Infectious Waste Management Plan

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USC Health & Safety Programs Unit 777-5269

POLICY:

A. In keeping with the University of South Carolina's policy of providing protection for its employees, students, visitors and community, a program has been developed for USC that describes the procedures for the identification, treatment, packaging, storage, transportation, and disposal of infectious wastes generated within the confines of USC.

This policy aims to minimize risk to staff, public, and the environment from improperly handled infectious waste and to plan for any infectious waste emergencies.

B. General Information

1. Infectious waste is defined as any waste (solid or liquid) that is capable of producing an infection. These wastes are characterized by the known or suspected presence of pathogens.

2. All persons required to handle infectious waste or materials will be provide with appropriate orientations, personal protective equipment, Hepatitis B vaccination, and on-the-job training.

3. Each department that generates or handles infectious waste will write specific policies and procedures that contain information regarding the identification, safe handling, treatment, packaging, storage, transportation, and disposal of these wastes. The policies and procedures for these departments will be reviewed and approved annually by the infectious control committee.

PROCEDURE:

A. Designation of Infectious Waste

1. Infectious waste will be classified as infectious by the Infection Control Committee. At a minimum the following will be classified as infectious:

   a. Sharps - all syringes and hypodermic needles used or unused. All contaminated broken glassware, microscopy slides, pipette tips, pasteur pipettes, etc.

   b. Microbiologicals - all cultures and stocks of infectious agents; discarded live and attenuated vaccines; cultures dishes/devices used to transfer, inoculate, and mix cultures.
c. Blood and Blood Products - all waste unabsorbed human blood, or blood products, or absorbed blood when the absorbent is supersaturated, including but not limited to: serum, plasma and other components of blood, and visibly bloody body fluids such as suction fluids, excretions, and secretions.

d. Pathological Waste - All tissues, organs, limbs, and other body parts removed from the whole body, and body fluids to which Universal Precautions apply (cerebrospinal fluid, synovial fluid, pleural fluid, peritoneal fluid, pericardial fluid, amniotic fluid, semen, and vaginal secretions.

e. Contaminated Animal Waste - Animal carcasses, body parts and bedding when the animal has been intentionally exposed to human pathogens in research or the production of biologicals.

f. Other Waste - Any other material designated by written generator policy as infectious or any other materials designated by a generator as infectious by placing the waste into a container labeled infectious. Any solid waste, which is mixed with infectious waste, becomes designated as infectious waste and must be so managed.

2. The classification of infectious waste will be reviewed and revised annually by the Infection Control Committee.

B. Segregation and Packaging

1. Infectious waste will be segregated from other waste at the point of origin by placing it in containers that are impervious to moisture. The containers will not be allowed to become so full that the top cannot be closed.

2. All sharps will be placed in rigid, puncture-resistant and leak resistant containers.

3. Infectious waste will be contained in clearly marked bags or other containers that are red or orange in color. Autoclave bags may be placed directly in the accumulation boxes provided.

4. The biological hazard symbol will be used to mark these containers. All containers must be labeled with the words: "infectious waste, "biohazardous waste" or " medical waste" written in English.

5. All waste packages must have a completed tag filled out. and attached. These tags will be available through your department's Health and Safety Coordinator, or the Health and Safety Department.

C. Treatment

1. A written quality assurance plan must be implemented when conducting any on site treatment.
2. Stream Sterilization (Autoclaving) - The following waste will be sterilized before disposal:

* Culture plates & Stocks
* Any infectious waste that must be stored longer than 92 hours at room temperature. DHEC has outline rules and procedures when using steam sterilization as a treatment method. This procedure is in Appendix A.

3. Compactors or grinders will not be used to process infectious waste.

4. All biohazardous waste (treated or untreated) will be picked up by the contractor to be incinerated. No biohazardous waste will be land filled.

D. Accumulation Point

1. All sites that generate large amounts of biohazardous waste will be assigned an accumulation point. This area must be protected from animals, weather and public. The area must be labeled and access limited.

2. All biohazardous waste brought to the accumulation point must be properly package as described above and be tagged.

3. The waste can then be placed in the accumulation boxes and logged in.

4. When a box is nearing capacity, please notify the Health and Safety Coordinator.

E. Off Site Disposal

1. All infectious waste treated or untreated will be collected, transported, and stored in the manner previously described agreed upon by our facility and the licensed transporter.

2. The contractor will pick up and transport the infectious waste in leak-proof, fully enclosed containers to a site approved by all regulatory bodies for handling and disposing of infectious waste.

3. All containers to be shipped out must be labeled "USC - (NAME OF CAMPUS) and DHEC #.

4. The Hazard Materials Coordinator will be sure all manifest for these waste transported off site are completed when necessary and kept on file.

5. It is the responsibility of the contractor to maintain all valid permits relevant to disposal of infectious waste.

F. Contingency Planning
1. All spills of infectious waste will be cleaned up immediately by a properly protected person trained in the appropriate procedures.

2. All spill residue, including broken glass, will be disposed of as infectious waste. Broken glass should be removed carefully.

3. During clean-up all personnel will wear proper personal protective clothing and equipment, including goggles, lab coat, face mask, and gloves.

4. A spill should be identified with a warning sign so that others in the area will not be contaminated.

5. Liquid spills of less than 5 ml or 5 gm should be covered with absorbent gauze pads and covered with liquid disinfectant. Solids should be wiped with wet absorbent gauze. The spill areas than should be cleaned using a disinfectant solution followed by clean water.

6. For spills of more than 5 ml or 5 gm, spread should be limited by gently covering with absorbent sheets or spill control pads and covered with liquid disinfectant. Access to the area should be restricted.

7. All contaminated surfaces should be thoroughly cleaned with a detergent solution and then wiped with clean water. All contaminated adsorbents and other materials should be disposed of as infectious waste.

Appendix A

Stream Sterilization Protocol

All sharps must be placed in a rigid, puncture-resistant and leak-resistant container. All other biohazardous waste must be placed in a red or orange bag clearly labeled with the biohazard symbol. Stream Sterilization is considered an approved method to treat certain types of biological waste. All biological cultures must be stream sterilized before disposal. After treatment by stream sterilization the waste is no longer biohazardous and can be treated as regular waste with the exception of sharps. All sharps should be incinerated.

To use stream sterilization the following must be adhered to:

1. Record the temperature and time during each complete cycle to ensure the attainment of a temperature of 121ο C for 45 minutes or longer at fifteen pounds pressure, depending on quantity and density of the load in order to achieve sterilization of the entire load.

2. The steam sterilizer must have a gauge, which indicates the pressure of each cycle.
3. Use heat sensitive tape or other device for each container that is processed to indicate that the steam sterilization temperature has been reached.

4. Use the biological indicator Bacillus stearothermophilus placed at the center of a load processed under standard operating conditions to confirm the attainment of adequate sterilization conditions. (Ampules containing Bacillus stearothermophilus are available commercially.)

5. Maintain records of the above procedures for period of not less than three years. See example of QC chart enclosed.

6. The stream sterilizer must be adequately vented.