567—102.9(455D) Tier 4 composting facility. A Tier 4 composting facility is a compost facility that composts any amount of Type A, B, and C feedstock. Tier 4 facilities shall comply with the provisions of this rule.

102.9(1) *Permit required.* Tier 4 composting facilities shall not be operated without a permit from the department as described in 567—subrule 100.4(2). A permit application shall be on a form prescribed by the department and include the following in addition to the requirements in 567—subrule 100.5(1):

a. Aerial photography identifying wells, streams, creeks, rivers, ponds, sinkholes, and drainage wells within one-half mile of the closest portion of the facility.

b. Design documents prepared by an Iowa-licensed professional engineer that include the following:

(1) Dimensions, details, and capacities of the proposed receiving, processing, production, curing, and storage areas, as well as the contact water containment, recycling, or treatment system.

(2) Design calculations justifying the size of the composting area for the volume of material to be composted.

(3) Design plans showing compliance with design requirements in 102.9(3).

c. A stormwater management plan that prevents run-on to the operating base, as well as controls outside of the operating base for a 25-year 24-hour storm event.

d. A flow diagram of all steps in the operational procedure.

e. An operations plan addressing the following:

(1) The method of composting, including description of the aeration method and the aeration frequency to be used to maintain aerobic conditions.

(2) The duration of composting with a time frame for receiving, processing, production, curing, and storage.

(3) A description of storage of feedstock, including quantity and types.

(4) A description of the methods to minimize and manage odors, dust, vectors, noise, and litter.

(5) A description of the specific procedures to be followed in case of equipment breakdown, maintenance downtime, and fire in equipment, composting material, or buildings, including methods to be used to remove or dispose of accumulated waste and burned or damaged material.

(6) Plans for using or marketing the finished compost.

(7) The method(s) of managing collected contact water.

(8) The method(s) of maintaining contact water management systems to maintain design volume.

(9) The description of the monitoring, sampling, and analysis procedures and schedule for testing the composting, including sampling frequency, sample size and number, and sample locations.

f. A closure plan containing a description of the steps necessary to close the facility in compliance with 567—100.10(455B, 455D).

g. Documentation that the person responsible for daily operation of the facility is certified by a department-approved program.

102.9(2) *Design requirements.* In addition to the requirements of 102.5(2), Tier 4 composting facilities shall comply with the following.

a. All operations shall take place on a foundation that will permit accessibility during periods of inclement weather. The foundation shall be maintained and repaired, as needed.

b. A base/foundation used for receiving, processing, and production of feedstock must meet the following minimum design standards.

(1) The base must support the load of the equipment, vehicles, materials, and all operations for the duration of the permit period.

(2) The base must have sufficient slope to prevent surface ponding and to transmit contact water to a containment structure to prevent liquids from entering surface water or groundwater.

(3) The base must be protected with a wearing surface consisting of asphalt, concrete, compacted granular aggregate, or similar relatively impermeable material and underlain by a liner consisting of a minimum of 12 inches of recompacted clay or other approved material with a hydraulic conductivity of 1×10^{-5} cm/sec or less. The bottom of the liner shall be at least 12 inches above the high-water table.

c. The containment structure for contact water shall include a liner system consisting of a minimum of 12 inches of recompacted clay or other approved material with a hydraulic conductivity of 1×10^{-7} cm/sec or less. The bottom of the liner shall be at least five feet above the high-water table.

d. The design of the facility shall include specifications for documentation of quality control and assurance that the construction meets the minimum design standards.

e. Composting facilities permitted by the department prior to September 23, 2026, shall submit a compliance plan on or before September 23, 2027, that includes a schedule to verify compliance or obtain compliance with this subrule no later than September 23, 2031.

f. The department may approve alternatives to these design requirements that provides the same level of environmental protection.

102.9(3) *Operating requirements.* In addition, the requirements of 567—102.4(455D), Tier 4 composting facilities shall comply with the following.

a. Access to the facility shall be limited as follows.

(1) Access to the facility shall be restricted with a lockable gate at the entrance to the facility and perimeter access controlled by a fence or natural barrier approved by the department.

(2) Access to the facility shall be allowed only when an employee, agent, or representative of the facility is on duty.

(3) Emergency access to the facility shall be provided. Fire lanes shall be maintained to provide access for firefighting equipment.

b. All putrescible materials received must be incorporated into the composting process within 24 hours of receipt, unless storage of these materials is specified in the operations plan and authorized in the permit.

c. Compost processing time and temperatures shall meet Process to Further Reduce Pathogens (PFRP) requirements in B.1 of 40 CFR Part 503, Appendix B, and produce compost that meets the stability necessary for the intended use. Unless otherwise proposed in the operating plan and authorized in the permit, the permit holder shall test, at a minimum:

(1) Twice weekly temperature readings of compost piles, batches, and windrows.

(2) Weekly moisture levels of compost piles, batches, and windrows.

d. Contact water shall be directed to a containment, recycling, or treatment system that prevents prohibited discharges to the stormwater system or a surface water. A containment system shall have a minimum of one foot of freeboard at all times.

e. The person responsible for daily operations shall be a certified compost operator as described in 567—102.11(455D). The department may require as a condition in the permit that a facility retain a certified compost operator during all regular operational hours.

f. A visual inspection of the facility shall be conducted and documented on a quarterly basis at a minimum. If deficiencies are discovered during the visual inspection, actions taken to correct the deficiency shall be documented. The inspection shall at a minimum include the following.

(1) The condition of the pad. Portions of the pad that are under windrows or piles of curing or finished compost are not required to be inspected.

(2) Verification that ponding is not occurring on the pad.

(3) Verification that contact water is being directed to a containment, recycling, or treatment system and not discharging to the stormwater system or to surface water.

(4) The remaining capacity, amount of freeboard, and general condition of the contact water basin.

(5) The condition of containers and aeration equipment used for in-vessel composting if applicable.

102.9(4) *Product testing.* Prior to the use or sale, finished compost must be sampled and measurements taken for the purpose of product testing in a manner that is representative of the composting activity and consistent with Test Methods for Examination of Composting and Compost (TMECC) (2026) or other applicable standards approved by the department in the permit. Contaminants within finished compost must comply with the following:

a. The density of fecal coliform bacteria shall be less than 1,000 most probable number (MPN) per gram of total solids (dry weight basis) or the density of Salmonella sp. bacteria in compost shall be less than three MPN per four grams of total solids (dry weight basis).

b. The concentrations of all metals shall be less than the following:

Metal	Concentration mg/kg dry weight
Arsenic (As)	41
Cadmium (Cd)	39
Copper (Cu)	1500
Lead (Pb)	300
Mercury (Hg)	17
Nickel (Ni)	420
Selenium (Se)	100
Zinc (Zn)	2800

c. Compost shall be tested for stability using one of the methods listed in TMECC 5.08 (2026), Respirometry, or another method approved by the department in the permit.

102.9(5) *Recordkeeping requirements.* The following records shall be maintained by the facility for a period of three years, kept at the facility at all times, and submitted to the department upon request:

a. Analytical results described in 102.9(5).

b. Types and weight of compostable materials and bulking agent, in tons, accepted at the facility annually.

c. Weight of compost, in tons, removed from the facility annually.

d. A copy of the operations plan, the permit and annual reports.

e. Documentation of the volumes and dates of treatment, recycling, or disposal of unused contact water.

f. Documentation of visual inspections conducted pursuant to 102.9(4)*"f."*

102.9(6) *Reporting requirements.* An annual report for the previous fiscal year beginning July 1 and ending June 30 shall be submitted to the department by July 31 of each year. The report shall be submitted using a form prescribed by the department and include the following:

a. Tons of type A feedstock received.

b. Tons of type B feedstock received.

c. Tons of type C feedstock received.

d. Tons of finished compost sold, given away or used by permit holder.

e. Method of composting.

f. Name of certified operator.

g. Copy of the most recent results of the testing required in 102.9(4).

102.9(7) *Closure requirements.*

a. A schedule to implement the closure plan in 102.9(2)*"f"* shall be submitted to the department at least 30 days prior to the proposed termination date for the facility. If needed, a request to modify the closure plan may be submitted at the same time.

b. Unless an alternative schedule is approved by the department, within six months of the facility's ceasing operation, the facility shall properly dispose of all organic material, solid waste, and litter and remove all finished compost from the premises.

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