



MISSOURI DEPARTMENT OF NATURAL RESOURCES

Management Of Infectious Waste By Small Quantity Generators

Technical Bulletin

1/1996

Division of Environmental Quality
Solid Waste Management Program

OVERVIEW

This document provides information concerning the management of infectious waste by those generating small quantities of this waste in Missouri. The document provides general information only. Specific questions should be addressed to the local Missouri Department of Natural Resources (MDNR) Regional Office or to the Solid Waste Management Program at (573) 751-5401.

Infectious waste in Missouri is regulated as a non-hazardous solid waste under the Missouri Solid Waste Management Law. Missouri law charges the MDNR and the Missouri Department of Health (MDOH) with the responsibility for regulation of infectious waste management. The MDOH is responsible for regulating the on-site management of infectious waste by Missouri hospitals and for defining wastes which are considered infectious when produced by small quantity generators. The MDNR is responsible for regulating all other aspects of infectious waste management, including permit requirements, transportation, packaging, etc.

It is important that anyone generating infectious waste be aware of the requirements for infectious waste management. Included in the requirements are the following major points:

- 1) All infectious waste must be treated before disposal in Missouri, except waste generated at an individual residence.
- 2) All sharps (needles, scalpels, broken glassware, etc.) must be packaged in a rigid, leakproof and puncture-resistant container prior to transport and all treated and untreated sharps must be similarly packaged before disposal.
- 3) All treated waste must be certified as having been treated prior to disposal in a landfill in Missouri. The certification must be provided to both the hauler and the landfill.
- 4) **The only requirement for infectious waste generated at an individual residence is that sharps be packaged in rigid, leakproof and puncture-resistant containers prior to disposal with regular household waste. Other requirements discussed in this bulletin (such as treatment, transport and certification) do not apply to infectious waste generated at an individual residence.**



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DEFINITIONS

Infectious waste is defined as “waste capable of producing an infectious disease because it contains pathogens of sufficient virulence and quantity so that exposure to the waste by a susceptible human host could result in an infectious disease.” All infectious waste must be treated before disposal in Missouri except when the waste is generated at an individual residence. Infectious waste generated at an individual residence must be properly packaged as described previously in this bulletin.

A small quantity generator (SQG) of infectious waste is defined as a generator of 100 kilograms (approximately 220 pounds) or less of infectious waste per month.

The Missouri Solid Waste Management Law required the MDOH to specify infectious waste that must be rendered innocuous regardless of quantity. The MDOH specified that small quantity generator infectious waste includes the following categories:

- (A) Sharps – Discarded sharps including hypodermic needles, syringes and scalpel blades. This definition includes broken glass or other sharp items that have come in contact with material defined as infectious;
- (B) Cultures and stocks of infectious agents – this category includes all cultures and stocks of infectious organisms as well as culture dishes and devices used to transfer, inoculate and mix cultures; and
- (C) Other wastes – Those wastes as designated by the medical authority responsible for the care of the patient (physician, podiatrist, dentist, veterinarian), which may be capable of producing an infectious disease.

Discarded sharps must always be handled as infectious waste and must always be properly packaged before transport and/or disposal. Cultures and stocks of infectious agents must also be handled as infectious waste unless generated by an individual residence. It is the responsibility of the health care professional, however, to determine whether any other items should be considered infectious waste when produced by a small quantity generator.

ON-SITE TREATMENT

Anyone generating infectious waste may choose to treat that waste on site to render it innocuous. Such on-site treatment of infectious waste does not require a permit or approval from the MDNR, except that on-site incineration will require a permit from the MDNR Air Pollution Control Program or from a local air pollution control agency. Some treatment methods may result in the discharge of liquids and may be regulated by the MDNR Water Pollution Control Program or the local sanitary sewer district. Hospitals choosing to treat infectious waste on site must comply with the requirements of the MDOH. Methods for on-site treatment include incineration, steam sterilization (autoclave) and chemical treatment.

For chemical treatment of sharps, the MDOH recommends the use of one part common household chlorine bleach mixed with nine parts water. This solution should be poured into the container of sharps and allowed to remain for approximately thirty (30) minutes. The solution must then be carefully poured off so that free liquid does not remain in the container. The solution may be disposed of in the sanitary sewer system. The sharps container must then be sealed prior to disposal.

OFF-SITE TREATMENT

Infectious Waste transported off the premises of the generator must be taken to a permitted infectious waste processing facility (for example, a transfer station, incinerator or steam sterilizing facility permitted to accept infectious waste), or to a hospital approved by both the MDNR and the MDOH to accept the waste or out of Missouri.

In order for a hospital to be approved to accept infectious waste from SQG's, the hospital must submit a request for approval to both MDNR and MDOH. Requirements for such requests are specified in 10 CSR 80-7.010 and 19 CSR 30-20.020. Hospitals may contact the Solid Waste Management Program and the MDOH-Bureau of Hospital Licensing for information about the approval process.

However, for the purposes of disposal, infectious waste generated by ambulance services in the process of caring for and delivering a patient to a hospital will be considered to be generated by the hospital to which the patient is delivered. Therefore, hospitals receiving such waste from ambulance services will not be required to obtain MDNR or MDOH approval for the acceptance of infectious waste from off-site.

Packaging of Untreated Infectious Waste:

Untreated infectious waste and all discarded sharps must be packaged in rigid, leakproof and puncture-resistant containers prior to transport and/or disposal. Prior to transport, all infectious waste must be placed in rigid or semi-rigid, leakproof containers clearly marked with the universal biohazard symbol, must be labeled with the words "Infectious Waste" or "Biohazard Waste" and must be sealed. There is no requirement for color of the container. Neither plastic bags nor glass containers may be used as primary containers for transportation of the waste; if these types of containers are used, they must be placed within a container which fits the description of rigid or semi-rigid and leakproof. If glass is present, the primary container must protect the glass from breakage. Reusable containers must be constructed of either heavy wall plastic or non-corrosive metal and must be cleaned and sanitized before reuse.

Transportation of Untreated Infectious Waste:

If a SQG chooses to utilize an off-site processing facility for management of its infectious waste, three options for transportation exist. The generator may transport the properly packaged waste using its own employees and vehicles, provided the vehicles are closed and secure. If the SQG chooses not to transport its own waste, the waste must be transported by an infectious waste transporter licensed in Missouri for the transportation of infectious waste. In addition, untreated sharps may be transported for the treatment by the United States Postal Service, as long as the Postal Service requirements (39CFR111) are followed.

If the waste is transported off the premises of the generator, it must be taken to a permitted infectious waste processing facility, a hospital approved by both the MDNR and MDOH to accept such waste, or out of the state.

Tracking Documents for Untreated Infectious Waste:

If a SQG transports its own infectious waste to an approved hospital, the generator must provide any records which may be required by the hospital receiving the waste. If the generator transports its own waste to a processing facility or if a licensed transporter is used, tracking documents must be prepared by the generator in accordance with 10 CSR 80-7.010. The transporter or the receiving facility may provide the forms, although they are not required to do so.

DISPOSAL

Section 260.203.2., RSMo, prohibits the placement of untreated infectious waste in a solid waste disposal area in Missouri, the only exception being infectious waste generated at an individual residence. Any person wishing to dispose of treated infectious waste other than that generated at an individual residence in Missouri, must certify to the hauler and to the landfill that the waste has been rendered innocuous and may legally be placed in a landfill.

Packaging of Sharps for Disposal:

Prior to disposal, all sharps must be packaged in rigid, leakproof and puncture-resistant containers. This requirement applies to all sharps, including those which have been treated and those which have not been in contact with infectious agents.

Suitable containers for such packaging include commercial sharps containers which are rigid, leakproof and puncture-resistant, as well as any other type of container which meets these requirements. Commonly found containers which may fulfill this purpose include metal containers which may be sealed (for example, coffee cans with the lid in place and sealed with heavy-duty tape) and commercial sharps containers designed for this purpose. A container should not be used for sharps which are to be treated if that container has a residue which may react adversely during the treatment technique. All containers should be thoroughly rinsed before use.

Certification of Treated Waste:

Treated infectious waste which is to be placed in a landfill in Missouri must be certified as having been properly handled. The generator must supply this certification document to both the sanitary landfill and to the waste hauler.

Requirements for information to be included in the certification document are specified in 10 CSR 80-7.010. The certification document must include the following information, at a minimum:

- The name, mailing address, location (when different from mailing address), and phone number of the office/facility treating the waste;
- The printed name and signature of the person responsible for the treatment process;
- A brief description of the treated waste (e.g. sharps in metal containers);
- A brief description of the method of treatment; and
- A statement that the waste has been managed in accordance with the Missouri Solid Waste Management Law and rules and may legally be placed in a landfill.

The certification must be revised when changes in the operation result in a change in the information provided. Copies of the revised certification document must be provided to both the waste hauler and the landfill.

OTHER REQUIREMENTS

In addition to these state requirements, counties or municipalities may have additional requirements for management of infectious waste. Generators should contact their county and city health departments to learn of these requirements.

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TREATED INFECTIOUS WASTE

Treatment Facility Name_____

Location_____

Mailing Address_____

Telephone_____

Treatment Waste Description

- Sharps in metal containers
- Sharps in heavy gauge plastic containers
- Incinerator ash
- Laboratory wastes in autoclave bags
- Other (*please specify*) _____

Treatment Method

- Steam sterilization
- Incineration
- Chemical Sterilization
- Other (*please specify*) _____

Certification

I certify that the aforesaid infectious waste has been managed in accordance with the Missouri Solid Waste Management Law and respective rules; and that it may legally be placed in a sanitary landfill.

Treatment Facility Manager, Officer, or Agent (*please print*)

Signature

Date

NOTICE: This form was designed by the Missouri State Medical Association, the Missouri Dental Association, the Missouri Association of Osteopathic Physicians and Surgeons, the Missouri Hospital Association, and the Missouri Veterinary Medical Association to comply with Section 260.203 RSMo. (Supp. 1988) of the Missouri Solid Waste Management Law. It may not be in complete compliance with all local solid waste treatment requirements.

MANAGEMENT OF INFECTIOUS WASTE

Small Quantity Generators

