



Rules of
Department of Natural Resources
Division 80—Solid Waste Management
Chapter 7—Infectious Waste Management

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**Title 10—DEPARTMENT OF
NATURAL RESOURCES**

**Division 80—Solid Waste Management
Chapter 7—Infectious Waste
Management**

**10 CSR 80-7.010 Infectious Waste Manage-
ment**

*PURPOSE: This rule pertains to the manage-
ment and treatment of infectious waste.*

*PUBLISHER'S NOTE: The secretary of state
has determined that the publication of the
entire text of the material which is incorpo-
rated by reference as a portion of this rule
would be unduly cumbersome or expensive.
This material as incorporated by reference in
this rule shall be maintained by the agency at
its headquarters and shall be made available
to the public for inspection and copying at no
more than the actual cost of reproduction.
This note applies only to the reference mate-
rial. The entire text of the rule is printed
here.*

(1) Applicability.

(A) Definition. Infectious waste means 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. These wastes include isolation wastes, cultures and stocks of etiologic agents, blood and blood products, pathological wastes, other contaminated wastes from surgery and autopsy, contaminated laboratory wastes, sharps, dialysis unit wastes, discarded biological materials known or suspected to be infectious; provided, however, that infectious waste does not mean waste treated to department specifications.

1. For the purposes of this chapter, a generator means any single office (doctor's office, dentist's office, and the like) or facility (hospital, nursing home, mortuary, and the like), whose act or process first causes an infectious waste. For purposes of tracking and fees, a transfer station permitted as an infectious waste processing facility becomes the generator when the infectious waste is transported for further processing.

2. Small quantity generators, i.e., persons generating one hundred kilograms (100 kg) or less per month of infectious waste, shall refer to 19 CSR 20-20.010 for the Department of Health definition of those categories of waste to be managed as an infectious waste.

3. Except as provided in paragraph (1)(A)2. of this rule, infectious waste shall

include the following wastes from specific and non-specific sources:

A. Isolation wastes. Wastes generated by patients who have communicable diseases which are capable of being transmitted to others via those wastes;

B. Contaminated surgical, dialysis and laboratory wastes. Wastes generated by surgery, dialysis and laboratory departments in the process of caring for patients who have communicable diseases which are capable of being transmitted to others via those wastes;

C. Cultures and stocks of infectious agents and associated biologicals. Cultures and stocks of infectious agents shall be designated as infectious waste when discarded because of the high concentrations of pathogenic organisms typically present in these materials. Included in this category are all cultures and stocks of infectious organisms as well as culture dishes and devices used to transfer, inoculate and mix cultures;

D. Blood and blood products. All discarded human blood and blood products, including serum, plasma and other components known or suspected to be contaminated with a transmissible infectious agent; except that the term "blood products" does not include patient care waste such as bandages or disposable gowns that are lightly soiled with blood or other body fluids, unless such wastes are soiled to the extent that the generator of the wastes determines that they should be managed as infectious wastes;

E. Pathology wastes. These wastes include tissues, organs, body parts and body fluids that are removed during surgery and autopsy. All such wastes shall be considered infectious waste. Also included are animal carcasses, body parts and bedding from animals contaminated with infectious agents capable of being transmitted to a human host. Nothing in this section shall supersede the disposal requirements for dead animals as set forth in Chapter 269, RSMo; and

F. Sharps. Discarded sharps, including hypodermic needles, syringes and scalpel blades. Broken glass or other sharp items that have come in contact with material considered infectious by definition are also included.

(B) Disposal of Infectious Waste. All sharps shall be packaged in rigid, leak-resistant and puncture-resistant containers and sealed prior to disposal.

1. Infectious waste treated to render it innocuous may be disposed as a solid waste provided the treater certifies to the transporter, if other than the generator, and certifies to the sanitary landfill operator or processing facility operator that the waste has been rendered innocuous as required by sec-

tion 260.203, RSMo. (Note: Treated infectious waste is not required to be transported in accordance with the requirements of section (4) of this rule.)

2. Certification of treated infectious waste, at a minimum, shall contain the following information: the name, mailing address, location (when different from the mailing address) and phone number of the office/facility treating the infectious waste; the printed name and the signature of the facility/office manager or person responsible for the treatment process; a brief description of the treated waste (sharps in metal containers, sharps in heavy gauge plastic containers, incinerator ash, laboratory wastes in autoclave bags); and a brief description of the method(s) of treatment (for example, steam sterilization, incineration, disinfection with bleach solution). In addition to these minimum requirements, the generator need only include 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 sanitary landfill. The certification shall be revised when changes in the operation of the office/facility result in a change to the information required by this paragraph.

3. In addition to the requirements of paragraphs (1)(B)1. and 2. of this rule, incinerator residue from a permitted infectious waste processing facility shall be considered to be a special waste and handled accordingly. Prior to departmental approval, and at a minimum, every six (6) months after that, the incinerator residue shall be tested for hazardous waste characteristics as per 40 CFR part 261 subpart C, as incorporated in 10 CSR 25-4.261, as applicable.

(C) Exemptions.

1. Any person who treats infectious waste generated on-site to render the waste innocuous or a hospital exempted from the requirements of a permit in paragraph (1)(C)5. of this rule may dispose of the treated waste as specified in subsection (1)(B) of this rule.

2. This rule shall not apply to generators of infectious waste at a single-family residential premise or a single-family dwelling unit provided those wastes are generated on-site and disposed with the generator's residential solid waste and provided sharps are packaged as required in subsection (1)(B) of this rule.

3. A person generating one hundred (100) kg or less per month of infectious waste as defined by 19 CSR 20-20.010 and who transports his/her own infectious waste for processing is exempt from the transportation and fee requirements of this rule, except that the vehicle used for transport of the infectious



waste shall be a closed and secured vehicle.

4. A generator of infectious waste who operates a single or multiple site research facility for research and experimental activities as defined in section 174 of the 1986 *Internal Revenue Code*, who generates such waste as a part of research and experimentation activities, who manages such waste on-site and who accepts no infectious waste from off-site, is exempt from the infectious waste processing facility permit requirements of this rule. The generator may accept infectious waste from other sites of the parent research company located in Missouri but shall not accept infectious waste from other sources and shall comply with all other requirements and provisions of the Missouri Solid Waste Management Law and the rules and regulations promulgated thereunder. The University of Missouri Ellis Fischel Cancer Center and the other facilities of the University of Missouri-Columbia shall be considered a multiple site research facility for the purposes of this rule.

5. Hospitals. Hospitals as defined in section 197.020, RSMo are exempted from the infectious waste processing facility requirements of this rule as long as all infectious waste generated, managed and treated on-site is done so in accordance with requirements established in 19 CSR 30-20.021 and no infectious waste is accepted from off-site for treatment except as specified in this paragraph.

A. Hospitals as defined in Chapter 197, RSMo may accept infectious waste for treatment from generators of one hundred kilograms per month (100 kg/month) or less and from other hospitals as defined in Chapter 197, RSMo and located in Missouri without being required to obtain a solid waste processing facility construction and operating permit or a solid waste processing facility construction and operating permit for the treatment of infectious waste except as provided in 19 CSR 30-20.021. Hospitals may accept infectious waste from those generators as provided by 260.203.9, RSMo upon approval of the Department of Natural Resources and the Department of Health. A notice of intent to accept the waste for treatment shall be hand delivered or sent by certified mail to the Department of Natural Resources and to the Department of Health. Failure of either department to respond to such a request by issuing a certification of approval or a denial within ninety (90) days constitutes approval. The request for approval shall include a report containing at a minimum the following information:

(I) A copy of the infectious waste management plan for the handling and treat-

ment of infectious waste as required by 19 CSR 30-20.021;

(II) A clause that infectious waste shall be accepted at the hospital only if it is properly packaged and labeled in accordance with section (2) of this rule;

(III) A clause that infectious waste shall only be accepted as provided by section 260.203.9, RSMo. The report shall include a summary of the system utilized to track the quantity by weight of infectious waste received per month by generator; and

(IV) A summary of the system utilized to track the quantity by weight of infectious waste treated per hour and per month.

B. Hospitals as defined in Chapter 197, RSMo and located in Missouri that transport their own infectious waste for processing are exempt from the transportation and fee requirements of this rule provided the infectious waste is transported using the hospital's employees and vehicles to a hospital as provided in paragraph (1)(C)5. of this rule or to an infectious waste processing facility and provided the vehicle used to transport the infectious waste is a closed and secured vehicle.

C. Hospitals accepting infectious waste for treatment from the following sources are required to obtain a solid waste processing facility construction and operating permit for operation of an infectious waste processing facility as provided in sections 260.200–260.345, RSMo and 10 CSR 80-2.020, 10 CSR 80-5.010 and 10 CSR 80-7.010:

(I) Generators of more than one hundred kilograms per month (100 kg/month), except other Missouri hospitals;

(II) Other hospitals not located in Missouri; and

(III) Off-site in quantities as provided in 19 CSR 30.

6. Pharmacies, as defined in Chapter 338, RSMo, and home health agencies, as defined in Chapter 197, RSMo, are exempt from the infectious waste processing facility permitting requirements of this rule provided that the only waste accepted is single dose hypodermic units presented in person by small quantity generators as defined by paragraph (1)(A)2. of this rule. Pharmacies and home health agencies operating under this exemption shall be limited to a maximum of ten (10) kilograms of infectious waste on-site at any time and process no more than one hundred (100) kg of infectious waste per month. All waste received under this exemption must be managed in accordance with this rule.

7. For the purpose of this rule, a person working on behalf of a home health agency

and who transports infectious waste from the patient's residence to the agency (as a central collection point) will be considered an extension of that agency and exempt from the transportation and fee requirements of this rule, except that the vehicle used for transport of the infectious waste shall be a closed and secured vehicle.

(2) Packaging of Infectious Waste. Prior to transport, all infectious waste shall be placed in rigid or semi-rigid, leak-resistant containers clearly marked with the universal biohazard symbol prominently displayed and labeled Infectious Waste or Biohazard Waste and sealed. All containers shall be closed in such a manner as to completely contain all waste and the outside of the container shall be kept free of contamination. For the purpose of this rule, leak-resistant containers are defined as containers that are closable with a tight fitting lid and are leakproof on the bottom and sides. Containers meeting the requirements of 29 CFR 1910.1030 are acceptable.

(A) Plastic bags. Plastic bags shall be tear resistant and leak resistant. Plastic bags shall not be used as primary containers for transportation of infectious waste. Infectious waste contained in plastic bags shall be placed within rigid or semi-rigid containers prior to transport.

(B) Sharps containers. Sharps shall be packaged in rigid, leak-resistant and puncture-resistant containers and sealed.

(C) Glass Containers. Glass containers shall not be used as primary containers for transportation of infectious waste. Glass containers must be placed into a rigid or semi-rigid leak-resistant container and protected from breakage.

(D) Reusable containers. Reusable containers shall be constructed of either heavy wall plastic or noncorrosive metal. Each container shall be cleaned and sanitized before it is reused.

(3) Tracking Documents.

(A) Generators. The generator of infectious waste that is to be transported to a permitted infectious waste processing facility shall—

1. Prepare tracking documents which shall include, at a minimum, the following information:

A. The printed or typed name, mailing address, location (when different from the mailing address) and telephone number of the generator;

B. The printed or typed name and address of the designated facility which is permitted to process the waste. The name and address of an alternate facility may also be



designated to which the waste may be transported in the event an emergency prevents delivery of the waste to the primary designated facility;

C. The printed or typed name, address and Missouri Transporter identification number of the transporter's company, if other than the generator;

D. The quantity, in volume or weight, of waste to be transported;

E. A name and signature block for the transporter, if other than the generator; and

F. A name and signature block for the receiving facility;

2. Sign the tracking document by hand. The name of the generator signing the document shall also be printed or typed on the tracking document;

3. Obtain the handwritten signature of the transporter, if other than the generator, and date of acceptance on the tracking document. The name of the transporter signing the document shall also be printed or typed on the tracking document;

4. Retain one (1) copy of the tracking document with the signatures required in this subsection; and

5. Give the transporter the remaining copies of the tracking document.

(B) Transporters.

1. A transporter shall not accept infectious waste from a generator unless it is accompanied by a tracking document completed in accordance with the requirements of subsection (3)(A) of this rule.

2. Before transporting the infectious waste, the transporter, if other than the generator, shall sign and date the tracking document acknowledging acceptance of the waste from the generator. The name of the transporter signing the document shall also be printed or typed on the tracking document.

3. The transporter shall ensure that the tracking document accompanies the infectious waste.

4. A transporter who delivers infectious waste to the designated facility shall—

A. Obtain the date of delivery and the handwritten signature of an authorized agent of the designated facility on the tracking document. The name of the authorized agent signing the document shall also be printed or typed on the tracking document;

B. Retain one (1) copy of the tracking document which has been completed as required by subsections (3)(A) and (B) of this rule; and

C. Provide a copy of the tracking document to the accepting facility.

5. A transporter shall deliver the entire quantity of infectious waste which s/he has accepted from a generator to—

A. The designated facility; or

B. The alternate designated facility if the waste cannot be delivered to the designated facility because an emergency prevents delivery.

6. If the infectious waste cannot be delivered in accordance with paragraph (3)(B)5. of this rule, the transporter shall contact the generator for further directions and shall revise the tracking document according to the generator's instructions.

(C) Processing Facility.

1. A facility shall not accept infectious waste which is not accompanied by a tracking document completed in accordance with subsections (3)(A) and (B) of this rule.

2. Upon receipt of infectious waste, an authorized agent of the facility shall—

A. Sign and date the accompanying tracking document. The name of the authorized agent signing the document shall be printed or typed on the tracking document; and

B. Note any significant discrepancies in the tracking document on each copy of the document.

3. An infectious waste processing facility permitted for the treatment of infectious waste shall record on the tracking document the date the shipment is treated.

4. An infectious waste processing facility permitted as an infectious waste transfer station shall record on the tracking document the date the shipment is transported for further processing.

5. Within thirty-five (35) days after the date the waste was accepted by the transporter, the processing facility shall send a copy of the completed tracking document to the generator.

6. A transfer station shall initiate a tracking document as generator prior to transporting infectious waste shipments for further processing and shall comply with the generator requirements of this rule.

(4) Transportation of Infectious Waste. Except as provided by paragraph (1)(C)3. and subparagraph (1)(C)5.B. of this rule, infectious waste shall only be transported from the point of generation by transporters who are licensed by the department in accordance with 10 CSR 25-6.263(2)(A)3. Sharps, as defined previously in subparagraph (1)(A)3.F. of this rule, in addition to the provisions of this section and paragraph (1)(C)3. of this rule, may be transported for treatment by the United States Postal Service, provided that the requirements of 39 CFR 111 are met. The standards for transporters shall be defined in 10 CSR 25-6.263 with the following exception: 49 CFR 172.101 and 49 CFR

173.386–173.388, which are incorporated by reference in 10 CSR 25-6, are not applicable to wastes defined in this chapter. In addition, vehicles that transport infectious waste shall be closed and secured vehicles, shall be cleaned and sanitized following leakage or spills and shall be cleaned and sanitized prior to using the vehicle for any other purpose. Any infectious waste transferred from the premises of the generator unless exempted by paragraph (1)(C)2. of this rule shall be taken to a hospital as provided in paragraph (1)(C)5. of this rule, an infectious waste processing facility permitted by the department or to an out-of-state facility. Infectious waste shall be managed in accordance with the laws and regulations of any state and local government in which jurisdiction it is transported, treated/processed or disposed.

(5) Permitted Infectious Waste Processing Facility. This section sets forth requirements for solid waste processing facilities permitted for the treatment or other processing of infectious waste. A report shall be submitted to the department containing plans, as defined in 10 CSR 80-2.010, addressing the requirements of sections 260.200-260.345, RSMo and 10 CSR 80.

(A) Treatment Facility. An infectious waste processing facility permitted for the treatment of infectious waste means a facility that has received a solid waste processing facility permit as provided in sections 260.200-260.345, RSMo and 10 CSR 80-2.020, 10 CSR 80-5.010, and this rule. The solid waste processing facility construction and operating permit shall specifically allow for the treatment of infectious waste as provided by this rule. Two (2) treatment technologies are approved for the treatment of infectious waste by permitted facilities—incineration and steam sterilization. Chemical sterilization and other types of treatment may be approved by the department on a case-by-case basis.

1. Permitted infectious waste incinerators shall be multi-chambered and be designed to provide complete combustion for the type of waste introduced into the incinerator. The incinerator shall achieve a minimum temperature of one thousand eight hundred degrees Fahrenheit (1800 °F) in the secondary chamber with a minimum retention time of one-half (1/2) second in the secondary chamber. Automatic controls that lock out the load system if the secondary chamber is not up to the minimum temperature and automatic, continuous temperature recording charts for the secondary chamber shall be equipped on the incinerator and utilized during any infectious waste treatment process.

A. The operator shall visually inspect



each batch of ash from batch-type ash removal systems prior to disposal. The operator shall visually inspect the ash from continuous ash removal systems a minimum of once per hour during operation.

B. Any partially combusted organic materials observed will be noted in the facility log. The facility manager shall be notified and corrective action taken. The corrective action and new ash observations shall be noted in the facility log.

C. Amount of waste treated each hour shall be recorded in the facility log by weight.

D. The plans shall include a statement quantifying the maximum amount, by weight, of infectious waste to be accepted each month.

E. The plans shall contain procedures for the handling of spills during unloading, storage, and processing of the infectious waste, and the plan will be implemented immediately upon discovery of any spill.

F. A solid waste technician trained in the handling of infectious waste and in the operation of the incinerator shall be on-site during any treatment process. Evidence of training shall be maintained on-site. The plans shall contain an outline of the training, including the name and qualifications of the person(s) providing the training.

2. Steam sterilization by permitted facilities using autoclaves is an acceptable means of treating infectious waste when operated at sufficient temperatures for adequate periods of time to kill infectious agents present in the waste. Automatic continuous time and temperature recording charts shall be utilized on each unit during operation. Units shall be operated according to manufacturer's recommendations.

A. During initial operational testing, four (4) waste charges representing the maximum amount of waste to be processed in any charge shall be treated. Each charge shall contain all types of waste that are to be treated at the facility and shall be packaged as the waste will be packaged for treatment during normal operations. For each of the four (4) waste charges, three (3) biological indicators approved by the department (such as three (3) vials of *Bacillus stearothermophilus*), shall be placed inside separate containers of simulated waste (that is, sharps containers, autoclavable bags), distributed throughout the waste charge prior to treatment, recovered after treatment, cultured, and analyzed. Any positive reading constitutes a failure of the treatment process and shall require corrective action and retesting in accordance with this subparagraph.

B. Each sterilizer shall be tested each week by placing one (1) department-approved

biological indicator inside a waste container prior to treatment. The biological indicator shall be recovered, cultured, and analyzed. A positive indicator constitutes a failure of the treatment process. The sterilizer shall not be used to treat infectious waste until corrective action has been taken and results verified. Upon completion of corrective action, the sterilizer shall be retested in accordance with subparagraph (5)(A)2.A. of this rule. Results of biological indicator tests and any corrective action shall be recorded in the facility log.

C. Amounts of waste treated each load shall be recorded in the facility log by weight.

D. Sharps that were treated by steam sterilization shall be packaged in rigid, leak-resistant and puncture-resistant containers, and sealed prior to disposal.

E. Sharps that have been rendered innocuous by an approved method and that have been shredded so as not to pose a puncture hazard are not required to be transported, packaged, or stored in rigid, semi-rigid, leak-resistant or puncture-resistant containers. Such sharps may be disposed of in a sanitary landfill as a solid waste.

F. The plans shall include a statement quantifying the maximum amount, by weight, of infectious waste to be accepted each month.

G. The plans shall contain procedures for the handling of spills during unloading, storage, and processing of the infectious waste, and the plan will be implemented immediately upon discovery of any spill.

H. A solid waste technician trained in the handling of infectious waste and in the operation of the steam sterilizer shall be on-site during any treatment process. Evidence of training shall be maintained on-site. The plans shall contain an outline of the training, including the name and qualifications of the person(s) providing the training.

(B) Transfer Stations. To facilitate consolidation of shipments prior to further transport, infectious waste may be transported to a transfer station as defined in 10 CSR 80-2.010. A solid waste processing facility permitted as a transfer station for infectious waste means a facility that has received a solid waste processing facility construction and operating permit as provided in sections 260.200–260.345, RSMo and 10 CSR 80-2.020, 10 CSR 80-5.010, and this rule. The solid waste processing facility construction and operating permit shall specifically allow for the acceptance of infectious waste.

(C) Storage. Infectious waste at infectious waste processing facilities shall be placed in a storage area or processing area as approved

by the department in the operational report and plans.

1. Processing area. Infectious waste at an infectious waste processing facility may be placed into the processing area provided the facility is operational and no infectious waste shall be stored in the processing area at the end of the operating day. For those facilities operating continuously, no infectious waste shall be kept in the processing area for more than twenty-four (24) hours.

A. The plans shall contain procedures for the handling of spills in the processing area.

B. The processing area shall have a floor sloped to drains connected to the sanitary sewage system or a collection device.

C. The processing area shall be clearly posted **INFECTIOUS WASTE PROCESSING AREA**, or **BIOHAZARD WASTE PROCESSING AREA**, or **BIOHAZARD, AUTHORIZED PERSONNEL ONLY** and shall display the universal biohazard symbol. Access shall be restricted and limited to authorized personnel.

2. Storage area. Infectious waste at an infectious waste processing facility may be placed into a storage area approved by the department provided the storage area meets the following minimum requirements:

A. For a storage area where infectious waste will be stored for 24 hours or less, the storage area shall be a locked, vermin-free, dry area, and not be used for any other purpose;

B. For a storage area where infectious waste will be stored for more than twenty-four (24) hours, but no more than seventy-two (72) hours, the storage area shall be a refrigerated, locked, vermin-free, dry area, and not be used for any other purpose;

C. The plans shall contain procedures for the handling of spills in any storage areas;

D. The storage area shall have a floor with a perimeter curb. The floor shall slope to a drain connected to the sanitary sewage system or a collection device. The perimeter curb shall be capable of containing potential spills and shall be designed to facilitate cleaning of the storage area; and

E. The storage area shall be clearly posted **INFECTIOUS WASTE STORAGE AREA**, or **BIOHAZARD WASTE STORAGE AREA**, or **BIOHAZARD, AUTHORIZED PERSONNEL ONLY** and shall display the universal biohazard symbol. Access shall be restricted and limited to authorized personnel.

(D) Fees. Any person who transports infectious waste to a permitted infectious waste processing facility shall pay a fee on any infectious waste so delivered as provided



in sections 260.200–260.345, RSMo. A person generating one hundred kilograms (100 kg) or less of infectious waste per month and hospitals as defined in section 197.020, RSMo and located in Missouri are exempt from the fees requirement of this rule provided the infectious waste is transported using the generator’s employees and vehicles.

1. An infectious waste processing facility shall collect a fee of two dollars per ton (\$2/ton) of infectious waste delivered to the facility.

2. Fees assessed by an infectious waste processing facility as provided in sections 260.200–260.345, RSMo shall be transmitted quarterly to the department within thirty (30) days of the end of each calendar quarter. A quarterly report shall be submitted with the fees.

A. The quarterly report shall specify the quantity of infectious waste received during that calendar quarter that was subject to fees.

B. An authorized representative of the facility shall sign and date the report and certify that the submitted information is true, accurate, and complete for the quarterly accounting of infectious waste delivered to the facility and subject to fees.

(6) Record Keeping. All tracking documents, operating logs, quarterly fees reports, records, test results and process monitoring records shall be kept for a period of at least three (3) years. The period of record retention extends upon the written request of the department or automatically during the course of any unresolved enforcement action regarding the regulated activity. These records shall be made available for inspection by the department upon request.

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**Original authority: 260.203, RSMo (1986), amended 1988, 1992, 1993 and 260.225, RSMo (1972), amended 1975, 1986, 1988, 1990, 1993, 1995, 2015.*