



WASTE MANUAL



Hazardous Waste

Universal Waste

Waste Oil

Infectious/Biohazard Waste

Residual Waste

Municipal Waste

Electronic Wastes

Recyclables

Annual review/update: January 2024

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Section I –WASTES AT MESSIAH UNIVERSITY

NOTE: This manual applies to all facilities of Messiah University, including those located at the main Grantham campus, the Bowmansdale building, and the facility located at 401 Winding Hill. Where the protocol for Winding Hill differs from the other locations, a separate protocol designated for the Winding Hill location will appear in the section.

A. GENERAL WASTE POLICY FOR MESSIAH UNIVERSITY

It is the mission of Messiah University to do our part in contributing to an environment where unnecessary waste is minimized (and eliminated whenever possible) and recycling is a way of life.

Messiah University is committed to the belief that it is not just good business to minimize waste generation; more importantly, it is good stewardship of the resources that God has given us. For that reason, **waste minimization is the ultimate goal** on campus. Areas should continuously try to search out ways to eliminate the production of waste streams and strive to minimize the amount of waste being generated. We are of the firm belief that each employee can make a positive contribution to this goal, even if it is simply reusing a ceramic coffee cup instead of a disposable cup in the break area; purchasing durable, long-lasting goods; or only printing information when needed and using both sides of the paper.

When waste minimization is not an option, then **reuse should be the second goal**. Can the item be repaired, given to charity, or sold? Can the box be reused? Can a refillable pen be purchased? Small contributions add up.

The **third option is recycling** and Messiah University has an extensive recycling program. Paper, cardboard, metals, plastics, newspapers, magazines, books, and printer cartridges are all examples of items that are recycled. Even food waste is recycled for compost. Each employee can do his or her part in recycling by making sure that items are put in the proper recycle container. The recycling program is outlined in more detail later in this manual.

The **fourth and last option is proper disposal of waste**. There are federal, state and local regulations that must be complied with for waste disposal. There are hazardous wastes, universal wastes, waste oil, residual wastes, municipal wastes, infectious/biohazard wastes and electronic wastes. All are generated at Messiah University and all are regulated in some manner. This manual is intended to outline the various programs at Messiah that govern the proper disposal for each of these types of waste. If you have any questions regarding information contained in this manual, please contact the Office of Human Resources & Compliance.

In the management of all wastes (generation, storage, labeling, accumulation, inspection, shipping, disposal and record keeping), Messiah University will strive to comply with applicable federal, state and local regulations.

B. SPILL CLEAN-UP OF ALL WASTES

The **spill clean-up procedure** for all chemical substances, including all wastes, is found in the [Hazard Communication Program: Chemicals Manual](#), Section 8 (Chemical Spills).

NOTE: The only exception is the spill of blood or body fluids; special clean-up procedures must be enforced. Refer to the [Exposure Control Plan](#) for additional information.

C. WASTE PROHIBITED FROM SANITARY SEWER DISPOSAL

Upper Allen Township regulates substances and types of substances that may be discharged into sanitary sewer. These regulations are to be adhered to in the discharge of any waste liquids down campus drains. Regulations are included in [Attachment I-A](#).

D. WASTE RESPONSIBILITIES – BACK-UP

Where responsibilities for compliance are assigned in the waste procedures contained in this manual, it is the responsibility of the area in which the employee reports to provide adequate back-up for completing these responsibilities in the employee's absence. **Back-up must be ensured at all times as many of the responsibilities listed in this manual are regulatory requirements.**

E. WASTE RECORDS AND INSPECTION FORMS

Electronic copies of all forms contained in this manual may be obtained by contacting the Office for Human Resources and Compliance. Record retention requirements for the specific waste/form are outlined in the applicable section(s) of this manual.

Inspection forms for specific types of waste are located in the respective sections of this manual. However, the form for the monthly inspection of the general waste storage area at the Lenhert building is [Attachment I-B](#) of this section.

F. GENERATOR STATUS, NOT A TSD FACILITY

It is important to note that Messiah University is a generator of waste. The University is NOT a Treatment/Storage or Disposal (TSD) facility for ANY type of waste. This means that for all waste, storage may not be longer than one year from the date of generation. Under state law, storing waste for more than one year is considered treatment/disposal and we do not hold the proper permits for this. In addition, the University cannot accept waste from off campus. Employees and students may not bring waste from their homes to be added to waste generated at the University. For example, waste for composting, electronics, paints, etc. generated in an employee's home cannot be brought to campus for disposal.

Wastes Prohibited from Sanitary Sewer Disposal

Chapter 200: Sewers and Sewage Disposal

[HISTORY: Adopted by the Board of Commissioners of the Township of Upper Allen as Arts. I through VII; [1] amended in its entirety 3-19-2014 by Ord. No. 718. Subsequent amendments noted where applicable.]

GENERAL REFERENCES

Sewer Advisory Board — See Ch. 71.

On-lot sewage disposal systems — See Ch. 199.

Fees — See Ch. A250.

[1]:

Editor's Note: Articles I through VII were adopted as follows: Art. I, Sewage Disposal System Permits, 3-5-1968 by Ord. No. 119, as amended; Art. II, Sewer Connections, 4-2-1973 by Ord. No. 180, as amended; Art. III, Sewer Use and Rentals, 4-2-1973 by Ord. No. 181, as amended; Art. IV, Industrial Pretreatment Program, 12-17-1998 by Ord. No. 517, as amended; Art. V, Reservation of Sanitary Sewer Capacity, 2-6-2008 by Ord. No. 651; Art. VI, 12-7-1993 by Ord. No. 480; and Art. VII, Grinder Pumps, 6-7-2005 by Ord. No. 596.

Sections Pertaining to Prohibited Discharge

200-3.11 Prohibited drainage.

No roof drainage, cellar, surface water, waste from hydrants or groundwater from underground drainage fields shall be permitted to drain into the sewer system. The sewer system is intended to convey sanitary sewage and liquid wastes only.

200-5.1 Prohibited discharge standards.

A.

Discharge of stormwater. No person shall discharge or cause or permit to be discharged any stormwater, surface water, groundwater, artesian well water, roof water, subsurface drainage, swimming pool drainage, condensate, deionized water, noncontact cooling water, building foundation drainage, and unpolluted wastewater into any sanitary sewer, unless specifically authorized by the Township.

B.

Prohibited discharges. No user shall discharge or cause to be discharged, directly or indirectly, any pollutant or wastewater that causes pass-through or contributes to interference with the operation or performance of the sewer system. These general prohibitions apply to all users, whether or not the users are subject to federal categorical pretreatment standards or any other federal, state or local pretreatment standards or requirements. No person shall discharge the following substances to the sewer system:

(1)

Any liquids, solids or gases which, by reason of their nature or quantity, are or may be sufficient, either alone or by interaction with other substances, to cause fire or explosion or be injurious in any other way to the sewer system or to the operation of the sewer system. At no time shall two successive readings on an explosion hazard meter at the point of discharge into the sewer system (or at any point in the sewer system) be more than 5%, nor any single reading be over 10%, of the lower explosive limit (LEL) of the meter. At no time shall the closed-cup flashpoint of the wastewater be less than 140°F. (60°C.) using test methods specified in 40 CFR 261.21. Prohibited materials include, but are not limited to, the following substances in concentrations which cause noncompliance with the above standard: gasoline, kerosene, naphtha, benzene, ethers, alcohols, peroxides, chlorates, perchlorates, bromates and carbides.

(2)

Solid or viscous substances which may cause obstruction to the flow in a sewer or other interferences with the operation of the sewer system, such as but not limited to grease, garbage with particles greater than 1/2 inch in any dimension, animal guts or tissues, paunch manure, bones, hair, hides or fleshings, entrails, whole blood, feathers, ashes, cinders, sand, spent lime, stone or marble dust, metal, glass, straw, shavings, grass clippings, rags, spent grains, spent hops, wastepaper, wood, plastics, gas, tar,

asphalt residues, residues from refining or processing of fuel or lubricating oil, mud, and glass grinding or polishing wastes.

(3)

Any wastewater having a pH less than 6.0 or more than 9.0, or wastewater having any other corrosive property capable of causing damage or hazard to structures, equipment and/or personnel of the sewer system.

(4)

Any wastewater containing toxic pollutants in sufficient quantity, either singly or by interaction with other constituents of the wastewater, which injures or interferes with any wastewater treatment process, constitutes a hazard to humans and animals, creates a toxic effect in the receiving waters of the sewage treatment plant, or exceeds the limitations set forth in an applicable federal categorical pretreatment standard.

(5)

Any noxious or malodorous liquids, gases or solids which, either singly or by interaction with other substances present in the sewer system, are sufficient to create a public nuisance or hazard to life or are sufficient to prevent entry into the sewer system for maintenance and repair.

(6)

Any petroleum oil, nonbiodegradable cutting oil or products of mineral oil origin in amounts that will cause interference or pass-through.

(7)

Fats, oils, greases or waxes of animal or vegetable origin in concentrations greater than a daily maximum of 200 mg/l or a monthly average of 100 mg/l.

(8)

Any substance that may cause the sewage treatment plant's effluent or any other product of the sewage treatment plant, such as residues, sludges or scums, to be unsuitable for reclamation or reuse, or to interfere with the reclamation process. In no case shall a substance discharged to the sewer system cause the sewage treatment plant to be in noncompliance with sludge use or disposal criteria, guidelines or regulations affecting sludge use or disposal developed pursuant to the Solid Waste Disposal Act, the Clean Air Act, the Toxic Substance Control Act, or state criteria applicable to the sludge management method being used.

(9)

Any substance that will pass-through and, as a result, cause the sewage treatment plant to violate its NPDES permit and/or state collection system permit or applicable receiving water quality standards.

(10)

Any wastewater with objectionable color which will pass-through the sewage treatment plant, such as, but not limited to, dye wastes and vegetable tanning solutions.

(11)

Any wastewater having a temperature which will inhibit biological activity in the sewage treatment plant, resulting in interference, but in no case wastewater with a temperature at the introduction into the sewage treatment plant which exceeds 104° F. (40° C.).

(12)

Any substance which results in the formation or release of toxic gases, vapors or fumes in a quantity that may cause acute worker health and safety problems.

(13)

Any trucked or hauled wastewater or pollutants, except those discharged at points designated by the Township.

(14)

Any pollutants, including oxygen-demanding pollutants (BOD, etc.) released at a flow rate and/or pollutant concentration that will cause interference to the sewage treatment plant or interfere with the operation of the sewer system.

(15)

Any wastewater containing any radioactive wastes or isotopes of such half-life or concentration as may exceed limits established by the Township or applicable state or federal regulations, cause interference or otherwise adversely impact the sewage treatment plant or cause or contribute to pollution.

(16)

Any wastewater, alone or in conjunction with other sources, which is incompatible with treatment processes in use at the sewage treatment plant so as to cause interference or pass-through or to cause the treatment plant effluent to fail a toxicity test.

(17)

Any wastewater containing any compounds or salts of aldrin, dieldrin, endrin, lindane, methoxychlor, toxaphene, dichlorophenoxyacetic acid, trichlorophenoxypropionic acid or other persistent herbicides, pesticides or rodenticides.

(18)

Medical wastes, except as specifically authorized by the Township in a wastewater discharge permit.

(19)

Detergents, surface-active agents or other substances that may cause excessive foaming in the sewage treatment plant.

(20)

Sludges, screenings or other residues from the pretreatment of industrial wastes.

C.

Unauthorized discharges. Discharge of any prohibited substance listed under §§ 200-5.1 and 200-5.2 of this chapter shall be considered an unauthorized discharge, and the Township may take whatever steps are necessary to halt such a discharge.

200-5.4 Local limits.

A.

The Township may establish, review and revise from time to time local limits regulating the discharge of specific pollutants by industrial users.

(7)

Local limits for industrial waste dischargers apply at the point of discharge to the sewer system. All metals are considered "total metal" unless otherwise indicated.

B. Table of local limits.

Substance	Monthly Average (mg/l)	Local Limits	
		Daily Maximum (mg/l)	MAHL ^{1, 2} (pounds per day)
Arsenic	0.1420	0.2840	0.6234
Cadmium	0.0908	0.1815	0.3983
Chromium	4.220	8.4439	18.5320
Copper	2.6575	5.3150	15.4752
Cyanide	1.4077	2.8153	6.2836
Lead	0.9672	1.9344	4.2456
Mercury	0.0442	0.0883	0.1939

Substance	Monthly Average (mg/l)	Local Limits	
		Daily Maximum (mg/l)	MAHL ^{1, 2} (pounds per day)
Molybdenum	0.5485	1.0970	2.5920
Nickel	1.5588	3.1175	6.8420
PCBs	0.0001	0.0002	0.0547
Selenium	0.3118	0.6235	1.3684
Silver	3.2657	6.5313	14.3344
Zinc	1.2145	2.4290	18.8507

Notes:

¹ Based on Table 18 of the Authority's Headworks Analysis dated January 26, 2010, using EPA Version PA 3.1.

² Maximum allowable headworks loading based on Table 20 of the Lower Allen Township Authority's Headworks Analysis dated January 26, 2010, using EPA Version PA 3.1.

The above information has been incorporated into this manual for convenience. To ensure that this is the latest version, go to Upper Allen Township's website at uatwp.org. Scroll down to the bottom of the screen and click on "Township Code."

NOTE: Per email received from Barry Cupp, Sewer Department Manager, Upper Allen Township, dated 8/6/15 and sent to Brad Markley, Director of Facility Services at Messiah University, the University is NOT considered an industrial user. However, we will always strive to comply with the discharge limits established by the sewer authority and shown in the table above.

1 mg/l = 1 ppm

MONTHLY INSPECTION OF WASTE STORAGE AREA, LENHERT BUILDING

Inspect the universal waste, hazardous waste and biohazard/infectious waste storage to insure that:

- Containers show no signs of leakage or damage
- No waste spill or spill residue is present on the floor, in containments or in freezer
- All containers are dated and storage time does not exceed the 1 year limit (90 days for biohazard/infectious waste in freezer)
- All containers are properly identified with type of waste
- Liquid waste containers are stored with secondary containment

[illegible]

Completed form should be saved for three years from latest date recorded.

Section II – HAZARDOUS WASTE

Hazardous waste is not generated at the facility located at Winding Hill Road so the contents of this section do not apply to that facility. If this should change, the Office for Human Resources and Compliance must be contacted immediately.

Federal Hazardous Waste Regulations were revised and the effective date for the new regulations is May 30, 2017. However, very little changed for VSQGs (previously called CESQGs) so this section has been updated to include these minor changes. The new generator regulations have been reorganized:

Provision	Former Citation	Final Citation
Generator Category Determination	261.5(c)-(e)	262.13
VSQG Provisions	261.5(a), (b), (f)-(g)	262.14
Satellite Accumulation Area Provisions	262.34(c)	262.15
SQG Provisions	262.34(d)-(f)	262.16
LQG Provisions	262.34(a), (b), (g)-(i), (m)	262.17

In addition to the federal US EPA regulations found at 40 CFR 260-279, PA DEP state regulations found in 25 PA Code, Article VII, Chapters 260-270 also apply.

A. HAZARDOUS WASTE POLICY

Messiah University Hazardous Waste EPA ID # for the Grantham campus is PAR000514125.

Waste generators are classified into three categories based on the amount of waste generated; requirements vary based on the generator classification.

- **Very Small Quantity Generator (VSQG), previously called Conditionally Exempt Small Quantity Generator (CESQG)** – generates no more than 220 pounds of hazardous waste or 2.2 pounds of acute hazardous waste per calendar month
- **Small Quantity Generator (SQG)** – generates 220-2200 pounds per calendar month
- **Large Quantity Generator (LQG)** – generates more than 2200 pounds per calendar month

Messiah University is a **Very Small Quantity Generator (VSQG)** of hazardous waste.

Hazardous wastes are generated, accumulated and stored throughout the campus and safe and correct storage practices are vitally important to ensure that the potential for accidents is minimized. The University has developed this plan to provide some basic guidelines for the safe handling and storage of hazardous wastes in compliance with US EPA and PA DEP regulations. Included in these regulations for hazardous waste compliance are the Resource, Conservation and Recovery Act (RCRA), the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), and the Emergency Planning and Community Right-to-Know Act (EPCRA).

Hazardous waste storage areas shall be kept free of contamination, fire hazards, or other safety and health hazards to prevent occurrences of injury or illness. The proper personal protective equipment will be available for use when handling these wastes.

All hazardous wastes generated at Messiah University will be transported for disposal by a permitted transporter of hazardous waste. All hazardous wastes will be shipped for disposal to a properly permitted Treatment, Storage and Disposal (TSD) Facility. All shipping papers will be properly certified (legible signature in the certification statement of the shipping paper) by an authorized representative of Messiah University who has completed the US DOT Hazardous Materials Training. A copy of the shipping paper will be retained for a minimum of three (3) years as required by US DOT and US EPA.

Messiah University will inform employees who work in areas where hazardous wastes are generated and students who participate in courses that produce chemical waste of the proper procedures for generation, accumulation, storage and disposal of such wastes.

This procedure provides basic guidelines for the safe handling and storage of hazardous waste. It is the responsibility of each department that generates and stores hazardous waste to develop their own department specific procedure and for their employees to follow those procedures. A list of all areas across campus where hazardous wastes are stored can be found in [Attachment II-A](#) of this section.

B. HAZARDOUS WASTE IDENTIFICATION/DEFINITION

1. Before a material can be classified as a hazardous waste it must first be a solid waste as defined under RCRA. All hazardous wastes are solid wastes. Not all solid wastes are hazardous wastes. (The term “solid” has nothing to do with the physical state of the waste. A gas or liquid can be a solid waste under RCRA.)
Refer to 40 CFR 261.2 for definition of solid waste when classifying a new waste or contact the Office for Human Resources and Compliance.
2. Certain wastes are excluded from RCRA as hazardous wastes. These are **specific** exclusions granted by EPA. (Refer to 40 CFR Part 261.4)
3. EPA has included in their regulations lists of substances that ARE acute hazardous wastes (P-listed and U-listed). The P and U lists designate as hazardous waste pure and commercial grade formulations of certain unused chemicals that are being disposed. For a waste to be considered a P- or U-listed waste it **must meet all of the following three criteria**:
 - The waste must contain one of the chemicals listed on the P or U list;
 - The chemical in the waste must be unused; and
 - The chemical in the waste must be in the form of a commercial chemical product.

EPA defines a commercial chemical product for P and U list purposes as a chemical that is either 100 percent pure, technical (e.g., commercial) grade or the sole active ingredient in a chemical formulation. (Refer to 40 CFR Part 261.33)

4. EPA has also included in the regulations a **F-list**, found at [40 CFR section 261.31](#). It identifies wastes from common manufacturing and industrial processes as hazardous. Because the processes generating these wastes can occur in different sectors of industry, the **F list wastes are known as wastes from non-specific sources**.
5. The regulations also include a **K-list**. However, the K-list identified hazardous waste from specific sectors of industry and manufacturing and are considered **source-specific wastes**. For this reason, they cannot be generated at Messiah University (as we are not in any of these specific sectors).
6. Wastes that have not been specifically listed may still be a hazardous waste if they exhibit one of four characteristics:
Ignitability – can create fires under certain conditions, are spontaneously combustible, or have a flash point less than 60 degrees C (140 degrees F). See 40 CFR 261.21 (Waste code D001)
Corrosivity – acids or bases ($\text{pH} \leq 2, \geq 12.5$) and capable of corroding metal containers such as storage tanks, drums and barrels. See 40 CFR 261.22 (Waste code D002)
Reactivity – unstable under “normal” conditions. They can cause explosions, toxic fumes, gases, or vapors when heated, compressed, or mixed with water. See 40 CFR 261.23 (Waste code D003)
7. **Toxicity** – harmful or fatal if ingested or absorbed. When toxic wastes are land disposed, contaminated liquid may leach from the waste and pollute ground water. (Toxicity Characteristic Leaching Procedure - TCLP Test). See below for a list of toxic chemicals and their associated waste codes (D004 – D043).

<u>Pollutant</u>	<u>Allowable Limit (PPM)</u>	<u>Hazardous Waste Code</u>
Arsenic	5.0 ppm (mg/L)	D004
Barium	100.0 ppm (mg/L)	D005
Cadmium	1.0 ppm (mg/L)	D006
Chromium	5.0 ppm (mg/L)	D007
Lead	5.0 ppm (mg/L)	D008
Mercury	0.2 ppm (mg/L)	D009
Selenium	1.0 ppm (mg/L)	D010
Silver	5.0 ppm (mg/L)	D011
Endrin	0.02 ppm (mg/L)	D012

<u>Pollutant</u>	<u>Allowable Limit (PPM)</u>	<u>Hazardous Waste Code</u>
Lindane	0.4 ppm (mg/L)	D013
Methoxychlor	10 ppm (mg/L)	D014
Toxaphene	0.5 ppm (mg/L)	D015
2,4-D	10 ppm (mg/L)	D016
2,4,5-TP (Silvex)	1 ppm (mg/L)	D017
Benzene	0.5 ppm (mg/L)	D018
Carbon Tetrachloride	0.5 ppm (mg/L)	D019
Chlordane	0.03 ppm (mg/L)	D020
Chlorobenzene	100 ppm (mg/L)	D021
Chloroform	6 ppm (mg/L)	D022
o-Cresol	200 ppm (mg/L)	D023
m-Cresol	200 ppm (mg/L)	D024
p-Cresol	200 ppm (mg/L)	D025
Cresol	200 ppm (mg/L)	D026
1,4-Dichlorobenzene	7.5 ppm (mg/L)	D027
1,2-Dichloroethane	0.5 ppm (mg/L)	D028
1,1-Dichloroethylene	0.7 ppm (mg/L)	D029
2,4-Dinitrotoluene	0.13 ppm (mg/L)	D030
Heptachlor	0.01 ppm (mg/L)	D031
Hexachlorobenzene	0.13 ppm (mg/L)	D032
Hexachlorobutadiene	0.5 ppm (mg/L)	D033
Hexachloroethane	3 ppm (mg/L)	D034
Methyl ethyl ketone	200 ppm (mg/L)	D035
Nitrobenzene	2 ppm (mg/L)	D036
Pentachlorophenol	100 ppm (mg/L)	D037
Pyridine	5 ppm (mg/L)	D038
Tetrachloroethylene	0.7 ppm (mg/L)	D039
Trichloroethylene	0.5 ppm (mg/L)	D040
2,4, 5-Trichlorophenol	400 ppm (mg/L)	D041
2,4,6-Trichlorophenol	2 ppm (mg/L)	D042
Vinyl Chloride	0.2 ppm (mg/L)	D043

8. Hazardous waste which also contains radioactive material is regulated under RCRA and the Atomic Energy Act. Contact the Radiation Safety Officer if this waste is generated.

9. Anything contaminated with a hazardous waste is a hazardous waste.

10. If uncertain if a waste is a hazardous waste, contact the Natural Sciences Laboratory Program Manager (in SEH) or the Office for Human Resources and Compliance. By law, **unknown** wastes may not be disposed of without first performing an analysis to determine the composition of the waste and any associated hazards.

11. Hazardous wastes are generated from classes, research, or disposal of outdated or expired inventories, or from certain processes (ex., certain inks at Messiah Press). All chemical inventories that are outdated, expired or no longer used shall be considered a waste and if they meet the above definitions shall be considered a hazardous waste.

12. Each hazardous waste accumulated for disposal must be assigned an **EPA hazardous waste code** as outlined by RCRA (ex., D001, F001, etc.). These codes identify the characteristics and/or source of the waste. RCRA numbers will be assigned by the hazardous waste disposal vendor as part of the contracted services.

13. Wastes that do not meet the definition of hazardous waste as defined in 40 CFR 261 may be a residual or municipal waste. Additionally, some hazardous wastes that are recycled may be a universal waste or classified as waste oil. Refer to these sections of the Waste Manual for more information and for specific regulations pertaining to these types of wastes.

C. HAZARDOUS WASTE REQUIREMENTS FOR VSQG

1. Very Small Quantity Generators (VSQG) **cannot store hazardous waste for more than one (1) year**. Storage exceeding one year is considered disposal by law and requires compliance with all regulations for a disposal (TSD) facility.

2. VSQG **cannot generate more than 220 pounds of hazardous waste in a calendar month or more than 2.2 pounds of acutely hazardous waste**.

3. **Episodic Event** – This can be a planned or unplanned event that generates more than the 220 pounds in a calendar month and should not occur more than once per year. (Part 262, Subpart L)

If you expect to generate more than this quantity due to an unusual clean out of inventory, EPA must be notified **no later than 30 days prior to initiating a planned episodic event** using EPA Form 8700–12 (Site ID form) (under Part 262, Subpart L—Alternative Standards for Episodic Generation; beginning at the new 262.230).

If the University generates more than the allowable quantity due to a spill (and cleanup of spill), **EPA must be notified within 72 hours of this unplanned episodic event.**

All waste from an episodic event (planned or unplanned) must be sent for disposal within 60 days of generation. It must be shipped using a EPA ID#, with a hazardous waste manifest and sent to a RCRA-designated TSDF or recycler. The containers must be labeled as part of an episodic event; records associated with the event must be maintained; and an emergency coordinator must be identified.

4. **VSQG cannot accumulate more than 2,200 pounds of hazardous waste or 2.2 pounds of acutely hazardous waste.** If the 2,200 pound accumulation limit is exceeded, the generator automatically becomes a Small Quantity Generator (SQG) and must comply with all regulations for a SQG.
5. A VSQG is not required to use a **manifest for shipments of hazardous waste unless it is part of an episodic event.** However, Messiah University will continue to use this document as it is the best practice to do so. The original generator's copy (of any shipping paper used for waste) should be retained for three (3) years per DOT and US EPA regulations and any copies received from the disposal facility must be retained with the generator's copy. The Office of Facilities Services will maintain all copies of the shipping papers for all hazardous wastes. Messiah Press should forward their copies to Facility Services for filing in the Lenhert building.
6. The words **"Hazardous Waste"** and **an indication of hazards must be on all containers of hazardous waste.**

The hazards associated with the waste (physical and health) must appear on the container. This can be accomplished by using the University's secondary label, NFPA labels, US DOT labels, or GHS labels or pictograms, or RCRA characteristics. The labels are not required to include the identity of the contents of the container. NOTE: While this is a requirement for SQGs and LQGs, Messiah University must comply as much as possible for the safety of our employees.

Prior to shipping, the contract company that packages our waste, completes the manifest, provides the transport and arranges for final disposal containers may mark them with the applicable RCRA waste codes or a bar-code system that performs the same function. This is not a requirement for VSQGs but is a good practice; it is required for SQGs and LQGs.

7. VSQG are not required to register for and obtain an EPA ID #. However, Messiah University was issued an EPA ID # as a SQG and we must continue to use it as a VSQG.

8. There are no satellite accumulation requirements for VSQGs. However, because of the generation and storage/accumulation limits, **the policy will be to document generation in areas, and date containers at the satellite accumulation areas once they are full. Full containers are then required to be moved to a central accumulation area (Kline 301A or Lenhart) within three (3) calendar days.** Areas should contact Facility Services (ext. 6011) when satellite accumulation area containers are full; the Controller will then move the containers to the either Kline 301A or Lenhart storage area. There are several exceptions to this policy:
 - a. Messiah Press may opt to maintain full containers at their facility. They will be responsible for arranging for the disposal of these containers when the container nears the one (1) year limit (or sooner).
 - b. Lab areas in Natural Sciences (Biology and Chemistry) will transfer full containers to Kline 301A within three (3) calendar days of becoming full and dated at the lab areas. When the total accumulation in Kline 301A area reaches 220 pounds or containers reach 180 days of storage (whichever occurs first), contents will be moved to Lenhart. NOTE: Contents may be moved sooner, but the quantity/storage time limit cannot be exceeded.
9. Biennial reporting is not required for VSQGs. However, **keeping records to verify generation dates and quantities for hazardous wastes is highly recommended by PA DEP** as proof of compliance with the regulations. The campus accumulation area and Messiah Press will use the "Hazardous Waste: Generation, Accumulation, Storage & Inspection Record" [Attachment II-B](#), for this purpose and will maintain the records in their respective areas. Other areas may use this record or generate their own, provided it meets the intent of this document.
10. **We need to insure the integrity of the containers, compatibility with wastes they contain, adequacy and safety of the storage areas**, etc. Therefore, a monthly inspection will be conducted and a record of waste quantities will be kept for the campus storage area in Lenhart, Messiah Press storage, and Kline 301A. Other areas will comply with the Guidelines for Storage Areas as outlined in this policy but do not need to keep a written record of this unless reoccurring problems with compliance arise.

D. HAZARDOUS WASTE REQUIREMENTS FOR STORAGE AREAS, CONTAINERS AND LABELS

It is the responsibility of anyone adding waste to a hazardous waste container or storage area AND the area manager to insure that the storage, container and label requirements as noted below are in compliance. Any problems noted should be corrected immediately or reported to the department director or responsible person for corrections. If assistance is needed in resolving the concern, contact the Natural Sciences Laboratory Program Manager or the Office for Human Resources and Compliance.

1. Requirements for Storage Areas for Hazardous Waste

- a. Materials which ignite easily under normal conditions (flammables) are considered fire hazards and will be stored in a cool, dry, well ventilated storage space away from areas of fire hazard (ex., sparks, heat, open flames). Whenever possible, storage should be in a flammable storage cabinet.
- b. Highly flammable materials will be kept in an area separate from oxidizing agents (material susceptible to spontaneous heating; explosives; etc.).
- c. The storage areas for flammables will be supplied with firefighting equipment, which could be either automatic or manual, as required by code.
- d. Oxidizers will not be stored close to liquids with low flash point.
- e. Materials which are toxic as stored or which can decompose into toxic components from contact with heat, moisture, acids or acid fumes will be stored in a cool, well ventilated place out of the direct rays of the sun.
NOTE: Incompatible toxic materials will be isolated from each other.
- f. Corrosive materials will be stored in a cool, well-ventilated area (above their freezing point).
- g. Corrosives will be isolated from other materials.
- h. Where approved chemical storage cabinets are provided, all chemicals will be stored in them.
- i. There shall be no sign of spills or leaks in the area.
- j. Spill clean-up materials will be available.
- k. Full containers in generation areas shall be dated upon becoming full.
- l. Full containers in generation areas shall be moved to either Kline 301A (Biology and Chemistry Labs) or to Lenhart (in all other areas) within (3) days of filling.
- m. When hazardous wastes accumulated/stored in Kline 301A reach either 220 pounds or 180 days (whichever comes first), waste must be moved to Lenhart for up to an addition 180 days of storage.

2. Requirements for Storage Containers for Hazardous Waste

- a. Containers used for hazardous waste must be compatible with the waste they contain.
- b. Liquid waste containers should have secondary containment equal to 110% of the stored volume.
- c. The container should be in good condition with no visible signs of damage to the container's integrity.
- d. There should be no residue on the outside of the container.
- e. The container must be **maintained closed** except when additions are being made to it or waste is being removed from it.
- f. Separate containers must be used for each waste stream; compatible wastes may be combined in a single container.
- g. Be careful not to mix incompatible wastes. Serious explosion and/or fires could result; toxic airborne emissions could be generated. Examples of incompatible wastes are given in [*Attachment II-C*](#).

- h. Containers should never be filled completely to the top; some space must be left for expansion of the waste due to temperature, etc. A minimum of 5% is recommended.

3. Empty Containers, Last Contained Hazardous Waste

Containers used for hazardous waste are only considered empty if:

- a. All wastes have been removed that can be removed using the practices commonly employed to remove materials from that type of container, e.g., pouring, pumping, and aspirating, and
 - 1. No more than 2.5 centimeters (one inch) of residue remain on the bottom of the container or inner liner, or
 - 2. No more than 3 percent by weight of the total capacity of the container remains in the container or inner liner if the container is less than or equal to 119 gallons in size; or
 - 3. No more than 0.3 percent by weight of the total capacity of the container remains in the container or inner liner if the container is greater than 119 gallons in size.
- b. A container that has held a hazardous waste that is a **compressed gas** is empty when the pressure in the container approaches atmospheric.

A container or an inner liner removed from a container that has held an **acute hazardous waste** is empty if:

- c. The container or inner liner has been **triple rinsed** using a solvent capable of removing the commercial chemical product or manufacturing chemical intermediate;
- d. The container or inner liner has been cleaned by another method that has been shown in the scientific literature, or by tests conducted by the generator, to achieve equivalent removal; or
- e. In the case of a container, the inner liner that prevented contact of the commercial chemical product or manufacturing chemical intermediate with the container has been removed.

4. Requirements for Hazardous Waste Labels

- a. The container shall be appropriately labeled with the words "hazardous waste," the type of waste, and the date the container became full at the accumulation area.
- b. If a container is being reused, all old labels must be completely removed or defaced.
- c. The chemical names must be fully written on the label. Abbreviations or formulas are not permitted.
- d. Primary hazards must be listed on the label or be affixed to the container as a separate label (See Section C.6 above for approved hazard identification labels). These include both physical and health hazards.
- e. Hazardous waste labels are available from Facility Services or the technician/lab manager of each area.

Please note that secondary containers that are used to transport hazardous waste must have labels in compliance with OSHA Hazard Communication Standard (1910.1200).

E. GAS CYLINDERS

Compressed gas cylinders are to be returned to the supplier. Lecture bottles are not accepted for return by many compressed gas suppliers and, therefore, the purchase of these items is discouraged. If such items exist for disposal, contact Facility Services.

F. SPILLS OF HAZARDOUS WASTES

In the event of a chemical or hazardous waste spill, the procedure outlined in the [Hazard Communication Program: Chemicals Manual](#), Section 8 (Chemical Spills) should be followed. **Any materials used to clean up the spill of hazardous waste are considered to be hazardous waste and must be disposed of properly. If, due to the spill, we will generate more than the allowable 220 lbs. per month, US EPA/PA DEP must be notified immediately and all waste from this episodic event must be sent for disposal within 60 days.**

G. HAZARDOUS WASTE RESPONSIBILITIES

1. Facility Services Personnel (as assigned)

- a. When notified by a department that waste is to be picked up for proper disposal, transport the waste to the Campus Accumulation Area (CAA, Lenhart 122C).
- b. As containers are placed in the CAA, add them to the record sheet, indicating the quantity and maintaining a total quantity to verify the 2,200 pound limit is not exceeded.
- c. If areas supplied records of generation with quantities listed, keep these with record sheet indicated in b. This will provide support that the 220 pound limit was not exceeded in any month across campus.
- d. When the “oldest” dated waste approaches the one (1) year limit or the total quantity approaches the 2,200 pound limit (or sooner), notify the hazardous waste disposal vendor to arrange for pick-up. Pick up may be more frequently but must never exceed these quantity and time limits.
- e. At the time of pick-up, retain the generator’s copy of the shipping paper (manifest) and file in the Lenhart Resource Room.
- f. Begin a new record sheet for contents of the storage area and indicate on the old record sheet the date of shipment, showing that the total is now zero. The old sheet should be kept for a minimum of three (3) years and can be filed with the copy of the shipping paper.
- g. Inspect the CAA area monthly when wastes are present or each time waste is added, whichever is more frequent. Use [Attachment II-B](#) of this manual to document the inspection.

2. Natural Sciences Laboratory Program Manager

- a. When there are full containers in any areas, remove them to Kline 301A within three (3) days of becoming full.
- b. Maintain a record of total waste accumulated in Kline 301A, including the date added to the room.
- c. Contact Facility Services, ext. 6011, to arrange a pick-up of waste when the total quantity reaches 220 pounds or 180 days* (whichever is sooner). Waste will then be taken to the campus accumulation area in Lenhart, and shipment to a hazardous waste disposal facility will be arranged as appropriate.
- d. Perform inspections of Kline 301A on a monthly basis and keep records for three (3) years. This can be recorded on the form ([Attachment II-B](#)) or on a form designed by the area.
- e. In courses that produce chemical waste, inform employees and students who participate of the proper procedures for generation, accumulation, storage and disposal of such wastes and spill clean-up procedures.
- f. A hazardous waste inventory will be maintained by the Natural Sciences Laboratory Program Manager that will include all hazardous waste generated in the departments of Chemistry and Biology. The hazardous waste inventory will include a list of all current hazardous waste containers in Kline 301A. It is the responsibility of the Natural Sciences Laboratory Program Manager, in collaboration with Facility Services and the Compliance Coordinator, that the inventory is kept up to date as proof that the 220 pound generation limit per calendar month and the 1 year limit for storage is not exceeded.

3. Theatre Chair/Visual Arts Technician

- a. Although an inspection record is not required (due to the very limited amount and sporadic generation of waste), periodic checks of container integrity, labeling, and storage areas should be conducted. This should include checking for leaks, use of proper container types, completion of labels, etc. Any non-compliance issues should be brought to the attention of faculty leadership in the areas and corrections made immediately.
- b. When containers of hazardous waste are full or reach 180 days*, notify Facility Services, ext. 6011, to schedule a pick up.
- c. Inform employees and students who participate in courses that produce chemical waste of the proper procedures for generation, accumulation, storage and disposal of such wastes and proper spill clean-up procedures.
 - Work Study and theatre students assigned to work in the scene shop and costume shop should be given a tour of the chemical storage areas. Students will be familiarized with the policies for disposing of wastes. It will be the duty of the production manager/technical director to train students before they begin work. It is recommended (but not required) that students enrolled in THEA 115 complete fire safety training and first aid training. Records of training will be maintained by the production manager/technical director.

4. Engineering Technician/Lab Assistant

- a. Although an inspection record is not required, periodic checks of container integrity, labeling, and storage areas should be conducted. This should include checking for leaks, use of proper container types, completion of labels, etc. Any non-compliance issues should be brought to the attention of faculty leadership and corrections made immediately.
- b. When containers of hazardous waste are full or reach 180 days* for storage, notify Facility Services, ext. 6011, and move them to Lenhert Waste Storage.
- c. Inform employees and students who participate in courses that produce chemical waste of the proper procedures for generation, accumulation, storage and disposal of such wastes and proper spill clean-up procedures.

* Although one (1) year is the limit applied to storage for VSQGs, to insure that no waste is present on campus that exceeds this limit, all waste will be moved to the Lenhert hazardous waste storage area when 180 days is reached. The only exception is waste generated at Messiah Press.

H. HAZARDOUS WASTES GENERATED AT MESSIAH UNIVERSITY & SPECIFIC AREA PROCEDURES

1. Hazardous Waste Generated at Messiah Press

Messiah's Messiah Press is striving to minimize/eliminate the use of hazardous materials. However, they may generate a limited quantity of hazardous waste materials. Hazardous materials are accumulated and then picked up by outside hazardous waste handling companies. The following is a list of current hazardous materials at Messiah Press and how they are disposed of:

- a. Waste Printer's Ink generated at Messiah Press is non-hazardous and can be disposed of as a residual waste.
- b. Developed (used) film is stored and taken to a foundry for silver reclamation.
- c. Solvent Impregnated Rags – Solvent impregnated rags with incidental amounts of non-hazardous ink will be collected and stored on a temporary basis in an approved Oily Waste Container. Messiah Press will contract with an approved outside vendor for shop rag service. The vendor will collect soiled rags on a monthly basis and supply clean replacements. **NOTE:** There is an exclusion for excluded solvent-contaminated wipes that are cleaned and reused and disposable solvent-contaminated wipes; they are conditionally excluded from the definition of hazardous waste provided that the business cleans or disposes of them properly. They must be managed in closed, labeled containers (labeled with words "Excluded Solvent-Contaminated Wipes") and cannot contain free liquids when sent for cleaning or disposal. Additionally, facilities that generate solvent-contaminated wipes may not accumulate wipes for longer than 180 days.
- d. There are no waste streams generated at Messiah Press that are anticipated to reach the 220 pound per calendar month generation limit or the 2,200 pound per year storage limit.

2. Hazardous Waste Generated in the Department of Theatre and Dance

- a. Enamel, Oil or Rust Paints – (Flammable, toxic) Rarely used. Empty containers, disposable paint trays and brushes will be allowed to dry and discarded in the common trash dumpster. In the event a brush needs cleaned, an odorless mineral spirits will be used; contact Facility Services, ext. 6011, for pick-up. All remaining partially full paint containers will be disposed of as hazardous waste.
- b. Spray Paints – (Flammable, toxic) RCRA empty spray paint canisters will be disposed in the common trash dumpster, labeled empty. Canisters containing paint with a clogged nozzle should be taken to the central accumulation area in the Lenhart building; contact Facility Services, ext. 6011, for pick-up.
- c. Miscellaneous Cleaning Solvents – (Flammable, toxic) Solvents such as paint thinner, mineral spirits, furniture strippers, bleaches, etc. are hazardous wastes. When full or reaching 180 days of storage, containers should be transported to Lenhart; contact Facility Services, ext. 6011, for pick-up. Empty containers may be air dried, labeled empty, and discarded in trash.
- d. Wood Preservatives – (Flammable, toxic) Use up entirely; RCRA empty, air-dried container may be placed in trash. Partially full containers should be handled as hazardous waste. Contact Facility Services, ext. 6011, for pick-up.
- e. Stains/Finishes – (Flammable, toxic) Use up entirely; empty, air-dried container may be placed in trash. Partially full containers should be handled as hazardous waste. Contact Facility Services, ext. 6011, for pick-up.
- f. Non-hazardous Wastes – there are some wastes generated in this department that are not hazardous wastes. Below is the proper disposal for these wastes:
 - Paint (latex/vinyl)- The department accumulates all leftover paint in 5 gallon paint buckets (labeled “Junk Paint”) and uses it to base paint future scenery. In the rare event that paint cannot be accumulated in this manner, the paint will be induced with a hardening compound and disposed in the common trash dumpster.
 - Paint containers - To minimize the amount of paint put into the drain, users will dump excess paint from disposable paint trays and containers in the 5 gallon accumulation bucket. The disposable paint trays will be given time to dry and discarded in the common trash dumpster.
 - Paint brushes – The department washes all latex paint brushes in the paint sink located in the rear of the scene shop. Many of the inexpensive brushes, also known as chip brushes, are disposed of in the trash after use and not washed in the sink. Expensive brushes are rinsed of the latex paint in the sink.
 - Foam Mixes - AB foam mixes are dried and then disposed of in the common trash container.
 - Fiberglass/epoxy resins – Excess AB mixture resins should be allowed to dry and transported to the common trash dumpster.

3. Hazardous Waste Generated in the Department of Visual Arts

Contact the Arts Technician for the appropriate disposal of wastes generated in any of the Visual Arts areas.

4. Hazardous Waste Generated in Facilities Maintenance

Contact Facility Services, ext. 6011, for the appropriate disposal of hazardous wastes generated in any of the facilities maintenance operations.

5. Hazardous Waste Generated in Grounds

Contact Facility Services, ext. 6011, for the appropriate disposal of hazardous wastes generated in any of the grounds operations.

6. Hazardous Waste Generated in the School of Science, Engineering and Health

- a. Laboratories and other areas where hazardous wastes are regularly generated should have a designated area for waste accumulation (near the point of generation). These areas shall be equipped with all necessary sealable waste storage containers, with adequate ventilation and secondary containment of 110% of the stored volume.
- b. Only one container per waste stream shall be maintained in each area.
- c. In the Natural Sciences areas, when the container is full at the satellite accumulation area it will be dated. Within three (3) calendar days the container will be moved to the central accumulation area in Kline 301A. Hazardous waste may accumulate in Kline 301A for up to 180 days from the date on its label before it shall be moved to Lenhart. Contact the Natural Sciences Laboratory Program Manager to have the container moved and replaced with an empty container, if needed.
- d. In the Engineering Labs, the Mechanical Engineering Technician will contact Facility Services, ext. 6011, to have containers transported to Lenhart waste storage within three (3) calendars from when they are full. As 55-gallon drums may be used in this area, it is important to remember the 220 pound generation limit per calendar month. The container should be dated when it becomes full.
- e. Each container shall be labeled in compliance with the labeling requirements outlined previously in this policy (see Section D.4).
- f. If the area is located within a fume hood, the fume hood will be used only for the accumulation of waste and not for any laboratory procedure or manipulations.
- g. Volatile and flammable wastes are not to be stored in these locations in quantities above five liters and must be transported to Kline 301A or the Lenhart hazardous waste storage area after that limit is reached.
- h. Hazardous wastes generated in areas without an approved accumulation area must be transported to Kline 301A or the Lenhart hazardous waste storage area immediately following generation of the waste.

- i. In the Department of Chemistry, containers are logged into the Hazardous Waste Log by date and contents. Abbreviations and/or chemical formulas may not be used to label hazardous waste containers or to record the contents in the Hazardous Waste Log.
- j. Chemicals that are intended to be reused should not be labeled as waste.
- k. When the container is full the Natural Sciences Laboratory Program Manager will fill out a Waste Composition sticker based on the Hazardous Waste Log and affix it to the container. Hazardous Waste labels are available from the Natural Sciences Laboratory Program Manager.
- l. Oil or Solvent Impregnated Rags – Oil or solvent impregnated rags will be collected and stored on a temporary basis in an approved Oily Waste Container. The Engineering Department will contract with an approved outside vendor for shop rag service. The vendor will collect soiled rags on a monthly basis and supply clean replacements. **NOTE:** There is an exclusion for excluded solvent-contaminated wipes that are cleaned and reused and disposable solvent-contaminated wipes; they are conditionally excluded from the definition of hazardous waste provided that the business cleans or disposes of them properly. They must be managed in closed, labeled containers (labeled with words “Excluded Solvent-Contaminated Wipes”) and cannot contain free liquids when sent for cleaning or disposal. Additionally, facilities that generate solvent-contaminated wipes may not accumulate wipes for longer than 180 days.
- m. Sharps Waste: Chemically Contaminated – Broken glassware that is chemically contaminated is considered hazardous waste. These materials must be packaged in a sharps proof container and disposed of as hazardous waste. Any syringes, lancets or scalpels that are chemically contaminated are considered to be both hazardous and biohazardous (mixed) waste. See below for instructions on mixed wastes.
- n. Sharps Waste: Clean - Broken glassware that is not chemically contaminated may be disposed of in the broken glass disposal boxes provided in each laboratory. **Syringes, lancets and scalpels are considered infectious waste, whether contaminated with infectious agents or not**, and should be placed in a sharps container for disposal.
- o. Mixed Waste – Biological/Chemical – Wastes that present an infectious hazard and meet the criteria for a hazardous waste are considered a type of mixed waste. Common examples of this type of waste are cell cultures containing hazardous chemicals and chemically contaminated medical sharps waste (lancets, syringes, needles, scalpels). Containers used to store mixed biological and chemical waste must be labeled as both hazardous waste and infectious waste. These containers are subject to the requirements of both hazardous waste containers and biohazard containers. They must be labeled with the words “Hazardous Waste” and the name and specific hazard of the chemical component of the waste, along with the word “Biohazard” and the universal biohazard symbol. See the Messiah University Infectious Waste Protocol for more details regarding storage of biohazardous wastes. *(For Radiological Mixed Waste, see q.)*
- p. Spent Embalming Fluid – **This is NOT a hazardous waste.** Once Embalming Fluid is drained from cadavers, the spent embalming fluid DOES NOT meet the definition of a RCRA Hazardous Waste from a RCRA Listed Process as identified in 40 CFR 261 Subpart

D (spent embalming fluid is not on RCRA's list of Hazardous wastes from non-specific sources in § 261.31, spent embalming fluid is not on RCRA's list of Hazardous wastes from specific sources in § 261.32, and embalming fluid, once used for its intended purpose, is not a discarded commercial chemical product [or off-specification species, container residue, and spill residues thereof] per § 261.33). Furthermore, it does not meet the characteristics that would make it a hazardous waste: it is not ignitable or corrosive. It will need to be properly disposed of but does not need to be labeled or shipped as a hazardous waste and not counted in limits for hazardous waste generation.

- q. **Mixed Waste – Mixed radiological and Hazardous Waste** - Mixed wastes are hazardous wastes that also contain radioactive material. Mixed waste is regulated under the RCRA and the Atomic Energy Act. The hazardous component of the mixed waste is regulated by EPA under RCRA. The radiological component of the mixed waste is regulated by the Department of Energy (DOE) or the Nuclear Regulatory Commission (NRC). Care should be given when disposing of radiation sources from the Physics Lab; a determination must be made if they are a mixed waste (depending on the source) and, if they are, they must be disposed of properly in compliance with hazardous waste regulations. If radiation levels are still present, it must be disposed of as a radioactive waste; if radiation has completely decayed and the dose rate is indistinguishable from the background, the source must be assessed to determine if it is a hazardous waste.

HAZARDOUS WASTE ACCUMULATION AREAS

ROOM/LOCATION	AREA NAME/PURPOSE
Bowmansdale 013	Print Shop
Climenhaga Fine Arts Center 016	Scene Shop
Climenhaga Fine Arts Center 111	Painting Studio
Frey Academic 010	Sculpture Studio
Frey Academic 045	Engineering Lab
Frey Academic 070	Engineering Shop
Frey Academic 175	Senior Studio
Frey Academic 182	Printmaking Studio
Jordan 261	
Jordan 274	
Jordan 363	Organic Chemistry Lab
Kline 202	
Kline 301	Chemical Storage Room
Kline 301 A	Centralized Accumulation Area for SEH (Kline/Jordan)
Kline 302	Advanced Chemistry Lab
Kline 303	Chemistry Research Lab
Kline 308	Organic Chemistry Research Lab
Kline 310	Instrument Room
Kline 313	Chemistry Research Lab
Kline 314	Chemical Analysis Lab
Kline 315	Physical Chemistry Research Lab
Lenhert 110	Facility Maintenance Shop
Lenhert 122C	Campus Centralized Accumulation Area
Mill House	Room (previously kitchen) used for cleaning brushes, etc.

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Waste Location: _____

This record should be completed when waste is added to the area or monthly (as a minimum). Initial and date this record after verifying quantity of waste and assuring that containers of waste are:

- **closed** at all times;
- **free of defects;**
- **exhibit no water stains that might jeopardize its integrity if it is a fiberboard container;**
- have **no leakage, spillage** or other environmental releases;
- are **labeled with the appropriate waste and hazard identification label;**
- **display the date when the container became full** which should be within the **1 year limit for storage***;
- **limit for generation is 220 lbs per calendar month;**
- **limit for accumulation is 2,200 pounds or 1 year, whichever comes first.**

* If date is approaching the 1 year limit, notify Facility Services, ext. 6011.

[illegible]

List of Incompatible Wastes (the list is not exhaustive)

In the lists below, the mixing of Group A material with a Group B material may have the potential consequence as noted.

<u>Group 1-A</u>	<u>Group 1-B</u>
Acetylene sludge	Acid sludge
Alkaline caustic liquids	Acid and water
Alkaline cleaner	Battery acid
Alkaline corrosive liquids	Chemical cleaners
Alkaline corrosive battery fluid	Electrolyte, acid
Caustic wastewater	Etching acid liquid or solvent
Lime sludge and other corrosive	Pickling liquor and other
alkalines	corrosive acids
Lime wastewater	Spent acid
	Spent mixed acid
Lime and water	Spent sulfuric acid
Potential consequences: Heat generation; violent reaction.	

<u>Group 2-A</u>	<u>Group 2-B</u>
Aluminum	Any waste in Group 1-A or 1-B
Beryllium	
Calcium	
Lithium	
Magnesium	
Potassium	
Sodium	
Zinc powder	
Other reactive metals and metal hydrides	
Potential consequences: Fire or explosion; generation of flammable hydrogen gas.	

<u>Group 3-A</u>	<u>Group 3-B</u>
Alcohols	Any concentrated waste in Groups 1-A or 1-B
Water	Calcium
	Lithium
	Metal hydrides
	Potassium
	Other water-reactive waste
Potential consequences: Fire, explosion, or heat generation; generation of flammable or toxic gases.	

<u>Group 4-A</u>	<u>Group 4-B</u>
Alcohols	Concentrated Group 1-A or 1-B wastes
Aldehydes	Group 2-A wastes
Halogenated hydrocarbons	
Nitrated hydrocarbons	
Unsaturated hydrocarbons	
Other reactive organic compounds and solvents	
Potential consequences: Fire, explosion, or violent reaction.	

<u>Group 5-A</u>	<u>Group 5-B</u>
Spent cyanide and sulfide solutions	Group 1-B wastes
Potential consequences: Generation of toxic hydrogen cyanide or hydrogen sulfide gas.	

<u>Group 6-A</u>	<u>Group 6-B</u>
Chlorates	Acetic acid and other organic acids
Chlorine	Concentrated mineral acids

<u>Group 6-A</u>	<u>Group 6-B</u>
Chlorites	Group 2-A wastes
Chromic acid	Group 4-A wastes
Hypochlorites	Other flammable and combustible wastes
Nitrates	
Nitric acid, fuming	
Perchlorates	
Permanganates	
Peroxides	
Other strong oxidizers	
Potential consequences: Fire, explosion, or violent reaction.	

Section III – UNIVERSAL WASTE

This section does not include protocol for the Winding Hill facility. The generation of universal waste is not anticipated at the Winding Hill location. There are no sources of pesticides or mercury at the facility. In addition, changing of fluorescent light bulbs is done by the building's owner and used bulbs are considered the property of and disposed by the building's owner. The generation of used batteries identified as universal waste is not anticipated; if this should change, the Office for Human Resources and Compliance should be contacted immediately.

A. UNIVERSAL WASTE POLICY

It is the policy of Messiah University to provide proper methods of storage, handling and recycling of Universal Waste materials generated and accumulated on campus. Universal Waste will be handled in compliance with US EPA and PA DEP regulations (40 CFR 273; PA Code 266 b).

Messiah University is a Small Quantity Hazardous Universal Waste Generator (SQHUW). We generate/accumulate less than 5,000 kg (11,000 lbs.) of universal waste per year.

B. UNIVERSAL WASTE DEFINITION

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 [Attachment III-A](#) for battery disposal methods.

Mercury containing 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).

Mercury containing 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 include CFL light bulbs.

Aerosol cans: A non-refillable receptacle containing a gas compressed, liquefied or dissolved under pressure, the sole purpose of which is to expel a liquid, paste, or powder and fitted with a self-closing release device allowing the contents to be ejected by the gas. (Compressed gas cylinders are not considered aerosol cans under this regulation and any container larger than 24 ounces is excluded.)

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.

Pennsylvania also includes oil-based finishes and photographic solutions intended for recycling as universal waste.

C. UNIVERSAL WASTE REQUIREMENTS

1. Each container must be labeled with the words “Universal Waste,” the specific type of waste, and the date the waste was first placed in the container.
NOTE: If aerosol cans are not placed in a container, then each aerosol can must be marked or labeled with “Universal Waste – Aerosol Can.”
2. Waste cannot be accumulated for more than one year. If accumulation/storage exceeds one year, it is considered disposal by law and we would need to comply with hazardous waste disposal facility regulations.
3. Employees who handle universal waste must receive training on handling requirements and emergency procedures.
4. Container integrity must be insured.
5. There should be a spill response procedure to immediately handle spills of universal waste.
6. We must prevent releases to the environment.
7. Universal waste can only be sent to facilities approved for recycling.

D. UNIVERSAL WASTE STORAGE AREAS, CONTAINERS AND LABELS

1. **Universal Waste Storage Areas and Central Accumulation Area are identified in the table below.**

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
Fry Apartments	B2	Mechanical Room	Light Bulbs
Hostetter Chapel	019	Boiler Room	Light Bulbs
Kelly Apartments	C6A	Mechanical Room	Light Bulbs
Kline & Jordan	K031	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	001	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
Smith Apartments	C4	Mechanical Room	Light Bulbs
South Complex	BB01	Mechanical Room	Light Bulbs
Oakes Theatre		Costume/Prop Shop	Aerosol Cans
Welcome Center		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

2. Universal Waste Storage Containers

Containers for universal waste should be obtained by contacting Facility Services, ext. 6011. Inspection of storage areas and containers must be completed each time waste is added to the container. The container's waste label also serves as the record of inspection. See [Attachment III-B](#) for an example.

3. Universal Waste Labels

Each container of universal waste must display a label with the words “Universal Waste,” the type of waste (ex., batteries) and the date the first contents were placed in the container. The label used at Messiah University also is used to meet the inspection requirements for universal waste storage. Copies of the label can also be obtained from the Facility Services (ext. 6011). See [Attachment III-B](#) for an example of the label.

NOTE: If aerosol cans are not placed in a container, then each aerosol can must be marked or labeled with “Universal Waste – Aerosol Can.”

4. Storage Conditions for Aerosol Cans

Aerosol cans are required to be stored in a container that is protected from sources of heat, including, but not limited to, open flames, lighting, smoking, cutting and welding, hot surfaces, frictional heat, static, electrical and mechanical sparks, and heat producing chemical reactions. It is recommended, but not required, to remove actuators and valve stems to reduce the risk of accidental release.

E. UNIVERSAL WASTE RESPONSIBILITIES

1. Campus Events/Facilities Maintenance Staff

- a. 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 and CFL light bulbs are disposed of as 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.** Storage of universal waste cannot exceed 1 year so this date should be monitored with each addition to the container. Initial and date the container inspection sheet each time an addition is made (see [Attachment III-B](#)). Lamps must be packaged without separators, or any other packing materials. All Universal Waste Containers must be stored in a dry place.
- b. Complete a monthly inspection of each universal waste storage area.
- c. Notify the Facility Services, ext. 6011, when accumulation areas need pick up for disposal (either containers are full or the date is approaching the 1 year storage limit).

2. Facility Maintenance

Drop off new containers and remove the full containers. New containers should be labeled Universal Waste and an inspection sheet attached to the lid ([Attachment III-B](#)). The full containers are to be taken to the Central Accumulation Area (CAA) in the Lenhart Building.

3. Facility Services Personnel (as assigned this duty)

- a. Oversee the collection and shipping of universal waste.

- b. Verify that items being disposed of are actually Universal Waste items. Secure full containers with tape.
- c. Contact a licensed qualified contractor to schedule the disposal of Universal Waste.
- d. Remove the Inspection Record from the container and retain.
- e. If there is a special project or unusual amount of Universal Waste disposal, work with the Office for Human Resources and Compliance, calculate cost and charge disposal cost back to the originating departments. (Example: Light bulbs & Ballast would be charged to Mechanical Services).

4. Fire and Safety Coordinator

Zimmerman's Automotive will be responsible to remove and dispose of lead-acid batteries from vehicles. Fire alarm batteries are collected for recycling by the Fire and Safety Coordinator and disposed of by Zimmerman's Automotive.

5. Director of Technology Support Services

- a. Technology Support Services will put all old alkaline batteries in an approved container located in Old Main 135. Battery Plus Bulbs will be notified when the container is full and will arrange pick up. **These are not a universal waste.**
- b. Technology Support Services will put all projector bulbs in a container located in Old Main B4 and label appropriately. The Facility Services (ext. 6011) will be contacted when the container is full or the waste is approaching the 1 year storage limit.

6. Office for Human Resources and Compliance

Provide annual training on proper Universal Waste procedures to all Facility Maintenance personnel and Campus Events personnel (all shifts) who handle universal waste. This will be included with annual training for other types of waste.

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	Throw in Trash or Recycle; These are not a universal waste
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	Throw in Trash or Recycle; these are not a universal waste
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	Recycle at Lenhart/ Larsen/Library
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	Recycle at Lenhart/ Larsen/Library; These are not a universal waste
Sealed Lead Acid (Rechargeable) (aka, Valve Regulated Lead Acid	"Gel", VRB, AGM, Cyclone, El Power, Dynasty, Gates, Lithonia, Saft, Panasonic, Yuasa	Multiples of 2 Volts: 2V, 6V, 12V	Video cameras, power tools, wheelchairs, ATV's metal Detectors, emergency lighting, clocks, cameras, alarm system's backup power, UPS's	Dispose of as Universal Waste
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

Universal Waste Accumulation & Inspection Record

Type of Universal Waste: _____

Storage Location: _____

This inspection should be completed each time universal waste is added to a container. Initial and date this inspection record after assuring that containers of Universal Waste are:

- **closed** at all times;
- **free of defects**;
- **exhibit no water stains that might jeopardize its integrity if it is a fiberboard container**;
- have **no leakage, spillage** or other environmental releases;
- are **labeled with a Universal Waste label** which must include type of waste;
- **display the accumulation start date** which should be within the **1 year limit for storage***;
- **stored in a dry place**;
- and that lamps are packaged without separators, or any other packing materials.

* If date is approaching the 1 year limit, notify Facility Services, ext. 6011.

DATE	INITIALS

DATE	INITIALS

DATE	INITIALS

Section IV – WASTE OIL

Waste oil is not generated in any of the Messiah University operations at the Winding Hill Road facility so the contents of this section do not apply to that facility. (Any waste oil from building maintenance such as emergency generators is the property of and responsibility of the building owner.) If this should change, the Office for Human Resources and Compliance must be contacted immediately.

A. WASTE OIL POLICY

It is the policy of Messiah University to properly handle waste oil in accordance with US EPA and PA DEP regulations (40 CFR 279; 25 PA Code Chapter 298).

B. WASTE OIL DEFINITION/IDENTIFICATION

1. There is a recycling “presumption” with waste oil. All “waste oil” is recyclable until disposed of as “used oil” (hazardous waste) or sent for disposal (not recycle).
2. The waste oil regulations apply only to oil as generated, not mixed with any other material. If it is mixed with other material, it can no longer be handled as waste oil.
3. Waste oil cannot contain more than 1,000 ppm of total halogens – if it does, it must be handled as a hazardous waste.
4. To be considered waste oil, it must meet three criteria:
 - a. It must be derived from Crude or Synthetic Oil
 - b. It must have been used as
 - Lubricant
 - Coolant
 - Hydraulic fluid
 - Non-contact heat transfer fluid
 - c. It must be contaminated with only physical or chemical impurities such as water, dirt, metals and solvents.
5. Examples of waste oil include lubricating oil, hydraulic fluid, metal working fluid, coolants, and cutting oils.
6. Waste oil does NOT include antifreeze, kerosene, vegetable oil or animal oil.

C. WASTE OIL GENERATOR REQUIREMENTS

1. Waste oil must be stored in proper containers or storage tanks.
2. Containers and tanks must be in good condition.

3. Containers and tanks must be kept closed when not adding or removing waste oil. Any funnels affixed to these containers or tanks must also be kept closed when not adding or removing waste oil.
4. Containers and above ground storage tanks must be labeled with the words “**Waste Oil.**”
5. Maximum container storage height is nine (9) feet.
6. The generator must have a spill control, containment and clean up procedure. (Refer to the [*Hazard Communication Program: Chemicals Manual*](#), Section 8 for information on spills.)
7. The generator must have a Preparedness, Prevention and Contingency (PPC) Plan. Per PA DEP, the site’s Spill Prevention, Control and Countermeasure (SPCC) Plan may be used in lieu of a PPC Plan as it contains the same elements as a PPC Plan. The University’s SPCC Plan is maintained at the Lenhart Building.
8. Records of the type of oil used and description of the processes that generate the waste oil must be maintained for three (3) years. (See section D.)
9. Records of tests used to determine total halogen concentrations must be maintained for three (3) years. (See section D.)
10. Only proper, authorized transporters may be used to transport waste oil.
11. Self-transportation of **no more than 55 gallons** at any time may occur provided it is being **taken to the generator’s aggregation point** in a vehicle owned by the generator or owned by an employee of the generator. (Note: Messiah University restricts the use of employee vehicles to be used for this purpose; University vehicles must be used.)
12. The following additional requirements do not apply to persons/institutions that generate oil that has been used in an internal combustion engine as an engine lubricant, or as a product for lubricating motor vehicle transmissions, gears or axles which, through use, storage or handling has become unsuitable for its original purpose due to the presence of chemical or physical impurities or loss of original properties. Therefore, as this is the source of waste oil generated at Messiah University, they do not apply to us but are noted here to show that **compliance is not mandatory:**
 - a. Source Reduction Strategy
 - b. Biennial Report (March 1 of odd numbered years)

D. WASTE OIL STORAGE AREAS, CONTAINERS, AND LABELS

1. Waste oil is stored/accumulated in a holding tank located in the facilities maintenance/garage area of the Lenhart Building. A waste oil filter crusher is also located in this area. Crushed filters, once drained, may be placed with metals for recycle.
2. The tank must be labeled with the words "Waste Oil."
3. All openings (and funnels secured in openings) to the tank must be maintained closed except when adding to or removing oil from the tank.
4. Secondary containment must be available for all waste oil containers, including the holding tank. Secondary containment may consist of a drip pan if regular inspections are conducted to monitor for leaking storage tanks. Double-walled tanks are acceptable containment.

E. SOURCES OF WASTE OIL AND USE OF OIL BURNER AT MESSIAH UNIVERSITY

1. Only waste oil generated from engine oil changes in grounds equipment is added to the bulk waste oil tank. Standard motor oil is used (as the virgin oil) in these vehicles and equipment. There is no potential source of halogens in this waste oil.
2. Should a major engine failure occur which could result in possible contamination with anti-freeze, any oil generated will be handled as Used Oil, not Waste Oil, and will not be added to the bulk waste oil storage tank.
3. Oil generated from any other processes on campus will be handled as Used Oil, not Waste Oil, and will not be added to the bulk waste oil storage tank.
4. As much as possible of the waste oil generated at the University is used in a waste oil burner located in Lenhart. This oil burner is an Energy Logic, Model # MH15602 AS322223; produces up to 112,000 BTUs; burns up to one (1) gallon per hour; and is used to provide heat to the Lenhart building, Grounds Maintenance area. Waste oil is added via a piping system directly from the bulk waste oil storage tank.

F. WASTE OIL RESPONSIBILITIES

1. **Grounds Mechanic**
 - a. On a regular basis monitor the waste oil holding tank to assure that the tank is in good condition (no rust or apparent leaks), properly labeled with the words "Waste Oil", that all ports are maintained closed and secondary containment is empty.
 - b. If it becomes necessary for Messiah University to provide transportation of waste oil to an off-site facility the following must be adhered to: Can be transported in a container

- no larger than 55 gallons. Must be taken to a facility that is licensed or permitted by a state/county/municipal government to manage waste oil.
- c. Mixtures of waste oils are classified as “Hazardous Waste” if they contain more than 1,000 parts per million total halogens. If it is suspected that waste oil may be contaminated with other hazardous waste products, testing shall be conducted by the use of analytical methods from the edition of SW-846 and are to be handled as Hazardous Waste. If testing methods are not provided by the approved hauler, they can be made available by contacting the Government Printing Office at 202-512-1800 and requesting document number 955-001-00000-1. (See Section D.)
 - d. It does not matter how much of a **listed** hazardous waste is mixed with the used oil; if it is a listed hazardous waste, the used oil becomes a hazardous waste.
Waste oil contaminated with CFC’s (Chlorofluorocarbons) shall be handled as hazardous waste.
 - e. If it becomes necessary to respond to a waste oil leak the following steps must be taken: Stop the release, contain the release, clean up and manage properly the released waste oil and other materials. Repair or replace any leaking waste oil storage containers before returning them to service. Contact the Office for Human Resources and Compliance to **determine if the release is reportable under our SPCC Plan**.
 - f. Used oil filters are to be crushed, drained and disposed of with other metals for recycling.

2. Facility Maintenance

All waste oil generated by refrigeration units containing possible contamination with CFC’s must be handled as hazardous waste and disposed of by a certified hazardous waste vendor. Used refrigeration oils may be kept on site and stored in approved labeled containers until arrangements can be made for proper disposal.

Section V – INFECTIOUS WASTE/BIOHAZARD WASTE

A. INFECTIOUS WASTE/BIOHAZARD WASTE POLICY

It is the policy of Messiah University to manage the storage, disposal, and processing of infectious and biohazard waste in compliance with US EPA, PA DEP and OSHA regulations (PA Code Chapter 284; OSHA 1910.120, 1910.145, 1910.1030, 1910.1200).

For more information regarding Messiah University's program to protect employees with potential exposure to bloodborne pathogens and body fluids, refer to the manual [*Exposure Control \(Bloodborne Pathogens\) Plan*](#).

B. INFECTIOUS WASTE/BIOHAZARD WASTE DEFINITIONS

1. **Infectious Waste** – includes the following:

a. Laboratory Waste

- Waste cultures and stocks of agents that are generated from a laboratory and are infectious to humans.
- Discarded contaminated items used to inoculate, transfer, or otherwise manipulate cultures or stocks of agents that are infectious to humans.
- Wastes from the production of biological agents that are infectious to humans.
- Discarded live or attenuated vaccines that are infectious to humans.
- Wastes that originates from clinical or research laboratory procedures involving communicable infectious agents unless such waste has been properly decontaminated by an approved process (e.g. autoclaving).

b. Blood

- Human blood and blood components and products made from human blood.
- Solid waste saturated with dripping human blood or blood products (e.g. contaminated items that would release blood in a liquid or semi-liquid form, if compressed).
- Human blood products include serum, plasma, and other blood components.

c. Regulated Human Body Fluids

- Blood and blood components.
- Cerebrospinal fluid, synovial fluid, pleural fluid, peritoneal fluid, pericardial fluid, amniotic fluid, semen, pus, drainage, vaginal secretion.
- Any body fluids that are visibly contaminated with blood, that are in containers or that drip freely or could be released in a liquid or semi-liquid state from soaked solid wastes items.

NOTE: OSHA does not generally consider discarded feminine hygiene products, used to absorb menstrual flow, to fall within the definition of regulated waste. The intended function of products such as sanitary napkins is to absorb and contain blood. The absorbent material of which they are composed would, under most circumstances,

prevent the release of liquid or semi-liquid blood or the flaking off of dried blood. OSHA expects these products to be discarded into waste containers which are properly lined with plastic or wax paper bags. Such bags should protect the employees from physical contact with the contents. This determination is not based on actual volume of blood, but rather on the potential to release blood (e.g., when compacted in a waste container).

d. Cadavers and Cadaver Lab Wastes

Per the CDC, "Employers and employees in the non-transplant anatomical donation industry and **end users** should recognize that cadavers and non-transplant anatomical materials **are considered potentially infectious** with *M. tuberculosis* and other pathogens, even if they are known to test negative for HIV, HBV, and HCV. Employers must comply with the OSHA Bloodborne Pathogen Standard..."

(see <https://www.cdc.gov/mmwr/preview/mmwrhtml/mm6317a4.htm>)

Cadavers, when use of them is finished, will be returned to the supplier in compliance with agreement established when they were obtained (cremated).

Other wastes generated in the cadaver labs are classified and will be disposed of as follows:

ITEM	WASTE TYPE/ CONTAINER TYPE	STORAGE & DISPOSAL
Sharps, contaminated	BIOHAZARD (INFECTIOUS) WASTE Sharps biohazard container	**Container may be used until full. Then close container tightly and seal. It must then be shipped for disposal within 30 days or moved to freezer to extend storage to 90 days. Ship for disposal as infectious/biohazard waste.
Gloves, paper towels, etc. (non-sharps) potentially contaminated with cadaver cells	BIOHAZARD (INFECTIOUS) WASTE Biohazard container with liner or biohazard bag.	**Must be sent for disposal within 30 days of the date the bag/container is full (or sealed, whichever occurs earlier) or move to freezer to extend storage to 90 days. Ship for disposal as infectious/biohazard waste.
Embalming fluid from cadaver	RESIDUAL WASTE* Liquid container	Do not fill completely; allow about 1 inch space at top. 1 year storage limit. Ship to ELK Environmental for disposal. This is NOT a hazardous waste or a biohazard waste.

*Justification for classification of waste embalming fluid from cadavers:

NOT A HAZARDOUS WASTE -

The RCRA hazardous waste identification regulations contain two mechanisms for identifying a waste as a hazardous waste, lists and characteristics. A waste is a hazardous waste if it either is listed (40 CFR

261.31, 32, or 33) or it exhibits one or more of the defined characteristics (261.21, 22, 23, or 24). **Used embalming fluids do not qualify as hazardous under any of these criteria.** Many people mistakenly believe they do because formaldehyde, the key

ingredient in such products, is listed under 261.33 (U122). Section 261.33 lists commercial chemical products which are hazardous wastes when discarded or intended

to be discarded. It does not include wastes which result from the intended use of the product. Thus, **embalming fluid, since it consists of formaldehyde plus some inert ingredients (e.g., colorants and perfumes), would be a hazardous waste if discarded unused; however, if the generator is disposing of embalming fluid which has been used, for example, to flush body fluids out of the cadaver, then disposal of the fluid does not constitute disposal of a hazardous waste.** Similarly used formalin contains about 8% methanol and it also contains sodium hydroxide, but it will not be sufficient to give it an ignitability characteristic or a corrosivity characteristic. There is nothing in the used formalin that will cause it to carry a reactivity characteristic and it does not contain any D004— D043 toxic waste characteristics. Understand that it still needs to be shipped as a hazardous material – hazardous waste and hazardous materials are not the same thing.

NOT AN INFECTIOUS/BIOHAZARD WASTE –

We have made a reasonable assumption that the formaldehyde fluid would kill all OPIM that might exist. Formaldehyde is on the EPA list of sterilants and for this reason we also believe our assumption is justifiable.

(NOTE: We could find no written determination from OSHA, EPA or other sources to corroborate this. However, in a conversation with the Harrisburg OSHA Duty Officer on 5/30/18, he was in agreement with our assumption.)

**** Justification for storage and disposal of wastes:**

Refer to the publication from the PA Department of Health for *Biohazard Disposal in Schools*

(https://www.health.pa.gov/topics/Documents/School%20Health/Pennsylvania,%20Biohazard%20Disposal%20in%20Schools_A_18.pdf) and to PA Chapter 284.415.

e. Research Animal Waste

Carcass, body parts, and blood derived from animals knowingly and intentionally exposed to agents that are infectious to humans; and/or accidentally or naturally infected with agents that are infectious to humans for the purpose of research, diagnostic, production of biological and/or testing of pharmaceuticals.

f. Infectious Animal Waste

- Radioactive Research Animal Waste: Animals and animal waste contaminated with radioactive material.
- Research Animal Waste Contaminated with Toxic Chemicals

g. Sharps – Any discarded items that can induce sub-dermal inoculation of infectious agents, or any item that can easily penetrate the skin, puncture waste bags and cardboard boxes including:

- Needles and syringes
- Surgical, scalpel and razor blades

- Pasteur pipettes capillary tubes
- Slides and cover slips
- Shards of contaminated glass, and any other sharps items derived from human or animal patient care, blood banks, laboratories, mortuaries, research facilities and industrial operations.

Sharps are considered infectious waste whether contaminated with infectious agents or not.

2. **Pathological Waste** – means human tissue and body parts removed by trauma, during surgery or autopsy or studies and which is intended for disposal. Pathological waste does not include teeth, hair or nails.
3. **Objectionable Waste** – is waste that will not be accepted in the trash haulers main processing plant. This includes:
 - Blood administration tubing.
 - Tubing or drainage collection devices (e.g. hemovacs, J.P. bulbs, and suction canisters), which cannot be emptied and/or rinsed from all visible blood.
 - Wound dressing/ gauze, which contains spots of blood greater than 2 inches in diameter.
 - Large volumes of tubing disposed of in same container (e.g. waste bag full of IV and/or ventilator tubing).
4. **Broken Glass** – any large items of non-contaminated broken glass containers. This includes bottles, burettes, beakers, test tubes, etc.
5. **Non-Infected Research Animal Waste** – means animals and animal waste that have not been in contact with agents that are infectious to humans or are not considered naturally infected.
6. **Preserved Animal Waste** – means preserved animals and parts that have been used in a teaching laboratory.

C. INFECTIOUS/BIOHAZARD WASTE REQUIREMENTS

1. **Infectious/Biohazard Waste Segregation**
 - a. All wastes will be segregated into appropriate categories at the point of generation (e.g. laboratory, academic areas, and service area), properly containerized and maintained in separate packaging throughout collection, storage and transport in a manner that prevents release of the waste material.
 - b. All untreated infectious waste will be placed immediately into appropriate collection bags and containers.

- c. All infectious/objectionable waste destined for on-site decontamination by autoclaving will be segregated from other waste and placed directly into autoclavable waste collection bags.
- d. Cadavers and cadaver parts are handled with the respect that should be afforded to human remains and are returned to the provider in compliance with the agreement at the time they were obtained. This may mean cremation of the cadaver and cadaver parts prior to returning the remains.

2. Infectious/Biohazard Waste Container Requirements

- a. Reusable containers:
 - Infectious waste collection and transportation containers will be rigid; leak-, burst- and tear-resistant under normal conditions of handling and use; constructed of smooth, easily cleanable, impermeable material.
 - Reusable containers that have been in direct contact with infectious material will be disinfected prior to reuse.
- b. Disposable containers:
 - All infectious waste collection containers (other than sharps) will be lined with disposable waste collection bags. Infectious waste collection bags will be impervious to moisture and of sufficient strength to preclude ripping, tearing or bursting under normal conditions of use and handling.
 - Red disposable infectious waste bags will be used for the collection of non-autoclavable infectious waste, such as pathological waste or infected research animal waste, or for other waste not intended for on-site decontamination or treatment.
 - Sharps containers will be rigid and puncture-, burst- and tear-resistant under normal conditions of handling and use. All sharps containers will be prominently labeled with the words "Sharps" and bear the biohazard symbol. Sharps containers should close to prevent hands from entering the box and be closed permanently when the box is full.

Please Note: Cardboard boxes are not acceptable sharps containers and should not be used as such.

3. Infectious/Biohazard Waste Labeling Requirements

- a. All infectious waste collection containers, bags, or liners will be clearly labeled with a biohazard symbol and/or marked with the words "Infectious Waste". (NOTE: Body bags for cadavers are not labeled as such, even when the cadaver/cadaver parts are being sent for final incineration.)
- b. Sharps containers must be labeled with the words "Sharps" and bear the biohazard waste symbol whether the sharps are infectious or not.
- c. **Waste can only be stored at the point of generation for up to 30 days from the date the container becomes full or is sealed.**

- d. It will be the generator's responsibility to post a biohazard label on the doors of any room where Biohazard Waste is kept. In general, affix Biohazard Warning labels to refrigerators, freezers and other containers holding blood and other potentially infectious materials to warn others of the hazards involved.

4. Infectious/Biohazard Waste Storage Requirements

- a. Infectious/objectionable, pathological, infected research animal and pathological waste destined for off-site shipment must be properly containerized, labeled and stored separately from other waste in areas designed to prevent the entry of vermin and access by unauthorized persons.
- b. All untreated infectious waste and non-preserved animal and pathological waste will be stored in coolers, refrigerator and freezers to prevent putrefaction and minimize odors.
- c. All storage containers will have tight fitting lids.
- d. **Storage cannot exceed 30 days at point of generation (from when container becomes full or is sealed). Messiah personnel may store bio-hazardous waste in freezers but storage in freezer may not exceed 30 days.**
- e. **Storage in freezers cannot exceed 90 days.** There are freezers for this purpose located in Lenhart Accumulation Area.

5. On-Site Decontamination of Infectious Waste

- a. All laboratories involved with the use of virulent infectious agents must decontaminate all cultures, stocks and materials used in the manipulation of infectious agents before disposal into the normal waste stream or general refuse.
- b. Infected animal carcasses and body parts will not be decontaminated on-site but shipped for off-site incineration.
- c. There are other acceptable processes for the decontamination of infectious waste. However, the approval of the Natural Sciences Lab Program Manager is necessary prior to decontamination.

D. INFECTIOUS/BIOHAZARD WASTE RESPONSIBILITIES

1. Areas Generating Infectious/Biohazard Waste

- a. All personnel involved in the generation of infectious/biohazard waste must be familiar with and understand this policy.
- b. Collect waste at the point of generation, placing in the appropriate container. Comply with all segregation, labeling, and storage requirements as outlined in Section C of this policy.
- c. Comply with all decontamination requirements that impact your area as outlined in Section C of this policy.

- d. **Waste can only be stored at the point of generation for 30 days.** At the Grantham Campus, contact Facility Services, ext. 6011, to have the container picked up before the 30 days are exceeded. At the Winding Hill facility, contact the cadaver lab coordinator.
- 2. Facility Services at Grantham, main campus
 - a. Pick up waste containers from generation areas.
 - b. Store in freezer located in Lenhart Accumulation Area. **Waste can be stored in this freezer for up to 90 days.**
 - c. Arrange for pick up and disposal of waste by appropriate waste hauler.
 - d. Maintain all records (including generator shipping papers and copies received from disposal facility) associated with the shipment and disposal of infectious/biohazard waste. Records should be kept in Lenhart Resource Room.
- 3. Cadaver Lab Coordinator at Winding Hill facility
 - a. Pick up waste containers from generation areas.
 - b. Store in waste accumulation room.
 - c. Arrange for pick up and disposal of waste by appropriate waste hauler. If freezer is not available for this purpose, waste must be disposed of within 30 days of generation.
 - d. Maintain all records (including generator shipping papers and copies received from disposal facility) associated with the shipment and disposal of infectious/biohazard waste.

E. ADDITIONAL RESOURCES FOR INFECTIOUS/BIOHAZARD WASTE MANAGEMENT

- 1. [Attachment V-A](#) – Infectious Waste Disposal Summary Chart
- 2. [Attachment V-B](#) – Biological Emergencies
- 3. [Attachment V-C](#) – Biohazardous and Medical Waste Guidelines



Infectious Waste Disposal Summary Chart

Type of Waste	Type of Container	Local Treatment	Final Disposal
<p style="text-align: center;">Sharps</p> <p>Needles, syringes, surgical scalpels, razor blades, Pasteur pipettes, capillary tubes, slides, cover slips, pipette tips, and shards of contaminated glass</p> <p>Sharps (except uncontaminated broken glass containers) are considered infectious waste whether contaminated with infectious agents or not.</p>	 <p style="text-align: center;">Sharps Container</p>	<p style="text-align: center;"><u>None</u></p> <p>Place sharps items intact, directly into sharps receptacle immediately after use, without recapping. Sharps container must not be filled more than 3/4 full.</p> <p>When container is 3/4 full, close container tightly and seal by taping cover. Contact Waste Coordinator for removal to Lenhart.</p> <p style="text-align: center;"><u>Warning:</u></p> <p>Open containers and containers with items other than sharps will not be picked up</p>	<p style="text-align: center;">Shipped off campus to outside contractor for ultimate destruction</p> <p>Store containers in a secure area until picked up for disposal by Waste Coordinator</p>
<p style="text-align: center;">Contaminated Non-Sharps Items</p> <p>Culture media and plastic ware, or other non-sharps items (e.g. gloves, absorbent pads, plastic test tubes, non-Pasteur pipettes, culture plates etc), contaminated with potentially infectious materials or agents (e.g. blood, body fluids, infectious cultures)</p> <p>Never place sharps items in a biohazard container; sharps must be disposed of in sharps container as infectious waste.</p>	<p style="text-align: center;">Biohazard container with liner</p>	<p style="text-align: center;">None</p>	<p style="text-align: center;">Shipped off campus to outside contractor for ultimate destruction</p>
<p style="text-align: center;">Contaminated Liquids</p> <p>Cell cultures, contaminated broth or media,</p>	<p style="text-align: center;">Glass bottle (2.5 or 4 Liters) marked with universal Biohazard symbol</p>	<p style="text-align: center;">Decontaminate with bleach solution</p> <p>Add bleach solution to the liquid waste for a 1:10 ratio of bleach to liquid waste. Wait 8 hrs. before disposing of this dilution into sewer system.</p>	<p style="text-align: center;">Discharge into sanitary sewer system</p>

Biological Emergencies at Grantham Campus



In case of biohazardous material spill, or exposure* to an infectious material or agent, do not panic. Proceed with the following:

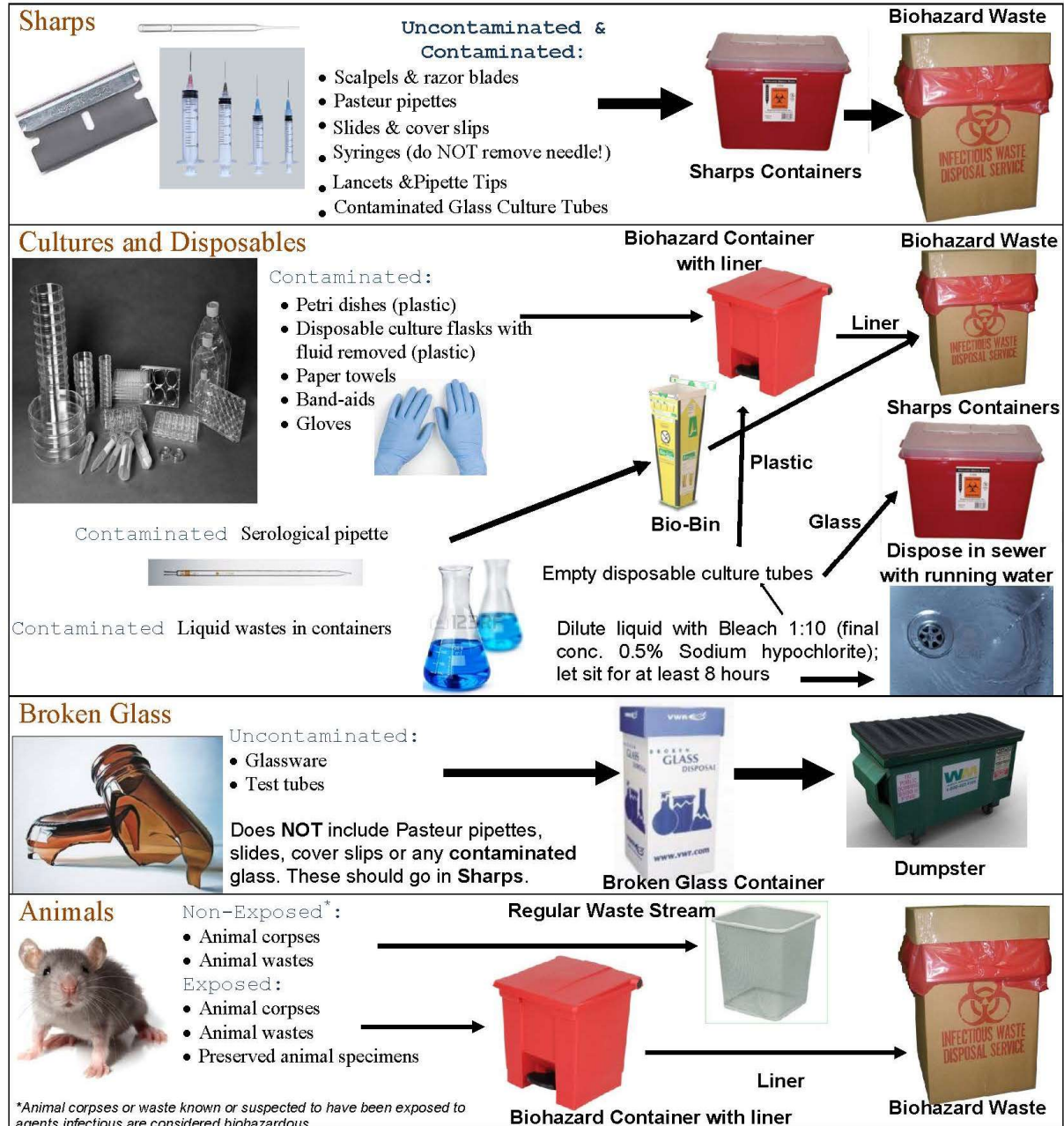
1. Notify all personnel in the area of the spill. Contact Dispatch immediately at 6005.
2. Restrict access to spill area.
3. Remove all contaminated clothing and place in a Biohazardous (autoclave) bag.
4. If skin is contaminated, begin washing with mild soap and water.
5. In case of an exposure,* seek medical help immediately.
6. Put on clean gloves and face mask.
7. Place absorbent pads on spilled material.
8. Spray pads with a disinfectant.
9. Have someone else call Dispatch at 6005.
10. Follow Emergency spill procedure. Use TP Disinfectant available through Campus Events.

Do not attempt to clean up a bioinfectious material spill without use of appropriate protective equipment.

If unsure, consult with the Facility Services, ext. 6011.

**All needle sticks and eye, mouth, other mucous membrane, or non-intact skin contact with blood or other infectious materials is considered an EXPOSURE INCIDENT and compliance with procedures outlined in the [Exposure Control Plan](#) is required. Further documentation on the Needlestick Log and/or OSHA Log may be also be required.*

BIOHAZARDOUS AND MEDICAL WASTE DISPOSAL GUIDELINES



For more information on final disposal:

**Biological Sciences Lab Coordinator, x2189
Office of Human Resources and Compliance x5300**

Section VI – RESIDUAL WASTE

A. RESIDUAL WASTE POLICY

As with all waste streams, Messiah University will strive to handle residual waste in compliance with state regulations.

B. RESIDUAL WASTE DEFINITION/IDENTIFICATION

Residual waste is non-hazardous industrial waste. It includes waste material (solid, liquid, or gas) produced in industrial, mining and agricultural operations. Residual waste is defined more by the point of generation than by the actual waste characteristics. Wastes generated from facilities maintenance (non-office areas) and Messiah Press (pressroom area) that are not hazardous wastes would be examples of residual waste. However, **if the waste stream is being recycled, it is not a residual waste**. Waste oil is NOT a residual waste. Discarded tires are considered “waste” unless being recycled.

C. RESIDUAL WASTE REQUIREMENTS

1. For generators of more than 2,200 pounds of residual waste per location in any single month, a Biennial Report and a Source Reduction Strategy are required. Messiah University does not generate a sufficient quantity of residual waste to entail compliance with these two requirements. The bulk of our non-hazardous waste comes from offices, dining areas, residence halls and rest rooms and is therefore classified as municipal waste, not as residual waste.
2. A person or municipality storing residual waste shall routinely inspect the facility and maintain records of the inspections and corrective actions that were taken.
3. A person or municipality may not store residual waste for more than one (1) year. It shall be presumed that a person or municipality storing residual waste more than 1 year is operating a residual waste disposal facility and is subject to the requirements for residual waste disposal.
4. A person or municipality that stores residual waste shall maintain accurate operational records that are sufficiently detailed to clearly and convincingly demonstrate that residual waste is being stored in accordance with the 1 year limit. These records may include shipping papers, invoices, or other documents that show dates and quantities of waste beings sent for proper disposal and should be retained for three years.
5. Disposal must be at a state permitted residual waste disposal facility.

D. RESIDUAL WASTE STORAGE AREAS, CONTAINERS AND LABELS

1. A person or municipality storing residual waste may not allow waste or constituents of waste to be blown or otherwise deposited outside of the storage area.
2. All containers shall be clearly labeled as “residual waste” or as the specific type of residual waste.
3. Containers shall be kept closed except when adding to or removing from container.
4. Container shall be free of defects that would jeopardize the integrity of the container.

E. RESIDUAL WASTE RESPONSIBILITIES – GROUNDS MANAGER, MESSIAH PRESS & WINDING HILL

The **Grounds Manager** or designee shall complete these responsibilities listed below for residual wastes accumulated on the main campus.

Messiah Press shall complete these responsibilities listed below for residual waste accumulated at Messiah Press/Bowmansdale Building.

Winding Hill cadaver lab coordinator shall complete these responsibilities listed below for residual waste accumulated at Winding Hill facility.

1. Conduct inspections of residual waste storage areas. These inspections must be completed at least monthly and records retained for three years. “Residual Waste Generation, Accumulation and Storage Inspection” form, [*Attachment VI-A*](#), shall be used for this purpose.
2. Take any necessary corrective action if non-compliance issues are found during these inspections. Record the corrective action on the form.
3. Insure that documentation such as shipping papers, invoices or other papers which indicate quantities and dates of shipment of waste for disposal are available in the event of an audit.

RESIDUAL WASTE GENERATION, ACCUMULATION & STORAGE INSPECTION

Waste Location: _____

This record should be completed monthly (as a minimum). Initial and date this record after verifying that containers of waste are:

- **closed** at all times except when adding to or taking from;
- **free of defects**;
- **exhibit no water stains that might jeopardize its integrity if it is a fiberboard container**;
- have **no leakage, spillage** or other environmental releases; not blown or otherwise deposited outside of storage area;
- are **labeled with the appropriate waste label**;
- **1 year limit for storage***;
- **limit for generation is 2,200 lbs per calendar month**;

* If date is approaching the 1 year limit, notify the Grounds Manager.

Concerns Noted	Corrective Action	Date Waste Shipped for Disposal*	Initials	Date

* In lieu of recording shipping date, proper copies of shipping papers or billing records may be used to show accumulation does not exceed one year limit. Retain record for three (3) years.

Section VII – MUNICIPAL SOLID WASTE

Municipal waste generated at the Winding Hill facility is collected by the buildings janitorial service and placed into a dumpster maintained by the building's owner. The dumpster's disposal is contracted by the building's owner and inspection of this waste container is the responsibility of the building owner.

A. MUNICIPAL SOLID WASTE POLICY

It is the policy of Messiah University to strive for compliance with all regulations of PA Code Chapter 285 pertaining to municipal waste.

B. MUNICIPAL SOLID WASTE DEFINITION

1. Municipal solid waste is waste generated by a household (including a single or multi-family residence); and
2. Waste generated by a commercial, industrial, or institutional entity, to the extent that the waste material
 - a. Is essentially the same as waste normally generated in a household;
 - b. Is collected and disposed of with other municipal solid waste as part of normal municipal solid waste collection services; and
 - c. Contains a relative quantity of hazardous substances no greater than the relative quantity of hazardous substances contained in waste material generated by a typical single-family household.

C. MUNICIPAL SOLID WASTE REQUIREMENTS

1. A person or institution that stores municipal waste may not allow waste or constituents to be blown or otherwise deposited outside of the storage area.
2. Municipal waste/containers shall be protected from the elements to prevent leachate into the ground.
3. Containers shall be kept closed except when waste is being added to or removed from the container.
4. The container shall be labeled with the words "Municipal Waste."
5. A person or institution storing municipal waste shall routinely inspect the facility, its equipment and the surrounding area for evidence of non-compliance and shall immediately

take necessary corrective actions. The person or institution shall maintain records of inspections and corrective actions that were taken.

6. A person or institution may not store municipal waste for more than one (1) year. PA DEP will presume that a person or municipality storing municipal waste more than one year is operating a municipal waste disposal facility and is subject to the requirements for municipal waste disposal.
7. A person or institution that stores municipal waste shall maintain accurate operational records that are sufficiently detailed to clearly and convincingly demonstrate to the Department that municipal waste is being stored less than one (1) year. Shipping papers such as bills of lading and invoices may suffice as documentation/proof of storage compliance.

D. MUNICIPAL SOLID WASTE RESPONSIBILITIES – GROUNDS MANAGER/MESSIAH PRESS PRODUCTION TECHNICIAN

The **Grounds Manager** or designee shall insure these responsibilities listed below are completed for municipal wastes accumulated on the main campus.

Messiah Press Production Technician or alternate shall complete these responsibilities listed below for municipal wastes accumulated at Messiah Press/Bowmansdale Building.

1. Conduct inspections of municipal waste storage areas. These inspections must be completed at least monthly and records retained for three years. "Municipal Waste Generation, Accumulation and Storage Inspection" form, [*Attachment VII-A*](#), shall be used for this purpose.
2. Take any necessary corrective action if non-compliance issues are found during these inspections. Record the corrective action on the form.
3. Insure that documentation such as shipping papers, invoices or other papers which indicate quantities and dates of shipment of waste for disposal are available in the event of an audit.

MUNICIPAL WASTE GENERATION, ACCUMULATION & STORAGE INSPECTION

Waste Location: _____

This record should be completed monthly (as a minimum). Initial and date this record after verifying that containers of waste are:

- **closed** at all times except when adding to or taking from;
- **free of defects**;
- have **no leakage, spillage** or other environmental releases; not blown or otherwise deposited outside of storage area;
- are **labeled with the appropriate waste label**;
- **1 year limit for storage**.

Concerns Noted	Corrective Action	Date Waste Shipped for Disposal*	Initials	Date

* In lieu of recording shipping date, proper copies of shipping papers or billing records may be used to show accumulation does not exceed one year limit. Retain for three (3) years.

Section VIII – RECYCLING PROGRAMS

Recycling programs at the Winding Hill facility are part of the waste collection/disposal program administered by the building's owner. However, as good stewards of God's creations, employees at this facility comply with Messiah's policy to minimize the generation of waste, reuse if possible, and participate in any recycling programs established by the building's owner.

For recycling/disposal of University owned computers and electronic devices at Winding Hill, contact ITS or the Office for Human Resources and Compliance.

A. RECYCLING POLICY

1. It is the policy of Messiah University to minimize the generation of waste. When waste is generated, then the policy is to reuse as much as possible. If reuse is not possible, then every attempt should be made to recycle the waste. Actual disposal should be the last choice. Additionally, Messiah University will comply with all state and federal regulations regarding waste recycling.
2. There are times when computers and other electronic devices are deemed obsolete by the University but are still usable. In such instances, University owned items may be donated for reuse. If this occurs, **to insure that the University does not retain liability for future disposal, [Attachment VIII-A](#) should be completed for each shipment and forwarded to the Office for Human Resources and Compliance for record retention.** Determination, collection and arrangement for shipments of reusable computers/electronic devices is made by ITS.
3. At the Grantham and Bowmansdale sites, Messiah University presently recycles paper, cardboard, commingles, newspapers, magazines, books, consumer devices, and metal scrap. The Facility Services department (ext. 6011) manages the recycling program at Messiah University. Campus Events and Dining Services work together with Facilities Services to maximize recycling efforts.
4. Universal waste (recycled hazardous waste such as batteries, mercury containing devices, fluorescent light bulbs) is covered under its own procedure (see Section III). Recycling of these items is not included in this procedure.
5. Waste oil is recycled. This is covered under its own procedure (see Section IV).
6. Food waste and leaves are composted on campus. Trees/wood are chipped for reuse as mulch.

7. Cooking oils generated in our dining services areas are collected and sold to Valley Protein, who picks it up routinely. It is then reused in the development of biofuel ingredients and the manufacture of animal feed, pet foods and other products.
8. By law, Messiah University cannot accept wastes for recycling that are not generated on campus property. Employees may not bring to campus waste generated off-site to be added to our recycling programs; this includes food scraps and lawn clippings for composting, and wood items for mulch.

B. RECYCLING DEFINITIONS

Cardboard – clean corrugated cardboard.

Commingles – aluminum, bi-metal, plastics (#1-7), glass containers (free of food residue; rinse out all containers and remove lids).

Consumer Device Recycling Act (CDRA) - this act bans the disposal of all covered devices regardless of whether or not they would be considered hazardous waste; this became effective January 24, 2103. Thus, businesses may no longer landfill covered devices or their components and must have those devices properly recycled or reused. Covered devices include desktop computers, laptop computers, computer monitors, computer peripherals and televisions.

Contaminants – items that, when placed into recycling containers make all pure recyclables UNrecyclable. **Items that are not recyclable, if placed into a recycling container, can contaminate the entire contents of that container. Likewise, recyclables placed into the wrong type of recyclable container can contaminate the entire contents.** Different types of recyclables should not be mixed.

Electronic Recycler - if the covered devices are recycled in Pennsylvania, the recycling facility must have obtained general permit #WMGR081 (Processing and beneficial use of electronic equipment and components by sorting, disassembling or mechanical processing).

Newspapers/Magazines/Books – consult Facilities Services for drop-off locations.

Paper – white office paper, most colored paper, envelopes, NCR paper, post-its.

C. RECYCLING RESPONSIBILITIES

1. Messiah University employees and students

- a. **Reduce** – use durable, long-lasting goods. Only print information when needed and print on both sides.

- b. **Reuse** – repair old items; give to charity or sell. Use durable coffee mugs, reuse boxes, reuse 3-ring binders and file folders, purchase refillable pens.
- c. **Recycle** – buy recycled products. Recycle items for which we have recycling programs. There are containers throughout campus for paper, cardboard, commingles, and foam containers. Do not contaminate the contents of these containers by placing items into them that do not belong. There are recycling collection boxes in offices for paper.
- d. If you have consumer devices for recycling, contact the Facility Services, ext. 6011, for assistance. He will inform you of the proper storage locations or will pick them up.

2. Facility Services Personnel, as assigned

- a. Arrange for shipments of recyclables, including consumer devices.
- b. Two times a year (November and April), submit announcement to student newsletters reminding students not to dispose of electronic equipment or appliances in dumpsters.
- c. As needed, promote recycling on campus by issuing reminders to employees and students via mass email and the *Intercom*.

3. Campus Events

- a. Collect recycling boxes for paper located in office areas and place into larger paper collection units. Collect *shredded confidential* paper from office areas and place into collection units.
- b. Collect cardboard boxes for recycling, break down and place in larger collection units outside buildings.
- c. Use cardboard baler where available to compact cardboard items.
- d. Empty recycle containers for commingles located throughout campus buildings into larger collection units outside buildings.

4. Grounds Services

- a. Distribute empty recycling containers across campus as needed and routinely collect recyclables from larger collection units and balers.
- b. Package (compact) cardboard for shipment.
- c. Arrange for shipments of recyclables, including scrap metal, to off campus recyclers.
- d. As needed, promote recycling on campus by issuing reminders to employees and students via mass email and the Intercom.
- e. Collect leaves from campus grounds and add to compost pile located in “Back 40” area.
- f. Turn compost pile as needed. (NOTE: Sustainability student volunteers collect food waste from campus dining service areas and add to compost pile.)
- g. Collect tree limbs and scrap wood; store in “Back 40.” Annually, rent chipper to generate wood chips that in turn will be used throughout campus.

5. Information Technology Services (ITS)

Determine if University owned computers and electronic devices are reusable. Collect and arrange donation to organizations such as C4KidsAmerica or sale to employees. Complete

[Attachment VIII-A](#) for each shipment and forwarded to the Office for Human Resources and Compliance for record retention. If the devices are not reusable, contact the Grounds Manager for assistance with proper disposal of electronics.

MESSIAH UNIVERSITY EQUIPMENT DONATION AGREEMENT

This Equipment Donation Agreement (the “Agreement”) by and between Messiah University (“Messiah”) and _____, having its address at _____ (“Recipient”) is entered into as of _____, 20____ (the “Effective Date”).

In consideration of the mutual promises and covenants contained in this Agreement, the parties agree as follows:

1. **Scope.** This Agreement sets forth the terms and conditions for Messiah giving to Recipient the Equipment, as further described in Exhibit A (“Contribution of Messiah Property”). This transaction does not constitute a sale of the Equipment.
2. **Warranty.** The equipment furnished under this agreement is provided on an “as is” basis, without any warranties or representations express, implied or statutory, including, without limitation, warranties of quality, performance, non-infringement, merchantability or fitness for a particular purpose..
3. **Taxes.** Recipient shall be solely responsible for payment of any and all sales, use, value-added and excise taxes, along with any other taxes of any nature whatsoever assessed upon or with respect to the Equipment provided under this Agreement.
4. **Limitation of Liability.** In no event shall Messiah University be liable for any special, incidental or consequential damages, lost profits, loss of use, lost data or any other indirect damages, even if Messiah has been informed of the possibility thereof.
5. **Disposal.** This equipment is being offered for reuse and therefore is not considered to be a waste product at point of disposal. Effective the date of this Document, Messiah is no longer the owner of this equipment. Therefore, Messiah University is not responsible for the disposal of the equipment including any parts from this equipment. Messiah University donates this equipment for reuse with the expectation that state and/or federal regulations pertaining to the proper disposal/recycle of this equipment/equipment parts will be met.
6. **Choice of Law.** This Agreement and the rights of the parties shall be interpreted and construed in accordance with the laws of the Commonwealth of Pennsylvania, without regard to its conflicts of law principles, and the state and federal courts of Pennsylvania shall have exclusive jurisdiction and venue over any dispute hereunder.

7. **No Agency.** Neither party has the right or authority to, and shall not, assume or create any obligation of any nature whatsoever on behalf of the other party or bind the other party in any respect whatsoever.

8. **Entire Agreement.** This Agreement is the entire agreement between the parties hereto concerning the subject matter hereof and replaces any prior oral or written communications between the parties. This Agreement may only be modified by a written document executed by the parties hereto.

IN WITNESS WHEREOF, the duly authorized representatives of the parties hereto have caused this Agreement to be duly executed as of the date first written above.

MESSIAH UNIVERSITY

Name of Company/Entity

By: _____

By: _____

Name: _____

Name: _____

Title: _____

Title: _____

Serial Number

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

WASTE HANDLING “AT A GLANCE” CHART FOR MESSIAH UNIVERSITY, MAIN CAMPUS AND BOWMANSDALE FACILITY

Waste Type	Generation/Accumulation/ Storage		Inspection	Labeling	Record Retention	Other	Responsibility
	Time Limit*	Quantity					
Hazardous (We are VSQG, EPA ID # PAR000514125)	1 year	Generation: 220 lbs/month; 2.2 lbs of acutely hazardous waste Accumulation: 2,200 lbs or 2.2 lbs of acutely h.w.	Monthly – use form in <i>Waste Manual</i>	Must include words “Hazardous Waste” & date container when it became full; use either RCRA label (preferred) or OSHA label	3 years (includes inspection records & shipping papers)	Must include hazardous waste code on shipping papers; manifest tracking not required for VSQGs	Facility Services Personnel, as assigned, ext. 6011
Universal SQHUW	1 year	11,000 lbs per year	Monthly & With each addition to container – use form in <i>Waste Manual</i>	Must include words “Universal Waste,” actual type/name of waste & date waste was first placed in container	3 years (includes inspection records & shipping papers)	Includes fluorescent bulbs, batteries; annual training for all who handle universal waste – provided to CE by Facility Services	Facility Maintenance (local containers) Facility Services Personnel (shipments from Lenhart)
Waste Oil	1 year	Unlimited	Routinely monitor accumulation tank	Must include words “Waste Oil” (not used oil)	3 years	Fac Maint oversee this; if transporting on campus to Lenhart tank, limit to 55 gal max at one time	Facility Maintenance
Municipal	1 year	Unlimited	Monthly using form in <i>Waste Manual</i>	Must display words “Municipal Waste” on container	3 years	Dumpsters; records include invoices, shipping papers or other documents which prove 1 year storage was not exceeded	Grounds
Residual	1 year	2,200 lbs/month	Monthly using form in <i>Waste Manual</i>	Must display words “Residual Waste” on container	3 years		Grounds &/or Area Generating Waste
Infectious/ Biohazard	30 days at point of generation; 90 days in Lenhart storage freezer	Unlimited		Must display biohazard sign &/or words “Infectious Waste” & date waste was first placed in container; sharps containers must include word “Sharps”			Facility Services Personnel, As assigned, Ext. 6011

Waste Type	Generation/Accumulation/ Storage		Inspection	Labeling	Record Retention	Other	Responsibility
	Time Limit*	Quantity					
Electronic Wastes	NA	NA	NA	NA	NA	If waste is going for recycle/reuse, an "Equipment Donation Agreement" must be completed to transfer liability; a copy of the completed form should be forwarded to the Office for Human Resources and Compliance.	Facility Services Personnel, As assigned, Ext. 6011
Recyclables						Includes cardboard, metal scrap, comingles, etc. – does not include lawn clippings, food scraps, trees.	Grounds

For all types of waste, containers must be compatible with waste, clean of residue, and kept closed at all times except when adding to or removing from container.

* If this limit is exceeded by even one day, it is presumed by the state to be disposal and we must comply as a disposal facility, which would include permits, reports, etc.

REVISION/REVIEW LOG

This manual will be reviewed in its entirety on an annual basis and the review date recorded on the cover. However, any revisions made independent of this annual review and all major revisions made as part of this annual review will be documented below.

Section I: WASTES AT MESSIAH UNIVERSITY	
Revision	Date
All waste procedures compiled into manual.	August 2013
Annual review completed.	August 2014
Added monthly inspection form for general waste storage area at Lenhert building.	October 2014
Annual review completed. Updated information re wastes prohibited from sanitary sewer disposal.	August 2015
Annual review completed.	June 2016
Included Winding Hill facility in manual.	January 2017
Annual review completed.	June 2017
Annual review completed.	June 2018
Added information regarding TSD facilities (section F).	September 2018
Completed annual review. Added information re Upper Allen Township website and codes at end of attachment on discharge limits.	May 2019
Annual review completed	July 2021
Annual review completed	June 2022
Annual review completed	January 2024
Annual review completed	January 2025

Section II: HAZARDOUS WASTE	
Revision	Date
All waste procedures compiled into manual.	August 2013
Removed references to Recycling and Waste Coordinator to Facility Compliance/Inventory Controller & replaced with area/individual in Facility Services now responsible	March 2014
Annual review completed. Updated list of hazardous wastes for Messiah Press.	August 2014
Annual review completed. Updated list in Attachment A.	August 2015
Annual review completed; minor edits; updated list of accumulation areas.	June 2016
Included reference to Winding Hill.	January 2017
Updated to reflect name change from Conditionally Exempt Small Quantity Generator to Very Small Quantity Generator and added information on what to do if monthly quantity is ever exceeded (per new EPA regulations).	January 2017
Annual review & updates to include new position of "Campus Events Inventory & Facility Compliance Manager."	June 2017
Added list of heavy metals and concentration limits.	October 2017
Added information on F-, K-, P- and U-lists. Expanded information provided under Identification/Definition section. Completed annual review.	June 2018
Added "Mixed Waste" information.	May 2019

Completed annual review.	June 2019
Changed references of specific positions within Facility Maintenance/Facility Services to simply Facility Services, ext. 6011.	February 2020
Annual review completed; minor edits to clarify that hazardous waste accumulated in Frey will be transported directly to Facility Services and not K301A.	July 2021
Annual review completed.	June 2022
Annual review completed	January 2024
Annual review completed; added additional TCLP Parameters to Toxicity characteristic; added management practices for "Excluded Solvent-Contaminated Wipes"; updated incompatible wastes table; updated management practices to reflect hazardous waste container will be dated once they become full at an accumulation area; updated wording on inspection logs, and wording changes.	January 2025

Section III: UNIVERSAL WASTE

Revision	Date
All waste procedures compiled into manual.	August 2013
Removed references to Recycling and Waste Coordinator to Facility Compliance/Inventory Controller& replaced with area/individual in Facility Services now responsible	March 2014
Annual review completed.	August 2014
Annual review completed.	August 2015
Annual review completed; minor edits.	June 2016
Included reference to Winding Hill.	January 2017
Annual review & updates to include new position of "Campus Events Inventory & Facility Compliance Manager."	June 2017
Annual review completed.	June 2018
Completed annual review.	June 2019
Added aerosol cans as universal waste and any special requirements associated with them. Changed references of specific positions within Facility Maintenance/Facility Services to simply Facility Services, ext. 6011.	February 2020
Annual review completed; removed reference to Hoffman building.	July 2021
Annual review completed.	June 2022
Annual review completed.	January 2024
Annual review completed; added storage locations to UWAA table; Changed inspection frequency to be completed monthly.	January 2025

Section IV: WASTE OIL

Revision	Date
All waste procedures compiled into manual.	August 2013
Removed references to Recycling and Waste Coordinator to Facility Compliance/Inventory Controller& replaced with area/individual in Facility Services now responsible	March 2014
Annual review completed. Added Section E, Sources of Waste Oil and Use of Oil Burner at Messiah University and renumbered succeeding sections.	August 2014
Annual review completed.	August 2015

Annual review completed.	June 2016
Included reference to Winding Hill.	January 2017
Annual review completed.	June 2017
Annual review completed.	June 2018
Annual review completed.	June 2019
Changed references of specific positions within Facility Maintenance/Facility Services to simply Facility Services, ext. 6011.	February 2020
Removed references to Fleet Services as this no longer exists.	October 2020
Annual review completed.	July 2021
Annual review completed.	June 2022
Annual review completed.	January 2024
Annual review completed	January 2025

Section V: INFECTIOUS WASTE/BIOHAZARD WASTE	
Revision	Date
All waste procedures compiled into manual.	August 2013
Removed references to Recycling and Waste Coordinator to Facility Compliance/Inventory Controller& replaced with area/individual in Facility Services now responsible	March 2014
Annual review completed. Added note to include OSHA's interpretation of feminine hygiene products.	August 2014
Annual review completed.	August 2015
Annual review completed.	June 2016
Included Winding Hill.	January 2017
Annual review & updated to include new position of "Campus Events Inventory & Facility Compliance Manager."	June 2017
Added information on waste generated in cadaver labs. Completed annual review.	June 2018
Completed annual reviews.	June 2019
Changed references of specific positions within Facility Maintenance/Facility Services to simply Facility Services, ext. 6011.	February 2020
Annual review completed.	July 2021
Annual review completed. Added Pipette Tips under the list of Sharps on page 45 and updated chart in Appendix V-C to include Pipette Tips as items that should be disposed of in a Sharps Container.	June 2022
Annual review completed	January 2024
Annual review completed; wording changes.	January 2025

Section VI: RESIDUAL WASTE	
Revision	Date
All waste procedures compiled into manual.	August 2013
Removed references to Recycling and Waste Coordinator to Facility Compliance/Inventory Controller& replaced with area/individual in Facility Services now responsible	March 2014
Annual review completed.	August 2014
Annual review completed.	August 2015

Annual review completed; minor edits.	June 2016
Included Winding Hill.	January 2017
Annual review & updated to include new position of "Campus Events Inventory & Facility Compliance Manager."	June 2017
Completed annual review.	June 2018
Completed annual review.	June 2019
Changed references of specific positions within Facility Maintenance/Facility Services to simply Facility Services, ext. 6011.	February 2020
Annual review completed.	July 2021
Annual review completed.	June 2022
Annual review completed.	January 2024
Annual review completed.	January 2025

Section VII: MUNICIPAL WASTE

Revision	Date
All waste procedures compiled into manual.	August 2013
Removed references to Recycling and Waste Coordinator to Facility Compliance/Inventory Controller& replaced with area/individual in Facility Services now responsible	March 2014
Annual review completed.	August 2014
Annual review completed.	August 2015
Annual review completed; minor edits.	June 2016
Included reference to Winding Hill.	January 2017
Annual review & updated to include new position of "Campus Events Inventory & Facility Compliance Manager."	June 2017
Completed annual review.	June 2018
Completed annual review.	June 2019
Changed references of specific positions within Facility Maintenance/Facility Services to simply Facility Services, ext. 6011.	February 2020
Annual review completed.	July 2021
Annual review completed.	June 2022
Annual review completed	January 2024
Annual review completed.	January 2025

Section VIII: RECYCLING PROGRAMS

Revision	Date
All waste procedures compiled into manual.	August 2013
Removed references to Recycling and Waste Coordinator to Facility Compliance/Inventory Controller& replaced with area/individual in Facility Services now responsible	March 2014
Annual review completed.	August 2014
Annual review completed.	August 2015
Annual review completed.	June 2016
Included reference to Winding Hill.	January 2017

Annual review & updated to include new position of "Campus Events Inventory & Facility Compliance Manager."	June 2017
Completed annual review.	June 2018
Completed annual review.	June 2019
Changed references of specific positions within Facility Maintenance/Facility Services to simply Facility Services, ext. 6011.	February 2020
Annual review completed.	July 2021
Annual review completed.	June 2022
Annual review completed	January 2024
Annual review completed	January 2025

WASTE HANDLING "AT A GLANCE" CHART FOR MESSIAH UNIVERSITY, MAIN CAMPUS AND BOWMANSDALE FACILITY

Revision	Date
Added to manual.	June 2016
Updated to include new position of "Campus Events Inventory & Facility Compliance Manager."	June 2017
Included in annual review.	June 2018
Completed annual review.	June 2019
Changed references of specific positions within Facility Maintenance/Facility Services to simply Facility Services, ext. 6011.	February 2020
Annual review completed.	July 2021
Annual review completed.	June 2022
Annual review completed	January 2024
Annual review completed; updated wording to reflect dating hazardous waste container when they become full; and updated inspection frequency for universal waste to monthly.	January 2025

Changed all references from "College" to "University" and updated titles/positions to reflect changes as a result of the Voluntary Separation Program. **July 2020**

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