electronic form and instructions [can be accessed on the Web at: www.dnr.mo.gov/env/hwp/downloads/hwfacgen-reports.htm](#).
 - iii. Late Fees, Penalties, and Interests
 - i. Failure to pay the assessed fees in a timely manner will result in a 15 percent late fee required by law. Late or untimely payment of any assessed Land Disposal Fee will result in an interest rate of 10 percent per annum also being charged.
 - ii. In Missouri, both civil and criminal penalties may be imposed for violations of the Missouri laws and regulations regarding hazardous waste. See Section 260.425 RSMo for a more complete explanation of the following.
 - i. Civil penalties may range from \$40 to \$10,000 per violation.
 - ii. Multi-day civil penalties may range from \$16 to \$2,000 per day that the violation was in existence.
 - iii. Criminal penalties range between \$2,500 and \$25,000 for each day of violation or up to one-year confinement in a county jail.
 - iii. Successive criminal convictions provide for a penalty between \$5,000 and \$50,000 for each day of violation or up to 10 years’ imprisonment.
 - iv. Additional penalties include \$32,500 per incident to laboratory personnel and may include additional EPA fines.
 - g. Emergency Procedures
 - i. St. Louis College of Pharmacy maintains a Building Emergency Operations Plan as a component of the Emergency Management Framework for the College. Emergency Management at the College aims to include all-hazards approach to emergency management to mitigate, prepare, respond, and recover from emergencies affecting the St.

Louis College of Pharmacy. Emergency Management Framework, Emergency Operations Plan, and the building emergency action plans are available on the STLCOP Campus Safety webpage.

- ii. In the event of a Hazmat event, emergency push buttons are located in critical areas for hazardous materials transportation and storage. To notify Public Safety of an emergency involving hazardous materials, appropriately placed buttons can be used in the event before evacuating the area.
- iii. The evacuation and chemical spill/release emergency procedures are below.
- iv. Evacuation
 - i. Many incidents (e.g. building fires, chemical releases, earthquake) could require an evacuation of all or part of the campus. All students and employees must evacuate the building they are in when notified to do so.
 - ii. Actions to Take
 - iii. When the building's fire alarm activates, or when notified to evacuate by Public Safety, Emergency Management or Facilities Management, you should:
 - i. Stop all work activities
 - ii. If possible to do so without endangering yourself, shut down all operations that could produce hazards if left unattended
 - iii. Begin evacuation immediately
 - iv. Alert others around you that an evacuation is taking place and they need to exit
 - v. Close doors behind you as you exit, but do not lock them (closed doors help contain fires; locked doors inhibit rescue operations)
 - iv. Unless it creates an unnecessary delay, gather your keys, purse or wallet as you evacuate, keeping in mind you may not be allowed back into the building for an extended time.
- v. Evacuation Routes/Exiting the Building
 - i. During a building evacuation, proceed to the nearest exit or stairwell if available. Use an alternate escape route if the stairwell is involved with fire, smoke, or otherwise obstructed. Each employee should be aware of at least two exit routes in their main building in the event one is compromised.
 - ii. Emergency Exit signage is posted throughout the building in corridors, elevator lobbies and stairwells.
 - iii. Walk - do not run - and do not use building elevators during an evacuation under any circumstances.
 - iv. Assist those who need assistance, especially physically challenged persons, to evacuate or in relocating them to an area of safe refuge. Do not move injured persons unless it is absolutely necessary. Persons involved with developing the local procedures need to address how to evacuate colleagues with special needs who are unable to evacuate on their own. Contact the STLCOP Emergency Manager for information and guidance on this topic.
 - v. If you are unable to leave a building that is being evacuated due to injury or entrapment, attempt to alert someone evacuating the building of your inability to leave. Advise them of your name, department, and room number or location. Make sure they understand to advise the Building Emergency Coordinator (BEC) of the situation.
- vi. Hazardous Materials Exposure/Spill
 - i. Definitions
 - i. Hazardous Material: Any material that could cause injury or death to humans and animals, or damage or pollute the land, air or water.
 - ii. Exposure: Direct contact between eye, mouth, mucous membrane, cut skin or abrasion with chemical or any other potentially hazardous material.
 - iii. Spill: Any unintentional release of a chemical or hazardous material.
 - ii. Actions to Take –
 - iii. Exposure Skin Contact/Splash: In the event any chemicals make contact with your skin or splash into a mucous membrane
 - i. Immediately wash the area with soap and water or irrigate the membrane with tepid water
 - ii. If appropriate, remove contaminated clothing
 - iii. Notify your supervisor and ensure an Incident Report is completed
 - iv. Contact Environmental Health & Safety at 446-8133 as soon as possible
 - iv. Inhalation: Leave the area and get to an area with fresh air
 - i. If you have shortness of breath or trouble breathing, have someone call Public Safety at 446- SAFE (7233)
 - ii. Notify your supervisor and ensure an Incident Report is completed
 - iii. Contact Environmental Health & Safety at 446-8133 as soon as possible
 - v. Ingestion:
 - i. Notify the 24/7 Exposure Hotline at 1-877-POST-EXP (877-767-8397) for help
 - ii. Notify your supervisor and ensure an Incident Report is completed
 - iii. Contact Environmental Health & Safety at 446-8133 as soon as possible
- vi. Actions to Take - Spill/Release
 - i. In the event any chemicals or hazardous materials are unintentionally released - regardless of size and location of the spill - quick action is necessary.
 - ii. Emergency alert buttons will be located on the loading dock, in certain laboratories, and outside the chemical storage room on the 6th floor of the ARB. These buttons are to be used in the event of a spill or release where EH&S, Public Safety, need to be notified.
 - iii. Internal Spill:

- i. Clear everyone out of the room/area
- ii. If you have been trained and have the proper materials/Personal Protective Equipment, contain or clean up the spill
- iii. If you do not have the training or equipment, contact Environmental Health & Safety at 446- 8133 during normal hours or Public Safety at 446-SAFE (7233) after hours.
- iv. Notification procedures include contacting:
 - i. EPA
 - ii. Missouri Department of Natural Resources located in Appendix A
 - iii. Louis City Fire Department
 - iv. In instance of accidental drain disposal, the Metropolitan Sewer District.

Policy Contacts:

Name	Contact Information
Carlin Harp	314-446-8133
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