

**3701:1-38-19 Waste disposal.**

- (A) A licensee shall dispose of licensed radioactive material in accordance with this rule. Licensed material shall be disposed of in one of the following manners:
- (1) By transfer to an authorized recipient as provided in this chapter, Chapter 3701:1-40 of the Administrative Code, or to the United States department of energy;
  - (2) By decay in storage provided that the radionuclide has a half-life of one hundred twenty days or less, or as otherwise permitted by the license;
  - (3) By release in effluents within the limits set forth in rule 3701:1-38-13 of the Administrative Code; or
  - (4) As authorized pursuant to paragraphs (B) to (F) of this rule.
- (B) A person shall be specifically licensed to receive waste containing licensed material from another person for:
- (1) Treatment prior to disposal;
  - (2) Treatment or disposal by incineration;
  - (3) Decay in storage;
  - (4) Disposal at a land disposal facility licensed pursuant to rules 3701:1-54-06 to 3701:1-54-12 of the Administrative Code or equivalent United States nuclear regulatory commission or agreement state regulations; or
  - (5) Storage until transfer to a storage or disposal facility authorized to receive the waste.
- (C) A licensee or applicant for a license may apply to the director for approval of proposed disposal procedures that are not otherwise authorized in these rules for the disposal of licensed material generated in the licensee's operations. Each application shall include:
- (1) A description of the waste containing licensed material to be disposed of, including the physical and chemical properties that have an impact on risk evaluation, and the proposed manner and conditions of waste disposal;
  - (2) An analysis and evaluation of pertinent information on the nature of the environment;
  - (3) The nature and location of other potentially affected facilities; and
  - (4) An analysis and procedures to ensure that doses are maintained ALARA and within the dose limits in rules 3701:1-38-12 and 3701:1-38-13 of the Administrative Code.
- (D) A licensee may discharge licensed material into sanitary sewerage as follows:
- (1) The material is readily soluble in water or is a biological material that is readily dispersible in water;

- (2) The quantity of licensed or other radioactive material that the licensee releases into the sewer in one month divided by the average monthly volume of water released into the sewer by the licensee does not exceed the concentration listed in table III of appendix C to rule 3701:1-38-12 of the Administrative Code; and
  - (3) If more than one radionuclide is to be released, the following conditions must also be satisfied:
    - (a) The licensee shall determine the fraction of the limit in table III of appendix C to rule 3701:1-38-12 of the Administrative Code represented by discharges into sanitary sewerage by dividing the actual monthly average concentration of each radionuclide released by the licensee into the sewer by the concentration of that radionuclide listed in table III of appendix C to rule 3701:1-38-12 of the Administrative Code; and
    - (b) The sum of the fractions for each radionuclide required by paragraph (D)(3)(a) of this rule does not exceed unity.
  - (4) The total quantity of licensed and other radioactive material that the licensee releases into the sanitary sewerage in a year does not exceed one hundred eighty-five gigabecquerels (five curies) of hydrogen-3, thirty-seven gigabecquerels (one curie) of carbon-14, and thirty-seven gigabecquerels (one curie) of all other radioactive materials combined.
  - (5) Excreta from an individual undergoing medical diagnosis or therapy with radioactive material is not subject to the limitations contained in paragraph (D) of this rule.
- (E) A licensee may dispose of licensed material by decay in storage. A licensee may hold radioactive material with a physical half-life of one hundred twenty days or less for decay-in-storage before disposal as non-radioactive material provided the licensee does the following:
- (1) Monitors the material at the container surface prior to disposal and determines that the radioactivity cannot be distinguished from the background radiation level with an appropriate radiation detection survey meter set on its most sensitive scale and with no interposing shielding;
  - (2) Removes or obliterates all radiation caution labels and symbols, unless otherwise specified in the license; and
  - (3) Retains a record of the disposal for three years.
- (F) A licensee may treat or dispose of licensed material by incineration only in the form and concentration specified in paragraph (G) of this rule or as specifically approved by the director pursuant to paragraph (C) of this rule.
- (G) A licensee may dispose of the following licensed material as if it were not radioactive. The licensee shall maintain records in accordance with paragraph (K) of rule 3701:1-38-20 of the Administrative Code.
- (1) 1.85 kilobecquerels (0.05 microcurie) or less, of hydrogen-3 or carbon-14 per gram of medium used for liquid scintillation counting; or
  - (2) 1.85 kilobecquerels (0.05 microcurie) or less, of hydrogen-3 or carbon-14 per

gram of animal tissue, averaged over the weight of the entire animal. A licensee shall not dispose of tissue pursuant to this paragraph in a manner that would permit its use either as food for humans or as animal feed.

- (H) A licensee shall transfer and dispose of licensed material in accordance with the following:
- (1) For transfer of radioactive waste intended for disposal at a licensed radioactive waste disposal facility, establish a manifest tracking system, and supplement existing requirements concerning transfers and recordkeeping for those wastes. Each shipment of radioactive waste designated for disposal at a licensed radioactive waste disposal facility shall be accompanied by a shipment manifest as specified in appendix A to this rule.
  - (2) Each shipment manifest shall include a certification by the waste generator in accordance with appendix A to this rule.
  - (3) Each person involved in the transfer of waste for disposal or in the disposal of waste, including the waste generator, waste collector, waste processor, and disposal facility operator, shall comply with the requirements specified in appendix A to this rule.
- (I) Nothing in this rule relieves a licensee from complying with other applicable federal, state and local regulations governing any other toxic or hazardous properties of materials that may be disposed of under this rule.

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Certification

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