

IBC
APPENDIX H
MANAGING REGULATED MEDICAL WASTE
(RMW/BIOHAZARDOUS WASTE)
SOP

May, 2024

Regulated Medical Waste (RMW/Biohazardous waste/biowaste) is managed under the State of Rhode Island's Regulated Medical Waste Regulations (250-RICR-140-15-1).

<https://rules.sos.ri.gov/regulations/part/250-140-15-1>

RMW is defined as any waste generated in the diagnosis (including testing and laboratory analysis), treatment (e.g., provision of medical services), or immunization of human beings or animals, in research pertaining to humans or animals, or in the production or testing of biologicals, or in the development of pharmaceuticals. Plasticware used in research is also included in these regulations if it has been used with cell cultures. Regulated medical wastes that are mixed with non-hazardous solid wastes shall be considered regulated medical wastes. Regulated medical waste also includes certain waste, as listed in this section that is generated in any process where it is likely to have been in contact with human blood or body fluids.

For the purposes of these regulations, the following categories of medical wastes are Regulated Medical Waste in the state of Rhode Island:

Cultures and Stocks:

- Cultures and stocks of infectious agents and associated biologicals including: cultures from medical and pathology laboratories; cultures and stocks of infectious agents from research laboratories; wastes from the production of biologicals; discarded live and attenuated viruses; culture dishes, plasticware and devices used to transfer, grow, inoculate and mix cultures.

Pathological Wastes:

- Human pathological wastes, including tissues, organs, and body parts that are removed during surgery or other medical procedures.

Human Blood, Body Fluids and Blood Products:

- Liquid waste human blood or body fluids.
- Products of blood.
- Items saturated and/or dripping with human blood or body fluids.

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- Items that were saturated and/or dripping with human blood or body fluids; including, but not limited to, serum, plasma, and other blood components, and their containers (e.g., blood bags and blood vials) and body fluids as described in Section I, C of the regulation.
- Specimens of body fluids and their containers.
- Human cell cultures.

Sharps:

- Sharps that have been used in animal or human care or treatment, sharps generated in medical or research laboratories, including, but not limited to hypodermic needles, syringes with or without the attached needle, Pasteur pipettes, scalpel blades, blood vials, needles with attached tubing and glass ampoules. Also included are other types of broken or unbroken glassware that have been used in animal or human care or treatment, including used microscope slides and cover slips. Disposable syringes and needles are considered Sharps RMW after one use.
- Sharps must be segregated and disposed of in leak-proof, rigid, puncture-resistant, shatterproof containers (Sharps containers are available from lab supply vendors). Dispose all Sharps containers in a Biohazard waste box. Call EHS to arrange pickup when a Sharps container is full if a Biohazard Waste Box is not available in your lab or on your floor.

Animal Waste:

- Research animal carcasses plus body parts and bedding of animals that were known to have been exposed to infectious agents during research, including research in veterinary hospitals, production of biologicals, or testing of pharmaceuticals. Research animal carcasses are disposed as Pathological Waste and the boxes are identified with a sticker to ensure they are disposed properly.

Unused sharps: Unused, discarded sharps, as described above.

Spill/Cleanup Material:

- Any material collected during or resulting from the cleanup of a spill of

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regulated medical waste.

Mixtures and Waste in Medical Waste Containers:

- Any waste which is a mixture of regulated medical waste and some other type of waste which is neither radioactive nor a hazardous waste of a type other than regulated medical waste. Also, any waste, when placed in a sharps container, bag with a biohazard symbol, or other container labeled and/or designed for the packaging of regulated medical waste, must be handled and treated as a regulated medical waste, even if the contents did not previously meet the definitions in this section. If the waste is a radioactive and/or a hazardous waste it must also be handled in accordance with Regulations appropriate for radioactive and/or hazardous wastes.

Crime Scene/Accident Cleanup Waste:

- Any waste generated by commercial entities hired to clean crime scenes or accidents that are saturated with human blood or are sharps or sharp objects contaminated with human blood.

Federal Department of Transportation (DOT) Shipping Regulations as they apply to RMW (Biohazardous Waste)

- RMW is regulated by the RI Dept. of Environmental Management (RIDEM). RIDEM also licenses medical waste transporters to legally transport medical waste from the waste generator's facility to the final disposal site. Because transportation is involved, US Department of Transportation (DOT) shipping regulations apply when shipping RMW for disposal.
- Anyone who offers medical waste for transport (the offeror, i.e., a PI), must ensure that the box is prepared in compliance with DOT regulations. These include having proper markings and labels on each box.
- The University's RMW vendor provides pre-printed shipping boxes so all appropriate labels and markings are in the correct locations on the boxes.
- Lab staff must ensure compliance with DOT regulations by setting the box

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up properly. When presented for transport, the box must be right side up and the writing must be legible to anyone looking at the box. If the box is upside-down, the offeror (PI) is out of compliance with the Hazard Communication component of the regulations.

- The driver will reject all boxes that are improperly prepared, including those that are presented upside down, or are leaking or wet. Drivers are subject to random inspections on the highway. An out of compliance box would mean a large fine for a driver who has accepted a non-compliant box.

Preparing RMW for Shipment

Biohazard waste boxes, red liner bags and 31 gal totes for recycling “clean” lab plastic are available in room 275-A College of Pharmacy; the cage on the Fascitelli Engineering loading dock, from Oliver Palmer in CBLS and at Peckham Farm. They are also available from EHS on request if you are in another building.

How to request a pickup or supplies

If you need to schedule a biohazardous waste pickup, submit an online Request for Biohazardous Waste Pickup form and indicate that you need a pickup. If you also need supplies, see the Supplies section at the bottom.
<https://web.uri.edu/ehs/biohazardous-waste-pickup-request-form/>

EHS provides the following:

- Biohazardous waste boxes (brown and white)
- Red bags (1 per box if heavy duty, otherwise 2 per box) to meet the required RIDEM specification.
- Tape
- 31 gal red totes for recycling “clean” lab plastic (deconned serological pipettes, syringes - no needles - and dry plastic tubes).

SETTING UP THE BOX

Take a minute to set the box up properly:

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- **Begin with the box upside down** so the writing will be right side up when finished.
- Fold the box into shape, then fold the bottom cardboard flaps together.
- Tape the bottom of the box SECURELY using 4 strips of tape, one of which will cover the seam where the flaps meet; the others will run the length of the box then be attached firmly to the sides of the box.
- **Flip the box over so it is right side up, and the writing is legible from any direction.**
- Tape the flaps to the sides of the box. Line the box with a heavy duty red bag (use two if they are very thin), carefully fitting them over the edge of the box as shown below. The box is now ready for use.



- **NOTE: Boxes and red bags must be kept closed except when adding waste.** Use a cover provided by EHS). Wax-coated lids should be routinely disinfected.



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FILLING THE BOX

The boxes are pre-printed to hold 55 pounds per OSHA regulations. **BOXES THAT ARE OVERWEIGHT WILL BE REJECTED AND YOU WILL HAVE TO RE-PACK THEM.**

- Red bags are containment for your waste. Disposable pipet tips as well as contaminated lab plastic ware, disposable lab coats, gloves and other disposable PPE can be collected in the box.
- *Items prohibited from disposal in the biowaste box include all pourable liquids, free sharps (not in a proper Sharps container) as well as any other materials that can puncture red bags and boxes, including serological pipettes.*



SEALING THE BOX FOR SHIPMENT

When the box is full and ready to be sealed, follow these important steps:

- Squeeze the air out of the bag, twist the top several times and tie into a knot. The box is now ready to be sealed with tape.
- Fold over the flaps and make sure they are completely sealed. There should be no gaps.

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- Carefully apply 4 strips of tape to seal the top and keep the biowaste properly contained in transit. One strip should cover the seam; the others will reinforce the top.
- Write the PI's name on the top of the box with a Sharpie.

This taping protocol may seem excessive but it's important!! If there is an accident on the highway, a properly taped box has a better chance of staying together than one taped with a single strip.

PICK-UP SCHEDULE

Pickups are scheduled on alternate Wednesdays. The 2024 schedule is at:

<https://web.uri.edu/ehs/2024-biowaste-schedule/>

Print a copy so you know when the RMW driver will be on campus. Don't allow boxes to accumulate in your lab!

NOTE: Pharmacy and CBLs are the only scheduled stops. If you are in either of those buildings, you do not need to schedule a pickup. EHS will remove your boxes without a Request for Pickup. Everyone else needs to submit a Pickup Request.

For all other buildings, use the **new online Biohazardous Waste Pickup Request form** at: <https://web.uri.edu/ehs/biohazardous-waste-pickup-request-form/>

Submit the online form by noon on Friday before the pickup. EHS may contact you to arrange a pickup earlier than Wednesday, especially if bad weather is forecast.

REMINDER: This is a regulated waste and must be always under control of the generator. **Do not leave boxes unattended on the loading dock or in the hallway the day or night before the pick-up.**

Leave all boxes inside, out of the rain and wet. Be careful leaving boxes at

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loading docks or other outside storage areas such as Beaupre. High winds can drive rain under the door. If a box gets wet, it will be rejected and you will have to repack it.

BOXES WILL BE REJECTED IF:

- Boxes are packed upside down.



- The seams on the box are not properly taped or are taped with anything other than clear packing tape provided by EHS (NO duct tape, masking tape, or blue painter's tape).
- The box is wet for any reason including condensation because it was stored under refrigeration.



Cardboard boxes are for dry waste only!

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- **The boxes are wet because they have previously been stored in a freezer or chiller, or the contents have been in a freezer and condensation has formed, compromising the rigidity of the cardboard box.**
- **The box is overweight. Do not exceed 35 pounds per box. Boxes are printed for 55 lbs. but EHS lab staff may have to move boxes.**

NOTE: Infectious liquids can be decontaminated with 10% bleach or autoclaved. If the pH of the waste bleach is outside the pH 5 to pH 9 window, it must be collected and disposed as hazardous waste through EHS. Alternatively, liquids can also be autoclaved and disposed to the sink. Do not add bleach to liquids that will be autoclaved and do not dispose bleach to the sink as it would violate the terms of the University's Waste Water discharge permit from the town of South Kingstown. Dispose waste bleach as chemical hazardous waste if the pH is outside the pH 5-pH 9 window.

SPECIAL NOTES

Write the PI's name on the box with a Sharpie before you leave the lab. Don't forget to do this!! EHS needs to know who shipped in case there is an accident on the highway. Emergency responders will assume the worst when they see the biohazard symbol on a box from an overturned truck; the burden of properly identifying the contents falls to the University.

College of Pharmacy

Because Medical Waste is a regulated waste, it must be stored in a secure area until it is picked up by the RMW driver. Room 275-A Avedisian is the designated storage location in Pharmacy. Waste disposal supplies, including boxes, red bags, 31 gal totes and tape are all stocked there.

- **When you have filled a box or tote, seal/close it properly in the lab and use a hand truck or lab cart to move it down to 275-A. Do not allow full boxes to accumulate in your lab.**

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- Place the box on the spill pallet in 275-A. Do not leave boxes on the floor. Heavy rain can cause flooding. 31 gal totes should be stacked on the floor.

College of Engineering

- EHS maintains a supply of boxes, red bags, 31 gal totes and tape in the cage on the Fascitelli loading dock.
- Supplies are replenished as necessary.
- If supplies are missing, they can be picked up from Pharmacy. Use the Biohazardous Waste Pick-up form to request supplies.

NEW: College of the Environment and Life Sciences (CBL)

There is a new biowaste storage room off the loading dock in CBL, in room 088. If you are in CBL, you are generating RMW in CBL, you do not need to send in a Pickup Request as CBL is scheduled stop for the driver.

- EHS maintains a supply of boxes, red bags, 31 gal totes and tape here. Supplies are replenished as necessary.
- If supplies are missing, they can be picked up from Pharmacy.
- When your bio box is full, take it down to the waste room and get a replacement. Do not allow full boxes to accumulate in your lab.
- 31-gallon totes are available for recycling lab plasticware. Our RMW vendor participates in a “Waste-to-Energy” program. While this is not a perfect solution, it is better than sending plastic to landfill.