

INFECTIOUS WASTE MANAGEMENT PLAN
Marshall University Robert C. Byrd Biotechnology Science Center

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II. OBJECTIVES OF THE WASTE MANAGEMENT PLAN

The objectives of this plan are to:

- A. Provide a safe environment for visitors, students, faculty and staff in the Robert C. Byrd Biotechnology Science Center (hereafter referred to as the Biotech Center).
- B. Proper management of infectious medical waste in accordance with the West Virginia Infectious Waste Rule 64-CSR-56 and the Occupational Safety and Health Administration Health Regulations on Exposure to Bloodborne Pathogens.

III. HANDLING OF INFECTIOUS MEDICAL WASTE

A. Packaging - All infectious medical waste, except free liquids, sharps and plastic or glass pipettes, shall be placed into two (2) leak-proof orange plastic bags (double-bagged) that meet the American Society for Testing and Materials drop weight test (ASTM-D-959-80) of 125 pounds. The bags shall have the international biohazard symbol on them and also contain the words "Biohazard" or "Biohazardous Materials" on them. Free liquids shall be contained in break resistant, tightly capped containers. These shall have the international biohazard symbol on them and the words "Biohazard" or "Biohazardous Materials" on them. Heavier materials shall be supported in double-walled corrugated fiberboard boxes. These boxes shall have the international biohazard symbol on them and the words "Biohazard" or "Biohazardous Materials" on them.

Contaminated needles and sharps shall be collected at the point of generation in rigid leak-proof and puncture-resistant containers that have the international biohazard symbol on them and the words "Biohazard" or "Biohazardous Materials" on them.

Contaminated Pasteur pipettes shall be placed into double-walled corrugated fiberboard boxes labeled for broken glass and with additional labels with the international biohazard label on them and the words "Biohazard" or "Biohazardous Materials" on them.

Contaminated plastic or glass serological pipettes shall be segregated from other biohazard waste and placed into two (2) leak-proof orange plastic bags (double-bagged) in such a manner as to not puncture the bags. The bags must meet the American Society for Testing and Materials drop weight test (ASTM-D-959-9) of 125 pounds and have the international biohazard symbol and words "Biohazard" or "Biohazardous Materials" on them.

Bags, boxes, liquid containers and sharps containers shall not be filled beyond 75% of their total capacity. All bags, boxes, liquid containers and sharps containers must be labeled with the supplied form label which states the origin of the waste and the signature of the operator processing the waste.

B. Handling - All unautoclaved infectious medical waste (except human waste from the Pathology section of the Department of Anatomy and Pathology and animal waste from the Animal Resource Facility (ARF)) that is in bags, boxes, liquid containers, or sharps containers shall be taken to Room 119A of the Biotech Center. Bags, boxes and sharps containers shall be placed into the large rigid, leak-proof and puncture resistant gray bin located in Room 119A, to await autoclaving. Liquid containers shall be placed on a shelf of

the gray metal cart located in Room 119A, to await autoclaving.

All human infectious solid medical waste from the Pathology section of the Department of Anatomy and Pathology shall be placed in the licensed biohazardous waste removal company's supplied polypropylene tubs with liners.

All unautoclaved infected animal carcasses and body parts from the ARF shall be placed in the licensed biohazardous waste removal company's supplied polypropylene tubs with liners.

Each Biotech Center laboratory, as necessary, shall receive from the waste removal company their own tubs with liners, which shall be bar coded for that particular laboratory. The tubs shall be kept in that laboratory until such time as they become full and/or weigh 50 pounds. At that point the tub shall be sealed and transported to Room 119 by the person designated from that laboratory. That person shall also notify the autoclave operator, in advance, that they are bringing the tub to Room 119. The autoclave operator shall immediately transport the tub to the refrigerated storage area, Room 116A in the ARF, to await pick-up by the licensed biohazardous waste removal company. The tubs for the ARF shall always be kept in the refrigerated storage area, Room 116A in the ARF. At such times as they become full and/or weigh 65 pounds, the tub shall be sealed, to await pick-up by the licensed biohazard waste removal company. Whole animals or gross sections of animals (e.g. whole organs) cannot be autoclaved on site and must be disposed as infected animal waste via the licensed waste company.

Autoclave room technician will be responsible for the sterilization and disposal of all biohazardous waste materials. During the handling of non-sterile biohazardous materials, the technician will at a minimum wear a lab coat and heavy duty gloves (e.g. Playtex Living Gloves) and observe all BSL1 operating procedures. Goggles shall be used when there is a risk of splashing. Individual lab technicians will wear disposal nitrile (or other synthetic) gloves and lab coats during the handling and transportation of biohazardous materials. Solid materials will be transported to the autoclave room 119A in double-bagged biohazard waste bags placed inside a secondary container. Use of lab carts will be recommended. Liquid material will be transported in the original container which will be placed within a larger secondary container (e.g. a polypropylene tub).

C. Labeling – The label on each bag, box, liquid container and/or sharps container shall contain the following information

- department name,
- phone number and the room number that the waste originated from,
- date packaged,
- initials of the person packaging the waste,
- physical address of the Robert C. Byrd Biotechnology Science Center (Marshall University, 1700 Third Avenue, Huntington, Cabell County, West Virginia, 25703)
- phone number, fax number and signature of the person autoclaving the waste,
- date treated and the method of treatment.

D. Treatment – All unautoclaved infectious medical waste, except that from the Pathology section of the Department of Anatomy and Pathology and from the ARF, that is in labeled bags, boxes, liquid containers and/or sharps containers shall be steam-

sterilized at 121.1° C (250 ° F) and 15 pounds pressure for 90 minutes. The autoclaves shall be tested every 40 hours (2400 minutes) of operation with *Bacillus geostearothermophilus*. The autoclaves shall be inspected quarterly by a licensed qualified technician from a licensed qualified sterilizer company and all necessary maintenance and upgrades made. Only the autoclaves located in Biotech Center Room 119 and Room 121 will be used for the sterilization of infectious medical waste. Biotech Center satellite labs located on 2nd, 3rd and 4th floors may not be used to sterilize infectious waste.

E. Disposal – All labeled solid infectious medical waste that has been steam sterilized and rendered noninfectious, will then be weighed, with the weight, the date weighed and the name of the person doing the weighing recorded in the log book. Several of the bags and/or boxes may then be packaged together in two (2) large black plastic bags double-bagged), tied shut and placed either directly into the Allied Waste solid waste dumpster for immediate pick-up or into the refrigerated storage area (Room 116A ARF) if the Allied Waste Dumpster will not have an immediate pick-up. All labeled liquid infectious medical waste that has been steam sterilized and rendered noninfectious may then be disposed of into the sanitary sewer.

F. At no time shall the Biotech Center at Marshall University knowingly accept infectious medical waste from another facility. All infectious medical waste generated at this facility shall be properly packaged and labeled before leaving the premises.

G. Storage - The designated storage area shall be Room 116A (the walk-in refrigerator) in the ARF. Access to the facility is restricted, it is vermin-proof and water-proof, and has been identified as a Biohazardous Storage Area with a sign prominently posted on the door. Once a month, or whatever schedule is deemed appropriate, the filled tubs in the storage area shall be picked up by the licensed biohazardous waste removal company. The tubs shall not be stored any longer than thirty (30) days. The Biotech Center will generate between 900 and 1,000 pounds of infectious medical waste per month.

H. Waste Removal - the Biotech Center at Marshall University shall contract with a licensed biohazardous materials waste removal company to remove infectious medical waste generated at the Biotech Center, to be disposed of according to local, state and federal regulations. At this time the Biotech Center shall contract with Stericycle, Inc.

The corporation office is: Stericycle, Inc.
28161 N. Keith Drive
Lake Forest, IL 60045
(800) 643-0240

The major account executive is: Gary Schuett
2341 Lockbourne Road
Columbus, OH 43207
(614) 449-9405

Fax (614) 449-9408

The operations office is: Stericycle, Inc.
544 St. Rt. 775
Proctorville, OH 45669
(740) 886-6499

The operations manager is: Lloyd Baldwin
544 St. Rt. 775
Proctorville, OH 45669
(740) 886-6499 extension 24
Fax (740) 886-7759

The disposal facility is: Stericycle, Inc.
1901 Pine Ave. SE
Warren, OH 44483
(800) 537-3455
Fax (330) 393-4792

Their permit/license # is: IMW-99-06-CM001

This licensed biohazardous materials waste removal company shall dispose of the infectious medical waste by off-site autoclaving and/or incineration as required.

I. Contingency Plan - In the event that the Biotech Center shall be unable to autoclave their infectious medical waste, our currently contracted licensed biohazardous materials waste company shall be contracted with to provide collection, treatment and disposal of the infectious medical waste generated at the Biotech Center. In the event that the licensed biohazardous materials waste removal company should be unable to provide collection and disposal of the Biotech Center infectious medical waste, we will contract with another licensed biohazardous waste disposal company to provide collection, treatment and disposal of the infectious medical waste generated at the Biotech Center

J. Separation - All medical waste shall be separated at the point of generation, including sharps, infectious materials and glass. Solid infectious medical waste shall be placed into orange biohazard bags. Liquid infectious waste shall be placed into leak-proof, break-resistant tightly capped containers. Contaminated broken glass and sharps shall be placed into a leak-proof and puncture-resistant container. Non-contaminated waste shall be placed into the regular trash. Non-contaminated broken glass shall be placed into boxes labeled as containing uncontaminated broken glass and placed into the regular trash.

K. Volume Reduction - Training shall be provided to educate personnel as to the

proper segregation of infectious versus noninfectious waste

IV. TRANSPORTATION OF INFECTIOUS MEDICAL WASTE

A. Internal Transportation - All infectious medical waste shall be transported through the Biotech Center in closed containers. At no time shall any infectious medical waste be transported without being enclosed in a proper container.

B. External Transportation - External transportation of infectious medical waste from the Biotech Center shall only be done by a licensed biohazardous materials waste removal company to their off-site treatment facility.

V. TRAINING

A. The Marshall University Institutional Biosafety Committee shall be responsible for training employees on the proper handling and treatment of infectious medical waste. All employees involved in research, laboratory work, housekeeping or maintenance shall be required to attend and complete education on the OSHA Occupational Exposure to Bloodborne Pathogens Standards, the Joan C. Edwards School of Medicine at Marshall University's Bloodborne Pathogen Exposure Control Plan and Personal Protective Equipment training. (See Attachment A)

B. All personnel who will be permitted to sign the shipping manifests for Stericycle, Inc. shall receive Haz Mat training, as mandated by the DOT, and every three years after that to maintain their certification.

VI. DISPOSAL PLAN

A. Stericycle, Inc. agrees to provide the Biotech Center with biohazardous materials waste collection and disposal through once a month pickups, or whatever schedule is deemed appropriate, at the Biotech Center, 1700 Third Avenue, Huntington, Cabell County, West Virginia, 25703. Stericycle, Inc. shall supply the Biotech Center with reusable 30 gallon polypropylene tubs containing red liners with Biohazard labels. No more than 65 pounds of waste may be placed in each container. (See Attachment B)

B. Manifest - All infectious medical waste to be collected by and disposed of off-site by Stericycle, Inc. which shall generate a manifest to track the material. (See Attachment B). In accordance with the West Virginia Infectious Waste Rule 64-CSR-56, all manifest records will be retained for a minimum of three years.

C. Transportation - All infectious medical waste collected and transported off-site by Stericycle, Inc. shall be in an enclosed, licensed and identified vehicle specifically used for this purpose. All transportation shall be in accordance with all State and Interstate Regulatory Agencies. (See Attachment B)

D. Handling - The infectious medical waste, that Stericycle, Inc. shall contract to remove, shall be placed into the containers so as not to puncture them. Stericycle, Inc. shall be responsible for replacing the containers with additional containers and liners as necessary. (See Attachment B)

E. Disposal of Waste - Disposal of the infectious medical waste shall be by off-site autoclaving and/or incineration and land filling by Stericycle, Inc., as required by applicable state and federal laws. Infected animal carcasses will be incinerated by Stericycle.

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