

Madison Environmental Resourcing Inc.

STANDARD OPERATING PROCEDURE
TITLE: Ebola packaging and transport
SOP#: 176
SCOPE: The handling, package preparation and transportation of Ebola virus waste.
PURPOSE: To provide instructions on how to safely handle, package, store and transport Ebola virus waste.
<p>DEFINITIONS:</p> <p>Infected facility (IF) – A hospital, clinic, skilled care or similar facility that provide care to human beings. A residence, hotel, place of business or public place.</p> <p>Madison Environmental Resourcing Inc. (MERI) – Medical waste treatment and transportation company.</p> <p>Personal Protective Equipment (PPE) – Equipment worn to minimize exposure to a variety of hazards.</p> <p>Disinfectant: This is a U.S. Environmental Protection Agency (EPA)-registered hospital disinfectant with a label claim for a non-enveloped virus (e.g., norovirus, rotavirus, adenovirus, poliovirus) that is recommended by the CDC for use as a disinfectant for the Ebola virus.</p> <p>Absorbent – A material that will absorb liquid. This could be vermiculite or other absorbent.</p> <p>Category A package: A certified shipping container that meets Department of Transportation CFR 49, 178.350 standard.</p> <p>Special Exempt Package (SEP): A package the DOT has approved to transport Category A waste.</p> <p>Outer package: A UN Standard or DOT approved non-bulk container, PG II level that meets DOT special exempt package requirements.</p>

Ebola packaging and transport		SOP# 176	
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REVISION DATE:	APPROVED BY:	<i>Jim Fitzpatrick</i> 10/24/14	
REVISION #: Rev			PAGE 1 of 5

Madison Environmental Resourcing Inc.

Biohazard/liner bag specification: 1.5 mil thickness biohazard plastic bag that meets ASTM D 1709 and 1922: 165 grams impact resistance and 480 grams tear resistance in both parallel and perpendicular planes.

PROCEDURE:

IF preparation

These are steps the IF should consider taking in the event a patient contracts the Ebola virus. The IF will have more detailed procedures, which should be followed for that specific facility.

1. Upon learning a patient may have been exposed or contracted the virus isolate the patient immediately according to your control plan.
2. Notify MERI immediately that a patient has entered your facility. MERI will deliver packing supplies needed.
3. Segregate and store all waste separately from all other infectious waste. This must be in a secure locked area.
4. Use the approved waste containers for collecting the waste. Each individual biohazard bag cannot exceed 22 lbs. when full. Follow the procedure below.

Collection and packaging of waste:

1. Don the appropriate PPE for the type of job function you will be performing. Follow the occupational safety and health requirements in place by regulating agencies and your facility.
2. Place the potentially contaminated waste into the first plastic bag. Maximum weight is 22 lbs. when filled.
3. Put enough absorbent material inside the bag to absorb any free liquid. No free liquid can be present.
4. **Prior to closure**, treat potentially contaminated waste with disinfectant by spraying the waste with disinfectant.
5. Place sharps waste in an authorized sharps container, and close and seal it in accordance with the packaging instructions for that container.
6. Wrap objects with sharp edges to prevent the tearing or puncture of the plastic bag.

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REVISION #: Rev			PAGE 2 of 5

Madison Environmental Resourcing Inc.

7. Close the plastic film bag by tying the bag with an overhand knot (see picture below) so not to tear or puncture the outer bag. This will ensure any liquid contents will not leak from the packaging.
8. Disinfect the exterior surface of the plastic bag. Either spray it or hand wipe it down with disinfectant.
9. Place the first plastic film bag, with the knot facing upward, into a second plastic film bag;
10. Close the second plastic film bag by tying the bag with an overhand knot (see picture below) so not to tear or puncture the outer bag. This will ensure any liquid contents will not leak from the packaging. Make sure the primary bag does not interfere with closing the second bag.
11. Disinfect the exterior surface of the second bag and place in outer packaging container.

Outer Packaging

- 1 The outer package must have a biohazard label on it and be a rigid DOT Approved non-bulk category A exempt package. This may be
 1. A 30 or 55 gallon plastic barrel UN approved;
 2. Or, a triple wall UN approved fiberboard barrel or corrugated box lined with a 6 mil polyethylene liner.
- 2 Place absorbent material sufficient to absorb all free liquid (if any) in the bottom of the rigid outer packaging or the liner of the fiberboard outer packaging.
- 3 Place the double-bagged waste into the plastic UN approve barrel or rigid fiberboard packaging with the 6 ml bag liner.
- 4 If a fiberboard container is used tie the liner with an overhand knot.
- 5 Securely close the outer packaging. Tape all joints and seam of a fiberboard box. Gross weight of the contain must be less that 150 lbs.
- 6 Disinfect the exterior surface of the package.
- 7 Move the container with a two-wheel cart or dolly to the secure storage area.

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REVISION #: Rev			PAGE 3 of 5

Madison Environmental Resourcing Inc.

Storage

1. MERI will either deliver a cargo container full of clean supplies needed or deliver a specific quantity of clean individual containers. It depends upon the situation.
2. The storage of waste will either be in a cargo container designated as dirty waste or a MERI truck.
3. The contents of the clean cargo container are:
 - a. 50 to 100 - 55 gallon UN certified plastic drums
 - b. 1000 bio hazard bags
 - c. 1- 2 wheel cart
 - d. Load bars.
 - e. 10 – 40 pound bags of granular absorbent.
 - f. 96 gallon container to hold supplies
 - g. PPE needed by the MERI men. SOP 205
 - h. Ebola spill kit SOP 137
 - i. 50 – absorbent pads
 - j. Sprayer
 - k. 4- 1 gallon jugs of disinfectant
 - l. 1 case of disposable paper towels.
 - m. Folder with SOP 137, 205, 275

Loading and Transportation

1. Don the appropriate PPE for the type of job function you will be performing. Follow the occupational safety and health requirements in place by regulating agencies and your facility.
2. Submit application to the DOT for special exempt package permit. DOT approval time is 24 to 48 hours. The permit is specific to IF site.er
3. Ensure biohazard and waste type labels are on the shipping container.
4. Move the waste containers from the secure storage area using a two-wheel cart or carry them by hand to the truck used for transportation. No fork truck or other mechanical means of lifting may be used unless specific approval is given.
5. Secure the load for shipment. Conduct in external visual inspection to determine there are no leaks and the cargo door(s) are closed and locked.

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REVISION #: Rev			PAGE 4 of 5

Madison Environmental Resourcing Inc.

6. Complete the shipping manifest. The shipping name is UN 2814 Infectious substances, affecting humans, 6.2, PGII.
7. Follow other special permit requirements as issued from the DOT.
8. Transport the waste to the disposal facility.



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REVISION #: Rev			PAGE 5 of 5