

3745-560-01 Composting facilities - applicability.

- (A) This chapter is the program chapter for composting facilities.
- (B) Except as otherwise provided in paragraph (D) of this rule, this chapter shall apply to any person who establishes or operates a solid waste composting facility in the state of Ohio.
- (C) In addition to the multi-program rules made applicable by reference in this chapter, the following multi-program rules apply to this chapter:
- (1) Rule 3745-500-35 of the Administrative Code which pertains to relationships among authorizing documents, rules, and the authority of the director and board of health.
 - (2) Rule 3745-500-210 of the Administrative Code which pertains to a variance from this chapter.
 - (3) Rule 3745-500-220 of the Administrative Code which pertains to an exemption from this chapter.
- (D) This chapter shall not apply to the following:
- (1) Composting of solid wastes generated within a single-family residence and disposed of or utilized on the premises where generated in a manner that does not create a nuisance or health hazard.
 - (2) Any person composting yard waste, agricultural plant materials, animal waste, food scraps, bulking agents, and additives within an aggregate area not greater than five hundred square feet on any premises in a manner that noise, dust, and odors do not constitute a nuisance or health hazard and does not cause or contribute to surface or ground water pollution.
 - (3) Agricultural operations. Composting facilities at locations engaging in agriculture as defined in section 1.61 of the Revised Code and that compost yard waste, agricultural plant materials, animal waste, food scraps, and bulking agents generated from the agricultural operations provided that the following conditions are met:
 - (a) The owner of the composting facility is the same as the owner of the agricultural operation where the yard waste, agricultural plant materials, animal waste, food scraps, and bulking agents are generated.
 - (b) The composting facility is located on property owned by the agricultural operation.
 - (c) The composting facility is operated in such a manner that noise, dust, and odors do not constitute a nuisance or health hazard and does not cause or contribute to surface or ground water pollution.
 - (d) All compost produced is utilized exclusively at the agricultural operation.
 - (4) On-farm dead animal and raw rendering material composting. Except as otherwise provided in section 3734.029 of the Revised Code, composting facilities that compost dead animals and raw rendering material pursuant to section 939.04 of the Revised Code that sell or offer for sale at retail or wholesale, distribute for use, or give away any compost product are subject to the compost quality standards established in this chapter.
 - (5) Restricted yard waste composting facilities. Composting facilities that compost yard waste and bulking agents provided that the following conditions are met:

- (a) The owner or operator composts only yard waste and bulking agents generated by the owner of an operation engaged in providing lawn mowing or landscaping services or operations that generate yard waste while lawn mowing or landscaping the owner's premises.
 - (b) The owner of the composting facility is the same as the owner of the operation.
 - (c) The composting facility is located on the owner's property.
 - (d) The limits of materials placement on the facility site are less than twenty-five hundred square feet of total area.
 - (e) The composting facility is operated in such a manner that noise, dust, and odors do not constitute a nuisance or health hazard and does not cause or contribute to surface or ground water pollution.
 - (f) All compost produced is utilized exclusively on the owner's property. The use of the compost in plant potting media by nurseries and greenhouses that grow plant stock is considered use on the owner's property for the purposes of this rule.
- (6) Sewage sludge composting. Sewage sludge composting with solid wastes when that sewage sludge composting is sewage sludge treatment or disposal pursuant to Chapter 3745-40 of the Administrative Code and is authorized by a current permit issued under Chapter 6111. of the Revised Code.
- (E) The following are not composting facilities and therefore are not subject to this chapter:
- (1) Wood recycling facilities. Facilities that grind, shred, or chip woody materials consisting of stumps, trees, limbs, branches, affixed leaves, bark, and other clean untreated wood to produce a wood product that does not meet the definition of compost product.
 - (2) Vermiculture operations. Any person that accepts food scraps, animal waste, and other feed for earthworms as long as the following criteria are met:
 - (a) Operations are conducted in a manner that noise, dust, and odors do not constitute a nuisance or health hazard and does not cause or contribute to surface or ground water pollution.
 - (b) Any vermicompost produced is utilized exclusively on property owned by the owner of the vermiculture operation.
- (F) Variances.
- (1) Any person may apply for a variance from any provision of this chapter for which an exemption is not required.
 - (2) A request for a variance and any action on the variance request shall be in accordance with rule 3745-500-210 of the Administrative Code.
- (G) Exemptions.
- (1) Any person may apply for an exemption from any provision of this chapter for which a variance is not required.
 - (2) A request for an exemption and any action on the exemption request shall be in accordance with rule 3745-500-220 of the Administrative Code.

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3745-560-02 Composting facilities - definitions.

If a term used in this chapter is defined in rule 3745-500-02 of the Administrative Code the definition in rule 3745-500-02 of the Administrative Code is applicable to this chapter unless the term is defined in this rule. As used in this chapter:

- (A)
- (1) "Accept" or "acceptance," in the context of material acceptance, handling, and disposal activities, means to record material in the log of operations or to place material on the materials placement area at a composting facility.
 - (2) "Acidic anaerobic fermentation" means a conditioning method in which compostable materials are inoculated with an effective microorganism (EM) inoculum and placed in sealed containers for a length of time sufficient for fermentation to occur under anaerobic conditions and promote acidification of the compostable material.
 - (3) "Active composting facility" means a composting facility where authorized feedstocks, bulking agents, additives, and compost products are received, processed, or stored.
 - (4) "Additive" means a supplemental material mixed with or otherwise added to feedstocks and bulking agents to create a favorable condition for the composting process and includes urea, crushed egg shells, source-separated spent coffee and tea grounds, and bacterial or fungal inoculum.
 - (5) "Aerated static pile" means a method of composting where solid waste is constructed into a pile and air is forced through the pile to enable aerobic composting.
 - (6) "Agricultural plant materials" means plant material including but not limited to stems, leaves, vines, or roots from an agricultural operation.
 - (7) "Alteration" means a change, other than a modification, to a class I composting facility or to a permit to install issued pursuant to Chapter 3734. of the Revised Code for a class I composting facility which is at least equivalent to the rule requirements. An alteration includes but is not limited to changes in the type of waste received, replacement of equipment, and repair of the facility.
 - (8) "Alternative material" means a waste that might be suitable for use as a feedstock, bulking agent, or additive in the composting process that is not authorized in rule for acceptance at a composting facility.
 - (9) "Animal waste" means animal excreta, bedding, wash waters, incidental waste feed, and silage drainage.
- (B)
- (1) "Biofilter material" means material consisting of bulking agents, shredded yard waste, or compost that is applied over the composting mixture to control odors, dust, or vectors.
 - (2) "Bulking agent" means a material added to a composting process to provide structural support, improve aeration, or absorb moisture and includes wood chips, straw, clean untreated wood, shredded newspaper, shredded cardboard, sawdust, shredded brush, shredded yard waste, compostable containers, and stover.
- (C)

- (1) "Class I solid waste composting facility" means a facility where the owner or operator may accept yard waste, agricultural plant materials, dead animals, raw rendering material, animal waste, food scraps, mixed solid waste, bulking agents, additives, and authorized alternative materials.
- (2) "Class II solid waste composting facility" means a facility where the owner or operator may accept yard waste, agricultural plant materials, dead animals, raw rendering material, animal waste, food scraps, bulking agents, additives, and authorized alternative materials.
- (3) "Class III solid waste composting facility" means a facility where the owner or operator may accept yard waste, agricultural plant materials, dead animals, raw rendering material, animal waste, bulking agents, additives, and authorized alternative materials. The material placement area is limited to a maximum of one hundred thirty-five thousand square feet.
- (4) "Class IV solid waste composting facility" means a facility where the owner or operator may accept only yard waste, agricultural plant materials, bulking agents, additives limited to source-separated spent coffee and tea grounds, urea, and bacterial or fungal inoculum, and authorized alternative materials.
- (5) "Clean untreated wood" means source-separated wood including but not limited to sawdust, pallets, and dimensional lumber that has not been treated chemically or with adhesives and coatings including but not limited to paint, glue, or any other visible contaminant.
- (6) "Commingled yard waste" means yard waste that has been collected with other solid wastes. Commingled yard waste does not include yard waste in bags co-collected with other solid wastes.
- (7) "Compost" means a humus-like organic material resulting from the biological decomposition of solid waste.
- (8) "Compostable container" means a container that has been independently tested and meets ASTM D6400 or D6868 as described in rule 3745-500-03 of the Administrative Code, including those displaying the biodegradable products institute's "Compostable Logo," which will decompose at a rate equal to or faster than the material with which the container is composted under equivalent conditions.
- (9) "Compostable serviceware" means food service items such as bowls, plates, cups, cutlery, and films, that have been independently tested and meets ASTM D6400 or D6868 as described in rule 3745-500-03 of the Administrative Code, including those displaying the biodegradable products institute's "Compostable Logo," which will decompose at a rate equal to or faster than the material with which the serviceware is composted under equivalent conditions.
- (10) "Compost product" means compost that meets applicable compost product quality standards.
- (11) "Composting" means the process of biological decomposition of solid wastes under controlled conditions resulting in compost. Controlled conditions include but are not limited to grinding, shredding, chipping, mixing feedstocks, bulking agents and additives, piling, physical turning, aerating, adding moisture, performing procedures to achieve human pathogen reduction, or other processing of solid wastes.
- (12) "Cross-contamination" means the intentional or unintentional contact of feedstocks subject to a more

stringent quality standard with a feedstock subject to a less stringent quality standard and includes but is not limited to contact with the surface of a machine, the mixture of tested compost with untested compost, or contact with leachate that was previously in contact with a feedstock subject to a more stringent quality standard.

- (D)
- (1) "Dead animals" means bodies or parts of a dead animal.
 - (2) "Design capacity" means the maximum capacity of materials that may be appropriately managed in the materials placement area, based upon the design, construction, equipment, composting method, and planned operational practices as specified in the authorizing documents.
- (E) "Effective microorganisms" or "EM," means an inoculum used for acidic anaerobic fermentation consisting predominately of lactic acid bacteria, yeasts, actinomycetes, and photosynthetic bacteria.
- (F) [Reserved.]
- (G) [Reserved.]
- (H) [Reserved.]
- (I)
- (1) "Inactive composting facility" means a composting facility where no solid wastes or compost product are received, processed, or stored.
 - (2) "Inert matter" means inorganic and organic constituents that were not readily decomposed during the composting process including but not limited to plastics, glass, textiles, rubber, leather, metal, ceramics, polystyrene, sharp objects, and painted, laminated, or treated wood.
 - (3) "In-vessel" means a method of composting where solid wastes are placed in an enclosed or partly enclosed unit and managed to enable composting.
- (J) [Reserved.]
- (K) [Reserved.]
- (L) [Reserved.]
- (M)
- (1) "Materials placement area" means any area of the composting facility where compost products, solid wastes, feedstocks, bulking agents, or additives are received, placed, processed, or stored.
 - (2) "Mixed solid waste" means a feedstock consisting of solid wastes that will readily decompose and waste materials that will not readily decompose and may contain household solid wastes that are excluded from regulation as hazardous wastes in accordance with Chapter 3745-51 of the Administrative Code.
 - (3) "Modification" means any substantial change to the location or size of the material placement area, or to the design, construction, process, or operation of a class I composting facility.

(N) [Reserved.]

(O)

- (1) "One hundred year flood" means a flood that has one per cent chance of being equaled or exceeded in any given year.
- (2) "Operational capacity" means the amount of materials designated by the owner or operator to be managed in the materials placement area as specified in the registration. The operational capacity may be less than or equal to the design capacity, but shall never exceed the design capacity.

(P) [Reserved.]

(Q) [Reserved.]

(R)

- (1) "Raw rendering material" has the same meaning as section 953.21 of the Revised Code.
- (2) "Runoff" means stormwater as defined in rule 3745-39-01 of the Administrative Code that has not come in contact with any compost products, solid wastes, feedstocks, bulking agents, or additives.
- (3) "Run-on" means precipitation that has fallen upslope of the materials placement area of a composting facility and flows onto the composting facility.

(S)

- (1) "Salvaging" means the extracting or removing of materials from the solid waste stream at the working face of a solid waste disposal facility for the intended purpose of recycling or for removal to a salvage facility regulated by Chapter 3737. of the Revised Code and rules adopted thereunder.
- (2) "Sewage sludge" has the same meaning as in Chapter 6111. of the Revised Code and rules adopted thereunder.
- (3) "Static pile" means a method of composting where solid wastes are constructed into a pile and are managed and turned to enable aerobic composting.

(T) [Reserved.]

(U) [Reserved.]

(V)

- (1) "Vermicompost" means compost produced through the vermicomposting process and that may contain worm castings.
- (2) "Vermicomposting" means the mesophilic process of bio-oxidation and stabilization of organic solid wastes by epigeic earthworm species which turn, fragment, aerate and increase microbial activity in the solid waste substrate, and results in vermicompost.
- (3) "Vermiculture" means the breeding of any species of earthworms in organic waste media, which produces incidental amounts of vermicompost.

(W)

- (1) "Washout" means the movement of feedstocks, bulking agents and additives from the material placement area of the facility as a result of flooding.
- (2) "Windrow" means an elongated pile.
- (3) "Windrow composting" means a method of composting where solid wastes are constructed into an elongated pile and are managed and turned to enable aerobic composting.

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3745-560-03 Plan view drawing update for class IV composting facilities.

No later than February 1, 2013, the owner or operator of a class IV composting facility that obtained an acknowledgment of registration prior to April 2, 2012 shall submit a plan view drawing that meets the requirements set forth in rule 3745-560-400 of the Administrative Code.

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3745-560-04 Composting - log of operations and annual report forms.

- (A) An owner or operator of a composting facility shall maintain a log of operations on forms prescribed by the director or by alternate forms either in paper or electronic format which shall contain the following:
- (1) General information: facility name and location, contact name and telephone number, registration number for class II, III, and IV facilities, and calendar year for which the log is maintained.
 - (2) Operational information: method of composting used and description of equipment available.
 - (3) Materials acceptance and distribution information: date when waste recorded in log of operations, quantity of waste received entered as tons or cubic yards, type of feedstocks, bulking agents, and additives received, county of generation, and quantity of compost product distributed entered as tons or cubic yards.
 - (4) Materials management information: dates when tree stumps, pallets, and clean whole wood are processed and dates when compost piles, windrows, and vessels are formed, turned, loaded, and sampled.
 - (5) Self-inspection checklist: information acknowledging compliance or noncompliance with operational requirements as specified in rule 3745-560-110, 3745-560-210, 3745-560-310, or 3745-560-410 of the Administrative Code and a description of actions taken to abate violations, if applicable.
 - (6) Unauthorized materials incident information: the date and time the unauthorized material was discovered, description of the material, hauler name, and action taken by the owner or operator.
 - (7) Yard waste load refusal information: the date and time that a load was rejected, the license plate number of the vehicle transporting the rejected load, hauler name, and the reason for rejecting the load.
- (B) An owner or operator of a composting facility shall submit an annual report on forms prescribed by the director which shall contain the following:
- (1) General information: facility name and location, contact name and telephone number, license number for class I and II facilities, registration number for class II, III, and IV facilities, and calendar year for which the report is submitted.
 - (2) Materials acceptance and distribution information: monthly quantity of waste received by feedstock type, bulking agent, and additive entered as tons or cubic yards, county of generation, and monthly quantity of compost product distributed entered as tons or cubic yards.
 - (3) Product testing information: copy of all testing performed on compost product and method utilized and results of the test analysis, if applicable.
 - (4) For class I or class II composting facilities, the current closure cost estimate pursuant to rule 3745-560-05 of the Administrative Code.

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3745-560-05 Composting - closure cost estimate.

- (A) Closure cost estimate. The owner or operator of a class I or class II composting facility shall determine the closure cost estimate as follows:
- (1) Class I composting facility. The closure cost estimate shall be based on the closure costs at the point in the operating life of the facility when the extent and manner of the operation would make the closure the most expensive, and shall be based on a third party conducting the closure activities. The closure cost estimate shall be documented as an itemized written estimate, in current dollars, of the cost of closure. Ohio EPA may require revisions to the closure cost estimate or to the closure financial assurance instrument.
 - (2) Class II composting facility. The closure cost estimate shall be calculated as follows:
 - (a) For facilities accepting solid wastes authorized in accordance with paragraph (B) of rule 3745-560-210 of the Administrative Code, two dollars and fifty cents per cubic yard, based on the operational capacity of the materials placement area, excluding the storage capacity of compost product, as specified in the authorizing document.
 - (b) For facilities accepting alternative materials, eight dollars per cubic yard or the local disposal rate, whichever is higher, for the maximum amount of alternative materials authorized pursuant to rule 3745-560-205 of the Administrative Code that will be managed based on the operational capacity of the materials placement area, excluding the storage capacity of compost product, as specified in the authorizing document.
 - (c) Class II composting facilities may request approval from the director of an alternative closure cost estimate that is lower than the estimate calculated in accordance with paragraph (A)(2)(a) or (A)(2)(b) of this rule by submitting an application that demonstrates one of the following:
 - (i) For alternative materials, that the cost of disposal is equivalent to the cost of disposal for materials authorized in paragraph (B) of rule 3745-560-210 of the Administrative Code, and that the closure cost estimate for the material can be calculated at two dollars and fifty cents per cubic yard.
 - (ii) The owner or operator has obtained authorization to land apply any material that is not a compost product on property owned by the owner or operator in compliance with Chapters 3734. and 6111. of the Revised Code.
- (B) Annual review of closure cost estimate. The owner or operator of a class I or class II composting facility shall annually review and make appropriate revisions to the closure cost estimate in accordance with paragraph (A) of this rule, and as follows:
- (1) For class I composting facilities, an adjustment for inflation shall be made. The adjustment shall be made as specified in this paragraph, using the preceding February inflation factor derived from the annual implicit price deflator for gross domestic product as published by the U.S. department of commerce. The inflation factor is the result of dividing the latest published annual deflator by the annual deflator for the previous year.
 - (a) The first adjustment is made by multiplying the closure cost estimate by the inflation factor. The

result is the adjusted closure cost estimate.

(b) Subsequent adjustments are made by multiplying the most recently adjusted closure cost estimate by the most recent inflation factor.

(2) For class II composting facilities, annually review and make appropriate revisions to the closure cost estimate to determine if the estimate accurately represents the cost to close the facility. The review shall take into consideration changes to the operational capacity, facility design and operations, changes to the materials placement area, changes to the amount of feedstocks, bulking agents, additives, and compost mixtures on site, and any other changes that would increase the cost of closure.

(C) Review of closure cost estimates associated with modifications or amendments to registrations.

(1) Upon issuance of a permit to install for a modification of an existing class I composting facility, the owner or operator shall review and make appropriate revisions to the closure cost estimate in accordance with paragraph (A) of this rule.

(2) Upon submittal of amendments to the registration of an existing class II composting facility, the owner or operator shall review and make appropriate revisions to the closure cost estimate in accordance with paragraph (A) of this rule.

(D) The owner or operator of a class I or class II composting facility shall ensure financial assurance instruments account for increases in the closure cost estimate, and shall ensure that sufficient financial assurance is available for closure activities at all times during the operating life of the composting facility.

(E) Ohio EPA may require revisions to the closure cost estimate or to the closure financial assurance instrument if the director determines that the operational capacity has increased or that the cost of closure exceeds the closure cost estimate.

(F) If the closure cost estimate is five thousand five hundred dollars or less, no financial assurance is required.

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3745-560-07 Director's general authorization of alternative materials and testing methods.**(A) Alternative materials.**

- (1) The director may authorize the acceptance of alternative materials not otherwise authorized in accordance with rules 3745-560-110, 3745-560-210, 3745-560-310 and 3745-560-410 of the Administrative Code. The authorization of alternative materials may identify the following:
 - (a) The authorized alternative material.
 - (b) The class of composting facility which may accept the alternative material for composting.
 - (c) Conditions of eligibility regarding acceptance of the alternative material.
 - (d) Operational conditions regarding use of the alternative material including but not limited to conditions that require the material which does not meet the eligibility criteria be processed or disposed of in a prescribed manner.
 - (e) For a class I, II, or III composting facility, additional quality standards or testing methods for the alternative material including but not limited to compost quality standards for specific uses in accordance with accepted agricultural and horticultural practices.
- (2) The director may issue a general authorization of alternative materials without request if the following are determined:
 - (a) The use of the alternative material is technically feasible for composting at the identified class of composting facility utilizing an approved composting or treatment method.
 - (b) The acceptance of the alternative material is unlikely to cause violations of Chapter 3704., 3734., or 6111. of the Revised Code, this chapter, or any other applicable federal or state laws.
 - (c) The acceptance of the alternative material is unlikely to adversely affect public health, safety, or the environment.
 - (d) For a class IV composting facility, the material proposed as an alternative material for composting possesses properties consistent with class IV compost products.

(B) The director may issue a general authorization of alternative preparation and analytical methods for compost quality standards without request. The director shall not issue a general authorization of alternative preparation and analytical methods unless the director determines that the alternative method is scientifically based and will provide equivalent or improved test results.

(C) The director's general authorization to accept alternative materials and testing methods under this rule may allow for any composting facility classification that meets the established conditions of eligibility and follows the operational conditions established by the director to accept and compost the identified alternative material and to use the identified alternative testing methods.

(D) Notice of the issuance of a director's general authorization of alternative materials and testing methods will be posted on the Ohio EPA webpage. A list of issued director's general authorizations of alternative materials and testing methods will be maintained on the Ohio EPA webpage and be available upon request.

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3745-560-15 Composting of dead animals and raw rendering material.

- (A) An owner or operator of a class I, class II, or class III composting facility that is composting dead animals or raw rendering material shall comply with the following:
- (1) Prior to acceptance of dead animals or raw rendering material:
 - (a) Designate a person responsible for the day to day operations of the composting facility who has participated in an educational course concerning composting of dead animals and raw rendering material conducted by the Ohio state university extension and who has obtained a certificate of completion for the course. A copy of the certificate shall be made available to Ohio EPA or the approved board of health upon request.
 - (b) Obtain written concurrence from Ohio EPA upon inspection verifying that the composting facility meets the preparation criteria specified in this chapter.
 - (2) Dead animals composting. Unless otherwise approved by Ohio EPA or the approved board of health, the owner or operator shall comply with the following when composting dead animals:
 - (a) Incorporate the dead animals into the composting process upon receipt at the facility.
 - (b) Document in the log of operations the species of the dead animals accepted and specify the bin where the dead animals were placed.
 - (c) Conduct the composting in three-sided bins.
 - (d) Complete the composting of the dead animals in the following stages:
 - (i) Stage one composting.
 - (a) The first layer of dead animals shall be placed on top of a bulking agent bottom layer a minimum of eighteen inches thick.
 - (b) A minimum of six inches of bulking agent shall separate each layer of dead animals.
 - (c) The last layer of dead animals shall be completely covered with a minimum of twenty-four inches of bulking agent.
 - (d) A full bin shall remain undisturbed for a minimum of ninety days.
 - (ii) Stage two composting.
 - (a) After completion of stage one composting, the contents shall be turned, mixed, or if there is no visible flesh present, moved to a secondary stage bin area and re-covered completely with a minimum of twelve inches of bulking agent.
 - (b) The material shall remain undisturbed in the secondary stage for a minimum of sixty days.
 - (c) If at the end of secondary stage there is still visible flesh or non-brittle bones, the owner or operator shall do the following:
 - (i) Mix with fresh bulking agent as necessary, cover completely with a minimum of twelve inches of bulking agent, and maintain undisturbed for a minimum of sixty days. Parts of dead animals shall not be visible.

- (ii) Reintroduce the material in a stage one or stage two bin as part of or in addition to the bulking agents.
 - (e) If a specific bulking agent or mixing ratio does not enable the composting of the dead animals, re-mix the bulking agent.
 - (f) Document the bulking agents used and the mixing ratio if applicable in the log of operations.
- (3) Raw rendering material composting. Unless otherwise approved by Ohio EPA or the approved board of health, the owner or operator shall comply with the following when composting raw rendering material:
- (a) Incorporate the raw rendering material into the composting process upon receipt at the facility.
 - (b) Document in the log of operations the bin where the raw rendering material was placed.
 - (c) Conduct the composting in three-sided bins.
 - (d) Complete the composting of the raw rendering material in the following stages:
 - (i) Stage one composting.
 - (a) The first layer of raw rendering material shall be placed on top of a bulking agent bottom layer a minimum of twenty-four inches thick.
 - (b) A minimum of twelve inches of bulking agent shall separate each layer of raw rendering material.
 - (c) The last layer of raw rendering material shall be completely covered with a minimum of twenty-four inches of bulking agent.
 - (d) A full bin shall remain undisturbed for a minimum of ninety days.
 - (ii) Stage two composting.
 - (a) After completion of stage one composting, the contents shall be turned, mixed, or if there is no visible flesh present, moved to a secondary stage bin area and re-covered completely with a minimum of twelve inches of bulking agent.
 - (b) The material shall remain undisturbed in the secondary stage for a minimum of sixty days.
 - (c) If at the end of secondary stage there is still visible flesh or non-brittle bones, the owner or operator shall do the following:
 - (i) Mix with fresh bulking agent as necessary, cover completely with a minimum of twelve inches of bulking agent, and maintain undisturbed for a minimum of sixty days. Parts of the raw rendering material shall not be visible.
 - (ii) Reintroduce the material in a stage one or stage two bin as part of or in addition to the bulking agents.
 - (e) If a specific bulking agent or mixing ratio does not enable the composting of the raw rendering material, re-mix the bulking agent in order to achieve an acceptable blend for composting.
 - (f) Document the bulking agents used and the mixing ratio if applicable in the log of operations.

- (4) Compost from dead animals or raw rendering material that does not have visible flesh material or bones shall be utilized on property owned by the owner or operator or tested for distribution in accordance with this chapter.
 - (5) Request in writing and obtain written concurrence from Ohio EPA or the approved board of health prior to the following:
 - (a) Utilizing composting systems other than three-sided bins.
 - (b) Adjusting the thickness of the bulking agent layers.
 - (c) Adjusting the length of the composting stages.
 - (d) Adjusting the time frame for incorporation of the dead animals or raw rendering material upon receipt at the facility.
 - (6) Nuisance. The owner or operator shall conduct operations at the facility in such a manner that dust, odors, and vectors are controlled as to not cause a nuisance.
 - (a) If odors, dust, or vectors are present, the owner or operator shall apply a cover consisting of a minimum of six inches of biofilter material over the dead animals or raw rendering material not later than twenty-four hours after discovery of the odors, dust, or vectors.
 - (b) If odors, dust, or vectors persist, then the owner or operator shall upon written notification of Ohio EPA or the approved board of health cease acceptance of dead animals or raw rendering material and dispose of the composting mixture at a licensed solid waste landfill.
 - (7) Upon written notification that an infectious or contagious animal disease has been reported in the state, the owner or operator shall cease acceptance of the reported dead animals or raw rendering material and dispose of any remaining compost in accordance with all applicable state and federal laws, including any applicable provisions of Chapter 941. of the Revised Code.
- (B) Compliance with this rule does not relieve any person of obligations under Chapter 941. or 953. of the Revised Code.

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3745-560-100 Class I composting facility establishment.

[Comment: For dates of non regulatory government publications, publications of recognized organizations and associations, test methods, federal rules, and federal statutory provisions referenced in this rule, see rule 3745-500-03 of the Administrative Code titled "Incorporation by reference."]

- (A) No person shall establish or operate a class I composting facility without first having met the following:
- (1) Obtaining a permit to install in accordance with this rule prior to the construction of a new class I composting facility.
 - (2) Obtaining a solid waste license pursuant to Chapter 3745-501 of the Administrative Code.
 - (3) Executing the financial assurance instrument pursuant to rule 3745-503-05 of the Administrative Code for an amount not less than the current closure cost estimate established in accordance with rule 3745-560-05 of the Administrative Code.
- (B) Permit to install for a class I composting facility. A permit to install application shall be submitted to Ohio EPA and shall consist of the following:
- (1) Plan sheets required in paragraph (C) of this rule. Engineering plans, specifications, and information as required by this rule shall be sufficiently detailed to allow for technical review of the permit application and to provide assurance that the facility meets the siting criteria and is designed and will be constructed, operated, and closed in accordance with this chapter and Chapter 3745-501 of the Administrative Code.
 - (2) Narrative report with operational information required in paragraph (D) of this rule. The information required in this rule shall be provided in sufficient detail to allow for technical review of the permit application and to provide assurance that the facility is designed and will be constructed, operated, and closed in accordance with this chapter and Chapter 3745-501 of the Administrative Code.
 - (3) Land owner information including name, address, and contact information, if the land owner is not the applicant. This information shall include a notarized written statement from each titleholder of each tract of land on which the facility is located that each titleholder acknowledges that the applicant is submitting a permit to install application and may use the land for the purpose of establishing a class I composting facility.
 - (4) Copies of the letters of intent required in paragraph (G) of this rule.
 - (5) A notarized statement described in and signed by the applicant in accordance with rule 3745-500-50 of the Administrative Code.
 - (6) For regulatory review purposes, the initial application and any subsequent revisions to the application shall be submitted in duplicate to the director with a third copy sent to the board of health of the health district where the facility is or will be located. Any revisions to the application must be accompanied by an index listing the change and the page where the change occurred. Upon written request from Ohio EPA, the applicant shall submit two additional complete copies of the revised application to the director and a notarized statement described in and signed by the applicant in accordance with rule 3745-500-50 of the Administrative Code.
- (C) Plan sheets. The following detailed engineering plans, specifications, and information for the composting facility shall be shown by means of drawings and narrative descriptions where appropriate and shall be

signed and sealed by a professional engineer. Minimum dimensions of the plan drawings shall be twenty-four inches by thirty-six inches. An individual plan drawing may contain information specified in more than one individual subheading. Each individual plan drawing shall clearly show the vertical and horizontal scales used. A scale of one inch equals no greater than one hundred feet shall be used unless specified otherwise by Ohio EPA.

- (1) Engineering plan cover sheet to be numbered sheet 1 shall contain the following detailed information:
 - (a) The name of the composting facility.
 - (b) The geographical location of the composting facility shown on a USGS 7.5 minute (topographic) map.
 - (c) The name and address of the applicant and the composting facility operator.
 - (d) The name and address of each titleholder of each tract of land to be used for the composting facility.
 - (e) The name, address, and telephone number of the person who prepared the plans.
 - (f) Index of plan sheets.
- (2) A plan drawing to be numbered consecutively as sheets 2A, 2B, 2C, etc. shall contain the following detailed facility construction and operational information:
 - (a) The property lines of land owned or leased for the composting facility as determined by a property survey conducted by a professional skilled in the appropriate discipline.
 - (b) Direction of prevailing winds during each season.
 - (c) Traffic patterns, including on-site access roads.
 - (d) Cross sections and construction materials of all surfaces and facilities on or in which solid wastes will be placed prior to, during, or after composting.
 - (e) Runoff control structures, sedimentation ponds, and leachate management system structures and the layout of the leachate management system including at a minimum leachate flow patterns, drains, piping, storage, and clean-outs.
 - (f) Composting facility boundary.
 - (g) Boundary lines for the materials placement and receiving area based on the design capacity and the operational capacity, if the operational capacity is different than the design capacity. The boundary lines shall include the areas for each of the following:
 - (i) Composting and materials processing.
 - (ii) Receiving and storage of feedstocks, bulking agents, or additives.
 - (iii) Storage of alternative materials authorized pursuant to rule 3745-560-105 of the Administrative Code and the composting processing area dedicated to these materials.
 - (iv) Storage of compost product.
 - (h) The location of existing or proposed maintenance buildings, weighing facilities, storage buildings,

and other structures.

- (i) Roads, railroads, and occupied dwellings.
 - (j) The location of fencing, gates, and natural or other screening on the site (may be shown on an aerial photograph).
 - (k) The north arrow.
- (3) A plan drawing to be numbered consecutively as sheets 3A, 3B, 3C, etc., showing the following detailed facility siting criteria items located inside the facility boundaries and within one thousand feet beyond the facility boundaries:
- (a) The property lines of land owned or leased for the composting facility as determined by a property survey conducted by a professional skilled in the appropriate discipline.
 - (b) Composting facility boundary.
 - (c) Public roads, railroads, and structures.
 - (d) Existing topography showing streams, wetlands, lakes, springs, and other surface waters of the state.
 - (e) Existing domiciles.
 - (f) Leachate management structures.
 - (g) The limits of the one hundred year floodplain.
 - (h) National park or national recreation areas, candidate areas for potential inclusion into the national park system, and any state park or established state park purchase areas.
 - (i) Any state or Ohio history connection nature preserves, state wildlife areas and national wildlife refuges, national and state wild scenic and recreational rivers, special interest areas and research natural areas in the Wayne national forest, state resource waters, coldwater habitats, and exceptional warmwater habitats.
- [Comment: Both the Ohio department of natural resources and the Ohio history connection, formerly the Ohio historical society, designate state nature preserves in Ohio.]
- (j) Existing public water supply wells, developed springs, or private potable water supply wells.
 - (k) The north arrow.
- (4) A plan drawing to be numbered consecutively as sheets 4A, 4B, 4C, etc. shall contain the following detailed facility surface and ground water management information inside the facility boundaries and within five hundred feet beyond the facility boundaries. At a minimum, the plan drawings shall include the following:
- (a) The property lines of land owned or leased for the composting facility as determined by a property survey conducted by a professional skilled in the appropriate discipline.
 - (b) A detailed description of the existing direction of flow and points of concentration of surface water.
 - (c) The existing topography showing vegetation, streams, wetlands, lakes, springs, and other surface

waters of the state with a contour interval no greater than five feet.

(d) The proposed topography of the site with contour lines that shall have an interval of no greater than five feet.

(e) Existing public and private water system drinking water supply wells.

(f) Drainage plans which show the following:

(i) Grades.

(ii) Swales and streams and existing or proposed diversion trenches.

(iii) Existing or proposed special drainage devices to be used for control of surface erosion.

(g) The north arrow.

(h) Existing drainage sinkholes or agricultural drainage wells.

(i) The direction of the downward slopes and drainage for the materials placement area.

(D) Narrative report. The following information shall be presented in narrative form with necessary accompanying diagrams provided on a form prescribed by the director and shall be signed and sealed by a professional engineer:

(1) A detailed discussion of general operational information which shall include the following:

(a) The authorized maximum daily waste receipt planned for the facility.

(b) The equipment to be used in the operation and maintenance of the facility.

(c) The waste processing rate, performance capabilities, and principal specifications of each piece of powered equipment to be used at the facility for loading, unloading, handling, or processing solid wastes.

(d) Calculation of the design capacity of the composting facility.

(e) Calculation of the operational capacity of the composting facility which shall be less than or equal to the design capacity of the composting facility. Facilities accepting authorized alternative materials shall also specify the maximum capacity and area dedicated to alternative materials.

(f) For informational purposes only, proposed hours of operation and if applicable proposed hours that the facility will be open to the public for receiving waste materials.

(g) Methods of loading and unloading solid waste materials including compost and materials that will be removed from the facility including but not limited to salvaged materials and materials that are not utilized in the composting process into transportation vehicles at the facility.

(h) Traffic patterns within the facility boundaries.

(i) Maximum and average force in pounds per square inch that will be exerted upon the floor of the facility.

(2) A detailed discussion of composting operational information shall include the following:

- (a) Identification of the sources, composition, and estimated quantity of solid waste by type of feedstock, bulking agent, or additive to be used for composting.
 - (b) A materials flow diagram for the facility showing both the type of feedstocks, bulking agents, or additives and the quantities of materials received and removed.
 - (c) Procedures, frequency, and the sequence of processes and steps involved in converting solid waste to compost including but not limited to handling, sorting, shredding, mixing, adding water, screening, turning, composting, curing, and recirculating leachate and other liquids authorized for use by the director.
 - (d) The percentage of mixture of the feedstock, bulking agent, and additive and the resulting carbon to nitrogen ratio.
- (3) A detailed discussion of control measures taken shall include the following:
- (a) The collection, containment, recirculation, treatment, removal, disposal and prevention of generation of leachate and how leachate will be prevented from entering surface and ground waters including either the following:
 - (i) Direct discharge to an approved treatment facility.
 - (ii) Leachate conveyance, recirculation, and storage structures and systems.
 - (b) The collection, containment, recirculation, treatment, removal, disposal and prevention of generation of surface water runoff and how water runoff will be prevented from entering surface and ground waters including either of the following:
 - (i) Direct discharge to an approved treatment facility.
 - (ii) Surface water runoff conveyance, recirculation, and storage structures and systems.
 - (c) How birds, rodents, and other vectors will be prevented from reaching solid wastes at the composting facility.
 - (d) Measures utilized to control fire, dust, scavenging, erosion, and blowing debris.
 - (e) Inspection procedures for incoming wastes to prevent and manage prohibited materials at the composting facility.
 - (f) Inclement weather operation procedures.
 - (g) Salvaging procedures to be conducted on site, if any.
 - (h) Odor management plan including discussion of the circumstances that are likely to result in nuisance odor production, methods that will be taken to reduce or minimize odors that are produced, and methods that will be used to mitigate the effects of odors.
- (E) On the date the permit to install application is received by Ohio EPA, the limits of materials placement and leachate management structures are in compliance with the following siting criteria:
- (1) Unless located in an enclosed building, materials placement area and leachate management structures shall not be located within the following:

- (a) Two hundred feet from any surface waters of the state.
 - (b) Three hundred feet from a known sinkhole or agricultural drainage well.
 - (c) The sanitary isolation radius of public water system drinking water supply wells as calculated using the formulas specified in rule 3745-9-04 of the Administrative Code.
 - (d) Three hundred feet from a private water system drinking water supply well that is not controlled by the facility.
 - (e) Fifty feet from a private water system drinking water supply well that is controlled by the facility owner.
 - (f) Three hundred feet from a transient non-community public water system drinking water supply well.
 - (g) Five hundred feet from a domicile unless the domicile is owned or leased by the owner or operator.
 - (h) One thousand feet from the following:
 - (i) An area designated by the Ohio department of natural resources as either a state nature preserve, a state wildlife area, or a state wild, scenic, or recreational river.
 - (ii) An area designated, owned, and managed by the Ohio history connection as a nature preserve.
 - (iii) An area designated by the United States department of the interior as either a national wildlife refuge or a national wild, scenic, or recreational river.
 - (iv) An area designated by the United States forest service as either a special interest area or a research natural area in the Wayne national forest.
 - (v) Stream segments designated by Ohio EPA as either a state resource water, a coldwater habitat, or an exceptional warmwater habitat.
 - (i) A one hundred year floodplain, unless the owner or operator demonstrates in the permit to install application that the facility will be designed, constructed, operated, and maintained to prevent washout of any waste materials by a one-hundred-year flood.
 - (j) Five hundred feet from an occupied dwelling unless the occupied dwelling is owned or leased by the owner or operator or the owner or operator has received written consent from the owner of the occupied dwelling.
 - (k) The inner management zone (one year time of travel) of a drinking water source protection area for a community or non-transient, non-community public water system using ground water.
- (2) The portions of the materials placement area and leachate management structures located within an enclosed building shall meet the siting criteria contained in paragraphs (E)(1)(h) to (E)(1)(j) of this rule.

For the purposes of this rule, an "enclosed building" means a structure with a low-permeability floor, walls, doors, and a roof that is capable of enclosing all waste handling areas, preventing rain from reaching the enclosed waste handling areas, and containing and collecting leachate within the enclosed waste handling areas.

- (3) Except for facilities which exclusively compost wastes generated within state parks or national parks, or national recreation areas the facility shall not be located in any of the following:
- (a) A state park established or dedicated under Chapter 1546. of the Revised Code.
 - (b) A state park purchase area established under section 1546.06 of the Revised Code.
 - (c) A unit of the national park system, or any property that lies within the boundaries of a national park or national recreation area but that has not been acquired or is not administered by the secretary of the United States department of the interior, or any candidate area identified for potential inclusion in the national park system pursuant to the "National Park System Plan."
- (F) Composting facilities permitted prior to April 2, 2012 shall comply with siting criteria in effect on the date of permit issuance.
- (G) Concurrent with submitting the permit to install application, the applicant shall do the following:
- (1) Comply with any applicable disclosure statement requirements in accordance with Chapter 3734. of the Revised Code and rules adopted thereunder.
 - (2) Mail letters of intent to establish a composting facility which include a description of property and facility boundaries by certified mail or any other form of mail accompanied by a receipt to the following:
 - (a) The governments of the general purpose political subdivisions where the facility is proposed to be located including but not limited to local health departments, county commissioners, legislative authority of a municipal corporation, or the board of township trustees.
 - (b) The single or joint county solid waste management district or districts or regional solid waste management authority or authorities where the facility is proposed to be located.
 - (c) The owner or lessee of any easement or right of way bordering or within the proposed facility boundaries which may be affected by the proposed solid waste facility.
 - (d) The local zoning authority having jurisdiction.
 - (e) The park system administrator, if any part of the proposed facility is to be located within or will share the park boundary.
 - (f) The conservancy district, if any part of the proposed facility is to be located within or will share the conservancy district boundary.
 - (g) The fire department having responsibility for providing fire control services where the facility is proposed to be located.
 - (h) The division of air pollution control, the division of surface water, and the division of drinking and ground water of Ohio EPA including a written request for information pertaining to any regulatory requirements under Chapter 3704. or Chapter 6111. of the Revised Code.
- (H) Modifications to a permit to install.
- (1) No person shall modify a class I composting facility without first obtaining a permit to install issued by the director.

- (2) The owner or operator proposing to modify a class I composting facility shall submit an application to the director in accordance with paragraphs (B), (C), and (D) of this rule.
- (I) Alterations to the permit to install. No person shall alter a class I composting facility without first submitting a request and obtaining written concurrence from Ohio EPA in accordance with rule 3745-500-150 of the Administrative Code.

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3745-560-101 Criteria and procedures for approval, revocation, and administrative change of a class I composting facility permit to install.

(A) Criteria for approval.

- (1) The director shall not approve a class I composting facility permit to install unless the following are determined:
 - (a) Establishment or modification and operation of the class I composting facility will not violate Chapter 3704., 3734., or 6111. of the Revised Code.
 - (b) The applicant or person listed as the operator who has previously or is currently responsible for the management or operation of one or more solid waste facilities has managed or operated such facility in substantial compliance with applicable provision of Chapters 3704., 3714., 3734., and 6111. of the Revised Code and any rules adopted and permits issued thereunder and has maintained substantial compliance with all applicable orders issued by the director, environmental review appeals commission, or courts having jurisdiction in accordance with Chapter 3746-13 of the Administrative Code in the course of such previous or current management or operations. The director may take into consideration whether compliance has been maintained with any applicable order of a board of health maintaining a program on the approved list.
 - (c) The applicant meets the requirements of sections 3734.40 and 3734.43 of the Revised Code and rules adopted thereunder.
 - (d) The person listed as operator of the facility shall meet the requirements of division (L) of section 3734.02 of the Revised Code and rules adopted thereunder.
 - (e) The permit to install application contains the information required pursuant to rule 3745-560-100 of the Administrative Code.
 - (f) The siting criteria as established in rule 3745-560-100 of the Administrative Code have been met.
 - (g) The facility preparation requirements are met as established in rule 3745-560-102 of the Administrative Code.
 - (h) The letters of intent were sent in accordance with rule 3745-560-100 of the Administrative Code.
- (2) An application notwithstanding any deficiency may be considered and acted upon if sufficient information is provided for the director to determine whether the permit to install requirements set forth in rule 3745-560-100 of the Administrative Code are satisfied.
- (3) If the director determines that information in addition to that required by rule 3745-560-100 of the Administrative Code is necessary to determine whether the criteria set forth in paragraph (A) of this rule are satisfied, the director may require that the applicant supply such information as a precondition to further consideration of the permit to install application.
- (4) The director may deny a permit to install application for a class I composting facility if not later than thirty days after receipt of notification that the application is incomplete the owner or operator has not corrected noted deficiencies and resubmitted the application or has not submitted a written request for and obtained approval of a thirty day extension.
- (5) The director may deny a permit to install application for a class I composting facility that proposes to be established on land where a hazardous or solid waste facility was operated and has not obtained previous

authorization as required by rule 3745-27-13 of the Administrative Code.

(B) Criteria for revocation of a class I composting facility permit to install.

The director may revoke a class I composting facility permit to install when any of the following apply:

- (1) The composting facility ceases to be an active composting facility.
- (2) The siting criteria as established in rule 3745-560-100 of the Administrative Code have not been met.
- (3) The composting facility was modified or altered and the owner or operator did not submit to Ohio EPA a modification or alteration request for the changes and failed to obtain any applicable authorizing documents.
- (4) A solid waste facility license held by the owner or operator of the composting facility expires and no license renewal has been applied for in the manner prescribed in Chapter 3745-501 of the Administrative Code.
- (5) A solid waste facility license held by the owner or operator of the composting facility expires and a license renewal has been applied for and denied as a final action of the licensing authority.
- (6) A solid waste facility license held by the owner or operator of the composting facility has been revoked as a final action of the licensing authority.
- (7) The owner or operator sells or offers for sale at retail or wholesale, uses, distributes for use, or gives away any compost that does not comply with the applicable quality standards established in this chapter.
- (8) The establishment or operation of the composting facility has violated Chapter 3704., 3734., or 6111. of the Revised Code.
- (9) Any causes for revocation pursuant to rule 3745-500-350 of the Administrative Code.

(C) Administrative change. A permit to install may be administratively changed in accordance with rule 3745-500-360 of the Administrative Code.

(D) Procedures.

- (1) When issuing, denying, modifying, suspending, approving or denying transfer of, or revoking a permit to install, the director shall follow the appropriate procedures set forth in rule 3745-500-120 of the Administrative Code and any applicable procedures set forth in the Revised Code.
- (2) Upon approving or denying the transfer of a permit to install, the director shall retain and distribute copies of the signed approval or denial letter pursuant to rule 3745-500-130 of the Administrative Code.

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3745-560-102 Construction and commencement of operations at class I composting facilities.

- (A) Facility site preparation. Prior to initial acceptance of feedstocks, bulking agents, or additives at the facility, the following shall be completed:
- (1) Materials placement areas shall be located within enclosed buildings or structures. The area where solid waste is received at the composting facility shall be located within structures that may have one open side.
 - (2) The floor of the composting facility used for materials placement and storage of materials that will be removed from the facility including but not limited to salvaged materials and materials that are not utilized in the composting process shall be designed and installed to meet the following:
 - (a) Constructed of an impermeable material such as concrete, asphalt, or metal to prevent the infiltration of leachate into the ground water.
 - (b) Constructed to withstand at least one hundred and ten per cent of the maximum force in pounds per square inch to be expected during normal operation.
 - (c) Constructed to prevent any unauthorized discharge of leachate from the facility.
 - (d) Constructed in such a manner to readily allow wet or dry cleanup operations.
 - (e) Sloped to direct leachate to collection points and not allow ponding of liquids.
 - (f) Constructed to direct leachate to the leachate management system.
 - (g) Designed to withstand the maximum temperatures encountered during composting.
 - (h) Accessible for annual visual inspection for cracks and breaks.
 - (i) Constructed with materials that enable repairs to be made.
 - (j) Constructed to allow heavy equipment operation during inclement weather.
 - (3) Adequate leachate collection, management, and treatment or disposal shall be provided and proper treatment or disposal facilities shall be used. If conveyance storage structures are utilized, the conveyance storage structures shall provide the following:
 - (a) For storage tanks, be provided with spill containment.
 - (b) For storage structures and other leachate handling areas, have a capacity sufficient for proper operation of the facility.
 - (c) For storage structures, be capable of being monitored or inspected for leaks.
 - (4) The land surface of the materials placement area shall be greater than or equal to one per cent in slope and less than or equal to six per cent in slope so as to direct surface water to collection points or otherwise control the surface water drainage.
 - (5) The materials placement area shall be constructed to allow facility operation during inclement weather.
 - (6) Construction of planned leachate and surface water management structures.
 - (7) Signs are posted with letters not less than three inches in height at the entrance of the composting facility

that include the following statement:

"This composting facility will not accept hazardous wastes, infectious wastes, asbestos, lead acid batteries, or other prohibited materials."

- (B) Verification of preparations. Prior to initial acceptance of feedstocks, bulking agents, or additives, the composting facility shall be inspected and written concurrence shall be received from Ohio EPA acknowledging compliance with this rule.

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3745-560-105 Alternative materials request for class I composting facilities.

- (A) The owner or operator of a class I composting facility may submit a written request to the director for approval to accept alternative materials not otherwise prohibited or authorized in accordance with rule 3745-560-110 of the Administrative Code. The request shall be submitted on forms prescribed by the director and include at a minimum the following:
- (1) A detailed description of the material to be accepted including any available analytical data, and any known or potential contaminants or pathogens that may cause or threaten to cause adverse impact to public health, safety, or the environment.
 - (2) The source and suppliers of the material.
 - (3) maximum amount of the material that the facility will accept on a daily basis. Whether pathogens are expected to be present in the material and what mechanisms will be in place to prevent exposure for those in contact with the waste or the compost product produced from the waste.
 - (4) The maximum amount of the material that the facility may accept on a daily basis.
 - (5) A detailed description of the intended use as a feedstock, bulking agent, or additive and the how the alternative material might function for that use.
 - (6) A detailed description of any impact that may result from the acceptance of the material in regard to the management of odor, litter, vectors, and leachate or other operational requirements of rule 3745-560-110 of the Administrative Code including the methods that will be used to control the impacts.
 - (7) Whether the owner or operator is requesting to compost the material on a temporary or continued basis.
 - (8) A detailed description of how the material will be managed at the facility. At a minimum, the description shall include the following:
 - (a) Whether the owner or operator will shred or screen the material prior to incorporation into the composting process.
 - (b) What equipment will be utilized.
 - (c) The percentage of mixture of the feedstock, bulking agent, or additive with other authorized feedstocks, bulking agents, or additives and the resulting carbon to nitrogen ratio.
 - (d) The method of composting utilized and any other treatment methods of conditioning compostable material to be used, if applicable.
 - (e) The anticipated moisture level of the incoming feedstock, bulking agent, or additive and the anticipated moisture levels after mixing with other authorized feedstocks, bulking agents, or additives.
 - (f) Any special management requirements due to the physical, biological or chemical characteristics of the alternative material.
 - (9) How the owner or operator intends to distribute or otherwise utilize the compost product.
 - (10) The revised closure cost estimate prepared in accordance with rule 3745-560-05 of the Administrative Code.

- (11) Any other information deemed necessary by Ohio EPA.
- (B) The director may approve and condition a request submitted in accordance with this rule upon determination of the following:
- (1) The use of the alternative material is technically feasible for composting and the owner or operator will use an approved composting method.
 - (2) The owner or operator has appropriate equipment and has demonstrated that there is enough operational capacity at the facility to manage the alternative material.
 - (3) The submitted analytical data demonstrates that if the alternative material exceeds the parameters specified in rule 3745-560-130 of the Administrative Code, the applicant has demonstrated that the compost produced will meet the compost quality standards specified in rule 3745-560-130 of the Administrative Code.
 - (4) The acceptance of the alternative material is unlikely to cause violations of Chapter 3704., 3734., or 6111. of the Revised Code, this chapter, or any other applicable federal or state laws.
 - (5) The acceptance, processing, and use of the material is unlikely to adversely affect or threaten to cause an adverse impact to public health, safety, or the environment.
- (C) The director may establish additional compost quality standards for the alternative materials requested to protect public health, safety, and the environment.

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3745-560-110 Operational requirements for class I composting facilities.

(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 plan view drawing. 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 in accordance with paragraph (H) of rule 3745-560-100 of the Administrative Code may constitute a modification and require submittal of an application for a permit to install.]

(B) Authorized materials. The owner or operator shall only accept those feedstocks, bulking agents, and additives authorized in the permit to install. The owner or operator may accept alternative materials upon approval of a permit alteration issued by the director pursuant to rule 3745-560-105 of the Administrative Code.

(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) Hazardous waste.

(c) Infectious waste.

(d) Asbestos including asbestos-containing waste material.

(e) Lead acid batteries.

(f) 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*.

(g) Scrap tires.

(h) 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. Containers used to transport authorized materials shall be removed, shredded, or otherwise processed to increase the exposed surface area for composting if incorporated into the composting process.
- (H) Operational 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 signs posted in accordance with rule 3745-560-102 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) Cross-contamination management. The owner or operator shall prevent and manage cross-contamination of feedstocks, bulking agents, additives, compost, and compost product. If cross-contamination occurs, the owner or operator shall do one of the following:
- (1) Comply with the more stringent testing standard required by rule 3745-560-120 of the Administrative Code if the cross-contamination is from a more stringently tested feedstock or material.
 - (2) Reintroduce the compost or compost product into the composting process.
 - (3) Remove and properly manage the contaminated feedstock, compost, bulking agent, or additive if the cross-contamination is from a prohibited material.
- (P) Food scraps management. An owner or operator who accepts food scraps shall do the following:
- (1) Incorporate the food scraps into the composting process or combine with bulking agents in a manner to prevent nuisances including but not limited to odor, vectors, and litter no later than the end of operating hours, as specified in the license application, on the date of receipt.
 - (2) Maintain a stockpile of biofilter material to provide at a minimum a six inch cover to piles containing food scraps and apply a biofilter cover consisting of at a minimum six inches on the piles if odors, dust, or

vectors are present or upon written request by Ohio EPA or the approved board of health.

- (3) Control free liquid from the incoming food scraps using a berm consisting of compost, bulking agents, or other absorbent material placed around the area where the incoming material is handled and mixed.
- (Q) Dead animals and raw rendering material management. An owner or operator that accepts dead animals and raw rendering material shall manage these materials in accordance with rule 3745-560-15 of the Administrative Code.
- (R) 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 (Q) 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.
- (S) The director, health commissioner, or board of health may order that compost or compost product be disposed in a licensed solid waste landfill if the director, health commissioner, or board of health determine that the compost or compost product does not meet the applicable standards of quality or causes or threatens to cause a nuisance or adversely affects the public health, safety, or the environment.

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3745-560-115 Record keeping requirements for class I composting facilities.

- (A) Record retention and availability. The owner or operator shall do the following:
- (1) Maintain records specified in this rule for a period of at least three years.
 - (2) Have records available for inspection by the approved board of health or Ohio EPA during normal operating hours.
 - (3) Upon request, submit records to Ohio EPA or the approved board of health.
- (B) Log of operation. The owner or operator shall do the following:
- (1) Record the facility operations on the log of operation forms as specified in rule 3745-560-04 of the Administrative Code.
 - (2) Complete the log of operation daily unless the owner or operator has received written concurrence for an alternative frequency from Ohio EPA or the approved board of health.
- (C) Annual report. Not later than February first of each year, the owner or operator shall submit an annual report to Ohio EPA. The annual report shall include the following:
- (1) The required information specified in rule 3745-560-04 of the Administrative Code.
 - (2) A summary of any maintenance performed on the waste handling floor and the leachate control system installed at the facility.

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3745-560-120 Compost product distribution requirements for class I composting facilities.**(A) Compost product distribution.**

- (1) Compost produced from mixed solid waste shall be disposed at a licensed sanitary landfill facility or may be used at a licensed sanitary landfill facility where the operator has obtained authorization for use of such compost in accordance with Chapter 3745-27 of the Administrative Code.
- (2) Except as provided in paragraph (A)(1) of this rule, an owner or operator shall only distribute compost that has been sampled in accordance with rule 3745-560-125 of the Administrative Code and meets the compost quality standards of rule 3745-560-130 of the Administrative Code.
- (3) Compost that meets the applicable quality standards of rule 3745-560-130 of the Administrative Code may be distributed as compost product for use in accordance with accepted agricultural, silvicultural, or horticultural practices.
- (4) Compost that does not meet the quality standards shall be reintroduced into the composting process, taken to another appropriate class of composting facility for further composting, disposed in a licensed solid waste disposal facility, or distributed for an alternative use after approval by the director in accordance with this rule.
- (5) If compost product is mixed with any amount of additional feedstocks, bulking agents, additives, or other untested compost, then the compost product is considered to be cross-contaminated and no longer a product. The compost shall be re-sampled and re-tested prior to distribution.

[Comment: Compost containing mixed solid waste may only be distributed in accordance with paragraph (A)(1) of this rule.]

(B) Product information and availability of test results.

- (1) Compost product that is distributed in packaged form shall be conspicuously labeled with product information. Product information shall be available in written form for compost product distributed without packaging. At a minimum, product information shall contain the following information:
 - (a) Name and address of the composting facility.
 - (b) Any feedstocks, bulking agents, and additives used.
 - (c) Recommended uses for the compost product.
 - (d) Any owner or operator recommended restrictions on the use of the compost product.
- (2) Upon request, the owner or operator shall provide the customer a summary of results from testing required in accordance with this rule.

(C) Request for approval for land application or alternative use of compost that does not meet applicable standards for compost product. The owner or operator whose compost has been sampled and tested in accordance with rules 3745-560-125 and 3745-560-130 of the Administrative Code and exceeds any of the applicable concentration limits may submit a written request for approval for land application or alternative use of the compost. At a minimum, a request for approval for land application or alternative use shall include

the following information:

- (1) Total quantity of compost and a detailed list of all feedstocks, bulking agents, and additives utilized to produce the compost.
 - (2) A copy of the test results of the compost required in accordance with rule 3745-560-130 of the Administrative Code.
 - (3) An explanation as to why the compost is unable to meet the quality standards specified in rule 3745-560-130 of the Administrative Code.
 - (4) A detailed description of the proposed alternative use, if not requesting land application.
 - (5) A detailed narrative of how the requested alternative use will not adversely affect the public health or safety or the environment.
 - (6) A copy of test results for soil from the proposed location of land application. The soil tests shall include the same parameters for the standards exceeded by the compost.
 - (7) The location of proposed land application, total acreage to be utilized, and proposed application rate including justification of specific application rates, safe uses, and any applicable restrictions.
 - (8) Any other information deemed necessary by the director.
- (D) Criteria for approval of a request for land application or alternative use of compost that does not meet applicable standards for compost product. The director may approve and condition a request for land application or alternative use of compost that does not meet applicable quality standards if the director determines the following:
- (1) The compost was not produced from mixed solid waste feedstock.
 - (2) The proposed land application or alternative use does not cause or threaten to cause an adverse effect to the public health or safety or the environment.
 - (3) The proposed land application or alternative use is in accordance with accepted agricultural, silvicultural, or horticultural practices.

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3745-560-125 Compost sampling requirements for class I composting facilities.

- (A) The owner or operator shall sample the compost in accordance with the following:
- (1) Determine the volume of the pile of compost and record in the log of operations.
 - (2) Obtain one composite sample from each pile no greater than ten thousand cubic yards as follows:
 - (a) Each composite sample shall consist of nine grab samples of equal volume.
 - (b) Three grab samples shall be taken at different depths from three equally divided locations of the pile of compost.
 - (c) Thoroughly mix grab samples in a clean container to form one composite sample of a minimum volume of four quarts.
 - (3) Extract a sub-sample of a minimum volume of two quarts from the composite sample and place in a clean container.
 - (4) At a minimum, label the sample container to document the collection date, time, and person obtaining the sample.
 - (5) Samples collected for testing of table 2 in rule 3745-560-130 of the Administrative Code shall be prepared and analysis started within one of the following time frames:
 - (a) Not later than eight hours after the collection of the sample.
 - (b) Not later than forty-eight hours after the collection of the sample when refrigerated and maintained at four degrees Centigrade.
 - (6) Sample collection and preservation shall ensure valid and representative results.
- (B) Authorization for alternative frequency of sampling or sampling method. Ohio EPA may approve and condition a request for an alternative frequency of sampling or sampling method the alternative frequency or method is determined to ensure equivalent protection of public health and safety and the environment. The determination shall be based on the information provided in paragraphs (C) and (D) of this rule and any other information required by Ohio EPA.
- (C) Request for approval of an alternative frequency of sampling. After one year of operation, the owner or operator may submit a written request for approval for an alternative frequency of sampling. The request shall include at a minimum the following information:
- (1) A description of the proposed alternative frequency of sampling including how compliance with applicable quality standards will be ensured.
 - (2) The feedstocks, bulking agents, and additives accepted at the facility.
 - (3) A copy of the test results for at least five consecutive sampling and testing cycles in accordance with this rule and rule 3745-560-130 of the Administrative Code.
 - (4) A description of the composting mix including but not limited to the feedstock to bulking agent ratio.
- (D) Request for approval of an alternative sampling method. The owner or operator may submit a written request

for approval of an alternative sampling method. The request shall include at a minimum the following information:

- (1) A detailed narrative of how the requested alternative sampling or testing method will ensure compliance with applicable quality standards.
 - (2) The feedstocks, bulking agents, and additives accepted at the facility.
- (E) Ohio EPA may require the owner or operator to submit additional information upon review of a request generated in accordance with paragraph (C) or (D) of this rule.
- (F) The owner or operator who has obtained an approval for an alternative frequency of sampling, sampling method, or testing method shall immediately notify the director of changes in the feedstocks, bulking agents, or additives composted or mix ratio for composting and simultaneously shall commence complying with this rule and rule 3745-560-130 of the Administrative Code.

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3745-560-130 Compost quality standards for class I composting facilities.

[Comment: For dates of non regulatory government publications, publications of recognized organizations and associations, test methods, federal rules, and federal statutory provisions referenced in this rule, see rule 3745-500-03 of the Administrative Code titled "Incorporation by reference."]

(A) The compost quality standards in this paragraph are applicable to all compost produced from yard waste, animal waste, agricultural plant materials, food scraps, dead animals, raw rendering material, and alternative materials. The quality standards are not applicable to compost produced with mixed solid waste subject to paragraph (A)(1) of rule 3745-560-120 of the Administrative Code. The owner or operator shall have the samples collected in accordance with rule 3745-560-125 of the Administrative Code analyzed using the methods specified in tables 1 to 4 of this rule or other methods authorized by the director pursuant to rule 3745-560-06 of the Administrative Code. Test results shall demonstrate that concentration limits are not exceeded for the parameters listed in tables 1 to 3 of this rule. The owner or operator shall also have the samples analyzed for the parameters identified in table 4, which have no associated concentration limits, to ensure usage of compost product in accordance with accepted agricultural, silvicultural, or horticultural practices.

Table 1 - Heavy metals

| Parameter | Concentration limit mg/kg dry weight | Preparation methods | Analytical methods | TMECC equivalent methods |
|-----------|--------------------------------------|------------------------------------|---|--------------------------|
| Arsenic | 41 | SW-846 3050B or SW-846 3051A | SW-846 6010D or SW-846 6020B or SW-846 7010 | TMECC 04.06-As |
| Boron | See Table 4 | | | |
| Cadmium | 35 | SW-846 3050B or SW-846 3051A | SW-846 6010D or SW-846 6020B or SW-846 7000B or SW-846 7010 | TMECC 04.06-Cd |
| Copper | 1500 | SW-846 3050B or SW-846 3051A | SW-846 6010D or SW-846 6020B or SW-846 7000B or SW-846 7010 | TMECC 04.06-Cu |
| Lead | 300 | SW-846 3050B or SW-846 3051A | SW-846 6010D or SW-846 6020B or SW-846 7000B or SW-846 7010 | TMECC 04.06-Pb |

Table 1 - Heavy metals

| | | | | |
|----------|------|------------------------------------|---|----------------|
| Mercury | 7.8 | SW-846 7471B | SW-846 7471B SW-846 6010D or SW-846 6020B or SW-846 7000B or SW-846 7010 | TMECC 04.06-Hg |
| Nickel | 420 | SW-846 3050B or SW-846 3051A | SW-846 6010D or SW-846 6020B or SW-846 7010 | TMECC 04.06-Ni |
| Selenium | 100 | SW-846 3050B or SW-846 3051A | SW-846 6010D or SW-846 6020B | TMECC 04.06-Se |
| Zinc | 2800 | SW-846 3050B or SW-846 3051A | SW-846 6010D or SW-846 or 6020B or SW-846 7000B or SW-846 7010 | TMECC 04.06-Zn |

Table 2 - Pathogens

| Parameter | Microbial count | Preparation method | Analytical method | TMECC equivalent method |
|-----------------|---|---|---|-------------------------|
| Fecal coliform | Limit of less than 1000 Most Probable Number per gram of total solids (dry weight) (1000 MPN/GTS) | Standard methods part 9221E or part 9222D | Standard methods 9260B and either 9222D or 9221E or 9223 | TMECC 07.01-B |
| Salmonella spp. | Limit of less than 3 Most Probable Number per 4 grams of total solids (3MPN/4GTS) | Standard method part 9260B | Standard methods 9260B and either 9222D or 9221E, or Neogen Reveal® 2.0 | TMECC 07.02 |

Table 3 - Inert matter

| Parameter | Concentration limit mg/kg dry weight | Preparation method | Analytical method | TMECC equivalent method |
|--------------|--------------------------------------|--------------------|-------------------|-------------------------|
| Inert matter | 1.0% by weight | U.S. EPA 160.3 | Detailed below | TMECC 03.08 |

Table 3 - Inert matter

| | | | | |
|---|---|---|--|--|
| | on No. 5 sieve (four mm screen) and no more than a fourth of this inert matter may be plastic | Methods for Chemical Analysis of Water and Wastes | | |
| Method for determining percent inert matter. Inert matter content shall be determined by passing a dried, weighed sample of not less than one hundred grams of compost through a "U.S. standard No. 5 sieve" (four millimeter). The material remaining on the screen shall be inspected and the inert matter shall be separated and weighed. The weight of the inert matter divided by the total weight of the compost sample and multiplied by one hundred shall be the per cent dry weight of the inert matter content. | | | | |

Table 4 - General parameters

| Parameter | Analytical method |
|----------------------|--|
| Boron | TMECC 04.05-B or Preparation: SW-846 3050B or SW-846 3051A and Analytical: SW-846 6010D or SW-846 6020B |
| Maturity | TMECC 05.08-A Specific Oxygen Uptake Rate or TMECC 05.08-B Carbon Dioxide Evolution Rate or TMECC 05.08-C In-situ Oxygen Refresh Rate or TMECC 05.08-D Dewar Self-Heating Test or TMECC 05.08-E Solvita® Maturity Index or TMECC 05.08-F Biologically Available Carbon |
| pH | TMECC 04.11-A or North central regional (NCR) publication 221 or SW-846 9045D soil pH or ASTM D2976 |
| Salinity | TMECC 04.10 A or NCR publication 221 |
| Total nitrogen | AOAC 968.06 or TMECC 04.02-D or TMECC 04.02-A |
| Total organic carbon | SW-846 9060 A or TMECC 04.01-A |
| Total phosphorus | TMECC 04.03-A or Preparation: SW-846 3050B or SW-846 3051A and Analytical: SW-846 6010D or SW-846 6020B |
| Total potassium | TMECC 04.04-A or Preparation: SW-846 3050B or SW-846 3051A and Analytical: SW-846 6010D or SW-846 6020B or SW-846 7000B |

[Comment:

Acceptable levels of maturity will vary according to end-user application (note: check date of maturity test).

Acceptable pH level will vary according to end-user application and will generally be in the 5.5 - 8.5 range.

Acceptable levels of soluble salts will vary according to end-user applications. The optimal ranges for growing media (compost amended soil) is 0.5 to 4.5 millimho per centimeter.

Compost producers may provide pH and soluble salts information in product literature for the intended end-user application that reflect user industry standards.]

- (B) Supplementary compost quality standards. Additional information or testing of feedstocks, bulking agents, additives, compost, or compost product may be required to ensure the standards are appropriately protective of public health, safety, or the environment.
- (1) Upon written notification from Ohio EPA, the owner or operator shall provide information regarding the feedstocks, bulking agents, additives, compost, or compost product including but not limited to the following:
- (a) The source of the feedstocks, bulking agents, and additives, including a description of the process used to generate the feedstocks, bulking agents, and additives.
 - (b) A description of the chemical and biological constituents and results for any testing requested by Ohio EPA.
 - (c) Any other information deemed necessary by Ohio EPA.
- (2) Upon review of such additional information, the director may establish additional conditions or quality standards for the compost. The director shall provide written notification to the owner or operator of such conditions or standards.
- (C) Authorization for an alternative preparation or analytical testing method. Ohio EPA may approve and condition a request for alternative testing methods upon determination that the alternative methods ensure equivalent protection of public health, safety, and the environment. The owner or operator may submit a written request for approval of an alternative testing method that includes at a minimum the following information:
- (1) The feedstocks, bulking agents, and additives accepted at the facility.
 - (2) A description or published references to the scientifically recognized preparation or analytical method that will provide equivalent or improved test results.
 - (3) A narrative of how the requested alternative sampling or testing method will ensure compliance with applicable quality standards.
- (D) Ohio EPA may require the owner or operator to submit additional information upon review of a request generated in accordance with paragraph (C) of this rule.
- (E) An owner or operator who has obtained an approval for an alternative preparation or analytical testing method shall immediately notify the director of changes in the feedstocks, bulking agents, or additives composed or the mix ratio for composting and simultaneously shall commence complying with this rule.

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3745-560-135 Closure and termination requirements for class I composting facilities.

- (A) The owner or operator of a composting facility shall perform closure as specified in this rule if any of the following occur:
- (1) The composting facility ceases to be an active composting facility.
 - (2) The director revokes the facility permit to install pursuant to paragraph (B) of rule 3745-560-101 of the Administrative Code.
 - (3) A solid waste facility license held by the owner or operator of the composting facility expires and no license renewal has been applied for in the manner prescribed in Chapter 3745-501 of the Administrative Code.
 - (4) A solid waste facility license held by the owner or operator of the composting facility expires and a license renewal has been applied for and denied as a final action of the licensing authority.
 - (5) A solid waste facility license held by the owner or operator of the composting facility has been revoked as a final action of the licensing authority.
 - (6) The director issues a final action addressing the following:
 - (a) The owner or operator sells or offers for sale at retail or wholesale, uses, distributes for use, or gives away any compost that does not comply with the applicable quality standards established in this chapter.
 - (b) Waste materials were accepted at the facility prior to obtaining a license in accordance with Chapter 3745-501 of the Administrative Code.
 - (c) The establishment or operation of the composting facility has violated Chapter 3704., 3714., 3734., or 6111. of the Revised Code or rules adopted thereunder.
- (B) The owner or operator of a facility required to perform closure in accordance with this rule shall do the following:
- (1) If the facility is closing pursuant to paragraph (A)(1) of this rule, send a written notification to Ohio EPA, the approved board of health, and the solid waste management district indicating the date on which the facility will cease acceptance of the waste materials.
 - (2) Not later than seven days after closure is required under paragraph (A) of this rule, the owner or operator of a composting facility that allowed public access shall post signs, stating in letters not less than three inches high that the facility is closed. The signs shall be posted in such a manner as to be easily visible at all access points into the facility and shall be maintained in legible condition for not less than one year, or until the facility re-opens as a registered composting facility or is converted to an alternative use. The text of the signs shall be the following:

"This facility is closed for all composting activities and all receipt of waste materials. Depositing solid wastes at this site constitutes open dumping which is a violation of Chapter 3734. of the Revised Code."
 - (3) Conduct the facility closure requirements in accordance with paragraph (C) of this rule.
 - (4) Send written notification to Ohio EPA or approved board of health certifying that the facility closure requirements have been completed in accordance with this rule.

- (5) Comply with rule 3745-560-110 of the Administrative Code until receipt of a letter of concurrence from Ohio EPA or the approved board of health stating that the facility is in compliance with the closure requirements of this rule.

(C) Closure requirements. The owner or operator shall perform the following closure activities:

- (1) Remove compost products and solid wastes from the composting facility.
- (2) Remove and properly dispose of leachate remaining on the site in accordance with applicable laws and regulations.
- (3) Modify, remove, or seal the leachate collection system to prevent discharges from the system to surface waters of the state or ground water unless such discharges are otherwise regulated in accordance with Chapter 6111. of the Revised Code.
- (4) Clean containers, equipment, machines, and materials placement area surfaces that were in contact with solid wastes at any time during the operation of the facility using procedures that substantially reduce or eliminate any remaining constituents or contaminants. This paragraph does not apply to materials placement area surfaces composed of soil, gravel, slag, or other permeable material.

(D) Termination of a class I composting facility permit to install.

- (1) A class I composting facility permit to install shall terminate in accordance with rule 3745-500-130 of the Administrative Code.
- (2) A permit to install for a facility that completed closure shall terminate upon receipt of a letter of concurrence by Ohio EPA or the approved board of health stating that the facility is in compliance with the closure requirements contained in this rule.

(E) An owner or operator who requests the termination of the composting facility permit after the composting facility ceases to be an active composting facility, for the purpose of a change to a class II, III, or IV composting facility, or to change to a yard waste only transfer facility in accordance with Chapter 3745-555 of the Administrative Code, may submit a written request to Ohio EPA or the approved board of health for alternative closure requirements. Ohio EPA or the approved board of health may approve alternative closure requirements provided the requirements are protective of public health, safety, and the environment.

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3745-560-200 Class II composting facility establishment.

- (A) No person shall establish a new class II composting facility or continue to operate an existing facility without first having submitted the following:
- (1) A registration application in accordance with this rule.
 - (2) An executed financial assurance instrument pursuant to rule 3745-503-05 of the Administrative Code for an amount not less than the current closure cost estimate established in accordance with rule 3745-560-05 of the Administrative Code.
- (B) No person shall operate a class II composting facility without first having obtained a solid waste license pursuant to Chapter 3745-501 of the Administrative Code.
- (C) Registration of class II composting facility. A registration application shall include the following:
- (1) Registration form prescribed by the director including but not limited to business name, contact person including operator and property owner, contact information, location of the proposed composting facility, closure cost estimate, and a statement certifying compliance with the siting criteria specified in paragraph (D) of this rule.
 - (2) Plan view drawing, using a scale of one inch equals no greater than one hundred feet, showing the following information inside the facility boundaries and within five hundred feet beyond the facility boundaries:
 - (a) The property lines of land owned or leased for the composting facility.
 - (b) The boundary lines for the composting facility.
 - (c) Public roads, railroads, and structures.
 - (d) Existing topography showing contours, streams, wetlands, lakes, springs, and other surface waters of the state.
 - (e) The north arrow.
 - (f) Boundary lines for the materials placement area based on the design capacity and the operational capacity, if the operational capacity is different than the design capacity. The boundary lines shall include the areas for each of the following:
 - (i) Composting and materials processing.
 - (ii) Receiving and storage of feedstocks, bulking agents, or additives.
 - (iii) Storage of alternative materials authorized pursuant to rule 3745-560-205 of the Administrative Code and the composting processing area dedicated to these materials.
 - (iv) Storage of compost product.
 - (g) Existing occupied dwellings.
 - (h) Any leachate management structure.

- (i) The limits of the one hundred year floodplain.
- (j) National park or national recreation areas, candidate areas for potential inclusion into the national park system, and any state park or established state park purchase areas.
- (k) Any state or Ohio history connection nature preserves, state wildlife areas and national wildlife refuges, national and state wild scenic and recreational rivers, special interest areas and research natural areas in the Wayne national forest, state resource waters, coldwater habitats, and exceptional warmwater habitats.

[Comment: Both the Ohio department of natural resources and the Ohio history connection, formerly the Ohio historical society, designate state nature preserves in Ohio.]

- (l) Existing public water supply wells, developed springs, or private potable water supply wells.
- (m) Existing drainage sinkholes or agricultural drainage wells.
- (n) The direction of the downward slopes and drainage for the materials placement area.

(3) Calculation of the design capacity of the composting facility.

(4) Calculation of the operational capacity of the composting facility which shall be less than or equal to the design capacity of the composting facility. Facilities accepting authorized alternative materials upon initial registration shall also specify the maximum capacity and area dedicated to alternative materials.

(5) Copies of consent letters pursuant to paragraph (D) of this rule.

(6) Copies of the letters of intent required in paragraph (E) of this rule.

(D) On the date the registration application is received by Ohio EPA, the limits of materials placement and leachate management structures shall meet the following siting criteria:

- (1) Unless located in an enclosed building, materials placement area and leachate management structures shall not be located within the following:
 - (a) Two hundred feet from any surface waters of the state.
 - (b) Three hundred feet from a known sinkhole or agricultural drainage well.
 - (c) The sanitary isolation radius of public water system drinking water supply wells as calculated using the formulas specified in rule 3745-9-04 of the Administrative Code.
 - (d) Three hundred feet from a private water system drinking water supply well that is not controlled by the facility.
 - (e) Fifty feet from a private water system drinking water supply well that is controlled by the facility owner.
 - (f) Three hundred feet from a transient non-community public water system drinking water supply well.
 - (g) Two hundred fifty feet from an occupied dwelling, unless the occupied dwelling is owned or leased by the owner or operator.
 - (h) Five hundred feet from the following:

- (i) An area designated by the Ohio department of natural resources as either a state nature preserve, a state wildlife area, or a state scenic river.
- (ii) An area designated, owned, and managed by the Ohio history connection as a nature preserve.
- (iii) An area designated by the United States department of the interior as either a national wildlife refuge or a national scenic river.
- (iv) An area designated by the United States forest service as either a special interest area or a research natural area in the Wayne national forest.
- (v) Surface waters of the state designated by Ohio EPA as either a state resource water, an outstanding national resource water, a superior high quality water, a coldwater habitat, or an exceptional warmwater habitat.

- (i) A one hundred year floodplain, unless the owner or operator demonstrates in the registration application that the facility will be designed, constructed, operated, and maintained to prevent washout of any waste materials by a one-hundred-year flood.
- (j) Five hundred feet from an occupied dwelling unless the occupied dwelling is owned or leased by the owner or operator or the owner or operator has received written consent from the owner of the occupied dwelling.
- (k) The inner management zone (one year time of travel) of a drinking water source protection area for a community or non-transient, non-community public water system using ground water.

- (2) The portions of the materials placement area and leachate management structures located within an enclosed building shall comply with paragraphs (D)(1)(h) to (D)(1)(j) of this rule.

For the purposes of this rule, an "enclosed building" means a structure with a low-permeability floor, walls, doors, and a roof that is capable of enclosing all waste handling areas, preventing rain from reaching the enclosed waste handling areas, and containing and collecting leachate within the enclosed waste handling areas.

- (3) Except for facilities which exclusively compost wastes generated within state parks or national parks, or national recreation areas, as of the date the initial registration application was submitted, the materials placement areas and leachate management system of the composting facility shall not be located in any one or combination of the following:
- (a) A national park or national recreation area.
 - (b) A state park or an established state park purchase area.
 - (c) A candidate area for potential inclusion in the national park system.
 - (d) A property that lies within the boundaries of a national park or national recreation area but that has not been acquired or is not administered by the secretary of the United States department of the interior.

- (E) Concurrent to submittal of the registration application, letters of intent to establish a composting facility which include a description of property and facility boundaries shall be sent by certified mail or any other form of mail accompanied by a receipt requested to the following:

- (1) The governments of the general purpose political subdivisions where the facility is proposed to be located including but not limited to local health departments, county commissioners, legislative authority of a municipal corporation, or the board of township trustees.
 - (2) The single or joint county solid waste management district or districts or regional solid waste management authority or authorities where the facility is proposed to be located.
 - (3) The owner or lessee of any easement or right of way bordering or within the proposed facility boundaries which may be affected by the proposed solid waste facility.
 - (4) The local zoning authority having jurisdiction.
 - (5) The park system administrator, if any part of the proposed facility is to be located within or will share the park boundary.
 - (6) The conservancy district, if any part of the proposed facility is to be located within or will share the conservancy district boundary.
 - (7) The fire department having responsibility for providing fire control services where the proposed facility is to be located.
- (F) Upon written notification by Ohio EPA that the registration application is incomplete, the applicant shall correct noted deficiencies and resubmit the registration application not later than thirty days after receipt of the notification.
- (G) Amendments to an existing registration. The registrant shall ensure that changes to the composting facility are in compliance with applicable regulations and all information contained on the plan view drawing and registration application is current by submitting an amended registration application as follows:
- (1) An amendment to an existing registration is required for changes in the information on the registration application, which may include but is not limited to the information required by paragraph (C) of this rule.
 - (2) An amendment to an existing registration involving any proposed change to the materials placement area shall include a revised plan view drawing submitted prior to implementation of any change. The plan view drawing shall include the information required in this rule. Any change to the materials placement area requires written concurrence from Ohio EPA acknowledging compliance with this chapter. If the amendment to the existing registration does not involve any proposed changes to the existing registration's plan drawing, the amendment may reference the existing registration's plan drawing.
- (H) Composting facilities registered prior to April 2, 2012 shall comply with siting criteria in effect on the date of initial registration.

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3745-560-201 Criteria for approval of a class II composting facility registration.

A class II composting facility shall not be considered registered unless compliance with the following are determined by Ohio EPA:

- (A) The registration application contains the information required in forms prescribed by the director as established in rule 3745-560-200 of the Administrative Code.
- (B) The siting criteria as established in rule 3745-560-200 of the Administrative Code have been met.
- (C) The plan view drawing contains the information required in rule 3745-560-200 of the Administrative Code.
- (D) The letters of intent were sent in accordance with rule 3745-560-200 of the Administrative Code.
- (E) If the proposed composting facility is established on land where a hazardous or solid waste facility was operated, the owner or operator has obtained previous authorization as required by rule 3745-27-13 of the Administrative Code.
- (F) The owner or operator is in substantial compliance at other solid waste disposal facilities that are owned or operated by the owner or operator.
- (G) The establishment and operation of the composting facility will not violate Chapter 3704., 3734., or 6111. of the Revised Code.
- (H) If Ohio EPA determines that information in addition to that required by rule 3745-560-200 of the Administrative Code is necessary to determine whether the criteria set forth in paragraph (A) of this rule are satisfied, Ohio EPA may require that the applicant supply such information as a precondition to further consideration of the registration application.

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3745-560-202 Construction and commencement of operations at class II composting facilities.

- (A) Facility design and construction. The composting facility shall be designed and constructed to meet the following:
- (1) The land surface of the materials placement area shall have a slope greater than or equal to one per cent and less than or equal to six per cent so as to direct surface water to collection points or otherwise control the surface water drainage.
 - (2) Prevent run-on from reaching the materials placement area.
 - (3) Prevent ponding and erosion.
 - (4) Minimize the potential impact to surface water and ground water.
 - (5) Collect and contain leachate within the boundary of the composting facility and prevent leachate from discharging to waters of the state, unless otherwise authorized pursuant to Chapter 6111. of the Revised Code.
 - (6) Construction of the materials placement area to allow facility operation during inclement weather.
 - (7) Construction of roads within the facility boundary to allow for passage of vehicles at all times.
 - (8) Signs are posted with letters not less than three inches in height at the entrance of the composting facility that include the following statement:

"This composting facility only accepts authorized wastes and authorized materials, and will not accept hazardous wastes, asbestos, batteries, or other prohibited materials."
- (B) Site preparation. The following requirements shall be completed prior to initial acceptance of feedstocks, bulking agents, or additives at the composting facility:
- (1) The composting facility and materials placement area has been constructed in accordance with paragraph (A) of this rule.
 - (2) Leachate and surface water management structures, if applicable, have been constructed in accordance with Chapter 6111. of the Revised Code.
 - (3) Signs are posted in accordance with paragraph (A) of this rule.
- (C) Initial acceptance of feedstocks. The owner or operator may begin to accept feedstocks, bulking agents, or additives if the owner or operator has submitted a registration application that complies with paragraphs (A) and (B) of rule 3745-560-201 of the Administrative Code, the owner or operator has complied with paragraphs (A) and (B) of this rule, and one of the following occurs:
- (1) The prepared composting facility has been inspected and written concurrence has been received from Ohio EPA acknowledging compliance with this rule.
 - (2) Ninety days have passed since Ohio EPA received the registration application.
- (D) Notwithstanding the provisions of paragraph (C) of this rule, the owner or operator shall not begin to accept feedstocks, bulking agents, or additives if not later than ninety days after Ohio EPA received the registration application, the director has provided a written notification of deficiency to the owner or operator that the registration application does not comply with paragraphs (A) and (B) of rule 3745-560-201 of the

Administrative Code or that the owner or operator has not complied with paragraphs (A) and (B) of this rule. If the owner or operator fails to address the deficiencies, the director may deny the registration application or approve the registration application with a variance or exemption.

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3745-560-205 Alternative materials request for class II composting facilities.

- (A) The owner or operator of a class II composting facility may submit a written request to the director for approval to accept alternative materials not otherwise prohibited or authorized in accordance with rule 3745-560-210 of the Administrative Code. The request shall be submitted on forms prescribed by the director and include at a minimum the following:
- (1) A detailed description of the material to be accepted including any available analytical data, and any known or potential contaminants or pathogens that may cause or threaten to cause adverse impact to public health, safety, or the environment.
 - (2) The source and suppliers of the material.
 - (3) maximum amount of the material that the facility will accept on a daily basis. Whether pathogens are expected to be present in the material and what mechanisms will be in place to prevent exposure for those in contact with the waste or the compost product produced from the waste.
 - (4) The maximum amount of the material that the facility may accept on a daily basis.
 - (5) A detailed description of the intended use as a feedstock, bulking agent, or additive and the how the alternative material might function for that use.
 - (6) A detailed description of any impact that may result from the acceptance of the material in regard to the management of odor, litter, vectors, and leachate or other operational requirements of rule 3745-560-210 of the Administrative Code including the methods that will be used to control the impacts.
 - (7) Whether the owner or operator is requesting to compost the material on a temporary or continued basis.
 - (8) A detailed description of how the material will be managed at the facility. At a minimum, the description shall include the following:
 - (a) Whether the owner or operator will shred or screen the material prior to incorporation into the composting process.
 - (b) What equipment will be utilized.
 - (c) The percentage of mixture of the feedstock, bulking agent, or additive with other authorized feedstocks, bulking agents, or additives and the resulting carbon to nitrogen ratio.
 - (d) The method of composting utilized and any other methods of conditioning compostable material to be used, if applicable.
 - (e) The anticipated moisture level of the incoming feedstock, bulking agent, or additive and the anticipated moisture levels after mixing with other authorized feedstocks, bulking agents, or additives.
 - (f) Any special management requirements due to the physical, biological or chemical characteristics of the alternative material.
 - (9) How the owner or operator intends to distribute or otherwise utilize the compost product.
 - (10) The revised closure cost estimate prepared in accordance with rule 3745-560-05 of the Administrative Code.

- (11) Any other information deemed necessary by Ohio EPA.
- (B) The director may approve and condition a request submitted in accordance with this rule upon determination of the following:
- (1) The use of the alternative material is technically feasible for composting and the owner or operator will use an approved composting method.
 - (2) The owner or operator has appropriate equipment and has demonstrated that there is enough operational capacity at the facility to manage the alternative material.
 - (3) The submitted analytical data demonstrates that if the alternative material exceeds the parameters specified in rule 3745-560-230 of the Administrative Code, the applicant has demonstrated that the compost produced will meet the compost quality standards specified in rule 3745-560-230 of the Administrative Code.
 - (4) The acceptance of the alternative material is unlikely to cause violations of Chapter 3704., 3734., or 6111. of the Revised Code, this chapter, or any other applicable federal or state laws.
 - (5) The acceptance, processing, and use of the material is unlikely to adversely affect or threaten to cause an adverse impact to public health, safety, or the environment.
- (C) The director may establish additional compost quality standards for the alternative materials requested to protect public health, safety, and the environment.

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3745-560-210 Operational requirements for class II composting facilities.

- (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 (G) of rule 3745-560-200 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, dead animals, raw rendering material, animal waste, food scraps, bulking agents, and additives. The owner or operator may accept alternative materials, as approved by the director pursuant to rule 3745-560-205 of the Administrative Code.
- (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) 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. At a minimum, the request shall include 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 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 signs posted in accordance with rule 3745-560-202 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) Cross-contamination management. The owner or operator shall prevent and manage cross-contamination of feedstocks, bulking agents, additives, compost, and compost product. If cross-contamination occurs, the owner or operator shall do one of the following:

- (1) Comply with the more stringent testing standard required by rule 3745-560-220 of the Administrative Code if the cross-contamination is from a more stringently tested feedstock or material.
- (2) Reintroduce the compost or compost product into the composting process.
- (3) Remove and properly manage the contaminated feedstock, compost, bulking agent, or additive if the cross-contamination is from a prohibited material.

- (P) Food scraps management. An owner or operator who accepts food scraps shall do the following:
- (1) Incorporate the food scraps into the composting process or combine with bulking agents in a manner to prevent nuisances including but not limited to odor, vectors, and litter no later than the end of operating hours, as specified in the license application, on the date of receipt.
 - (2) Maintain a stockpile of biofilter material to provide at a minimum a six inch cover to piles containing food scraps and apply a biofilter cover consisting of at a minimum six inches on the piles if odors, dust, or vectors are present or upon written request by Ohio EPA or the approved board of health.
 - (3) Control free liquid from the incoming food scraps using a berm consisting of compost, bulking agents, or other absorbent material placed around the area where the incoming material is handled and mixed.
- (Q) Dead animals and raw rendering material management. An owner or operator that accepts dead animals and raw rendering material shall manage these materials in accordance with rule 3745-560-15 of the Administrative Code.
- (R) 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 (Q) 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.
- (S) The director, health commissioner, or board of health may order that compost or compost product be disposed in a licensed solid waste landfill if the director, health commissioner, or board of health determine that the compost or compost product does not meet the applicable standards of quality or causes or threatens to cause a nuisance or adversely affects the public health, safety, or the environment.

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3745-560-215 Record keeping requirements for class II composting facilities.

- (A) Record retention and availability. The owner or operator shall do the following:
- (1) Maintain records specified in this rule for a period of at least three years.
 - (2) Have records available for inspection by the approved board of health or Ohio EPA during normal operating hours.
 - (3) Upon request, submit records to Ohio EPA or the approved board of health.
- (B) Log of operation. The owner or operator shall do the following:
- (1) Record the facility operations on the log of operation forms as specified in rule 3745-560-04 of the Administrative Code.
 - (2) Complete the log of operation daily unless the owner or operator has received written concurrence for an alternative frequency from Ohio EPA or the approved board of health.
- (C) Annual report. Not later than February first of each year, the owner or operator shall submit an annual report to Ohio EPA. The annual report shall include the required information specified in rule 3745-560-04 of the Administrative Code.

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3745-560-220 Compost product distribution requirements for class II composting facilities.

- (A) Compost product distribution. The compost product distribution requirements of this rule shall not apply to the owner or operator of a class II composting facility provided that all compost produced is utilized exclusively on property owned by the owner of the facility.
- (1) An owner or operator shall only distribute compost that has been sampled in accordance with rule 3745-560-225 of the Administrative Code and meets the compost quality standards of rule 3745-560-230 of the Administrative Code.
 - (2) Compost that meets the applicable quality standards may be distributed as compost product for use in accordance with accepted agricultural, silvicultural, or horticultural practices.
 - (3) Compost that does not meet the quality standards shall be reintroduced into the composting process, taken to another appropriate class of composting facility for further composting, disposed in a licensed solid waste disposal facility, or distributed for an alternative use after approval by the director in accordance with this rule.
 - (4) If compost product is mixed with any amount of additional feedstocks, bulking agents, additives, or other untested compost, then the compost product is considered to be cross-contaminated and no longer a product. The compost shall be re-sampled and re-tested prior to distribution.
 - (5) Any compost product may be blended with other compost products prior to distribution.
- (B) Product information and availability of test results.
- (1) Compost product that is distributed in packaged form shall be conspicuously labeled with product information. Product information shall be available in written form for compost product distributed without packaging. At a minimum, product information shall contain the following information:
 - (a) Name and address of the composting facility.
 - (b) Any feedstocks, bulking agents, and additives used.
 - (c) Recommended uses for the compost product.
 - (d) Any owner or operator recommended restrictions on the use of the compost product.
 - (2) Upon request, the owner or operator shall provide the customer a summary of results from testing required in accordance with this rule.
- (C) Request for approval for land application or alternative use of compost that does not meet applicable standards for compost product. The owner or operator whose compost has been sampled and tested in accordance with rules 3745-560-225 and 3745-560-230 of the Administrative Code and exceeds any of the applicable concentration limits may submit a written request for approval for land application or alternative use of the compost. At a minimum, a request for approval for land application or alternative use shall include the following information:
- (1) Total quantity of compost and a detailed list of all feedstocks, bulking agents, and additives utilized to produce the compost.
 - (2) A copy of the test results of the compost required in accordance with rule 3745-560-230 of the

Administrative Code.

- (3) An explanation as to why the compost is unable to meet the quality standards specified in rule 3745-560-230 of the Administrative Code.
 - (4) A detailed description of the proposed alternative use, if not requesting land application.
 - (5) A detailed narrative of how the requested alternative use will not adversely affect the public health or safety or the environment.
 - (6) A copy of test results for soil from the proposed location of land application. The soil tests shall include the same parameters for the standards exceeded by the compost.
 - (7) The location of proposed land application, total acreage to be utilized, and proposed application rate including justification of specific application rates, safe uses, and any applicable restrictions.
 - (8) Any other information deemed necessary by the director.
- (D) Criteria for approval of a request for land application or alternative use of compost that does not meet applicable standards for compost product. The director may approve and condition a request for land application or alternative use of compost that does not meet applicable quality standards if the director determines the following:
- (1) The proposed land application or alternative use does not cause or threaten to cause an adverse impact to public health, safety, or the environment.
 - (2) The proposed land application or alternative use is in accordance with accepted agricultural, silvicultural, or horticultural practices.

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3745-560-225 Compost sampling requirements for class II composting facilities.

- (A) The owner or operator shall sample the compost in accordance with the following:
- (1) Determine the volume of the pile of compost and record in the log of operations.
 - (2) Obtain one composite sample from each pile no greater than ten thousand cubic yards as follows:
 - (a) Each composite sample shall consist of nine grab samples of equal volume.
 - (b) Three grab samples shall be taken at different depths from three equally divided locations of the pile of compost.
 - (c) Thoroughly mix grab samples in a clean container to form one composite sample of a minimum volume of four quarts.
 - (3) Extract a sub-sample of a minimum volume of two quarts from the composite sample and place in a clean container.
 - (4) At a minimum, label the sample container to document the collection date, time, and person obtaining the sample.
 - (5) Samples collected for testing of table 2 in rule 3745-560-230 of the Administrative Code shall be prepared and analysis started within one of the following time frames:
 - (a) Not later than eight hours after the collection of the sample.
 - (b) Not later than forty-eight hours after the collection of the sample when refrigerated and maintained at four degrees Centigrade.
 - (6) Sample collection and preservation shall ensure valid and representative results.
- (B) Authorization for alternative frequency of sampling or sampling method. Ohio EPA may approve and condition a request for an alternative frequency of sampling or sampling method if the alternative frequency or method is determined to ensure equivalent protection of public health and safety and the environment. The determination shall be based on the information provided in paragraphs (C) and (D) of this rule and any other information required by Ohio EPA.
- (C) Request for approval of an alternative frequency of sampling. After one year of operation, the owner or operator may submit a written request for approval for an alternative frequency of sampling. The request shall include at a minimum the following information:
- (1) A description of the proposed alternative frequency of sampling including how it will ensure compliance with applicable quality standards.
 - (2) The feedstocks, bulking agents, and additives accepted at the facility.
 - (3) A copy of the test results for at least five consecutive sampling and testing cycles in accordance with this rule and rule 3745-560-230 of the Administrative Code.
 - (4) A description of the composting mix including but not limited to the feedstock to bulking agent ratio.

- (5) Any other information deemed necessary by Ohio EPA.
- (D) Request for approval of an alternative sampling method. The owner or operator may submit a written request for approval of an alternative sampling method. The request shall include at a minimum the following information:
- (1) A detailed narrative of how the alternative sampling or testing method will ensure compliance with applicable quality standards.
 - (2) The feedstocks, bulking agents, and additives accepted at the facility.
 - (3) For alternative testing methods, the scientifically recognized test preparation and analytical method that will provide equivalent or improved test results.
- (E) Ohio EPA may require the owner or operator to submit additional information upon review of a request generated in accordance with paragraph (C) or (D) of this rule.
- (F) The owner or operator who has obtained an approval for an alternative frequency of sampling or sampling method shall immediately notify the director of changes in the feedstocks, bulking agents, or additives composted or mix ratio for composting and simultaneously shall commence complying with this rule and rule 3745-560-230 of the Administrative Code.

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3745-560-230 Compost quality standards for class II composting facilities.

[Comment: For dates of non regulatory government publications, publications of recognized organizations and associations, test methods, federal rules, and federal statutory provisions referenced in this rule, see rule 3745-500-03 of the Administrative Code titled "Incorporation by reference."]

(A) The compost quality standards in this paragraph are applicable to all compost produced from yard waste, animal waste, agricultural plant materials, food scraps, dead animals, raw rendering material, and alternative materials. The owner or operator shall have the samples collected in accordance with rule 3745-560-225 of the Administrative Code analyzed using the methods specified in tables 1 to 4 of this rule or other methods authorized by the director pursuant to rule 3745-560-06 of the Administrative Code. Test results shall demonstrate that concentration limits are not exceeded for the parameters listed in tables 1 to 3 of this rule. The owner or operator shall also have the samples analyzed for the parameters identified in table 4, which have no associated concentration limits, to ensure usage of compost product in accordance with accepted agricultural, silvicultural, or horticultural practices.

Table 1 - Heavy metals

| Parameter | Concentration limit mg/kg dry weight | Preparation methods | Analytical methods | TMECC equivalent methods |
|-----------|--------------------------------------|------------------------------------|---|--------------------------|
| Arsenic | 41 | SW-846 3050B or SW-846 3051A | SW-846 6010D or SW-846 6020B or SW-846 7010 | TMECC 04.06-As |
| Boron | See Table 4 | | | |
| Cadmium | 35 | SW-846 3050B or SW-846 3051A | SW-846 6010D or SW-846 6020B or SW-846 7000B or SW-846 7010 | TMECC 04.06-Cd |
| Copper | 1500 | SW-846 3050B or SW-846 3051A | SW-846 6010D or SW-846 6020B or SW-846 7000B or SW-846 7010 | TMECC 04.06-Cu |
| Lead | 300 | SW-846 3050B or SW-846 3051A | SW-846 6010D or SW-846 6020C or SW-846 7000B or SW-846 7010 | TMECC 04.06-Pb |
| Mercury | 7.8 | SW-846 7471B | SW-846 7471B SW-846 6010D | TMECC 04.06-Hg |

Table 1 - Heavy metals

| | | | | |
|----------|------|------------------------------------|---|-------------------|
| | | | or SW-846 6020B or SW-846 7000B or SW-846 7010 | |
| Nickel | 420 | SW-846 3050B or SW-846 3051A | SW-846 6010D or SW-846 6020B or SW-846 7010 | TMECC 04.06-Ni |
| Selenium | 100 | SW-846 3050B or SW-846 3051A | SW-846 6010D or SW-846 6020B | TMECC 04.06-Se |
| Zinc | 2800 | SW-846 3050B or SW-846 3051A | SW-846 6010D or SW-846 6020B or SW-846 7000B or SW-846 7010 | TMECC 04.06-Zn |

Table 2 - Pathogens

| Parameter | Microbial count | Preparation method | Analytical method | TMECC equivalent method |
|-----------------|---|---|---|-------------------------|
| Fecal coliform | Limit of less than 1000 Most Probable Number per gram of total solids (dry weight) (1000 MPN/GTS) | Standard methods part 9221E or part 9222D | Standard methods 9260B and either 9222D, 9221E or 9223 | TMECC 07.01-B |
| Salmonella spp. | Limit of less than 3 Most Probable Number per 4 grams of total solids (3MPN/4GTS) | Standard method part 9260B | Standard methods 9260B and either 9222D or 9221E, or Neogen Reveal® 2.0 | TMECC 07.02 |

Table 3 - Inert matter

| Parameter | Concentration limit mg/kg dry weight | Preparation method | Analytical method | TMECC Equivalent method |
|--------------|--|-------------------------------------|-------------------|-------------------------|
| Inert matter | 1.0% by weight on No. 5 sieve (four mm screen) | U.S. EPA 160.3 Methods for Chemical | Detailed below | TMECC 03.08 |

Table 3 - Inert matter

| | | | | |
|--|---|------------------------------|--|--|
| | and no more than a fourth of this inert matter may be plastic | Analysis of Water and Wastes | | |
| <p>Method for determining percent inert matter. Inert matter content shall be determined by passing a dried, weighed sample of not less than one hundred grams of compost through a "U.S. standard No. 5 sieve" (four millimeter). The material remaining on the screen shall be inspected and the inert matter shall be separated and weighed. The weight of the inert matter divided by the total weight of the compost sample and multiplied by one hundred shall be the per cent dry weight of the inert matter content.</p> | | | | |

Table 4 - General parameters

| Parameter | Analytical method |
|----------------------|--|
| Boron | TMECC 04.05-B or Preparation: SW-846 3050B or SW-846 3051A and Analytical: SW-846 6010D or SW-846 6020B |
| Maturity | TMECC 05.08-A Specific Oxygen Uptake Rate or TMECC 05.08-B Carbon Dioxide Evolution Rate or TMECC 05.08-C In-situ Oxygen Refresh Rate or TMECC 05.08-D Dewar Self-Heating Test or TMECC 05.08-E Solvita® Maturity Index or TMECC 05.08-F Biologically Available Carbon |
| pH | TMECC 04.11-A or North central regional (NCR) publication 221 or SW-846 9045D soil pH or ASTM D2976 |
| Salinity | TMECC 04.10 A or NCR publication 221 |
| Total nitrogen | AOAC 968.06 or TMECC 04.02-D or TMECC 04.02-A |
| Total organic carbon | SW-846 9060 A or TMECC 04.01-A |
| Total phosphorus | TMECC 04.03-A or Preparation: SW-846 3050B or SW-846 3051A and Analytical: SW-846 6010D or SW-846 6020B |
| Total potassium | TMECC 04.04-A or Preparation: SW-846 3050B or SW-846 3051A and Analytical: SW-846 6010D or SW-846 6020B or SW-846 7000B |

[Comment:

Acceptable levels of maturity will vary according to end-user application (note: check date of maturity test).

Acceptable pH level will vary according to end-user application and will generally be in the 5.5 - 8.5 range.

Acceptable levels of soluble salts will vary according to end-user applications. The optimal ranges for growing media (compost amended soil) is 0.5 to 4.5 millimho per centimeter.

Compost producers may provide pH and soluble salts information in product literature for the intended end-user application that reflect user industry standards.]

- (B) Supplementary compost quality standards. Additional information or testing of feedstocks, bulking agents, additives, compost, or compost product may be required to ensure the standards are appropriately protective of public health, safety, or the environment.
- (1) Upon written notification from Ohio EPA, the owner or operator shall provide information regarding the feedstocks, bulking agents, additives, compost, or compost product including but not limited to the following:
 - (a) The source of the feedstocks, bulking agents, and additives, including a description of the process used to generate the feedstocks, bulking agents, and additives.
 - (b) A description of the chemical and biological constituents and results for any testing requested by Ohio EPA.
 - (c) Any other information deemed necessary by Ohio EPA.
 - (2) Upon review of such additional information, the director may establish additional conditions or quality standards for the compost. The director shall provide written notification to the owner or operator of such conditions or standards.
- (C) Authorization for an alternative preparation or analytical testing method. Ohio EPA may approve and condition a request for alternative testing methods upon determination that the alternative methods ensure equivalent protection of public health, safety, and the environment. The owner or operator may submit a written request for approval of an alternative testing method that includes at a minimum the following information:
- (1) The feedstocks, bulking agents, and additives accepted at the facility.
 - (2) A description or published references to the scientifically recognized preparation or analytical method that will provide equivalent or improved test results.
 - (3) A narrative of how the requested alternative sampling or testing method will ensure compliance with applicable quality standards.
- (D) Ohio EPA may require the owner or operator to submit additional information upon review of a request generated in accordance with paragraph (C) of this rule.
- (E) An owner or operator who has obtained an approval for an alternative preparation or analytical testing method shall immediately notify the director of changes in the feedstocks, bulking agents, or additives composed or the mix ratio for composting and simultaneously shall commence complying with this rule.

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3745-560-235 Closure and termination of registration requirements for class II composting facilities.

- (A) The owner or operator of a composting facility shall perform closure as specified in this rule if any of the following occurs:
- (1) The composting facility ceases to be an active composting facility.
 - (2) A solid waste facility license held by the owner or operator of the composting facility expires and no license renewal has been applied for in the manner prescribed in Chapter 3745-501 of the Administrative Code.
 - (3) A solid waste facility license held by the owner or operator of the composting facility expires and a license renewal has been applied for and denied as a final action of the licensing authority.
 - (4) A solid waste facility license held by the owner or operator of the composting facility has been revoked as a final action of the licensing authority.
 - (5) The director issues a final action addressing the following:
 - (a) The owner or operator sells or offers for sale at retail or wholesale, uses, distributes for use, or gives away any compost that does not comply with the applicable quality standards established in this chapter.
 - (b) Waste materials were accepted at the facility prior to obtaining a license in accordance with Chapter 3745-501 of the Administrative Code.
 - (c) The establishment or operation of the composting facility has violated Chapter 3704., 3714., 3734., or 6111. of the Revised Code or rules adopted thereunder.
- (B) The owner or operator of a facility required to perform closure in accordance with this rule shall do the following:
- (1) If the facility is closing pursuant to paragraph (A)(1) of this rule, send a written notification to Ohio EPA, the approved board of health, and the solid waste management district indicating the date on which the facility will cease acceptance of the waste materials.
 - (2) Not later than seven days after closure is required under paragraph (A) of this rule, the owner or operator of a composting facility that allowed public access shall post signs, stating in letters not less than three inches high that the facility is closed. The signs shall be posted in such a manner as to be easily visible at all access points into the facility and shall be maintained in legible condition for not less than one year, or until the facility re-opens as a registered composting facility or is converted to an alternative use. The text of the signs shall be the following:

"This facility is closed for all composting activities and all receipt of waste materials. Depositing solid wastes at this site constitutes open dumping which is a violation of Chapter 3734. of the Revised Code."
 - (3) Conduct the facility closure requirements in accordance with paragraph (C) of this rule.
 - (4) Send written notification to Ohio EPA or approved board of health certifying that the facility closure requirements have been completed in accordance with this rule.
 - (5) Comply with rule 3745-560-210 of the Administrative Code until receipt of a letter of concurrence from Ohio EPA or the approved board of health stating that the facility is in compliance with the closure

requirements of this rule.

- (C) Closure requirements. The owner or operator shall perform the following closure activities:
- (1) Remove compost products and solid wastes from the composting facility.
 - (2) Remove and properly dispose of leachate remaining on the site in accordance with applicable laws and regulations.
 - (3) Modify, remove, or seal the leachate collection system to prevent discharges from the system to surface waters of the state or ground water unless such discharges are otherwise regulated in accordance with Chapter 6111. of the Revised Code.
 - (4) Clean containers, equipment, machines, and materials placement area surfaces that were in contact with solid wastes at any time during the operation of the facility using procedures that substantially reduce or eliminate any remaining constituents or contaminants. This paragraph does not apply to materials placement area surfaces composed of soil, gravel, slag, or other permeable material.
- (D) Criteria for termination of a registration. A registration for a facility that has completed closure shall terminate upon receipt of a letter of concurrence by Ohio EPA or the approved board of health stating that the facility is in compliance with the closure requirements contained in this rule.
- (E) This rule does not apply to a registrant who requests termination of a composting facility registration after obtaining a class I composting facility permit to install and annual license.
- (F) An owner or operator who requests the termination of the composting facility registration after the composting facility ceases to be an active composting facility, for the purpose of a change to a class III or IV composting facility, or to change to a yard waste only transfer facility in accordance with Chapter 3745-555 of the Administrative Code, may submit a written request to Ohio EPA or the approved board of health for alternative closure requirements. Ohio EPA or the approved board of health may approve alternative closure requirements provided the requirements are protective of public health, safety, and the environment.

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3745-560-300 Class III composting facility establishment.

- (A) No person shall establish a new class III composting facility or continue to operate an existing facility without first submitting a registration application in accordance with this rule.
- (B) Registration of class III composting facility. A registration application shall include the following:
- (1) Registration form prescribed by the director including but not limited to business name, contact person including the operator and property owner, contact information, location of the proposed composting facility, and a statement certifying compliance with the siting criteria specified in paragraph (C) of this rule.
 - (2) Plan view drawing, using a scale of one inch equals no greater than one hundred feet, showing the following information inside the facility boundaries and within five hundred feet beyond the facility boundaries:
 - (a) The property lines of land owned or leased for the composting facility.
 - (b) The boundary lines for the composting facility.
 - (c) Public roads, railroads, and structures.
 - (d) Existing topography showing contours, streams, wetlands, lakes, springs, and other surface waters of the state.
 - (e) The north arrow.
 - (f) Boundary lines for the materials placement area based on the design capacity and the operational capacity, if the operational capacity is different than the design capacity. The boundary lines shall include the areas for each of the following:
 - (i) Composting and materials processing.
 - (ii) Receiving and storage of feedstocks, bulking agents, or additives.
 - (iii) Storage of alternative materials authorized pursuant to rule 3745-560-305 of the Administrative Code and the composting processing area dedicated to these materials.
 - (iv) Storage of compost product.
 - (g) Existing occupied dwellings.
 - (h) Any leachate management structure.
 - (i) The limits of the one hundred year floodplain.
 - (j) National park or national recreation areas, candidate areas for potential inclusion into the national park system, and any state park or established state park purchase areas.
 - (k) Any state or Ohio history connection nature preserves, state wildlife areas and national wildlife

refuges, national and state wild scenic and recreational rivers, special interest areas and research natural areas in the Wayne national forest, state resource waters, coldwater habitats, and exceptional warmwater habitats.

[Comment: Both the Ohio department of natural resources and the Ohio history connection, formerly the Ohio historical society, designate state nature preserves in Ohio.]

- (l) Existing public water supply wells, developed springs, or private potable water supply wells.
 - (m) Existing drainage sinkholes or agricultural drainage wells.
 - (n) The direction of the downward slopes and drainage for the materials placement area.
- (3) Calculation of the design capacity of the composting facility.
- (4) Calculation of the operational capacity of the composting facility which shall be less than or equal to the design capacity of the composting facility. Facilities accepting authorized alternative materials upon initial registration shall also specify the maximum capacity and area dedicated to alternative materials.
- (5) Copies of consent letters pursuant to paragraph (C) of this rule.
- (6) Copies of the letters of intent required in paragraph (D) of this rule.
- (C) On the date the registration application is received by Ohio EPA, the limits of materials placement and leachate management structures shall meet the following siting criteria:
- (1) Unless located in an enclosed building, the materials placement area and leachate management structures shall not be located within the following:
 - (a) Two hundred feet from any surface waters of the state.
 - (b) Three hundred feet from a known sinkhole or agricultural drainage well.
 - (c) The sanitary isolation radius of public water system drinking water supply wells as calculated using the formulas specified in rule 3745-9-04 of the Administrative Code.
 - (d) Three hundred feet from a private water system drinking water supply well that is not controlled by the facility.
 - (e) Fifty feet from a private water system drinking water supply well that is controlled by the facility owner.
 - (f) Three hundred feet from a transient non-community public water system drinking water supply well.
 - (g) Two hundred fifty feet from an occupied dwelling, unless the occupied dwelling is owned or leased by the owner or operator.
 - (h) Five hundred feet from the following:
 - (i) An area designated by the Ohio department of natural resources as either a state nature preserve, a state wildlife area, or a state scenic river.

- (ii) An area designated, owned, and managed by the Ohio history connection as a nature preserve.
- (iii) An area designated by the United States department of the interior as either a national wildlife refuge or a national scenic river.
- (iv) An area designated by the United States forest service as either a special interest area or a research natural area in the Wayne national forest.
- (v) Surface waters of the state designated by Ohio EPA as either a state resource water, an outstanding national resource water, a superior high quality water, a coldwater habitat, or an exceptional warmwater habitat.

(i) A one hundred year floodplain, unless the owner or operator demonstrates in the registration application that the facility will be designed, constructed, operated, and maintained to prevent washout of any waste materials by a one-hundred-year flood.

(j) Two hundred fifty feet from an occupied dwelling, unless the occupied dwelling is owned or leased by the owner or operator, or the owner or operator has received written consent from the owner of the occupied dwelling.

(k) The inner management zone (one year time of travel) of a drinking water source protection area for a community or non-transient non-community public water system using ground water.

(2) The portions of the materials placement area and leachate management structures located within an enclosed building shall comply with paragraphs (C)(1)(h) to (C)(1)(j) of this rule.

For the purposes of this rule, an "enclosed building" means a structure with a low-permeability floor, walls, doors, and a roof that is capable of enclosing all waste handling areas, preventing rain from reaching the enclosed waste handling areas, and containing and collecting leachate within the enclosed waste handling areas.

(3) Except for facilities which exclusively compost wastes generated within state parks or national parks, or national recreation areas, as of the date the initial registration application was submitted, the materials placement areas and leachate management system of the composting facility shall not be located in any one or combination of the following:

(a) A national park or national recreation area.

(b) A state park or an established state park purchase area.

(c) A candidate area for potential inclusion in the national park system.

(d) A property that lies within the boundaries of a national park or national recreation area but that has not been acquired or is not administered by the secretary of the United States department of the interior.

(4) The materials placement area shall not exceed one hundred thirty-five thousand square feet of total area on any one premises.

(D) Concurrent to submittal of the registration application, letters of intent to establish a composting facility

which include a description of property and facility boundaries shall be sent by certified mail or any other form of mail accompanied by a receipt requested to the following:

- (1) The governments of the general purpose political subdivisions where the facility is proposed to be located including but not limited to local health departments, county commissioners, legislative authority of a municipal corporation, or the board of township trustees.
 - (2) The single or joint county solid waste management district or districts or regional solid waste management authority or authorities where the facility is proposed to be located.
 - (3) The owner or lessee of any easement or right of way bordering or within the proposed facility boundaries which may be affected by the proposed solid waste facility.
 - (4) The local zoning authority having jurisdiction.
 - (5) The park system administrator, if any part of the proposed facility is to be located within or will share the park boundary.
 - (6) The conservancy district, if any part of the proposed facility is to be located within or will share the conservancy district boundary.
 - (7) The fire department having responsibility for providing fire control services where the proposed facility is to be located.
- (E) Upon written notification by Ohio EPA that the registration application is incomplete, the applicant shall correct noted deficiencies and resubmit the registration application not later than thirty days after receipt of the notification.
- (F) Amendments to an existing registration. The registrant shall ensure that changes to the composting facility are in compliance with applicable regulations and all information contained on the plan view drawing and registration application is current by submitting an amended registration application as follows:
- (1) An amendment to an existing registration is required for changes in the information on the registration application, which may include but is not limited to the information required by paragraph (B) of this rule.
 - (2) An amendment to an existing registration involving any proposed change to the materials placement area shall include a revised plan view drawing submitted prior to implementation of any change. The plan view drawing shall include the information required in this rule. Any change to the materials placement area requires written concurrence from Ohio EPA acknowledging compliance with this chapter. If the amendment to the existing registration does not involve any proposed changes to the existing registration's plan drawing, the amendment may reference the existing registration's plan drawing.
- (G) Composting facilities registered prior to April 2, 2012 shall comply with siting criteria in effect on the date of initial registration.

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3745-560-301 Criteria for approval of a class III composting facility registration.

A class III composting facility shall not be considered registered unless compliance with the following are determined by Ohio EPA:

- (A) The registration application contains the information required in forms prescribed by the director as established in rule 3745-560-300 of the Administrative Code.
- (B) The siting criteria as established in rule 3745-560-300 of the Administrative Code have been met.
- (C) The plan view drawing contains the information required in rule 3745-560-300 of the Administrative Code.
- (D) The letters of intent were sent in accordance with rule 3745-560-300 of the Administrative Code.
- (E) If the proposed composting facility is established on land where a hazardous or solid waste facility was operated, the owner or operator has obtained previous authorization as required by rule 3745-27-13 of the Administrative Code.
- (F) The owner or operator is in substantial compliance at other solid waste disposal facilities that are owned or operated by the owner or operator.
- (G) The establishment and operation of the composting facility will not violate Chapter 3704., 3734., or 6111. of the Revised Code.
- (H) If Ohio EPA determines that information in addition to that required by rule 3745-560-300 of the Administrative Code is necessary to determine whether the criteria set forth in paragraph (A) of this rule are satisfied, Ohio EPA may require that the applicant supply such information as a precondition to further consideration of the registration application.

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3745-560-302 Construction and commencement of operations at class III composting facilities.

- (A) Facility design and construction. The composting facility shall be designed and constructed to meet the following:
- (1) The land surface of the materials placement area shall have a slope greater than or equal to one per cent and less than or equal to six per cent so as to direct surface water to collection points or otherwise control the surface water drainage.
 - (2) Prevent run-on from reaching the materials placement area.
 - (3) Prevent ponding and erosion.
 - (4) Minimize the potential impact to surface water and ground water.
 - (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) Construction of the materials placement area to allow facility operation during inclement weather.
 - (7) Construction of roads within the facility boundary to allow for passage of vehicles at all times.
 - (8) Signs are posted with letters not less than three inches in height at the entrance of the composting facility that include the following statement:

"This composting facility only accepts authorized wastes and authorized materials, and will not accept hazardous wastes, asbestos, batteries, or other prohibited materials."
- (B) Site preparation. The following requirements shall be completed prior to initial acceptance of feedstocks, bulking agents, or additives at the composting facility:
- (1) The composting facility and materials placement area has been constructed in accordance with paragraph (A) of this rule.
 - (2) Leachate and surface water management structures, if applicable, have been constructed in accordance with Chapter 6111. of the Revised Code.
 - (3) Signs are posted in accordance with paragraph (A) of this rule.
- (C) Initial acceptance of feedstocks. The owner or operator may begin to accept feedstocks, bulking agents, or additives if the owner or operator has submitted a registration application that complies with paragraphs (A) and (B) of rule 3745-560-301 of the Administrative Code, the owner or operator has complied with paragraphs (A) and (B) of this rule, and one of the following occurs:
- (1) The prepared composting facility has been inspected and written concurrence has been received from Ohio EPA acknowledging compliance with this rule.
 - (2) Ninety days have passed since Ohio EPA received the registration application.
- (D) Notwithstanding the provisions of paragraph (C) of this rule, the owner or operator shall not begin to accept feedstocks, bulking agents, or additives if not later than ninety days after Ohio EPA received the registration application, the director has provided a written notification of deficiency to the owner or operator that the registration application does not comply with paragraphs (A) and (B) of rule 3745-560-301 of the

Administrative Code or that the owner or operator has not complied with paragraphs (A) and (B) of this rule. If the owner and operator fails to address the deficiencies, the director may deny the registration application or approve the registration application with a variance or exemption.

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3745-560-305 Alternative materials request for class III composting facilities.

- (A) The owner or operator of a class III composting facility may submit a written request to the director for an approval to accept alternative materials not otherwise prohibited or authorized in rule 3745-560-310 of the Administrative Code. The request shall be submitted on forms prescribed by the director and include at a minimum the following:
- (1) A detailed description of the material to be accepted including a description of any known or potential contaminants that may cause or threaten to cause an adverse impact to public health, safety, or the environment, and any available analytical data on the material.
 - (2) The source and suppliers of the material.
 - (3) Whether pathogens are expected to be present in the material and what mechanisms will be in place to prevent exposure for those in contact with the waste or the compost product produced from such wastes.
 - (4) The maximum amount of the material that the facility may accept on a daily basis.
 - (5) A detailed description of the intended use as a feedstock, bulking agent, or additive and how the alternative material might function for that use.
 - (6) A detailed description of any impact that may result from the acceptance of the material in regard to the management of odor, litter, vectors, and leachate or other operational requirements of rule 3745-560-310 of the Administrative Code including the methods that will be used to control the impacts.
 - (7) Whether the owner or operator is requesting to compost the material on a temporary or continued basis.
 - (8) A detailed description of how the material will be managed at the facility. At a minimum, the description shall include the following:
 - (a) Whether the owner or operator will shred or screen the material prior to incorporation into the composting process.
 - (b) What equipment will be utilized.
 - (c) The percentage of mixture of the feedstock, bulking agent, or additive with other authorized feedstocks, bulking agents, or additives and the resulting carbon to nitrogen ratio.
 - (d) The method of composting utilized and any other methods of conditioning compostable material to be used if applicable.
 - (e) The anticipated moisture level of the incoming feedstock, bulking agent, or additive and the anticipated moisture levels after mixing with other authorized feedstocks, bulking agents, or additives.
 - (f) Any special management requirements due to the physical, biological or chemical characteristics of the alternative material
 - (9) How the owner or operator intends to distribute or otherwise utilize the compost product.
 - (10) Any other information deemed necessary by Ohio EPA.
- (B) The director may approve and condition a request submitted in accordance with this rule upon determination of the following:

- (1) The use of the alternative material is technically feasible for composting and the owner or operator will use an approved composting method.
 - (2) The owner or operator has appropriate equipment and has demonstrated that there is enough operational capacity at the facility to manage the alternative material.
 - (3) The submitted analytical data demonstrates that the alternative material does not exceed the parameters specified in rule 3745-560-330 of the Administrative Code.
 - (4) The acceptance of the alternative material is unlikely to cause violations of Chapter 3704. 3734., or 6111. of the Revised Code, this chapter, or any other applicable federal or state laws.
 - (5) The acceptance, processing, and use of the material is unlikely to adversely affect or threaten to cause an adverse effect to public health, safety, or the environment.
- (C) The director may establish additional compost quality standards for the alternative materials requested to protect public health, and safety, and the environment.

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3745-560-310 Operational requirements for class III composting facilities.

(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 3745-560-300 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, animal waste, dead animals, raw rendering material, bulking agents, and additives.

(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 that 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 signs posted in accordance with rule 3745-560-302 of the Administrative Code.
- "This composting facility only accepts yard waste, agricultural plant materials, and animal waste, and will not accept hazardous wastes, infectious wastes, asbestos, batteries, or other prohibited materials."
- (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) Cross-contamination management. The owner or operator shall prevent and manage cross-contamination of feedstocks, bulking agents, additives, compost, and compost product. If cross-contamination occurs, the owner or operator shall do one of the following:

- (1) Comply with the more stringent testing standard required by rule 3745-560-320 of the Administrative Code if the cross-contamination is from a more stringently tested feedstock or material.
- (2) Reintroduce the compost or compost product into the composting process.

- (3) Remove and properly manage the contaminated feedstock, compost, bulking agent, or additive if the cross-contamination is from a prohibited material.
- (P) Dead animals and raw rendering material management. An owner or operator that accepts dead animals and raw rendering material shall manage these materials in accordance with rule 3745-560-15 of the Administrative Code.
- (Q) 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 (Q) 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.
- (R) The director, health commissioner, or board of health may order that compost or compost product be disposed in a licensed solid waste landfill if the director, health commissioner, or board of health determine that the compost or compost product does not meet applicable standards of quality or causes or threatens to cause a nuisance or adversely affects the public health, safety, or the environment.

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3745-560-315 Record keeping requirements for class III composting facilities.

- (A) Record retention and availability. The owner or operator shall do the following:
- (1) Maintain records specified in this rule for a period of at least three years.
 - (2) Have records available for inspection by the approved board of health or Ohio EPA during normal operating hours.
 - (3) Upon request, submit records to Ohio EPA or the approved board of health.
- (B) Log of operation. The owner or operator shall do the following:
- (1) Record the facility operations on the log of operation forms as specified in rule 3745-560-04 of the Administrative Code.
 - (2) Complete the log of operation at a minimum once per week unless the owner or operator has received written concurrence for an alternative frequency from Ohio EPA or the approved board of health.
 - (3) Complete the log of operation more often than weekly if conditions warrant a higher frequency of completion in order to effectively monitor operations at the composting facility, or when required by Ohio EPA or the approved health department.
- (C) Annual report. Not later than February first of each year, the owner or operator shall submit an annual report to Ohio EPA. The annual report shall include the required information specified in rule 3745-560-04 of the Administrative Code.

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3745-560-320 Compost product distribution requirements for class III composting facilities.

- (A) Compost product distribution. The compost product distribution requirements of this rule shall not apply to the owner or operator of a class III composting facility provided that all compost produced is utilized exclusively on property owned by the owner of the facility.
- (1) An owner or operator shall only distribute compost that has been sampled in accordance with rule 3745-560-325 of the Administrative Code and meets the compost quality standards of rule 3745-560-330 of the Administrative Code.
 - (2) Compost that meets the applicable quality standards may be distributed as compost product for use in accordance with accepted agricultural, silvicultural, or horticultural practices.
 - (3) Compost that does not meet the quality standards shall be reintroduced into the composting process, taken to another appropriate class of composting facility for further composting, disposed in a licensed solid waste disposal facility, or distributed for an alternative use after approval by the director in accordance with this rule.
 - (4) If compost product is mixed with any amount of additional feedstocks, bulking agents, additives, or other untested compost, then the compost product is considered to be cross-contaminated and no longer a product. The compost shall be re-sampled and re-tested prior to distribution.
 - (5) Any compost product may be blended with other compost products prior to distribution.
- (B) Product information and availability of test results.
- (1) Compost product that is distributed in packaged form shall be conspicuously labeled with product information. Product information shall be available in written form for compost product distributed without packaging. At a minimum, product information shall contain the following information:
 - (a) Name and address of the composting facility.
 - (b) Any feedstocks, bulking agents, and additives used.
 - (c) Recommended uses for the compost product.
 - (d) Any owner or operator recommended restrictions on the use of the compost product.
 - (2) Upon request, the owner or operator shall provide the customer a summary of results from testing required in accordance with this rule.
- (C) Request for approval for land application or alternative use of compost that does not meet applicable standards for compost product. The owner or operator whose compost has been sampled and tested in accordance with rules 3745-560-325 and 3745-560-330 of the Administrative Code and exceeds any of the applicable concentration limits may submit a written request for approval for land application or alternative use of the compost. At a minimum, a request for approval for land application or alternative use shall include the following information:
- (1) Total quantity of compost and a detailed list of all feedstocks, bulking agents, and additives utilized to produce the compost.
 - (2) A copy of the test results of the compost required in accordance with rule 3745-560-330 of the

Administrative Code.

- (3) An explanation as to why the compost is unable to meet the quality standards specified in rule 3745-560-330 of the Administrative Code.
 - (4) A detailed description of the proposed alternative use, if not requesting land application.
 - (5) A detailed narrative of how the requested alternative use will not adversely affect the public health or safety or the environment.
 - (6) A copy of test results for soil from the proposed location of land application. The soil tests shall include the same parameters for the standards exceeded by the compost.
 - (7) The location of proposed land application, total acreage to be utilized, and proposed application rate including justification of specific application rates, safe uses, and any applicable restrictions.
 - (8) Any other information deemed necessary by the director.
- (D) Criteria for approval of a request for land application or alternative use of compost that does not meet applicable standards for compost product. The director may approve and condition a request for land application or alternative use of compost that does not meet applicable quality standards if the director determines the following:
- (1) The proposed land application or alternative use does not cause or threaten to cause an adverse impact to public health, safety, or the environment.
 - (2) The proposed land application or alternative use is in accordance with accepted agricultural, silvicultural, or horticultural practices.

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3745-560-325 Compost sampling requirements for class III composting facilities.

- (A) The owner or operator shall sample the compost in accordance with the following:
- (1) Determine the volume of the pile of compost and record in the log of operations.
 - (2) Obtain one composite sample from each pile no greater than ten thousand cubic yards as follows:
 - (a) Each composite sample shall consist of nine grab samples of equal volume.
 - (b) Three grab samples shall be taken at different depths from three equally divided locations of the pile of compost.
 - (c) Thoroughly mix grab samples in a clean container to form one composite sample of a minimum volume of four quarts.
 - (3) Extract a sub-sample of a minimum volume of two quarts from the composite sample and place in a clean container.
 - (4) At a minimum, label the sample container to document the collection date, time, and person obtaining the sample.
 - (5) Samples collected for testing of table 2 in rule 3745-560-330 of the Administrative Code shall be prepared and analysis started within one of the following time frames:
 - (a) Not later than eight hours after the collection of the sample.
 - (b) Not later than forty-eight hours after the collection of the sample when refrigerated and maintained at four degrees Centigrade.
 - (6) Sample collection and preservation shall ensure valid and representative results.
- (B) Authorization for alternative frequency of sampling or sampling method. Ohio EPA may approve and condition a request for an alternative frequency of sampling or sampling method if the alternative frequency or method is determined to ensure equivalent protection of public health and safety and the environment. The determination shall be based on the information provided in paragraphs (C) and (D) of this rule and any other information required by Ohio EPA.
- (C) Request for approval of an alternative frequency of sampling. After one year of operation, the owner or operator may submit a written request for approval for an alternative frequency of sampling. The request shall include at a minimum the following information:
- (1) A description of the proposed alternative frequency of sampling including how compliance with applicable quality standards will be ensured.
 - (2) The feedstocks, bulking agents, and additives accepted at the facility.
 - (3) A copy of the test results for at least five consecutive sampling and testing cycles in accordance with this rule and rule 3745-560-330 of the Administrative Code.
 - (4) A description of the composting mix including but not limited to the feedstock to bulking agent ratio.

- (5) Any other information deemed necessary by Ohio EPA.
- (D) Request for approval of an alternative sampling method. The owner or operator may submit a written request for approval of an alternative sampling method. The request shall include at a minimum the following information:
- (1) A detailed narrative of how the alternative sampling or testing method will ensure compliance with applicable quality standards.
 - (2) The feedstocks, bulking agents, and additives accepted at the facility.
 - (3) For alternative testing methods, the scientifically recognized test preparation and analytical method that will provide equivalent or improved test results.
- (E) Ohio EPA may require the owner or operator to submit additional information upon review of a request generated in accordance with paragraph (C) or (D) of this rule.
- (F) The owner or operator who has obtained an approval for an alternative frequency of sampling or sampling method shall immediately notify the director of changes in the feedstocks, bulking agents, or additives composted or mix ratio for composting and simultaneously shall commence complying with this rule and rule 3745-560-330 of the Administrative Code.

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3745-560-330 Compost quality standards for class III composting facilities.

[Comment: For dates of non regulatory government publications, publications of recognized organizations and associations, test methods, federal rules, and federal statutory provisions referenced in this rule, see rule 3745-500-03 of the Administrative Code titled "Incorporation by reference."]

- (A) The compost quality standards in this paragraph are applicable to all compost produced from yard waste, animal waste, and agricultural plant materials. The owner or operator shall have the samples collected pursuant to rule 3745-560-325 of the Administrative Code and analyzed using the methods specified in tables 1 to 4 of this rule or other methods authorized by the director pursuant to rule 3745-560-06 of the Administrative Code. Test results shall demonstrate that concentration limits are not exceeded for the parameters listed in tables 1 to 3 of this rule. The owner or operator shall also have the samples analyzed for the parameters identified in table 4, which have no associated concentration limits, to ensure usage of compost product in accordance with accepted agricultural, silvicultural, or horticultural practices.

Table 1 - Heavy metals

| Parameter | Concentration limit mg/kg dry weight | Preparation methods | Analytical methods | TMECC equivalent methods |
|-----------|--------------------------------------|------------------------------------|--|--------------------------|
| Arsenic | 41 | SW-846 3050B or SW-846 3051A | SW-846 6010D or SW-846 6020B or SW-846 7010 | TMECC 04.06-As |
| Boron | See Table 4 | | | |
| Cadmium | 35 | SW-846 3050B or SW-846 3051A | SW-846 6010D or SW-846 6020B or SW-846 7000B or SW-846 7010 | TMECC 04.06-Cd |
| Copper | 1500 | SW-846 3050B or SW-846 3051A | SW-846 6010D or SW-846 6020B or SW-846 7000B or SW-846 7010 | TMECC 04.06-Cu |
| Lead | 300 | SW-846 3050B or SW-846 3051A | SW-846 6010D or SW-846 6020C or SW-846 7000B or SW-846 7010 | TMECC 04.06-Pb |
| Mercury | 7.8 | SW-846 7471B | SW-846 7471B SW-846 6010D or SW-846 6020B or SW-846 7000B or SW-846 7010 | TMECC 04.06-Hg |

Table 1 - Heavy metals

| | | | | |
|----------|------|------------------------------------|--|-------------------|
| Nickel | 420 | SW-846 3050B or SW-846 3051A | SW-846 6010D or SW-846 6020B or SW-846 7010 | TMECC 04.06-Ni |
| Selenium | 100 | SW-846 3050B or SW-846 3051A | SW-846 6010D or SW-846 6020B | TMECC 04.06-Se |
| Zinc | 2800 | SW-846 3050B or SW-846 3051A | SW-846 6010D or SW-846 6020B or SW-846 7000B or SW-846 7010 | TMECC 04.06-Zn |

Table 2 - Pathogens

| Parameter | Microbial count | Preparation method | Analytical method | TMECC equivalent method |
|-----------------|---|---|---|-------------------------|
| Fecal coliform | Limit of less than 1000 Most Probable Number per gram of total solids (dry weight) (1000 MPN/GTS) | Standard methods part 9221E or part 9222D | Standard methods 9260B and either 9222D, 9221E or 9223 | TMECC 07.01-B |
| Salmonella spp. | Limit of less than 3 Most Probable Number per 4 grams of total solids (3MPN/4GTS) | Standard method part 9260B | Standard methods 9260B and either 9222D or 9221E, or Neogen Reveal® 2.0 | TMECC 07.02 |

Table 3 - Inert matter

| Parameter | Concentration limit mg/kg dry weight | Preparation method | Analytical method | TMECC Equivalent method |
|--|--|--|-------------------|-------------------------|
| Inert matter | 1.0% by weight on No. 5 sieve (four mm screen) and no more than a fourth of this inert matter may be plastic | U.S. EPA 160.3 Methods for Chemical Analysis of Water and Wastes | Detailed below | TMECC 03.08 |
| Method for determining percent inert matter. Inert matter content shall be determined by | | | | |

Table 3 - Inert matter

passing a dried, weighed sample of not less than one hundred grams of compost through a "U.S. standard No. 5 sieve" (four millimeter). The material remaining on the screen shall be inspected and the inert matter shall be separated and weighed. The weight of the inert matter divided by the total weight of the compost sample and multiplied by one hundred shall be the per cent dry weight of the inert matter content.

Table 4 - General parameters

| Parameter | Analytical method |
|----------------------|--|
| Boron | TMECC 04.05-B or Preparation: SW-846 3050B or SW-846 3051A and Analytical: SW-846 6010D or SW-846 6020B |
| Maturity | TMECC 05.08-A Specific Oxygen Uptake Rate or TMECC 05.08-B Carbon Dioxide Evolution Rate or TMECC 05.08-C In-situ Oxygen Refresh Rate or TMECC 05.08-D Dewar Self-Heating Test or TMECC 05.08-E Solvita® Maturity Index or TMECC 05.08-F Biologically Available Carbon |
| pH | TMECC 04.11-A or North central regional (NCR) publication 221 or SW-846 9045D soil pH or ASTM D2976 |
| Salinity | TMECC 04.10 A or NCR publication 221 |
| Total nitrogen | AOAC 968.06 or TMECC 04.02-D or TMECC 04.02-A |
| Total organic carbon | SW-846 9060 A or TMECC 04.01-A |
| Total phosphorus | TMECC 04.03-A or Preparation: SW-846 3050B or SW-846 3051A and Analytical: SW-846 6010D or SW-846 6020B |
| Total potassium | TMECC 04.04-A or Preparation: SW-846 3050B or SW-846 3051A and Analytical: SW-846 6010D or SW-846 6020B or SW-846 7000B |

[Comment:

Acceptable levels of maturity will vary according to end-user application (note: check date of maturity test).

Acceptable pH level will vary according to end-user application and will generally be in the 5.5 - 8.5 range.

Acceptable levels of soluble salts will vary according to end-user applications. The optimal ranges for growing media (compost amended soil) is 0.5 to 4.5 millimho per centimeter.

Compost producers may provide pH and soluble salts information in product literature for the intended

end-user application that reflect user industry standards.]

- (B) Supplementary compost quality standards. Additional information or testing of feedstocks, bulking agents, additives, compost, or compost product may be required to ensure the standards are appropriately protective of public health, safety, or the environment.
- (1) Upon written notification Ohio EPA, the owner or operator shall provide information regarding the feedstocks, bulking agents, additives, compost, or compost product including but not limited to the following:
- (a) The source of the feedstocks, bulking agents, and additives, including a description of the process used to generate the feedstocks, bulking agents, and additives.
 - (b) A description of the chemical and biological constituents and results for any testing requested by Ohio EPA.
 - (c) Any other information deemed necessary by Ohio EPA.
- (2) Upon review of such additional information, the director may establish additional conditions or quality standards for the compost. The director shall provide written notification to the owner or operator of such conditions or standards.
- (C) Authorization for an alternative preparation or analytical testing method. Ohio EPA may approve and condition a request for alternative testing methods upon determination that the alternative methods ensure equivalent protection of public health, safety, and the environment. The owner or operator may submit a written request for approval of an alternative testing method that includes at a minimum the following information:
- (1) The feedstocks, bulking agents, and additives accepted at the facility.
 - (2) A description or published references to the scientifically recognized preparation or analytical method that will provide equivalent or improved test results.
 - (3) A narrative of how the requested alternative sampling or testing method will ensure compliance with applicable quality standards.
- (D) Ohio EPA may require the owner or operator to submit additional information upon review of a request generated in accordance with paragraph (C) of this rule.
- (E) An owner or operator who has obtained an approval for an alternative preparation or analytical testing method shall immediately notify the director of changes in the feedstocks, bulking agents, or additives composed or the mix ratio for composting and simultaneously shall commence complying with this rule.

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3745-560-335 Closure and termination requirements for class III composting facilities.

- (A) The owner or operator of a composting facility shall perform closure as specified in this rule if any of the following occur:
- (1) The composting facility ceases to be an active composting facility.
 - (2) The director issues a final action addressing either of the following:
 - (a) The owner or operator sells or offers for sale at retail or wholesale, uses, distributes for use, or gives away any compost that has violated the applicable quality standards established in this chapter.
 - (b) The establishment or operation of the composting facility has violated Chapter 3704., 3714., 3734., or 6111. of the Revised Code or rules adopted thereunder.
- (B) The owner or operator of a facility required to perform closure in accordance with this rule shall do the following:
- (1) If the facility is closing pursuant to paragraph (A)(1) of this rule, send a written notification to Ohio EPA, the approved board of health, and the solid waste management district indicating the date on which the facility will cease acceptance of the waste materials.
 - (2) Not later than seven days after closure is required under paragraph (A) of this rule, the owner or operator of a composting facility that allowed public access shall post signs, stating in letters not less than three inches high that the facility is closed. The signs shall be posted in such a manner as to be easily visible at all access points into the facility and shall be maintained in legible condition for not less than one year, or until the facility re-opens as a registered composting facility or is converted to an alternative use. The text of the signs shall be the following:

"This facility is closed for all composting activities and all receipt of waste materials. Depositing solid wastes at this site constitutes open dumping which is a violation of Chapter 3734. of the Revised Code."
 - (3) Conduct the facility closure requirements in accordance with paragraph (C) of this rule.
 - (4) Send written notification to Ohio EPA or approved board of health certifying that the facility closure requirements have been completed in accordance with this rule.
 - (5) Comply with rule 3745-560-310 of the Administrative Code until receipt of a letter of concurrence from Ohio EPA or the approved board of health stating that the facility is in compliance with the closure requirements of this rule.
- (C) The owner or operator shall perform the following closure activities:
- (1) Remove compost products and solid wastes from the composting facility.
 - (2) Remove and properly dispose of leachate remaining on the site in accordance with applicable laws and regulations.
 - (3) Modify, remove, or seal the leachate collection system to prevent discharges from the system to surface waters of the state or ground water unless such discharges are otherwise regulated in accordance with Chapter 6111. of the Revised Code.
 - (4) Clean containers, equipment, machines, and materials placement area surfaces that were in contact with solid wastes at any time during the operation of the facility using procedures that substantially reduce or

eliminate any remaining constituents or contaminants. This paragraph does not apply to materials placement area surfaces composed of soil, gravel, slag, or other permeable material.

- (D) Criteria for termination of a registration. A registration for a facility that has completed closure shall terminate upon receipt of a letter of concurrence by Ohio EPA or the approved board of health stating that the facility is in compliance with the closure requirements contained in this rule.
- (E) This rule does not apply to a registrant who requests termination of a composting facility registration after obtaining appropriate authorizations for a class I or II composting facility.
- (F) An owner or operator who requests the termination of the composting facility registration after the composting facility ceases to be an active composting facility, for the purpose of a change to a class III or IV composting facility, or to change to a yard waste only transfer facility in accordance with Chapter 3745-555 of the Administrative Code, may submit a written request to Ohio EPA or the approved board of health for alternative closure requirements. Ohio EPA or the approved board of health may approve alternative closure requirements provided the requirements are protective of public health, safety, and the environment.

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3745-560-400 Class IV composting facility establishment.

- (A) No person shall establish a new class IV composting facility or continue to operate an existing facility without first submitting a registration application in accordance with this rule.
- (B) Registration of class IV composting facility. A registration application shall include the following:
- (1) Registration form prescribed by the director including but not limited to business name, contact person including the operator and property owner, contact information, location of the proposed composting facility, and a statement certifying compliance with the siting criteria specified in paragraph (C) of this rule:
 - (2) Plan view drawing, using a scale of one inch equals no greater than one hundred feet, showing the following information inside the facility boundaries and within five hundred feet beyond the facility boundaries:
 - (a) The property lines of land owned or leased for the composting facility.
 - (b) The boundary lines for the composting facility.
 - (c) Public roads, railroads, and structures.
 - (d) Existing topography showing contours, streams, wetlands, lakes, springs, and other surface waters of the state.
 - (e) The north arrow.
 - (f) Boundary lines for the materials placement area based on the design capacity and the operational capacity, if the operational capacity is different than the design capacity. The boundary lines shall include the areas for each of the following:
 - (i) Composting and materials processing.
 - (ii) Receiving and storage of feedstocks, bulking agents, or additives.
 - (iii) Storage of alternative materials authorized pursuant to rule 3745-560-405 of the Administrative Code and the composting processing area dedicated to these materials.
 - (iv) Storage of compost product.
 - (g) Existing occupied dwellings.
 - (h) Any leachate management structure.
 - (i) The limits of the one hundred year floodplain.
 - (j) National park or national recreation areas, candidate areas for potential inclusion into the national park system, and any state park or established state park purchase areas.
 - (k) Any state or Ohio history connection nature preserves, state wildlife areas and national wildlife refuges, national and state wild scenic and recreational rivers, special interest areas and research natural areas in the Wayne national forest, state resource waters, coldwater habitats, and exceptional

warmwater habitats.

[Comment: Both the Ohio department of natural resources and the Ohio history connection, formerly the Ohio historical society, designate state nature preserves in Ohio.]

- (l) Existing public water supply wells, developed springs, or private potable water supply wells.
 - (m) Existing drainage sinkholes or agricultural drainage wells.
 - (n) The direction of the downward slopes and drainage for the materials placement area.
- (3) Calculation of the design capacity of the composting facility.
- (4) Calculation of the operational capacity of the composting facility which shall be less than or equal to the design capacity of the composting facility. Facilities accepting authorized alternative materials upon initial registration shall also specify the maximum capacity and area dedicated to alternative materials.
- (5) Copies of consent letters pursuant to paragraph (C) of this rule.
- (6) Copies of the letters of intent required in paragraph (D) of this rule.
- (C) On the date the registration application is received by Ohio EPA, the limits of materials placement and leachate management structures shall meet the following siting criteria:
- (1) Unless located in an enclosed building, the materials placement area and leachate management structures shall not be located within the following:
 - (a) Two hundred feet from any surface waters of the state.
 - (b) Two hundred feet from a public water supply well, a developed spring, or a private potable water supply well, unless either of the following conditions are met:
 - (i) The water supply well or developed spring is controlled by the owner or operator, needed as a source of nonpotable water, and constructed to prevent contamination of the ground water.
 - (ii) The water supply well or developed spring was constructed and is used solely for monitoring ground water quality.
 - (c) Five hundred feet from the following:
 - (i) An area designated by the Ohio department of natural resources as either a state nature preserve, a state wildlife area, or a state scenic river.
 - (ii) An area designated, owned, and managed by the Ohio history connection as a nature preserve.
 - (iii) An area designated by the United States department of the interior as either a national wildlife refuge or a national scenic river.
 - (iv) An area designated by the United States forest service as either a special interest area or a research natural area in the Wayne national forest.
 - (v) Surface waters of the state designated by Ohio EPA as either a state resource water, an outstanding national resource water, a superior high quality water, a coldwater habitat, or an exceptional warmwater habitat.

- (d) A one hundred year floodplain, unless the owner or operator demonstrates in the registration application that the facility will be designed, constructed, operated, and maintained to prevent washout of any waste materials by a one-hundred-year flood.
- (e) Two hundred fifty feet from an occupied dwelling, unless the occupied dwelling is owned or leased by the owner or operator, or the owner or operator has received written consent from the owner of the occupied dwelling.

- (2) The portions of the materials placement area and leachate management structures located within an enclosed building shall comply with paragraphs (C)(1)(d) to (C)(1)(f) of this rule.

For the purposes of this rule, an "enclosed building" means a structure with a low-permeability floor, walls, doors, and a roof that is capable of enclosing all waste handling areas, preventing rain from reaching the enclosed waste handling areas, and containing and collecting leachate within the enclosed waste handling areas.

- (3) Except for facilities which exclusively compost wastes generated within state parks or national parks, or national recreation areas, as of the date the initial registration application was submitted, the materials placement areas and leachate management system of the composting facility shall not be located in any one or combination of the following:

- (a) A national park or national recreation area.
- (b) A state park or an established state park purchase area.
- (c) A candidate area for potential inclusion in the national park system.
- (d) A property that lies within the boundaries of a national park or national recreation area but that has not been acquired or is not administered by the secretary of the United States department of the interior.

- (D) Concurrent to submittal of the registration application, letters of intent to establish a composting facility which include a description of property and facility boundaries shall be sent by certified mail or any other form of mail accompanied by a receipt requested to the following:

- (1) The governments of the general purpose political subdivisions where the facility is proposed to be located including but not limited to local health departments, county commissioners, legislative authority of a municipal corporation, or the board of township trustees.
- (2) The single or joint county solid waste management district or districts or regional solid waste management authority or authorities where the facility is proposed to be located.
- (3) The owner or lessee of any easement or right of way bordering or within the proposed facility boundaries which may be affected by the proposed solid waste facility.
- (4) The local zoning authority having jurisdiction.
- (5) The park system administrator, if any part of the proposed facility is to be located within or will share the park boundary.
- (6) The conservancy district, if any part of the proposed facility is to be located within or will share the conservancy district boundary.

- (7) The fire department having responsibility for providing fire control services where the proposed facility is to be located.
- (E) Upon written notification by Ohio EPA that the registration application is incomplete, the applicant shall correct noted deficiencies and resubmit the registration application not later than thirty days after receipt after the notification.
- (F) Amendments to an existing registration. The registrant shall ensure that changes to the composting facility are in compliance with applicable regulations and all information contained on the plan view drawing and registration application is current by submitting an amended registration application as follows:
- (1) An amendment to an existing registration is required for changes in the information on the registration application, which may include but is not limited to the information required by paragraph (B) of this rule.
 - (2) An amendment to an existing registration involving any proposed change to the materials placement area shall include a revised plan view drawing submitted prior to implementation of any change. The plan view drawing shall include the information required in this rule. Any change to the materials placement area requires written concurrence from Ohio EPA acknowledging compliance with this chapter. If the amendment to the existing registration does not involve any proposed changes to the existing registration's plan drawing, the amendment may reference the existing registration's plan drawing.
- (G) Composting facilities registered prior to April 2, 2012 shall comply with siting criteria in effect on the date of initial registration.

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3745-560-401 Criteria for approval of a class IV composting facility registration.

A class IV composting facility shall not be considered registered unless compliance with the following are determined by Ohio EPA:

- (A) The registration application contains the information required in forms prescribed by the director as established in rule 3745-560-400 of the Administrative Code.
- (B) The siting criteria as established in rule 3745-560-400 of the Administrative Code have been met.
- (C) The plan view drawing contains the information required in rule 3745-560-400 of the Administrative Code.
- (D) The letters of intent were sent in accordance with rule 3745-560-400 of the Administrative Code.
- (E) If the proposed composting facility is established on land where a hazardous or solid waste facility was operated, the owner or operator has obtained previous authorization as required by rule 3745-27-13 of the Administrative Code.
- (F) The owner or operator is in substantial compliance at other solid waste disposal facilities that are owned or operated by the owner or operator.
- (G) The establishment and operation of the composting facility will not violate Chapter 3704., 3734., or 6111. of the Revised Code.
- (H) If Ohio EPA determines that information in addition to that required by rule 3745-560-400 of the Administrative Code is necessary to determine whether the criteria set forth in paragraph (A) of this rule are satisfied, Ohio EPA may require that the applicant supply such information as a precondition to further consideration of the registration application.

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3745-560-402 Construction and commencement of operations at class IV composting facilities.

- (A) Facility design and construction. The composting facility shall be designed and constructed to meet the following:
- (1) The land surface of the materials placement area shall have a slope greater than or equal to one per cent and less than or equal to six per cent so as to direct surface water to collection points or otherwise control the surface water drainage.
 - (2) Prevent run-on from reaching the materials placement area.
 - (3) Prevent ponding and erosion.
 - (4) Minimize the potential impact to surface water and ground water.
 - (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) Construction of the materials placement area to allow facility operation during inclement weather.
 - (7) Construction of roads within the facility boundary to allow for passage of vehicles at all times.
 - (8) Signs are posted with letters not less than three inches in height at the entrance of the composting facility that include the following statement:

"This composting facility only accepts yard waste and agricultural plant materials and will not accept hazardous wastes, infectious wastes, asbestos, batteries, or other prohibited materials."
- (B) Site preparation. The following requirements shall be completed prior to initial acceptance of feedstocks, bulking agents, or additives at the composting facility:
- (1) The composting facility and materials placement area has been constructed in accordance with paragraph (A) of this rule.
 - (2) Leachate and surface water management structures, if applicable, have been constructed in accordance with Chapter 6111. of the Revised Code.
 - (3) Signs are posted in accordance with paragraph (A) of this rule.
- (C) Initial acceptance of feedstocks. The owner or operator may begin to accept feedstocks, bulking agents, or additives if the owner or operator has submitted a registration application that complies with paragraphs (A) and (B) of rule 3745-560-401 of the Administrative Code, the owner or operator has complied with paragraphs (A) and (B) of this rule, and one of the following occurs:
- (1) The prepared composting facility has been inspected and written concurrence has been received from Ohio EPA acknowledging compliance with this rule.
 - (2) Ninety days have passed since Ohio EPA received the registration application.
- (D) Notwithstanding the provisions of paragraph (C) of this rule, the owner or operator shall not begin to accept feedstocks, bulking agents, or additives if not later than ninety days after Ohio EPA received the registration application, the director has provided a written notification of deficiency to the owner or operator that the registration application does not comply with paragraphs (A) and (B) of rule 3745-560-401 of the

Administrative Code or that the owner or operator has not complied with paragraphs (A) and (B) of this rule. If the owner or operator fails to address the deficiencies, the director may deny the registration application or approve the registration application with a variance or exemption.

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3745-560-405 Alternative materials request for class IV composting facilities.

- (A) The owner or operator of a class IV composting facility may submit a written request to the director for an approval to accept alternative materials not otherwise prohibited or authorized in rule 3745-560-410 of the Administrative Code. The request shall be submitted on forms prescribed by the director and include at a minimum the following:
- (1) A detailed description of the material to be accepted including a description of any known or potential contaminants that may cause or threaten to cause an adverse impact to public health, safety, or the environment, and any available analytical data on the material.
 - (2) The source and suppliers of the material.
 - (3) The maximum amount of the material that the facility may accept on a daily basis.
 - (4) A detailed description of the intended use as a feedstock, bulking agent, or additive and how the alternative material might function for that use.
 - (5) A detailed description of any impact that may result from the acceptance of the material in regard to the management of odor, litter, vectors, and leachate or other operational requirements of rule 3745-560-410 of the Administrative Code including the methods that will be used to control the impacts.
 - (6) Whether the owner or operator is requesting to compost the material on a temporary or continued basis.
 - (7) A detailed description of how the material will be managed at the facility. At a minimum, the description shall include the following:
 - (a) Whether the owner or operator will shred or screen the material prior to incorporation into the composting process.
 - (b) What equipment will be utilized.
 - (c) The percentage of mixture of the feedstock, bulking agent, or additive with other authorized feedstocks, bulking agents, or additives and the resulting carbon to nitrogen ratio.
 - (d) The method of composting utilized and any other methods of conditioning compostable material to be used if applicable.
 - (e) The anticipated moisture level of the incoming feedstock, bulking agent, or additive and the anticipated moisture levels after mixing with other authorized feedstocks, bulking agents, or additives.
 - (f) Any special management requirements due to the physical, biological or chemical characteristics of the alternative material
 - (8) How the owner or operator intends to distribute or otherwise utilize the compost product.
 - (9) Any other information deemed necessary by Ohio EPA.
- (B) The director may approve and condition a request submitted in accordance with this rule upon determination of the following:

- (1) The use of the alternative material is technically feasible for composting and the owner or operator will use an approved composting method.
- (2) The owner or operator has appropriate equipment and has demonstrated that there is enough operational capacity at the facility to manage the alternative material.
- (3) The material proposed as an alternative material for composting possesses properties capable of meeting compost quality standards for a class IV composting facility, in accordance with rule 3745-560-420 of the Administrative Code.
- (4) The acceptance of the alternative material is unlikely to cause violations of Chapter 3704. 3734., or 6111. of the Revised Code, this chapter, or any other applicable federal or state laws.
- (5) The acceptance, processing, and use of the material is unlikely to adversely affect or threaten to cause an adverse effect to public health, safety, or the environment.

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

- (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.

Effective: 10/1/2018
Five Year Review (FYR) Dates: 11/14/2017 and 11/14/2022

CERTIFIED ELECTRONICALLY

Certification

08/20/2018

Date

Promulgated Under: 119.03
Statutory Authority: 3734.02, 3734.028, 3734.12
Rule Amplifies: 3734.02, 3734.028, 3734.12
Prior Effective Dates: 04/02/2012

3745-560-415 Record keeping requirements for class IV composting facilities.

- (A) Record retention and availability. The owner or operator shall do the following:
- (1) Maintain records specified in this rule for a period of at least three years.
 - (2) Have records available for inspection by the approved board of health or Ohio EPA during normal operating hours.
 - (3) Upon request, submit records to Ohio EPA or the approved board of health.
- (B) Log of operation. The owner or operator shall do the following:
- (1) Record the facility operations on the log of operation forms as specified in rule 3745-560-04 of the Administrative Code.
 - (2) Complete the log of operation at a minimum once per week unless the owner or operator has received written concurrence for an alternative frequency from Ohio EPA or the approved board of health.
 - (3) Complete the log of operation more often than weekly if conditions warrant a higher frequency of completion in order to effectively monitor operations at the composting facility, or when required by Ohio EPA or the approved board of health.
- (C) Annual report. Not later than February first of each year, the owner or operator shall submit an annual report to Ohio EPA. The annual report shall include the required information specified in rule 3745-560-04 of the Administrative Code.

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3745-560-420 Compost distribution requirements for class IV composting facilities.

Compost produced at class IV composting facilities in accordance with this chapter is considered a compost product acceptable for distribution for use in accordance with accepted agricultural, silvicultural, or horticultural practices, regardless of the extent of biological decomposition of the waste materials, and does not have specified quality standards.

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3745-560-435 Closure and termination requirements for class IV composting facilities.

- (A) The owner or operator of a composting facility shall perform closure as specified in this rule if any of the following occur:
- (1) The composting facility ceases to be an active composting facility.
 - (2) The director issues a final action addressing either of the following:
 - (a) The owner or operator sells or offers for sale at retail or wholesale, uses, distributes for use, or gives away any compost that does not comply with the applicable quality standards established in this chapter.
 - (b) The establishment or operation of the composting facility has violated Chapter 3704., 3714., 3734., or 6111. of the Revised Code or rules adopted thereunder.
- (B) The owner or operator of a facility required to perform closure in accordance with this rule shall do the following:
- (1) If the facility is closing pursuant to paragraph (A)(1) of this rule, send a written notification to Ohio EPA, the approved board of health, and the solid waste management district indicating the date on which the facility will cease acceptance of the waste materials.
 - (2) Not later than seven days after closure is required under paragraph (A) of this rule, the owner or operator of a composting facility that allowed public access shall post signs, stating in letters not less than three inches high that the facility is closed. The signs shall be posted in such a manner as to be easily visible at all access points into the facility and shall be maintained in legible condition for not less than one year, or until the facility re-opens as a registered composting facility or is converted to an alternative use. The text of the signs shall be the following:

"This facility is closed for all composting activities and all receipt of waste materials. Depositing solid wastes at this site constitutes open dumping which is a violation of Chapter 3734. of the Revised Code."
 - (3) Conduct the facility closure requirements in accordance with paragraph (C) of this rule.
 - (4) Send written notification to Ohio EPA or approved board of health certifying that the facility closure requirements have been completed in accordance with this rule.
 - (5) Comply with rule 3745-560-410 of the Administrative Code until receipt of a letter of concurrence from Ohio EPA or the approved board of health stating that the facility is in compliance with the closure requirements of this rule.
- (C) The owner or operator shall perform the following closure activities:
- (1) Remove compost products and solid wastes from the composting facility.
 - (2) Remove and properly dispose of leachate remaining on the site in accordance with applicable laws and regulations.
 - (3) Modify, remove, or seal the leachate collection system to prevent discharges from the system to surface waters of the state or ground water unless such discharges are otherwise regulated in accordance with Chapter 6111. of the Revised Code.
 - (4) Clean containers, equipment, machines, and materials placement area surfaces that were in contact with

solid wastes at any time during the operation of the facility using procedures that substantially reduce or eliminate any remaining constituents or contaminants. This paragraph does not apply to materials placement area surfaces composed of soil, gravel, slag, or other permeable material.

- (D) Criteria for termination of a registration. A registration for a facility that has completed closure shall terminate upon receipt of a letter of concurrence by Ohio EPA or the approved board of health stating that the facility is in compliance with the closure requirements contained in this rule.
- (E) This rule does not apply to a registrant who requests termination of a composting facility registration after obtaining appropriate authorizations for a class I, II, or III composting facility.
- (F) An owner or operator who requests the termination of the composting facility registration after the composting facility ceases to be an active composting facility, or to change to a yard waste only transfer facility in accordance with Chapter 3745-555 of the Administrative Code, may submit a written request to Ohio EPA or the approved board of health for alternative closure requirements. Ohio EPA or the approved board of health may approve alternative closure requirements provided the requirements are protective of public health, safety, and the environment.

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