



## Ohio Administrative Code

### Rule 3745-560-410 Operational requirements for class IV composting facilities.

Effective: October 1, 2018

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(A) Authorizing documents. The owner or operator shall operate the facility in accordance with applicable authorizing documents including but not limited to maintaining the design and operational capacities specified in the registration. The owner or operator shall have a copy of applicable authorizing documents available for inspection by Ohio EPA or the approved board of health during normal operating hours.

[Comment: Changes to the facility registration in accordance with paragraph (F) of rule 3745-560-400 of the Administrative Code may require submittal of an amended registration.]

(B) Authorized materials. The owner or operator shall only accept yard waste, agricultural plant materials, bulking agents, and additives consisting only of source-separated coffee and tea grounds, urea, and bacterial or fungal inoculum.

(C) Prohibited material management. The owner or operator shall not accept any prohibited material at the facility.

(1) Prohibited material includes but is not limited to the following:

(a) Any solid waste, feedstock, bulking agent, or additive other than those feedstocks, bulking agents, or additives authorized by paragraph (B) of this rule.

(b) Commingled yard waste.

(c) Construction and demolition debris, except for construction and demolition debris that meets the definition of clean untreated wood.

(d) Hazardous waste.



- (e) Infectious waste.
  - (f) Asbestos including asbestos-containing waste material.
  - (g) Batteries.
  - (h) Wastes that may include heat stable toxins produced by microorganisms including but not limited to improperly processed foods that are contaminated or likely to be contaminated with *Clostridium botulinum*.
  - (i) Containerized bulk liquids.
  - (j) Any other material that the facility is otherwise prohibited to accept under federal or state laws.
- (2) If prohibited material is detected, the owner or operator shall immediately do the following:
- (a) Remove the prohibited material from the materials placement area.
  - (b) Manage the prohibited material in accordance with applicable laws and regulations.
  - (c) Record incidents in the log of operations.
- (D) Methods of composting. The owner or operator shall manage authorized materials by utilizing any of the following methods of composting:
- (1) Windrow composting. The windrow construction, carbon to nitrogen ratio, moisture content, and turning frequency shall enable controlled biological decomposition under primarily aerobic conditions to be maintained throughout the composting process. Windrows shall be constructed parallel to the line of slope on the site and turned at a minimum four times per year to mix materials, distribute moisture and heat, increase porosity, and change the location of materials in a pile or windrow to ensure consistent composting. If a windrow is in place for at least twelve months, it shall have been turned a minimum of four times during that that period.



(2) In-vessel composting. The construction, loading, carbon to nitrogen ratio, moisture content, and turning frequency shall enable controlled biological decomposition under primarily aerobic conditions to be maintained throughout the composting process.

(3) Aerated static pile composting. The construction, including the aeration system, carbon to nitrogen ratio, and moisture content, shall enable controlled biological decomposition under primarily aerobic conditions to be maintained throughout the composting process.

(4) Static pile composting. The construction, carbon to nitrogen ratio, moisture content, and turning frequency shall enable controlled biological decomposition under primarily aerobic conditions to be maintained throughout the composting process. Static piles shall be turned at a minimum two times per year to reintroduce oxygen into the composting process.

(5) Vermicomposting. The construction, placement, and maintenance of vermicomposting beds, bins, and batch reactors systems shall facilitate the survival of the earthworms. Solid waste material to be fed to earthworms shall be managed to achieve pathogen reduction prior to feeding to the earthworms.

(6) Other methods. The owner or operator may submit a written request to the director for approval of an alternative composting method. The request shall include at a minimum a detailed description of the alternative composting method and how the method will enable controlled biological decomposition and comply with the operational requirements specified in this rule.

(E) Methods of conditioning compostable materials. The owner or operator may manage authorized materials in conjunction with the composting methods in paragraph (D) of this rule by utilizing any of the following methods:

(1) Acidic anaerobic fermentation. The owner or operator shall construct containers and utilize microbial inoculum to allow for and maintain acidic anaerobic fermentation conditions. The owner or operator shall maintain materials in sealed containers for a length of time sufficient for acidic anaerobic fermentation to occur, and acidic conditions shall be maintained between a pH range of 3.5 to 6.0.



(2) Other methods. The owner or operator may submit a written request to the director for approval of an alternative method of conditioning compostable materials. The request shall include at a minimum a detailed description of the alternative method and how the method will enable controlled biological decomposition and comply with the operational requirements specified in this rule.

(F) Certified operator. The owner or operator shall ensure that the technical operation and maintenance of the composting facility is under the responsible charge of an operator certified by the director as having completed the operator training required by Chapter 3734. of the Revised Code and rules adopted thereunder.

(G) Containers management. The owner or operator shall properly manage any containers used to transport authorized materials to a composting facility according to the following:

(1) Compostable containers shall be shredded or otherwise processed to increase the exposed surface area for composting prior to incorporation into the composting process.

(2) Feedstocks, bulking agents, and additives shall be removed from containers that do not meet the definition of compostable containers prior to incorporation into the composting process. These containers shall not be shredded and shall be managed as solid waste.

(H) Operational control management. The owner or operator shall operate the composting facility in such a manner that does the following:

(1) Controls noise, dust, and odors so as not to cause a nuisance or a health hazard.

(2) Controls the attraction, breeding, and emergence of insects, birds, rodents, and other vectors so as not to cause a nuisance or a health hazard. The owner or operator shall initiate vector control measures as deemed necessary by the approved board of health or Ohio EPA.

(3) Prevents the occurrence of fire, the spread of fire, and extinguishes fire. The owner or operator shall act immediately to prevent the spread of fire and extinguish fire.

(4) Employs reasonable measures to collect, properly contain, and dispose of scattered litter.



(5) Prevents the creation of water pollution as to not violate Chapter 6111. of the Revised Code or any rules adopted thereunder.

(6) Prevents the creation of air pollution as to not violate Chapter 3704. of the Revised Code or any rules adopted thereunder.

(I) Facility access management. The owner or operator shall do the following:

(1) Employ reasonable measures to limit access to the composting facility by non-employees during non-operating hours or in the absence of operating personnel.

(2) Maintain materials placement areas and access roads within the facility boundary in such a manner to allow facility operations and access at all times with minimum erosion and ponding of surface water.

(3) Exclude domestic and farm animals from the facility, except for animals utilized for security purposes or vector control.

(J) Equipment availability. The owner or operator shall have operable equipment of adequate size and quantity for the operations of the facility available at all times.

(K) Facility signage. When public access is allowed, the owner or operator shall maintain posted in accordance with rule 3745-560-402 of the Administrative Code.

(L) Wood processing and management. The owner or operator when accepting tree stumps, trunks, limbs, or clean untreated wood shall do the following:

(1) Shred, grind, or chip the tree stumps, trunks, limbs, or the clean untreated wood, prior to incorporation into the composting process and remove foreign materials including but not limited to nails and banding.

(2) Shred, grind, chip, or remove tree stumps, trunks, limbs, and clean untreated wood at a minimum



on an annual basis or more often than annually if conditions causing a nuisance or safety hazard warrant processing or removal of the tree stumps, trunks, limbs, and clean untreated wood, or when required by Ohio EPA or the approved board of health.

(M) Surface water management. The owner or operator shall do the following:

(1) Manage surface water in accordance with Chapter 6111. of the Revised Code.

(2) Minimize run-on from reaching the materials placement area.

(3) Undertake actions as necessary to correct the conditions causing the erosion or ponding, unless the ponding is for the purposes of collection.

(4) Divert surface water away from the materials placement area. Ensure that the land surface of the materials placement area maintains a slope greater than or equal to one per cent and less than or equal to six per cent to direct surface water to collection points or otherwise control the surface water drainage.

(5) Maintain any structures or mechanisms used for the collection or containment of runoff, if applicable.

(6) Monitor surface water runoff or ground water as required by the director or approved board of health if a substantial threat of surface water or ground water pollution exists.

(N) Leachate management. The owner or operator shall do the following:

(1) Manage leachate in accordance with Chapter 6111. of the Revised Code.

(2) Take action to minimize, control, or eliminate the conditions which contribute to the production of leachate.

(3) Minimize ponding of leachate in the materials placement area.



(4) Eliminate the conditions that contribute to the unauthorized discharge of leachate from the composting facility.

(5) Collect and contain leachate within the boundary of the composting facility and prevent leachate from discharging to waters of the state, unless the discharge is authorized pursuant to Chapter 6111. of the Revised Code.

(6) If applicable, maintain any structures or mechanisms used for the collection or containment of leachate.

[Comment: Leachate may be collected and contained for reintroduction into the composting process.]

(O) Upon written notice, Ohio EPA or the approved board of health may require the owner or operator to submit a written narrative describing the current or planned management practices for any or all of the areas of management under paragraphs (C) to (O) of this rule. Unless otherwise specified in the notice, the owner or operator shall submit the narrative to Ohio EPA or the approved board of health not later than thirty days upon receipt of the notice.

(P) Ohio EPA or the approved board of health may order that compost or compost product be disposed in a licensed solid waste landfill if Ohio EPA or the approved board of health determined that the compost or compost product causes or threatens to cause a nuisance or adversely affects the public health, safety, or the environment.