

**3745-66-10 Applicability- closure and post-closure.**

Except as rule 3745-65-01 of the Administrative Code provides otherwise:

- (A) Rules 3745-66-11 to 3745-66-15 of the Administrative Code, which concern closure, apply to the owners and operators of all hazardous waste management facilities; and
- (B) Rules 3745-66-16 to 3745-66-20 of the Administrative Code, which concern post-closure care, apply to the owners and operators of:
  - (1) All hazardous waste disposal facilities;
  - (2) Waste piles and surface impoundments for which the owner or operator intends to remove the wastes at closure to the extent that these rules are made applicable to such facilities in rule 3745-67-28 or 3745-67-58 of the Administrative Code;
  - (3) Tank systems that are required under rule 3745-66-97 of the Administrative Code to meet requirements for landfills; and
  - (4) Containment buildings that are required under rule 3745-256-102 of the Administrative Code to meet the requirements for landfills.
- (C) Rule 3745-66-21 of the Administrative Code applies to owners and operators of units that are subject to the requirements of paragraph (G) of rule 3745-50-45 of the Administrative Code and are regulated under an enforceable document as defined in paragraph (G) of rule 3745-50-45 of the Administrative Code.
- (D) The director may replace all or part of the requirements of rules 3745-66-10 to 3745-66-21 of the Administrative Code [and the unit-specific standards in paragraph (C) of rule 3745-66-11 of the Administrative Code that apply to a regulated unit (as defined in rule 3745-54-90 of the Administrative Code), with alternative requirements for closure set out in an approved closure or post-closure plan or in an enforceable document [as defined in paragraph (G) of rule 3745-50-45 of the Administrative Code] where the director determines that:
  - (1) A regulated unit is situated among waste management units (or areas of concern), a release has occurred, and both the regulated unit and one or more waste management unit(s) (or areas of concern) are likely to have contributed to the release; and
  - (2) It is not necessary to apply the requirements of rules 3745-66-10 to 3745-66-21 of the Administrative Code (and/or those referenced in this rule) because the alternative requirements will protect human health and the environment, and will satisfy the closure performance standard of paragraphs (A) and (B) of rule 3745-66-11 of the Administrative Code.

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3745-66-11                    **Closure performance standard.**

The owner or operator must close his facility in a manner that:

- (A) Minimizes the need for further maintenance; and
- (B) Controls, minimizes, or eliminates, to the extent necessary to protect human health and the environment, post-closure escape of hazardous waste, hazardous constituents, leachate, contaminated run-off, or hazardous waste decomposition products to the ground water, or surface waters, or to the atmosphere; and
- (C) Complies with the closure requirements of rules 3745-66-10 to 3745-66-21, including, but not limited to, the requirements of rules 3745-66-97, 3745-67-28, 3745-67-58, 3745-67-80, 3745-68-10, 3745-68-51, 3745-68-81, 3745-69-04, and ~~3745-205-102~~3745-256-102 of the Administrative Code.

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Certification

07/23/2010

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Date

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3745-66-12

**Closure plan and amendment of closure plan.**

- (A) Written closure plan. On April 15, 1981, the owner or operator of a hazardous waste management facility shall have a written closure plan. Until final closure is completed and certified in accordance with rule 3745-66-15 of the Administrative Code, a copy of the most current closure plan shall be furnished to the director upon request, including request by mail. In addition, for facilities without approved closure plans, a copy of the most current closure plan shall be provided during site inspections, on the day of inspection, to any officer, employee, or representative of Ohio EPA who is duly designated by the director.
- (B) Content of closure plan. The closure plan shall identify steps necessary to perform partial or final closure of the facility at any point during the active life of the facility. The closure plan shall include at least ~~the following~~:
- (1) A description of how each hazardous waste management unit at the facility will be closed in accordance with rule 3745-66-11 of the Administrative Code; and
  - (2) A description of how final closure of the facility will be conducted in accordance with rule 3745-66-11 of the Administrative Code. The description shall identify the maximum extent of the operation which will be unclosed during the active life of the facility; and
  - (3) An estimate of the maximum inventory of hazardous wastes ever on-site over the active life of the facility and a detailed description of the methods to be used during partial and final closure, including, but not limited to, methods for removing, transporting, treating, storing, or disposing of all hazardous waste, identification of and the types of off-site hazardous waste management units to be used, if applicable; and
  - (4) A detailed description of the steps needed to remove or decontaminate all hazardous waste residues and contaminated containment system components, equipment, structures, and soils during partial and final closure including, but not limited to, procedures for cleaning equipment and removing contaminated soils, methods for sampling and testing surrounding soils, and criteria for determining the extent of decontamination necessary to satisfy the closure performance standard; and
  - (5) A detailed description of other activities necessary during the partial and final closure periods to ensure that all partial closures and final closure satisfy the closure performance standards, including, but not limited to, ground water monitoring, leachate collection, and run-on and run-off control; and

- (6) A schedule for closure of each hazardous waste management unit and for final closure of the facility. The schedule shall include, at a minimum, the total time required to close each hazardous waste management unit and the time required for intervening closure activities which will allow tracking of the progress of partial and final closure (for example, in the case of a landfill unit, estimates of the time required to treat or dispose of all hazardous waste inventory and of the time required to place a final cover shall be included); and
- (7) An estimate of the expected year of final closure for facilities that use trust funds to demonstrate financial assurance under rule 3745-66-43 or 3745-66-45 of the Administrative Code and for which the remaining operating life is less than twenty years, and for facilities without approved closure plans.
- (8) For facilities where the director has applied alternative requirements at a regulated unit under paragraph (F) of rule 3745-54-90, paragraph (D) of rule 3745-66-10, or paragraph (D) of rule 3745-66-40 of the Administrative Code, either the alternative requirements that apply to the regulated unit, or a reference to the enforceable document that contains those alternative requirements.
- (C) Amendment of closure plan. The owner or operator may amend the closure plan at any time prior to the notification of partial or final closure of the facility. An owner or operator with an approved closure plan shall submit a written request to the director to authorize a change to the approved closure plan. The written request shall include a copy of the amended closure plan for approval by the director.
- (1) The owner or operator shall amend the closure plan whenever ~~any of the following occur:~~
- (a) Changes in operating plans or facility design affect the closure plan; or
  - (b) There is a change in the expected year of closure, if applicable; or
  - (c) In conducting partial or final closure activities, unexpected events require a modification of the closure plan; or
  - (d) The owner or operator requests the director to apply alternative requirements to a regulated unit under paragraph (F) of rule 3745-54-90, paragraph (D) of rule 3745-66-10, or paragraph (D) of rule 3745-66-40 of the Administrative Code.
- (2) The owner or operator shall amend the closure plan at least sixty days prior to the proposed change in facility design or operation, or no later than sixty days after an unexpected event has occurred which has affected the closure plan. If an unexpected event occurs during the partial or final closure period, the

owner or operator shall amend the closure plan no later than thirty days after the unexpected event. These provisions also apply to owners or operators of surface impoundments and waste piles who intended to remove all hazardous wastes at closure, but are required to close as landfills in accordance with rule 3745-68-10 of the Administrative Code.

- (3) An owner or operator with an approved closure plan shall submit the modified closure plan to the director at least sixty days prior to the proposed change in facility design or operation, or no more than sixty days after an unexpected event has occurred which has affected the closure plan. If an unexpected event has occurred during the partial or final closure period, the owner or operator shall submit the modified closure plan no more than thirty days after the unexpected event. These provisions also apply to owners or operators of surface impoundments and waste piles who intended to remove all hazardous wastes at closure but are required to close as landfills in accordance with rule 3745-68-10 of the Administrative Code. If the amendment to the closure plan is a "Class 2" or "Class 3" modification according to the criteria in rule 3745-50-51 of the Administrative Code, the modification to the closure plan will be approved according to the procedures in paragraph (D)(4) of this rule.
- (4) The director may request modifications to the closure plan under the conditions described in paragraph (C)(1) of this rule. An owner or operator with an approved closure plan shall submit the modified closure plan within sixty days after the request from the director, or within thirty days if the unexpected event occurs during partial or final closure. If the amendment is considered a "Class 2" or "Class 3" modification according to the criteria in rule 3745-50-51 of the Administrative Code, the modification to the closure plan will be approved in accordance with the procedures in paragraph (D)(4) of this rule.

(D) Notification of partial closure and final closure.

- (1) The owner or operator shall submit the closure plan to the director at least one hundred eighty days prior to the date on which the owner or operator expects to begin closure of the first surface impoundment, waste pile, land treatment, or landfill unit, or final closure if closure involves such a unit, whichever is earlier. The owner or operator shall submit the closure plan to the director at least forty-five days prior to the date on which the owner or operator expects to begin partial or final closure of a boiler or industrial furnace. The owner or operator shall submit the closure plan to the director at least forty-five days prior to the date on which the owner or operator expects to begin final closure of a facility with only tanks, container storage, or incinerator units. Owners or operators with approved closure plans shall notify the director in writing at least sixty days prior to the date on which the owner or operator expects to begin closure

of a surface impoundment, waste pile, landfill, or land treatment unit, or final closure of a facility involving such a unit. Owners or operators with approved closure plans shall notify the director in writing at least forty-five days prior to the date on which the owner or operator expects to begin partial or final closure of a boiler or industrial furnace. Owners or operators with approved closure plans shall notify the director in writing at least forty-five days prior to the date on which the owner or operator expects to begin final closure of a facility with only tanks, container storage, or incinerator units.

- (2) The date when the owner or operator "expects to begin closure" shall be either:
- (a) Within thirty days after the date on which any hazardous waste management unit receives the known final volume of hazardous wastes or, if there is a reasonable possibility that the hazardous waste management unit will receive additional hazardous wastes, no later than one year after the date on which the unit received the most recent volume of hazardous waste. If the owner or operator of a hazardous waste management unit can demonstrate to the director that the hazardous waste management unit or facility has the capacity to receive additional hazardous wastes and the owner or operator has taken, and will continue to take, all steps to prevent threats to human health and the environment, including compliance with all applicable provisions of Chapters 3745-65 to 3745-69 and 3745-256 of the Administrative Code, the director may approve an extension to this one-year limit; or
  - (b) For units ~~that meet~~meeting the requirements of paragraph (D) of rule 3745-66-13 of the Administrative Code, no later than thirty days after the date on which the hazardous waste management unit receives the known final volume of nonhazardous wastes, or if there is a reasonable possibility that the hazardous waste management unit will receive additional nonhazardous wastes, no later than one year after the date on which the unit received the most recent volume of nonhazardous wastes. If the owner or operator can demonstrate to the director that the hazardous waste management unit has the capacity to receive additional nonhazardous wastes and the owner or operator has taken, and will continue to take, all steps to prevent threats to human health and the environment, including compliance with all applicable provisions of Chapters 3745-65 to 3745-69 and 3745-256 of the Administrative Code, the director may approve an extension to this one-year limit.
- (3) The owner or operator shall submit the owner's or operator's closure plan to the director no later than fifteen days after ~~either~~:



- (a) Notice of failure to qualify for a permit by rule, revocation, or withdrawal of a permit by rule, except when a "Part B" permit is issued simultaneously with revocation or withdrawal of a permit by rule; or
  - (b) Issuance of a judicial decree or the issuance by the director of an order for compliance to cease receiving hazardous wastes or close.
- (4) The director will provide the owner or operator and the public, through a newspaper notice, the opportunity to submit written comments on the closure plan and request modifications to the closure plan no later than thirty days after the date of the notice. ~~The director will also, in~~ response to a request or at the director's discretion, the director will also hold a public hearing whenever such a hearing might clarify one or more issues concerning a closure plan. The director will give public notice of the hearing at least thirty days before the public hearing occurs. (Public notice of the hearing may be given at the same time as notice of the opportunity for the public to submit written comments, and the two notices may be combined.) The director will approve, modify, or disapprove the closure plan within ninety days after receipt of the closure plan. If the director does not approve the closure plan, the director will provide the owner or operator with a detailed written statement of reasons for the refusal, and the owner or operator shall modify the closure plan or submit a new closure plan for approval within thirty days after receipt of such written statement. The director will approve or modify this closure plan in writing within sixty days. If the director modifies the closure plan, this modified closure plan becomes the approved closure plan. The director will assure that the approved closure plan is consistent with rules 3745-66-11 to 3745-66-15 of the Administrative Code and the applicable requirements of rules 3745-65-90 to 3745-65-94, 3745-66-97, 3745-67-28, 3745-67-58, 3745-67-80, 3745-68-10, 3745-68-51, 3745-68-81, 3745-69-04, and 3745-256-102 of the Administrative Code. A copy of the modified closure plan with a detailed statement of reasons for the modifications will be mailed to the owner or operator.
- (E) Removal of wastes and decontamination or dismantling of equipment. Nothing in this rule precludes the owner or operator from removing hazardous wastes and decontaminating or dismantling equipment in accordance with the approved partial or final closure plan at any time before or after notification of partial or final closure.

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Five Year Review (FYR) Dates: 7/20/2022 and Exempt

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10/11/2022

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Date

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08/29/1985, 11/13/1987, 12/08/1988, 02/11/1992,  
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09/05/2010, 03/24/2017

3745-66-13

**Time allowed for closure.**

(A) Within ninety days after receiving the final volume of hazardous wastes, or the final volume of nonhazardous wastes if the owner or operator complies with all applicable requirements in paragraphs (D) and (E) of this rule, at a hazardous waste management unit or facility, or within ninety days after approval of the closure plan, whichever is later, the owner or operator must treat, remove from the unit or facility, or dispose of on-site, all hazardous wastes in accordance with the approved closure plan. The director may approve a longer period if the owner or operator demonstrates that:

(1)

(a) The activities required to comply with paragraphs (A) to (A)(2) of this rule will, of necessity, take longer than ninety days to complete; or

(b)

(i) The hazardous waste management unit or facility has the capacity to receive additional hazardous wastes, or has the capacity to receive nonhazardous wastes if the facility owner or operator complies with paragraphs (D) and (E) of this rule; and

(ii) There is a reasonable likelihood that he or another person will recommence operation of the hazardous waste management unit or the facility within one year; and

(iii) Closure of the hazardous waste management unit or facility would be incompatible with continued operation of the hazardous waste management unit or facility; and

(2) He has taken and will continue to take all steps to prevent threats to human health and the environment, including compliance with all applicable requirements in Chapters 3745-65 to 3745-69 and 3745-256 of the Administrative Code.

(B) The owner or operator must complete partial and final closure activities in accordance with the approved closure plan and within one hundred eighty days after receiving the final volume of hazardous wastes, or the final volume of nonhazardous wastes if the owner or operator complies with all applicable requirements in paragraphs (D) and (E) of this rule, at the hazardous waste management unit or facility, or one hundred eighty days after approval of the closure plan, if that is later. The director may approve an extension to the closure

period if the owner or operator demonstrates that:

- (1)
    - (a) The partial or final closure activities will, of necessity, take longer than one hundred eighty days to complete; or
    - (b)
      - (i) The hazardous waste management unit or facility has the capacity to receive additional hazardous wastes, or has the capacity to receive nonhazardous wastes if the facility owner or operator complies with paragraphs (D) and (E) of this rule; and
      - (ii) There is a reasonable likelihood that he or another person will recommence operation of the hazardous waste management unit or facility within one year; and
      - (iii) Closure of the hazardous waste management unit or facility would be incompatible with continued operation of the site; and
  - (2) He has taken and will continue to take all steps to prevent threats to human health and the environment from the unclosed but not operating hazardous waste management unit or facility, including compliance with all applicable requirements in Chapters 3745-65 to 3745-69 and 3745-256 of the Administrative Code.
- (C) The demonstrations referred to in paragraphs (A)(1) and (B)(1) of this rule must be made as follows:
- (1) The demonstrations referred to in paragraph (A)(1) of this rule must be made at least thirty days prior to the expiration of the ninety-day period in paragraph (A) of this rule; and
  - (2) The demonstrations in paragraph (B)(1) of this rule must be made at least thirty days prior to the expiration of the one-hundred-eighty-day period in paragraph (B) of this rule, unless the owner or operator is otherwise subject to the deadlines in paragraph (D) of this rule.
- (D) The director may allow an owner or operator to receive nonhazardous waste in a landfill, land treatment, or surface impoundment unit after the final receipt of

hazardous wastes at that unit if:

- (1) The owner or operator submits an amended "Part B" application, or a "Part B" application, if not previously required, and demonstrates that:
  - (a) The unit has the existing design capacity as indicated on the "Part A" application to receive nonhazardous wastes; and
  - (b) There is a reasonable likelihood that the owner or operator or another person will receive nonhazardous waste in the unit within one year after the final receipt of hazardous wastes; and
  - (c) The nonhazardous wastes will not be incompatible with any remaining wastes in the unit or with the facility design and operating requirements of the unit or facility under Chapters 3745-65 to 3745-69 and 3745-256 of the Administrative Code; and
  - (d) Closure of the hazardous waste management unit would be incompatible with continued operation of the unit or facility; and
  - (e) The owner or operator is operating and will continue to operate in compliance with all applicable requirements in the hazardous waste rules; and
- (2) The "Part B" application includes an amended waste analysis plan, ground water monitoring and response program, human exposure assessment required under RCRA ~~section~~Section 3019, and closure and post-closure plans, and updated cost estimates and demonstrations of financial assurance for closure and post-closure care as necessary and appropriate to reflect any changes due to the presence of hazardous constituents in the nonhazardous wastes, and changes in closure activities, including the expected year of closure if applicable under paragraph (B)(7) of rule 3745-66-12 of the Administrative Code, as a result of the receipt of nonhazardous wastes following the final receipt of hazardous wastes; and
- (3) The "Part B" application is amended, as necessary and appropriate, to account for the receipt of nonhazardous wastes following receipt of the final volume of hazardous wastes; and
- (4) The "Part B" application and the demonstrations referred to in paragraphs (D)(1) and (D)(2) of this rule are submitted to the director no later than one hundred eighty days prior to the date on which the owner or operator of the

facility receives the known final volume of hazardous wastes, or no later than ninety days after February 11, 1992, whichever is later.

(E) In addition to the requirements in paragraph (D) of this rule, an owner or operator of a hazardous waste surface impoundment that is not in compliance with the liner and leachate collection system requirements in 42 U.S.C. 3004(o)(1) and 3005(j)(1) or 42 U.S.C. 3004(o)(2) or 3004(o)(3) or 3005(j)(2), 3005(j)(3), 3005(j)(4) or 3005(j)(13) must:

(1) Submit with the "Part B" application:

(a) A contingent corrective measures plan; and

(b) A plan for removing hazardous wastes in compliance with paragraph (E)(2) of this rule; and

(2) Remove all hazardous wastes from the unit by removing all hazardous liquids and removing all hazardous sludges to the extent practicable without impairing the integrity of the liner(s), if any.

(3) Removal of hazardous wastes must be completed no later than ninety days after the final receipt of hazardous wastes. The director may approve an extension to this deadline if the owner or operator demonstrates that the removal of hazardous wastes will, of necessity, take longer than the allotted period to complete and that an extension will not pose a threat to human health and the environment.

(4) If a release that is a statistically significant increase (or decrease in the case of pH) in hazardous constituents over background levels is detected in accordance with the requirements in rules 3745-65-90 to 3745-65-94 of the Administrative Code, the owner or operator of the unit:

(a) Must implement corrective measures in accordance with the approved contingent corrective measures plan required by paragraph (E)(1) of this rule no later than one year after detection of the release, or approval of the contingent corrective measures plan, whichever is later;

(b) May receive wastes at the unit following detection of the release only if the approved corrective measures plan includes a demonstration that continued receipt of wastes will not impede corrective action; and

(c) May be required by the director to implement corrective measures in less

than one year or to cease receipt of wastes until corrective measures have been implemented if necessary to protect human health and the environment.

- (5) During the period of corrective action, the owner or operator must provide ~~semi-annual~~annual reports to the director ~~that describe~~describing the progress of the corrective action program, compile all ground water monitoring data, and evaluate the effect of the continued receipt of nonhazardous wastes on the effectiveness of the corrective action.
- (6) The director may require the owner or operator to commence closure of the unit if the owner or operator fails to implement corrective action measures in accordance with the approved contingent corrective measures plan within one year as required in paragraph (E)(4) of this rule, or fails to make substantial progress in implementing corrective action and achieving the facility's background levels.
- (7) If the owner or operator fails to implement corrective measures as required in paragraph (E)(4) of this rule, or if the director determines that substantial progress has not been made pursuant to paragraph (E)(6) of this rule he will:
  - (a) Notify the owner or operator in writing that the owner or operator must begin closure in accordance with the deadline in paragraphs (A) and (B) of this rule and provide a detailed statement of reasons for this determination, and
  - (b) Provide the owner or operator and the public, through a newspaper notice, the opportunity to submit written comments on the decision no later than twenty days after the date of the notice.
  - (c) If the director receives no written comments, the decision will become final five days after the close of the comment period. The director will notify the owner or operator that the decision is final, and that a revised closure plan, if necessary, must be submitted within fifteen days ~~of~~after the final notice and that closure must begin in accordance with the deadlines in paragraphs (A) and (B) of this rule.
  - (d) If the director receives written comments on the decision, he will make a final decision within thirty days after the end of the comment period, and provide the owner or operator in writing and the public through a newspaper notice, a detailed statement of reasons for the final decision. If the director determines that substantial progress has not been made, closure must be initiated in accordance with the deadlines in paragraphs

(A) and (B) of this rule.

~~[Comment: For dates of non-regulatory government publications, publications of recognized organizations and associations, federal rules, and federal statutory provisions referenced in this rule, see rule 3745-50-11 of the Administrative Code titled "Incorporated by reference."]~~

[Comment: For dates of non-regulatory government publications, publications of recognized organizations and associations, federal rules, and federal statutory provisions referenced in this rule, see rule 3745-50-11 of the Administrative Code titled "Incorporated by reference."]



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07/23/2010

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02/14/1995, 12/07/2000, 12/07/2004

### **3745-66-14 Disposal or decontamination of equipment, structures and soils.**

During the partial and final closure periods, all contaminated equipment, structures, and soil must be properly disposed of, or decontaminated, unless otherwise specified in rule 3745-66-97, 3745-67-28, 3745-67-58, 3745-67-80, or 3745-68-10 of the Administrative Code. By removing all hazardous wastes or hazardous constituents during partial and final closure, the owner or operator may become a generator of hazardous waste and must handle that hazardous waste in accordance with all applicable requirements of Chapter 3745-52 of the Administrative Code.

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3745-66-15

**Certification of closure.**

Within sixty days ~~of~~after completion of closure of each surface impoundment, waste pile, land treatment, landfill unit, and storage area, and within sixty days ~~of~~after completion of final closure, the owner or operator ~~shall~~must submit to the director, by registered mail, a certification that the hazardous waste management unit or facility, as applicable, has been closed in accordance with specifications in the approved closure plan. The certification ~~shall~~must be signed by the owner or operator and by ~~an independent, registered~~a qualified professional engineer. Documentation supporting the ~~independent, registered~~ professional engineer's certification ~~shall~~must be furnished to the director upon request until he releases the owner or operator from the financial assurance requirements for closure under paragraph (H) of rule 3745-66-43 of the Administrative Code.

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11/11/1999

### **3745-66-16 Survey plat.**

No later than the submittal of the certification of closure of each hazardous waste disposal unit, an owner or operator must submit to the local zoning authority, or the authority with jurisdiction over local land use, and to the director, a survey plat indicating the location and dimensions of landfill cells or other hazardous waste disposal units with respect to permanently surveyed benchmarks. This plat must be prepared and certified by a professional land surveyor. The plat filed with the local zoning authority, or the authority with jurisdiction over local land use must contain a note, prominently displayed, which states the owner's or operator's obligation to restrict disturbance of the hazardous waste disposal unit in accordance with rules 3745-66-10 to 3745-66-21 of the Administrative Code.

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3745-66-17

**Post-closure care and use of property.**

(A)

(1) Post-closure care for each hazardous waste management unit subject to the requirements of rules 3745-66-17 to 3745-66-20 of the Administrative Code ~~must~~shall begin after completion of closure of the unit and continue for thirty years after that date. It ~~must~~shall consist of at least the following:

(a) Monitoring and reporting in accordance with the requirements of rules 3745-65-90 to 3745-65-94, 3745-67-20 to ~~3745-67-30~~3745-67-31, 3745-67-50 to 3745-67-60, 3745-67-70 to 3745-67-82, and 3745-68-01 to 3745-68-16 of the Administrative Code; and

(b) Maintenance and monitoring of waste containment systems in accordance with the requirements of rules 3745-65-90 to 3745-65-94, 3745-67-20 to ~~3745-67-30~~3745-67-31, 3745-67-50 to 3745-67-60, 3745-67-70 to 3745-67-82, and 3745-68-01 to 3745-68-16 of the Administrative Code.

(2) Any time preceding closure of a hazardous waste management unit subject to post-closure care requirements or final closure, or any time during the post-closure period for a particular hazardous waste disposal unit, the director may:

(a) Shorten the post-closure care period applicable to the hazardous waste management unit, or facility, if all disposal units have been closed, if ~~he~~the director finds that the reduced period is sufficient to protect human health and the environment (e.g., leachate or ground water monitoring results, characteristics of the hazardous waste, application of advanced technology, or alternative disposal, treatment, or re-use techniques indicate that the hazardous waste management unit or facility is secure); or

(b) Extend the post-closure care period applicable to the hazardous waste management unit or facility, if ~~he~~the director finds that the extended period is necessary to protect human health and the environment (e.g., leachate or ground water monitoring results indicate a potential for migration of hazardous wastes at levels which may be harmful to human health and the environment).

(B) The director may require, at partial ~~or~~and final closure, continuation of any of the security requirements of rule 3745-65-14 of the Administrative Code during part or all of the post-closure period when:

- (1) Hazardous wastes may remain exposed after completion of partial or final closure;  
or
  - (2) Access by the public or domestic livestock may pose a hazard to human health.
- (C) Post-closure use of property on or in which hazardous wastes remain after partial or final closure ~~must~~shall never be allowed to disturb the integrity of the final cover, ~~liner(s)~~liners, or any other components of the containment system, or the function of the facility's monitoring systems, unless the director finds that the disturbance:
- (1) Is necessary to the proposed use of the property, and will not increase the potential hazard to human health or the environment; or
  - (2) Is necessary to reduce a threat to human health or the environment.
- (D) All post-closure care activities ~~must~~shall be in accordance with the provisions of the approved post-closure plan as specified in rule 3745-66-18 of the Administrative Code.

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Certification

06/02/2023

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Date

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3745-66-18

**Post-closure plan and amendment of post-closure plan.**

- (A) Written post-closure plan. On April 15, 1981, the owner or operator of a hazardous waste disposal unit shall have a written post-closure plan. An owner or operator of a surface impoundment or waste pile who intends to remove all hazardous wastes at closure shall prepare a post-closure plan and submit the post-closure plan to the director within ninety days after the date that the owner or operator or director determines that the hazardous waste management unit or facility shall be closed as a landfill subject to the requirements of rules 3745-66-17 to 3745-66-20 of the Administrative Code.
- (B) Until final closure of the facility, a copy of the most current post-closure plan shall be furnished to the director upon request, including request by mail. In addition, for facilities without approved post-closure plans, the post-closure plan shall be provided during site inspections, on the day of inspection, to any officer, employee, or representative of the agency who is duly designated by the director. After final closure has been certified, the person or office specified in paragraph (C)(3) of this rule shall keep the approved post-closure plan during the post-closure period.
- (C) For each hazardous waste management unit subject to the requirements of this rule, the post-closure plan shall identify the activities that will be carried on after closure of each disposal unit and the frequency of these activities, and include at least:
- (1) A description of the planned monitoring activities and frequencies at which the monitoring activities will be performed to comply with rules 3745-65-90 to 3745-66-94, 3745-67-20 to ~~3745-67-30~~3745-67-31, 3745-67-50 to 3745-67-60, 3745-67-70 to 3745-67-82, and 3745-68-01 to 3745-68-16 of the Administrative Code during the post-closure care period;
  - (2) A description of the planned maintenance activities and frequencies at which the maintenance activities will be performed, to ensure:
    - (a) The integrity of the cap and final cover or other containment systems in accordance with the requirements in rules 3745-67-20 to ~~3745-67-30~~3745-67-31, 3745-67-50 to 3745-67-60, 3745-67-70 to 3745-67-82, and 3745-68-01 to 3745-68-16 of the Administrative Code; and
    - (b) The function of the monitoring equipment in accordance with the requirement of rules 3745-65-90 to 3745-65-94, 3745-67-20 to ~~3745-67-30~~3745-67-31, 3745-67-50 to 3745-67-60, 3745-67-70 to 3745-67-82, and 3745-68-01 to 3745-68-16 of the Administrative Code; and

- (3) The name, address, and telephone number of the person or office to contact about the hazardous waste disposal unit or facility during the post-closure care period.
  - (4) For facilities subject to rule 3745-66-21 of the Administrative Code, provisions that satisfy the requirements of paragraphs (A)(1) and (A)(3) of rule 3745-66-21 of the Administrative Code.
  - (5) For facilities where the director has applied alternative requirements at a regulated unit under paragraph (F) of rule 3745-54-90, paragraph (D) of rule 3745-66-10, or paragraph (D) of rule 3745-66-40 of the Administrative Code, either the alternative requirements that apply to the regulated unit or a reference to the enforceable document that contains those requirements.
- (D) Amendment of post-closure plan. The owner or operator may amend the post-closure plan any time during the active life of the facility or during the post-closure care period. An owner or operator with an approved post-closure plan shall submit a written request to the director to authorize a change to the approved post-closure plan. The written request shall include a copy of the amended post-closure plan for approval by the director.
- (1) The owner or operator shall amend the post-closure plan whenever:
    - (a) Changes in operating plans or facility design affect the post-closure plan; or
    - (b) Events which occur during the active life of the facility, including partial and final closures, affect the post-closure plan; or
    - (c) The owner or operator requests the director to apply alternative requirements to a regulated unit under paragraph (F) of rule 3745-54-90, paragraph (D) of rule 3745-66-10, or paragraph (D) of rule 3745-66-40 of the Administrative Code.
  - (2) The owner or operator shall amend the post-closure plan at least sixty days prior to the proposed change in facility design or operation, or no later than sixty days after an unexpected event has occurred which has affected the post-closure plan.
  - (3) An owner or operator with an approved post-closure plan shall submit the modified post-closure plan to the director at least sixty days prior to the proposed change in facility design or operation, or no more than sixty days after an unexpected event has occurred which has affected the post-closure plan. If an owner or operator of a surface impoundment or a waste pile who intended to remove all hazardous wastes at closure in accordance with paragraph (B) of rule 3745-67-28 or paragraph (A) of rule 3745-67-58 of the Administrative Code is required to close as a landfill in accordance with rule 3745-68-10 of

the Administrative Code, the owner or operator shall submit a post-closure plan within ninety days after the determination by the owner or operator or director that the unit shall be closed as a landfill. If the amendment to the post-closure plan is a "Class 2" or "Class 3" modification according to the criteria in rule 3745-50-51 of the Administrative Code, the modification to the post-closure plan will be approved according to the procedures in paragraph (F) of this rule.

- (4) The director may request modifications to the post-closure plan under the conditions described in paragraph (D)(1) of this rule. An owner or operator with an approved post-closure plan shall submit the modified post-closure plan no later than sixty days after the request from the director. If the amendment to the post-closure plan is considered a "Class 2" or "Class 3" modification according to the criteria in rule 3745-50-51 of the Administrative Code, the modifications to the post-closure plan will be approved in accordance with the procedures in paragraph (F) of this rule. If the director determines that an owner or operator of a surface impoundment or waste pile who intended to remove all hazardous wastes at closure shall close the facility as a landfill, the owner or operator shall submit a post-closure plan for approval to the director within ninety days after the determination.
- (E) The owner or operator of a facility with hazardous waste management units subject to these requirements shall submit the post-closure plan to the director at least one hundred eighty days before the date the owner or operator expects to begin partial or final closure of the first hazardous waste disposal unit. The date the owner or operator "expects to begin closure" of the first hazardous waste disposal unit shall be either within thirty days after the date on which the hazardous waste management unit receives the known final volume of hazardous waste or, if there is a reasonable possibility that the hazardous waste management unit will receive additional hazardous wastes, no later than one year after the date on which the unit received the most recent volume of hazardous wastes. The owner or operator shall submit the post-closure plan to the director no later than fifteen days after:
- (1) Termination, revocation, or withdrawal of a "Part A" permit, except when a "Part B" permit is issued to the facility simultaneously with termination, revocation, or withdrawal of a "Part A" permit; or
  - (2) Issuance of a judicial decree or the issuance by the director of an order for compliance to cease receiving wastes or to close.
- (F) The director will provide the owner or operator and the public, through a newspaper notice, the opportunity to submit written comments on the post-closure plan and request modifications to the post-closure plan no later than thirty days after the date of the notice. In response to a request, or at the director's discretion, the director

will also hold a public hearing whenever such a public hearing might clarify one or more issues concerning a post-closure plan. The director will give public notice of the public hearing at least thirty days before the public hearing occurs. (Public notice of the public hearing may be given at the same time as notice of the opportunity for the public to submit written comments, and the two notices may be combined.) The director will approve, modify, or disapprove the post-closure plan within ninety days after receipt of the post-closure plan. If the director does not approve the post-closure plan, the director will provide the owner or operator with a detailed written statement of reasons for the refusal, and the owner or operator shall modify the post-closure plan or submit a new post-closure plan for approval within thirty days after receiving such written statement. The director will approve or modify this post-closure plan in writing within sixty days. If the director modifies the post-closure plan, this modified post-closure plan becomes the approved post-closure plan. The director will ensure that the approved post-closure plan is consistent with rules 3745-66-17 to 3745-66-20 of the Administrative Code. A copy of the modified post-closure plan with a detailed statement of reasons for the modifications will be mailed to the owner or operator.

(G) The post-closure plan and length of the post-closure care period may be modified any time prior to the end of the post-closure care period in either of the following two ways:

(1) The owner or operator or any member of the public may petition the director to extend or reduce the post-closure care period applicable to a hazardous waste management unit or facility based on cause, or alter the requirements of the post-closure care period based on cause.

(a) The petition shall include evidence demonstrating that:

(i) The secure nature of the hazardous waste management unit or facility makes the post-closure care requirements unnecessary or supports reduction of the post-closure care period specified in the current post-closure plan (e.g., leachate or ground water monitoring results, characteristics of the wastes, application of advanced technology, or alternative disposal, treatment, or re-use techniques indicate that the facility is secure); or

(ii) The requested extension in the post-closure care period or alteration of post-closure care requirements is necessary to prevent threats to human health and the environment (e.g., leachate or ground water monitoring results indicate a potential for migration of hazardous wastes at levels which may be harmful to human health and the environment).

- (b) These petitions will be considered by the director only when the petitions present new and relevant information not previously considered by the director. Whenever the director is considering a petition, the director will provide the owner or operator and the public, through a newspaper notice, the opportunity to submit written comments within thirty days after the date of the notice. In response to a request, or at the director's discretion, the director will also hold a public hearing whenever a public hearing might clarify one or more issues concerning the post-closure plan. The director will give the public notice of the public hearing at least thirty days before the public hearing occurs. (Public notice of the public hearing may be given at the same time as notice of the opportunity for written public comments, and the two notices may be combined.) After considering the comments, the director will issue a final determination, based upon the criteria provided in paragraph (G)(1) of this rule.
  - (c) If the director denies the petition, the director will send the petitioner a brief written response giving a reason for the denial.
- (2) The director may tentatively decide to modify the post-closure plan if the director deems the modification is necessary to prevent threats to human health and the environment. The director may propose to extend or reduce the post-closure care period applicable to a hazardous waste management unit or facility based on cause, or alter the requirements of the post-closure care period based on cause.
- (a) The director will provide the owner or operator and the affected public, through a newspaper notice, the opportunity to submit written comments within thirty days after the date of the notice and the opportunity for a public hearing as in paragraph (G)(1)(b) of this rule. After considering the comments, the director will issue a final determination.
  - (b) The director will base the final determination upon the same criteria as required for petitions under paragraph (G)(1)(a) of this rule. A modification of the post-closure plan may include, where appropriate, the temporary suspension rather than permanent deletion of one or more post-closure care requirements. At the end of the specified period of suspension, the director would then determine whether the requirements should be permanently discontinued or reinstated to prevent threats to human health and the environment.

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Certification

06/02/2023

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Date

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09/29/2021

3745-66-19

**Post-closure notices.**

- (A) No later than sixty days after certification of closure of each hazardous waste disposal unit, the owner or operator ~~must~~shall submit to the local zoning authority, or the authority with jurisdiction over local land use, and to the director, a record of the type, location, and quantity of hazardous wastes disposed of within each cell or other disposal unit of the facility. For hazardous wastes disposed of before January 12, 1981, the owner or operator ~~must~~shall identify the type, location, and quantity of the hazardous wastes to the best of ~~his~~the owner's or operator's knowledge and in accordance with any records ~~he~~the owner or operator has kept.
- (B) Within sixty days ~~of~~after certification of closure of the first hazardous waste disposal unit and within sixty days ~~of~~after certification of closure of the last hazardous waste disposal unit, the owner or operator ~~must~~shall:
- (1) Record, in accordance with state law, a notation on the deed to the facility property, or on some other instrument which is normally examined during title search, that will notify in perpetuity the potential purchasers of the property that:
    - (a) The land has been used to manage hazardous wastes; and
    - (b) ~~Its~~The land use is restricted under rules ~~3745-55-10 to 3745-55-20 and~~ 3745-66-10 to 3745-66-21 of the Administrative Code; and
    - (c) The survey plat and record of the type, location, and quantity of hazardous wastes disposed of within each cell or hazardous waste disposal unit of the facility required by rule 3745-66-16 of the Administrative Code and paragraph (A) of this rule have been filed with the local zoning authority or the authority with jurisdiction over local land use and with the director; and
  - (2) Submit to the director a certification signed by the owner or operator that ~~he~~the owner or operator has recorded the notation specified in paragraph (B)(1) of this rule and a copy of the document in which the notation has been placed; ~~to the director~~.
- (C) If the owner or operator or any subsequent owner of the land upon which a hazardous waste disposal unit was located wishes to remove hazardous wastes and hazardous waste residues, the liner, if any, and all contaminated structures, equipment, and soils, ~~he~~must the owner or operator shall request a modification to the approved post-closure plan in accordance with the requirements of paragraph (G) of rule 3745-66-18 of the Administrative Code. The owner or operator ~~must~~shall demonstrate that the removal of hazardous wastes will satisfy the criteria of paragraph (C) of rule

3745-66-17 of the Administrative Code. By removing hazardous waste, the owner or operator may become a generator of hazardous waste and ~~must~~shall manage ~~it~~the hazardous waste in accordance with all applicable requirements of Chapters 3745-50 to 3745-69, 3745-205, 3745-256, 3745-266, 3745-270, 3745-273, and 3745-279 of the Administrative Code. If the owner or operator is granted approval to conduct the removal activities, the owner or operator may request that the director approve either:

- (1) The removal of the notation on the deed to the facility property or other instrument normally examined during title search; or
- (2) The addition of a notation to the deed or instrument indicating the removal of the hazardous waste.



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3745-66-20

**Certification of completion of post-closure care.**

No later than sixty days after the completion of the established post-closure care period for each hazardous waste disposal unit, the owner or operator must submit to the director, by registered mail, a certification that the post-closure care period for the hazardous waste disposal unit was performed in accordance with the specifications in the approved post-closure plan. The certification must be signed by the owner or operator and ~~an independent registered~~ a qualified professional engineer. Documentation supporting the ~~independent registered~~ professional engineer's certification must be furnished to the director upon request until he releases the owner or operator from the financial assurance requirements for post-closure care under paragraph (H) of rule 3745-66-45 of the Administrative Code.

Effective: 09/05/2010

R.C. 119.032 review dates: Exempt

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07/23/2010

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03/13/2002

**3745-66-21 Post-closure requirements for facilities that obtain enforceable documents in lieu of post-closure permits.**

- (A) Owners and operators who are subject to the requirement to obtain a post-closure permit under rule 3745-50-45 of the Administrative Code, but who obtain enforceable documents in lieu of post-closure permits, as provided under paragraph (G) of rule 3745-50-45 of the Administrative Code, must comply with the following requirements:
- (1) The requirements to submit information about the facility in paragraph (C)(14) of rule 3745-50-44 of the Administrative Code;
  - (2) The requirements for facility-wide corrective action in rule 3745-54-101 of the Administrative Code;
  - (3) The requirements of rules 3745-54-91 to 3745-54-100 of the Administrative Code.
- (B)
- (1) The director, in issuing enforceable documents under this rule in lieu of permits, will assure a meaningful opportunity for public involvement which, at a minimum, includes public notice and opportunity for public comment:
    - (a) When Ohio EPA becomes involved in a remediation at the facility as a regulatory or enforcement matter;
    - (b) On the proposed preferred remedy and the assumptions upon which the remedy is based, in particular those related to land use and site characterization; and
    - (c) At the time of a proposed decision that remedial action is complete at the facility. These requirements must be met before the director may consider that the facility has met the requirements of paragraph (G) of rule 3745-50-45 of the Administrative Code, unless the facility qualifies for a modification to these public involvement procedures under paragraph (B)(2) or (B)(3) of this rule.
  - (2) If the director determines that even a short delay in the implementation of a remedy would adversely affect human health or the environment, he may delay compliance with the requirements of paragraph (B)(1) of this rule and implement the remedy immediately. However, the director will assure involvement of the public at the earliest opportunity, and, in all cases, upon making the decision that additional remedial action is not needed at the facility.

- (3) The director may allow a remediation initiated prior to October 22, 1998 to substitute for corrective action required under a post-closure permit even if the public involvement requirements of paragraph (B)(1) of this rule have not been met, so long as he assures that notice and comment on the decision that no further remediation is necessary to protect human health and the environment takes place at the earliest reasonable opportunity after the first effective date of this rule.

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Prior effective dates: None

3745-66-40

**Applicability- financial requirements.**

- (A) The requirements of rules 3745-66-42, 3745-66-43, 3745-66-47, and 3745-66-48 of the Administrative Code apply to owners and operators of all hazardous waste facilities, including underground injection control facilities, except as this rule or rule 3745-65-01 of the Administrative Code provide otherwise.
- (B) The requirements of rules 3745-66-44 and ~~3745-66-46~~3745-66-45 of the Administrative Code apply only to owners and operators of:
- (1) Disposal facilities;
  - (2) Tank systems that are required under rule 3745-66-97 of the Administrative Code to meet the requirements for landfills; and
  - (3) Containment buildings that are required under rule 3745-256-102 of the Administrative Code to meet the requirements for landfills.
- (C) The state of Ohio and federal agencies are exempt from the requirements of rules 3745-66-40 to 3745-66-48 of the Administrative Code.
- (D) The director may replace all or part of the requirements of rules 3745-66-40 to 3745-66-48 of the Administrative Code that apply to a regulated unit with alternative requirements for financial assurance set out in the permit or in an enforceable document [as defined in paragraph (G) of rule 3745-50-45 of the Administrative Code], where the director:
- (1) Prescribes alternative requirements for the regulated unit under paragraph (F) of rule 3745-65-90 and/or paragraph (D) of rule 3745-66-10 of the Administrative Code, and
  - (2) Determines that it is not necessary to apply the requirements of rules 3745-66-40 to 3745-66-48 of the Administrative Code because the alternative financial assurance requirements will protect human health and the environment.

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3745-66-41

**Definitions- ~~pertaining to~~ financial requirements.**

(A) When used in rules 3745-66-40 to 3745-66-48 of the Administrative Code, the following terms have the following meanings:

- (1) "Closure plan" means the plan for closure prepared in accordance with ~~the requirements of~~ rule 3745-66-12 of the Administrative Code.
- (2) "Current closure cost estimate:" means the most recent of the estimates prepared in accordance with paragraphs (A), (B), and (C) of rule 3745-66-42 of the Administrative Code.
- (3) "Current post-closure cost estimate" means the most recent of the estimates prepared in accordance with paragraphs (A), (B), and (C) of rule 3745-66-44 of the Administrative Code.
- (4) "Parent corporation" means a corporation which directly owns at least fifty per cent of the voting stock of the corporation which is the facility owner or operator; the latter corporation is deemed a "subsidiary" of the parent corporation.
- (5) "Post-closure plan" means the plan for post-closure care prepared in accordance with ~~the requirements of rule 3745-66-18~~ rules 3745-66-17 to 3745-66-20 of the Administrative Code.

(B) The following terms are used in the specifications for the financial test for closure and post-closure care and liability coverage. The definitions are intended to assist in the understanding of rules 3745-66-40 to 3745-66-48 of the Administrative Code and are not intended to limit the meaning of terms in a way that conflicts with generally accepted accounting practices.

- (1) "Assets" means all existing and all probable future economic benefits obtained or controlled by a particular entity.
- (2) "Current assets" means cash or other assets or reasonably expected to be realized in cash or sold or consumed during the normal operating cycle of the business.



- (3) "Current liabilities" means obligations whose liquidation is reasonably expected to require the use of existing resources properly classifiable as current assets or the creation of other current liabilities.
  - (4) "Current plugging and abandonment ~~cost estimate~~cost estimate" means the most recent of the estimates prepared in accordance with rule 3745-34-36 of the Administrative Code.
  - (5) "Independently audited" refers to an audit performed by an independent certified public accountant in accordance with generally accepted auditing standards.
  - (6) "Liabilities" means probable future sacrifices of economic benefits arising from present obligations to transfer assets or provide services to other entities in the future as a result of past transactions or events
  - (7) "Net working capital" means current assets minus current liabilities.
  - (8) "Net worth" means total assets minus total liabilities and is equivalent to owner's equity.
  - (9) "Tangible net worth" means the tangible assets that remain after deducting liabilities; such assets would not include such intangibles such as good will and rights to patents or royalties.
- (C) In the liability insurance requirements the terms "bodily injury" and "property damage" shall have the meanings given these terms by applicable Ohio law. However, these terms do not include those liabilities which, consistent with standard industry practice, are excluded from coverage in liability policies for bodily injury and property damage. ~~The agency~~Ohio EPA intends the meanings of other terms used in the liability insurance requirements to be consistent with their common meanings with in the insurance industry. The definitions of several of the terms in paragraphs (C)(1) to (C)(4) of this rule are intended to assist in the understanding of rules 3745-66-40 to 3745-66-48 of the Administrative Code and are not intended to limit their meanings in a way that conflict with general insurance industry usage.
- (1) "Accidental occurrence" means an accident, including continuous or repeated exposure to conditions, which results in bodily injury or property damage neither expected nor intended from the standpoint of the insured.

- (2) "Legal defense costs" means any expenses that an insurer incurs in defending against claims of third parties brought under the terms and conditions of ~~an~~ an insurance policy.
  - (3) "Nonsudden accidental occurrence" means an occurrence which takes place over time and involves continuous or repeated exposure.
  - (4) "Sudden accidental occurrence" means an occurrence which is not continuous or repeated in nature.
- (D) "Substantial business relationship" means the extent of a business relationship necessary under applicable Ohio law to make a guarantee contract issued incident to that relationship valid and enforceable. A "substantial business relationship" ~~must arise~~ arises from a pattern of recent or ongoing business transactions, in addition to the guarantee itself, such that a currently existing business relationship between the guarantor and the owner or operator is demonstrated to the satisfaction of the director.

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02/16/2009

3745-66-42

**Cost estimate for closure.**

- (A) The owner or operator shall have a detailed written estimate, in current dollars, of the cost of closing the facility in accordance with rules 3745-66-11 to 3745-66-15 of the Administrative Code and applicable closure requirements in rules 3745-66-97, 3745-67-28, 3745-67-58, 3745-67-80, 3745-68-10, 3745-68-51, 3745-68-81, 3745-69-04, and 3745-256-102 of the Administrative Code.
- (1) The closure cost estimate shall equal the cost of final closure at the point in the facility's active life when the extent and manner of the facility's operation would make closure the most expensive, as indicated by the facility's closure plan [see paragraph (B) of rule 3745-66-12 of the Administrative Code].
  - (2) The closure cost estimate shall be based on the costs to the owner or operator of hiring a third party to close the facility. A third party is a party who is neither a parent nor a subsidiary of the owner or operator. (See the definition of "parent corporation" in rule 3745-66-41 of the Administrative Code.) The owner or operator may use costs for on-site disposal if the owner or operator can demonstrate that on-site disposal capacity will exist at all times over the life of the facility.
  - (3) The closure cost estimate may not incorporate any salvage value that may be realized by the sale of hazardous wastes, or nonhazardous waste if applicable under paragraph (D) of rule 3745-66-13 of the Administrative Code, facility structures or equipment, land, or other assets associated with the facility at the time of partial or final closure.
  - (4) The owner or operator may not incorporate a zero cost for hazardous wastes, or nonhazardous wastes if applicable under paragraph (D) of rule 3745-66-13 of the Administrative Code, that might have economic value.
- (B) During the active life of the facility, the owner or operator shall adjust the closure cost estimate for inflation within sixty days prior to the anniversary date of the establishment of the financial instruments used to comply with rule 3745-66-43 of the Administrative Code. For owners and operators using the financial test or corporate guarantee, the closure cost estimate shall be updated for inflation within thirty days after the close of the firm's fiscal year and before submittal of updated information to the director as specified in paragraph (E)(3) of rule 3745-66-43 of the Administrative Code. The adjustment may be made by recalculating the closure cost estimate in current dollars, or by using an inflation factor derived as specified in 40 CFR 265.142(b).
- (1) The first adjustment is made by multiplying the closure cost estimate by the inflation factor. The result is the adjusted closure cost estimate.

- (2) Subsequent adjustments are made by multiplying the latest adjusted closure cost estimate by the latest inflation factor.
- (C) During the active life of the facility, the owner or operator shall revise the closure cost estimate no later than thirty days after a revision has been made to the closure plan which increases the cost of closure. If the owner or operator has an approved closure plan, the closure cost estimate shall be revised no later than thirty days after the director has approved the request to modify the closure plan, if the change in the closure plan increases the cost of closure. The revised closure cost estimate shall be adjusted for inflation as specified in paragraph (B) of this rule.
- (D) ~~The~~ During the operating life of the facility, the owner or operator shall keep ~~the following~~ at the facility ~~during the operating life of the facility~~: the latest closure cost estimate prepared in accordance with paragraphs (A) and (C) of this rule and, when this estimate has been adjusted in accordance with paragraph (B) of this rule, the latest closure cost estimate.
- (E) A copy of the facility's current, detailed closure cost estimate prepared and maintained in accordance with paragraphs (A) and (B) of this rule shall be submitted annually to the director.
- (1) For owners or operators using a financial mechanism other than the financial test, such submittal of the closure cost estimate to the director shall be made within sixty days ~~following~~ after a revision or update to the estimate made in accordance with paragraph (B) of this rule.
- (2) For owners or operators using a financial test, such submittal of the closure cost estimate to the director shall be made within ninety days after the close of the firm's fiscal year ~~following~~ after a revision or update to the estimate made in accordance with paragraph (B) of this rule.

[Comment 1: As used in this rule, "detailed closure cost estimate" means a listing of the specific costs associated with each major phase of closure activity for each hazardous waste management unit, including but not limited to: removal, transportation, and off-site disposal of hazardous waste and contaminated media; decontamination activities; construction of landfill cap system; sampling and laboratory analysis; and certification of closure by a qualified professional engineer.]

[Comment 2: For dates of non-regulatory government publications, publications of recognized organizations and associations, federal rules, and federal statutory provisions referenced in this rule, see rule 3745-50-11 of the Administrative Code titled "Incorporated by reference."]

Effective: 9/29/2021  
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CERTIFIED ELECTRONICALLY

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Certification

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3745-66-43

**Financial assurance for facility closure.**

An owner or operator of each facility shall establish financial assurance for closure of the facility. The owner or operator shall choose from among the following options specified in paragraphs (A) to (E) of this rule:

**(A) Closure trust fund.**

- (1) An owner or operator may satisfy the requirements of this rule by establishing a closure trust fund which conforms to the requirements of ~~paragraphs~~paragraph (A) to (A)(1)(b) of this rule and submitting an originally signed duplicate of the trust agreement to the director ~~by certified mail~~. The trustee shall be an entity which has the authority to act as a trustee and whose trust operations are regulated and examined by a federal or state agency.
- (2) The wording of the trust agreement shall be identical to the wording specified in paragraph (A)(1) of rule 3745-55-51 of the Administrative Code and the trust agreement shall be accompanied by a formal certification of acknowledgement [for an example, see paragraph (A)(2) of rule 3745-55-51 of the Administrative Code.] "Schedule A" of the trust agreement shall be updated within sixty days after a change in the amount of the current closure cost estimate covered by the agreement.
- (3) Payments to the trust fund shall be made annually by the owner or operator over the twenty years beginning on August 26, 1983 or over the remaining operating life of the facility as estimated in the closure plan, whichever period is shorter. This period is hereafter referred to as the "pay-in period." The payments to the closure trust fund shall be made as follows:
  - (a) The first payment shall be made by August 26, 1983, except as provided in paragraph (A)(5) of this rule. The first payment shall be at least equal to the current closure cost estimate except as provided in paragraph (F) of this rule, divided by the number of years in the pay-in period.
  - (b) Subsequent payments shall be made no later than thirty days after each anniversary date of the first payment. The amount of each subsequent payment shall be determined by this formula:

$$\text{Next payment} = (\text{CE} - \text{CV}) / Y$$

Where CE is the current closure cost estimate, CV is the current value of the trust fund, and Y is the number of years remaining in the pay-in period.

- (4) The owner or operator may accelerate payments into the trust fund or the owner or operator may deposit the full amount of the current closure cost estimate at the time the trust fund is established. However, the owner or operator shall maintain the value of the trust fund at no less than the value the trust fund would have if annual payments were made as specified in paragraph (A)(3) of this rule.
- (5) If the owner or operator establishes a closure trust fund after having initially used one or more alternate mechanisms specified in this rule, the owner's or operator's first payment shall be at least the amount that the trust fund would have contained if the trust fund were established initially and annual payments made as specified in paragraph (A)(3) of this rule.
- (6) After the pay-in period is completed, whenever the current closure cost estimate changes, the owner or operator shall compare the new estimate with the trustee's most recent annual valuation of the trust fund. If the value of the trust fund is less than the amount of the new estimate, the owner or operator, within sixty days after the change in the cost estimate, either shall ~~either~~ deposit an amount into the trust fund so that the value of the trust fund after this deposit at least equals the amount of the current closure cost estimate, or obtain other financial assurance as specified in this rule to cover the difference.
- (7) If the value of the trust fund is greater than the total amount of the current closure cost estimate, the owner or operator may submit a written request to the director for release of the amount in excess of the current closure cost estimate.
- (8) If an owner or operator substitutes other financial assurance as specified in this rule for all or part of the trust fund, the owner or operator may submit a written request to the director for release of the amount in excess of the current closure cost estimate covered by the trust fund.
- (9) Within sixty days after receiving a request from the owner or operator for release of funds as specified in paragraph (A)(7) or (A)(8) of this rule, the director will instruct the trustee to release to the owner or operator such funds as the director specifies in writing.
- (10) After beginning partial or final closure, an owner or operator or another person authorized to conduct partial or final closure may request reimbursement for partial or final closure expenditures by submitting itemized bills to the director. The owner or operator may request reimbursement for partial closure only if sufficient funds are remaining in the trust fund to cover the maximum costs of closing the facility over the remaining operating life of the facility. No later than sixty days after receiving bills for partial or final closure activities, the director will instruct the trustee to make reimbursements in those amounts as the director



specifies in writing, if the director determines that the partial or final closure expenditures are in accordance with the approved closure plan, or are otherwise justified. If the director has reason to believe that the maximum cost of closure over the remaining operating life of the facility will be significantly greater than the value of the trust fund, the director may withhold reimbursement of such amounts as the director deems prudent until the director determines, in accordance with paragraph (H) of this rule, that the owner or operator is no longer required to maintain financial assurance for final closure of the facility. If the director does not instruct the trustee to make such reimbursements, the director will provide to the owner or operator a detailed written statement of reasons.

(11) The director will agree to termination of the trust when ~~either~~:

- (a) The owner or operator substitutes alternate financial assurance as specified in this rule; or
- (b) The director releases the owner or operator from the requirements of this rule in accordance with paragraph (H) of this rule.

(B) Surety bond guaranteeing payment into a closure trust fund.

- (1) An owner or operator may satisfy the requirements of this rule by obtaining a surety bond which conforms to the requirements of ~~paragraphs~~ paragraph (B) ~~to (B)(9)~~ of this rule and submitting the bond to the director ~~by certified mail~~. ~~The~~ At a minimum, the surety company issuing the bond, ~~at a minimum,~~ shall be among those listed as acceptable sureties on federal bonds in "Circular 570" of the U.S. department of the treasury.

[Comment: "Circular 570" is published in the Federal Register annually on July first. Interim changes in the circular are also published in the Federal Register.]

- (2) The wording of the surety bond shall be identical to the wording specified in paragraph (B) of rule 3745-55-51 of the Administrative Code.
- (3) The owner or operator who uses a surety bond to satisfy the requirements of this rule also shall ~~also~~ establish a standby trust fund. Under the terms of the surety bond, all payments made thereunder will be deposited by the surety directly into the standby trust fund in accordance with instructions from the director. This standby trust fund shall meet the requirements specified in paragraph (A) of this rule, except that:
  - (a) An originally signed duplicate of the trust agreement shall be submitted to the director with the surety bond; and

- (b) Until the standby trust fund is funded pursuant to this rule, the following are not required by rules 3745-66-40 to 3745-66-48 of the Administrative Code:
- (i) Payments into the trust fund as specified in paragraph (A) of this rule.
  - (ii) Updating of "Schedule A" of the trust agreement [see paragraph (A) of rule 3745-55-51 of the Administrative Code] to show current closure cost estimates.
  - (iii) Annual valuations as required by the trust agreement.
  - (iv) Notices of nonpayment as required by the trust agreement.
- (4) The bond shall guarantee that the owner or operator will:
- (a) Fund the standby trust fund in an amount equal to the penal sum of the bond ~~at least sixty days prior to~~ before the expected date of the beginning of final closure of the facility; or
  - (b) Fund the standby trust fund in an amount equal to the penal sum within fifteen days after an order to begin final closure in accordance with rules 3745-66-10 to 3745-66-21 of the Administrative Code is issued by the director, or by an Ohio court, or by another court of competent jurisdiction, or by a U.S. district court, or within fifteen days after issuance of a notice of revocation of the permit by the director; or
  - (c) Provide alternate financial assurance as specified in this rule and obtain the director's written approval of the assurance provided within ninety days after receipt by both the owner or operator and the director of a notice of cancellation of the bond from the surety.
- (5) Under the terms of the bond, the surety shall become liable on the bond obligation when the owner or operator fails to perform as guaranteed by the bond.
- (6) The penal sum of the bond shall be in an amount at least equal to the amount of the current closure cost estimate, except as provided in paragraph (F) of this rule.
- (7) Whenever the current closure cost estimate increases to an amount greater than the penal sum of the bond, the owner or operator, within sixty days after the increase, either shall ~~either~~ cause the penal sum of the bond to be increased to an amount at least equal to the current closure cost estimate and submit evidence of such increase to the director, or shall obtain other financial assurance as specified in this rule to cover the increase. Whenever the current closure cost

estimate decreases, the penal sum may be reduced to the amount of the current closure cost estimate following written approval by the director.

- (8) Under the terms of the bond, the bond shall remain in force unless the surety sends written notice of cancellation by certified mail to the owner or operator and to the director. Cancellation may not occur, however, during the one hundred twenty days beginning on the date of receipt of the notice of cancellation by both the owner or operator and the director, as evidenced by the return receipts.
- (9) The owner or operator may cancel the bond if the director has given prior written consent based on the director's receipt of evidence of alternate financial assurance as specified in this rule.

(C) Closure letter of credit.

- (1) An owner or operator may satisfy the requirements of this rule by obtaining an irrevocable standby letter of credit which conforms to the requirements of ~~paragraphs~~ paragraph (C) to (C)(10)(b) of this rule and submitting the letter of credit to the director ~~by certified mail~~. The issuing institution shall be an entity which has the authority to issue letters of credit and whose letter of credit operations are regulated and examined by a federal or state agency.
- (2) The wording of the letter of credit shall be identical to the wording specified in paragraph (D) of rule 3745-55-51 of the Administrative Code.
- (3) An owner or operator who uses a letter of credit to satisfy the requirements of this rule also shall ~~also~~ establish a standby trust fund by the time the letter of credit is obtained. Under the terms of the letter of credit, all amounts paid pursuant to a draft by the director shall be deposited by the issuing institution directly into the standby trust fund in accordance with instructions from the director. ~~The~~ This standby trust fund shall meet the requirements of the trust fund specified in paragraph (A) of this rule, except that:
  - (a) An originally signed duplicate of the trust agreement shall be submitted to the director with the letter of credit; and
  - (b) Unless the standby trust fund is funded pursuant to this rule, the following are not required:
    - (i) Payments into the trust as specified in paragraph (A) of this rule.
    - (ii) Updating of "Schedule A" of the trust agreement [see paragraph (A) of rule 3745-55-51 of the Administrative Code] to show current closure cost estimates.

- (iii) Annual valuations as required by the trust agreement.
  - (iv) Notices of a nonpayment as required by the trust agreement.
- (4) The letter of credit shall be accompanied by a letter from the owner or operator referring to the letter of credit by number, issuing institution, and date, and providing the U.S. EPA identification number, name, and address of the facility, and the amount of funds assured for closure of the facility by the letter of credit.
  - (5) The letter of credit shall be irrevocable and issued for a period of at least one year. The letter of credit shall provide that the expiration date will be automatically extended for a period of at least one year unless, at least one hundred twenty days before the current expiration date, the issuing institution notifies both the owner or operator and the director by certified mail of a decision not to extend the expiration date. Under the terms of the letter of credit, the one hundred twenty days ~~will~~ begin on the date when both the owner or operator and the director have received the notice, as evidenced by the return receipts.
  - (6) The letter of credit shall be issued in an amount at least equal to the current closure cost estimate, except as provided in paragraph (F) of this rule.
  - (7) Whenever the current closure cost estimate increases to an amount greater than the amount of the credit, the owner or operator, within sixty days after the increase, either shall ~~either~~ cause the amount of the credit to be increased so that the amount of the credit at least equals the current closure cost estimate and submit evidence of such increase to the director, or shall obtain other financial assurance as specified in this rule to cover the increase. Whenever the current closure cost estimate decreases, the amount of the credit may be reduced to the amount of the current closure cost estimate following written approval by the director.
  - (8) ~~Following~~After a determination pursuant to Chapter 3734. of the Revised Code or Section 3008 of RCRA that the owner or operator has failed to perform final closure in accordance with the approved closure plan and other requirements of Chapters 3745-65 to 3745-69 and 3745-256 of the Administrative Code when required to do so, the director may draw on the letter of credit.
  - (9) If the owner or operator does not establish alternate financial assurance as specified in this rule and obtain written approval of such alternate assurance from the director within ninety days after receipt by both the owner or operator and the director of a notice from the issuing institution that the issuing institution has decided not to extend the letter of credit beyond the current expiration date, the director will draw on the letter of credit. The director may

delay the drawing if the issuing institution grants an extension of the term of the credit. During the last thirty days of any such extension, the director will draw on the letter of credit if the owner or operator has failed to provide alternate financial assurance as specified in this rule and obtain written approval of such assurance from the director.

(10) The director will return the letter of credit to the issuing institution for termination when ~~either~~:

(a) An owner or operator substitutes alternate financial assurance as specified in this rule; or

(b) The director releases the owner or operator from the requirements of this rule in accordance with paragraph (H) of this rule.

(D) Closure insurance.

(1) An owner or operator may satisfy the requirements of this rule by obtaining closure insurance which conforms to the requirements of ~~paragraphs~~paragraph (D) ~~to (D)(10)(b)~~ of this rule and submitting a certificate of such insurance to the director. By August 26, 1983, the owner or operator shall submit to the director a letter from an insurer stating that the insurer is considering issuance of closure insurance conforming to the requirements of ~~paragraphs~~paragraph (D) ~~to (D)(10)(b)~~ of this rule to the owner or operator. Within ninety days after August 26, 1983, the owner or operator shall submit the certificate of insurance to the director or establish other financial assurance as specified in this rule. At a minimum, the insurer shall be licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer, in one or more states.

(2) The wording of the certificate of insurance shall be identical to the wording specified in paragraph (E) of rule 3745-55-51 of the Administrative Code.

(3) The closure insurance policy shall be issued for a face amount at least equal to the current closure cost estimate, except as provided in paragraph (F) of this rule. The term "face amount" means the total amount the insurer is obligated to pay under the policy. Actual payments by the insurer will not change the face amount, although the insurer's future liability will be lowered by the amount of the payments.

(4) The closure insurance policy shall guarantee that funds will be available to close the facility whenever final closure occurs. The policy also shall ~~also~~ guarantee that once final closure begins, the insurer will be responsible for paying out

funds, up to an amount equal to the face amount of the policy, upon the direction of the director, to such party or parties as the director specifies.

- (5) After beginning partial or final closure, an owner or operator or any other person authorized to conduct closure may request reimbursement for closure expenditures by submitting itemized bills to the director. The owner or operator may request reimbursement for partial closure only if the remaining value of the policy is sufficient to cover the maximum costs of closing the facility over the remaining operating life of the facility. Within sixty days after receiving bills for closure activities, the director will determine whether the partial or final closure expenditures are in accordance with the approved closure plan or otherwise justified, and if so, the director will instruct the insurer to make reimbursement in such amounts as the director specifies in writing. If the director has reason to believe that the maximum cost of closure over the remaining operating life of the facility will be significantly greater than the face amount of the policy, the director may withhold reimbursement of such amounts as the director deems prudent until the director determines, in accordance with paragraph (H) of this rule, that the owner or operator is no longer required to maintain financial assurance for final closure of the particular facility. If the director does not instruct the insurer to make such reimbursement, the director will provide to the owner or operator a detailed written statement of reasons.
- (6) The owner or operator shall maintain the policy in full force and effect until the director consents to termination of the policy by the owner or operator as specified in paragraph (D)(10) of this rule. Failure to pay the premium, without substitution of alternate financial assurance as specified in this rule, will constitute a significant violation, warranting such remedy as the director deems necessary. Such violation will be deemed to begin upon receipt by the director of a notice of future cancellation, termination, or failure to renew due to nonpayment of the premium, rather than upon the date of expiration.
- (7) Each policy shall contain a provision allowing assignment of the policy to a successor owner or operator. Such assignment may be conditional upon consent of the insurer, provided such consent is not unreasonably refused.
- (8) The policy shall provide that the insurer may not cancel, terminate, or fail to renew the policy except for failure to pay the premium. The automatic renewal of the policy, at a minimum, shall provide the insured with the option of renewal at the face amount of the expiring policy. If there is a failure to pay the premium, the insurer may elect to cancel, terminate, or fail to renew the policy by sending notice by certified mail to the owner or operator and the director. Cancellation, termination, or failure to renew may not occur, however, during the one hundred

twenty days beginning with the date of receipt of the notice by both the director and the owner or operator, as evidenced by the return receipts. Cancellation, termination, or failure to renew may not occur and the policy will remain in full force and effect in the event that on or before the date of expiration, any of the following occurs:

- (a) The director deems the facility abandoned.
  - (b) A permit is revoked or terminated.
  - (c) Closure is ordered by the director or a U.S. district court or other court of competent jurisdiction.
  - (d) The owner or operator is named as debtor in a voluntary or involuntary proceeding under Title 11 (bankruptcy), U.S. Code.
  - (e) The premium due is paid.
- (9) Whenever the current closure cost estimate increases to an amount greater than the face amount of the policy, the owner or operator, within sixty days after the increase, either shall either cause the face amount to be increased to an amount at least equal to the current closure cost estimate and submit evidence of such increase to the director, or shall obtain other financial assurance as specified in this rule to cover the increase. Whenever the current closure cost estimate decreases, the face amount may be reduced to the amount of the current closure cost estimate following after written approval by the director.
- (10) The director will give written consent to the owner or operator that the owner or operator may terminate the insurance policy when ~~either~~:
- (a) An owner or operator substitutes alternate financial assurance as specified in this rule: or
  - (b) The director releases the owner or operator from the requirements of this rule in accordance with paragraph (H) of this rule.
- (E) Financial test and corporate guarantee for closure.

- (1) An owner or operator may satisfy the requirements of this rule by demonstrating that the owner or operator passes a financial test as specified in ~~paragraphs paragraph~~ paragraph (E) to ~~(E)(10)(c)~~ of this rule. To pass this test, the owner or operator shall meet the criteria of either paragraph (E)(1)(a) or (E)(1)(b) of this rule.

(a) The owner or operator shall have:

- (i) Two of the following three ratios: a ratio of total liabilities to net worth less than 2.0; a ratio of the sum of net income plus depreciation, depletion, and amortization to total liabilities greater than 0.1; and a ratio of current assets to current liabilities greater than 1.5; and
- (ii) Net working capital and tangible net worth each at least six times the sum of the current closure and post-closure cost estimates and the current plugging and abandonment cost estimates; and
- (iii) Tangible net worth of at least ten million dollars; and
- (iv) Assets located in the United States amounting to at least ninety per cent of the owner's or operator's total assets or at least six times the sum of the current closure and post-closure cost estimates and the current plugging and abandonment cost estimates.

(b) The owner or operator shall have:

- (i) A current rating for the owner's or operator's most recent bond issuance of "AAA, AA, A, or BBB" as issued by "Standard and Poor's" or "Aaa, Aa, A, or Baa" as issued by "Moody's"; and
- (ii) Tangible net worth at least six times the sum of the current closure and post-closure cost estimates and the current plugging and abandonment cost estimates; and
- (iii) Tangible net worth at least ten million dollars; and
- (iv) Assets located in the United States amounting to at least ninety per cent of the owner's or operator's total assets or at least six times the sum of the current closure and post-closure cost estimates and the current plugging and abandonment cost estimates.

(2) The phrase "current closure and post-closure cost estimates" as used in paragraph (E)(1) of this rule refers to the cost estimates required to be shown in paragraphs 1-4 of the letter from the owner's or operator's chief financial officer as specified in paragraph (F) of rule 3745-55-51 of the Administrative Code. The phrase "current plugging and abandonment cost estimates" as used in paragraph (E)(1) of this rule refers to the cost estimates required to be shown in paragraphs 1-4 of the letter from the owner's or operator's chief financial officer as specified in paragraph (F) of rule 3745-55-51 of the Administrative Code.



- (3) To demonstrate that the owner or operator meets this test, the owner or operator shall submit the following items to the director:
- (a) A letter signed by the owner's or operator's chief financial officer and worded as specified in paragraph (F) of rule 3745-55-51 of the Administrative Code.
  - (b) A copy of the independent certified public accountant's report on examination of the owner's or operator's financial statements for the latest completed fiscal year.
  - (c) A special report from the owner's or operator's independent certified public accountant to the owner or operator stating that both:
    - (i) The accountant has compared the data which the letter from the chief financial officer specifies as having been derived from the independently audited year-end financial statements for the latest fiscal year with the amounts in such financial statements: and
    - (ii) In connection with that procedure, no matters came to the accountant's attention which caused the accountant to believe that the specified data should be adjusted.
- (4) The owner or operator may obtain an extension of the time allowed for submittal of the documents specified in paragraph (E)(3) of this rule if the fiscal year of the owner or operator ends during the ninety days prior to August 26, 1983 and if the year-end financial statements for that fiscal year will be audited by an independent certified public accountant. The extension will end no later than ninety days after the end of the owner's or operator's fiscal year. To obtain the extension, the owner's or operator's chief financial officer, by August 26, 1983, shall send, ~~by August 26, 1983~~, a letter to the director. This letter from the chief financial officer shall:
- (a) Request the extension: and
  - (b) Certify that the chief financial officer has grounds to believe that the owner or operator meets the criteria of the financial test: and
  - (c) Specify for each facility to be covered by the test the U.S. EPA identification number, name, address, and current closure and post-closure cost estimates to be covered by the test: and
  - (d) Specify the date ending the owner's or operator's last complete fiscal year before August 26, 1983: and

- (e) Specify the date, no later than ninety days after the end of such fiscal year, when the owner or operator will submit the documents specified in paragraph (E)(3) of this rule; and
  - (f) Certify that the year-end financial statements of the owner or operator for such fiscal year will be audited by an independent certified public accountant.
- (5) After the initial submittal of items specified in paragraph (E)(3) of this rule, the owner or operator shall send updated information to the director within ninety days after the close of each succeeding fiscal year. This information shall consist of all three items specified in paragraph (E)(3) of this rule.
- (6) If the owner or operator no longer meets the requirements of paragraph (E)(1) of this rule, the owner or operator shall send notice to the director of intent to establish alternate financial assurance as specified in this rule. The notice shall be sent by certified mail within ninety days after the end of the fiscal year for which the year-end financial data show that the owner or operator no longer meets the requirements. The owner or operator shall provide the alternate financial assurance within one hundred twenty days after the end of such fiscal year.
- (7) The director, based on a reasonable belief that the owner or operator may no longer meet the requirements of paragraph (E)(1) of this rule, may require reports of financial condition at any time from the owner or operator in addition to those specified in paragraph (E)(3) of this rule. If the director finds, on the basis of such reports or other information, that the owner or operator no longer meets the requirements of paragraph (E)(1) of this rule, the owner or operator shall provide alternate financial assurance as specified in this rule within thirty days after notification of such a finding.
- (8) The director may disallow use of this test on the basis of qualifications in the opinion expressed by the independent certified public accountant in the accountant's report on examination of the owner's or operator's financial statements [see paragraph (E)(3)(b) of this rule]. An adverse opinion or a disclaimer of opinion will be cause for disallowance. The director will evaluate other qualifications on an individual basis. The owner or operator shall provide alternate financial assurance as specified in this rule within thirty days after notification of the disallowance.
- (9) The owner or operator is no longer required to submit the items specified in paragraph (E)(3) of this rule when ~~either~~:

- (a) An owner or operator substitutes alternate financial assurance as specified in this rule; or
  - (b) The director releases the owner or operator from the requirements of this rule in accordance with paragraph (H) of this rule.
- (10) An owner or operator may meet the requirements of this rule by obtaining a written guarantee. The guarantor shall be the direct or higher-tier parent corporation of the owner or operator, a firm whose parent corporation is also the parent corporation of the owner or operator, or a firm with a "substantial business relationship" with the owner or operator. The guarantor shall meet the requirements for owners or operators in paragraphs (E)(1) to (E)(8) of this rule and shall comply with the terms of the guarantee. The wording of the guarantee shall be identical to the wording specified in paragraph (H) of rule 3745-55-51 of the Administrative Code. A certified copy of the guarantee shall accompany the items sent to the director as specified in paragraph (E)(3) of this rule. One of these items shall be the letter from the guarantor's chief financial officer. If the guarantor's parent corporation is also the parent corporation of the owner or operator, the letter shall describe the value received in consideration of the guarantee. If the guarantor is a firm with a "substantial business relationship" with the owner or operator, this letter shall describe this "substantial business relationship" and the value received in consideration of the guarantee. The terms of the guarantee shall provide that:
- (a) If the owner or operator fails to perform final closure of a facility covered by the corporate guarantee in accordance with the closure plan and other requirements of Chapters 3745-65 to 3745-69 and 3745-256 of the Administrative Code whenever required to do so, the guarantor will do so or establish a trust fund as specified in paragraph (A) of this rule in the name of the owner or operator.
  - (b) The corporate guarantee will remain in force unless the guarantor sends notice of cancellation by certified mail to the owner or operator and the director. Cancellation may not occur, however, during the one hundred twenty days beginning on the date of receipt of the notice of cancellation by both the owner or operator and the director, as evidenced by the return receipts.
  - (c) If the owner or operator fails to provide alternate financial assurance as specified in this rule and obtain the written approval of such alternate assurance from the director within ninety days after receipt by both the owner or operator and the director of a notice of cancellation of the

corporate guarantee from the guarantor, the guarantor will provide such alternative financial assurance in the name of the owner or operator.

- (F) Use of multiple financial mechanisms. An owner or operator may satisfy the requirements of this rule by establishing more than one financial mechanism per facility. These mechanisms are limited to trust funds, surety bonds, letters of credit, and insurance. The mechanisms shall be as specified in paragraphs (A) to (D) of this rule, except that it is the combination of mechanisms, rather than the single mechanism, which shall provide financial assurance for an amount at least equal to the current closure cost estimate. If an owner or operator uses a trust fund in combination with a surety bond or a letter of credit, the owner or operator may use the trust fund as the standby trust fund for the other mechanisms. A single standby trust fund may be established for two or more mechanisms. The director may use any or all of the mechanisms to provide for closure of the facility.
- (G) Use of a financial mechanism for multiple facilities. An owner or operator may use a financial assurance mechanism specified in this rule to meet the requirements of this rule for more than one facility. Evidence of financial assurance submitted to the director shall include a list showing, for each facility, the U.S. EPA identification number, name, address, and the amount of funds for closure assured by the mechanism. The amount of funds available through the mechanism shall be no less than the sum of funds that would be available if a separate mechanism had been established and maintained for each facility. In directing funds available through the mechanism for closure of any of the facilities covered by the mechanism, the director may direct only the amount of funds designated for that facility, ~~unless the owner or operator agrees to the use of additional funds designated for that facility;~~ unless the owner or operator agrees to the use of additional funds available under the mechanism.
- (H) Release of the owner or operator from the requirements of this rule. Within sixty days after receiving certifications from the owner or operator and a qualified professional engineer that final closure has been completed in accordance with the approved closure plan (see rule 3745-66-15 of the Administrative Code), the director will notify the owner or operator in writing that the owner or operator is no longer required by this rule to maintain financial assurance for final closure of the facility, unless the director has reason to believe that final closure has not been in accordance with the approved closure plan. The director will provide the owner or operator a detailed written statement of any such reason to believe that closure has not been in accordance with the approved closure plan.

[Comment: For dates of non-regulatory government publications, publications of recognized organizations and associations, federal rules, and federal statutory provisions

referenced in this rule, see rule 3745-50-11 of the Administrative Code titled "Incorporated by reference."]

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3745-66-44

**Cost estimate for post-closure care.**

- (A) The owner or operator of a hazardous waste disposal unit shall have a detailed written estimate, in current dollars, of the annual cost of post-closure monitoring and maintenance of the facility in accordance with the applicable post-closure provisions in rules 3745-66-17 to 3745-66-21, 3745-67-28, 3745-67-58, 3745-67-80, and 3745-68-10 of the Administrative Code.
- (1) The post-closure cost estimate shall be based on the costs to the owner or operator of hiring a third party to conduct post-closure care activities. A "third party" is a party who is neither a parent nor a subsidiary of the owner or operator (see the definition of "parent corporation" in rule 3745-66-41 of the Administrative Code).
  - (2) The post-closure cost estimate is calculated by multiplying the annual post-closure cost estimate by the number of years of post-closure care required under rule 3745-66-17 of the Administrative Code.
- (B) During the active life of the facility, the owner or operator shall adjust the post-closure cost estimate for inflation within sixty days prior to the anniversary date of the establishment of the financial instruments used to comply with rule 3745-66-45 of the Administrative Code. For owners or operators using the financial test or corporate guarantee, the post-closure care cost estimate shall be updated for inflation no later than thirty days after the close of the firm's fiscal year and before submittal of updated information to the director as specified in paragraph (D)(5) of rule 3745-66-45 of the Administrative Code. The adjustment may be made by recalculating the post-closure cost estimate in current dollars or by using an inflation factor derived as specified in 40 CFR 265.144(b).
- (1) The first adjustment is made by multiplying the post-closure cost estimate by the inflation factor. The result is the adjusted post-closure cost estimate.
  - (2) Subsequent adjustments are made by multiplying the latest adjusted post-closure cost estimate by the latest inflation factor.
- (C) During the active life of the facility, the owner or operator shall revise the post-closure cost estimate no later than thirty days after a revision to the post-closure plan which increases the cost of post-closure care. If the owner or operator has an approved post-closure plan, the post-closure cost estimate shall be revised no later than thirty days after the director has approved the request to modify the plan, if the change in the post-closure plan increases the cost of post-closure care. The revised post-closure cost estimate shall be adjusted for inflation as specified in paragraph (B) of this rule.

- (D) The owner or operator shall keep ~~the following~~ at the facility during the operating life of the facility: the latest post-closure cost estimate prepared in accordance with paragraphs (A) and (C) of this rule and, when the estimate has been adjusted in accordance with paragraph (B) of this rule, the latest adjusted post-closure cost estimate.
- (E) A copy of the facility's current, detailed post-closure cost estimate prepared and maintained in accordance with paragraphs (A) and (B) of this rule shall be submitted annually to the director.
- (1) For owners or operators using a financial mechanism other than the financial test, such submittal of the post-closure cost estimate to the director shall be made within sixty days ~~following~~after a revision or update to the estimate made in accordance with paragraph (B) of this rule.
  - (2) For owners or operators using a financial test, such submittal of the post-closure cost estimate to the director shall be made within ninety days after the close of the firm's fiscal year ~~following~~after a revision or update to the estimate made in accordance with paragraph (B) of this rule.

[Comment 1: As used in this rule, "detailed post-closure cost estimate" means a listing of the specific costs associated with each major phase of facility post-closure activity for each hazardous waste management unit, including but not limited to: ground water monitoring, maintenance of final cap and cover, erosion and wind dispersal control, and leachate collection and disposal activities.]

[Comment 2: For dates of non-regulatory government publications, publications of recognized organizations and associations, federal rules, and federal statutory provisions referenced in this rule, see rule 3745-50-11 of the Administrative Code titled "Incorporated by reference."]



Effective: 9/29/2021  
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CERTIFIED ELECTRONICALLY

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Certification

09/14/2021

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3745-66-45

**Financial assurance for post-closure care.**

An owner or operator of each facility with a hazardous waste disposal unit shall establish financial assurance for post-closure care of the disposal units.

**(A) Post-closure trust fund.**

- (1) An owner or operator may satisfy the requirements of this rule by establishing a post-closure trust fund which conforms to the requirements of ~~paragraphs~~ paragraph (A) to (A)(12)(b) of this rule and submitting an originally signed duplicate of the trust agreement to the director ~~by certified mail~~. The trustee shall be an entity which has the authority to act as a trustee and whose trust operations are regulated and examined by a federal or state agency.
- (2) The wording of the trust agreement shall be identical to the wording specified in paragraph (A)(1) of rule 3745-55-51 of the Administrative Code, and the trust agreement shall be accompanied by a formal certification of acknowledgement [for an example, see paragraph (A)(2) of rule 3745-55-51 of the Administrative Code]. "Schedule A" of the trust agreement shall be updated within sixty days after a change in the amount of the current post-closure cost estimate covered by the agreement.
- (3) Payments into the trust fund shall be made annually by the owner or operator over the remaining operating life of the facility as estimated in the closure plan [paragraph (A) of rule 3745-66-12 of the Administrative Code] or over the twenty years beginning with August 26, 1983, whichever period is shorter. This period is hereafter referred to as the "pay-in period." The payments to the post-closure trust fund shall be made as follows:
  - (a) The first payment shall be made by August 26, 1983, except as provided in paragraph (A)(5) of this rule. The first payment shall be at least equal to the post-closure cost estimate (see rule 3745-66-44 of the Administrative Code) except as provided in paragraph (F) of this rule, divided by the number of years in the pay-in period.
  - (b) Subsequent payments shall be made no later than thirty days after each anniversary date of the first payment. The amount of each subsequent payment shall be determined by this formula:

$$\text{Next payment} = (\text{CE} - \text{CV}) / Y$$

Where CE is the current post-closure cost estimate, CV is the current value of the trust fund, and Y is the number of years remaining in the pay-in period.

- (4) The owner or operator may accelerate payments into the trust fund or the owner or operator may deposit the full amount of the current post-closure cost estimate at the time the trust fund is established. However, the owner or operator shall maintain the value of the trust fund at no less than the value the trust fund would have if annual payments were made as specified in paragraph (A)(3) of this rule.
- (5) If the owner or operator establishes a post-closure trust fund after having used one or more alternate mechanisms specified in this rule, the owner's or operator's first payment shall be in at least the amount that the trust fund would contain if the trust fund were established initially and annual payments made as specified in paragraph (A)(3) of this rule.
- (6) After pay-in period is completed, whenever the current post-closure cost estimate changes during the operating life of the facility, the owner or operator shall compare the new estimate with the trustee's most recent annual valuation of the trust fund (described in section 10 of the trust agreement). If the value of the trust fund is less than the amount of the new estimate, the owner or operator, within sixty days after the change in the cost estimate, either shall ~~either~~ deposit an amount into the trust fund so that ~~its~~ the value of the trust fund after this deposit at least equals the amount of the current post-closure cost estimate, or shall obtain other financial assurance as specified in this rule to cover the difference.
- (7) During the operating life of the facility, if the value of the trust fund is greater than the total amount of the current post-closure cost estimate, the owner or operator may submit a written request to the director for release of the amount in excess of the current post-closure cost estimate.
- (8) If an owner or operator substitutes other financial assurance as specified in this rule for all or part of the trust fund, the owner or operator may submit a written request to the director for release of the amount in excess of the current post-closure cost estimate covered by the trust fund.
- (9) Within sixty days after receiving a request from the owner or operator for release of funds as specified in paragraph (A)(7) or (A)(8) of this rule, the director will instruct the trustee to release to the owner or operator such funds as the director specifies in writing.
- (10) During the period of post-closure care, the director may approve a release of funds if the owner or operator demonstrates to the director that the value of the trust fund exceeds the remaining cost of post-closure care.

- (11) An owner or operator or any other person authorized to conduct post-closure may request reimbursement for post-closure expenditures by submitting itemized bills to the director. Within sixty days after receiving bills for post-closure care activities, the director will instruct the trustee to make reimbursement in those amounts as the director specifies in writing, if the director determines that the post-closure expenditures are in accordance with the approved post-closure plan or otherwise justified. If the director does not instruct the trustee to make such reimbursement, the director will provide the owner or operator with a detailed written statement of reasons.
- (12) The director will agree to termination of the trust when ~~either~~:
- (a) The owner or operator substitutes alternate financial assurance as specified in this rule: or
  - (b) The director releases the owner or operator from the requirements in this rule, in accordance with paragraph (H) of this rule.
- (B) Surety bond guaranteeing payment into a post-closure trust fund.
- (1) An owner or operator may satisfy the requirements of this rule by obtaining a surety bond which conforms to the requirements of ~~paragraphs~~ paragraph (B) to (B)(9) of this rule and submitting the bond to the director ~~by certified mail~~. The surety company issuing the bond, at a minimum, shall be among those listed as acceptable sureties on federal bonds in "Circular 570" of the U.S. department of treasury.
- [Comment: "Circular 570" is published in the Federal Register annually on July first. Interim changes in the circular are also published in the Federal Register.]
- (2) The wording of the surety bond shall be identical to the wording specified in paragraph (B) of rule 3745-55-51 of the Administrative Code.
- (3) The owner or operator who uses a surety bond to satisfy the requirements of this rule also shall ~~also~~ establish a standby trust fund by the time the bond is obtained. Under the terms of the surety bond, all payments made thereunder shall be deposited by the surety directly into the standby trust fund in accordance with instructions from the director. This standby trust fund shall meet the requirements specified in paragraph (A) of this rule, except that:
- (a) An originally signed duplicate of the trust agreement shall be submitted to the director with the surety bond: and

- (b) Until the standby trust fund is funded pursuant to this rule, the following are not required:
  - (i) Payments into the trust fund as specified in paragraph (A) of this rule.
  - (ii) Updating of "Schedule A" of the trust agreement [see paragraph (A) of rule 3745-55-51 of the Administrative Code] to show current post-closure cost estimates.
  - (iii) Annual valuations as required by the trust agreement.
  - (iv) Notices of nonpayment as required by the trust agreement.
- (4) The bond shall guarantee that the owner or operator will do any of the following:
  - (a) Fund the standby trust fund in an amount equal to the penal sum of the bond before the beginning of final closure of the facility.
  - (b) Fund the standby trust fund in an amount equal to the penal sum within fifteen days after an order to begin final closure is issued by the director, or an Ohio court, or by a U. S. district court, or other court of competent jurisdiction, or within fifteen days after issuance of a notice of revocation of the permit by the director.
  - (c) Provide alternate financial assurance as specified in this rule, and obtain the director's written approval of the assurance provided, within ninety days after receipt by both the owner or operator and the director of a notice of cancellation of the bond from the surety.
- (5) Under the terms of the bond, the surety will become liable on the bond obligation when the owner or operator fails to perform as guaranteed by the bond.
- (6) The penal sum of the bond shall be in an amount at least equal to the current post-closure cost estimate (see rule 3745-66-44 of the Administrative Code), except as provided in paragraph (F) of this rule.
- (7) Whenever the current post-closure cost estimate increases to an amount greater than the penal sum, the owner or operator, within sixty days after the increase, either shall either cause the penal sum to be increased to an amount at least equal to the current post-closure cost estimate and submit evidence of such increase to the director, or shall obtain other financial assurance as specified in this rule to cover the increase. Whenever the current post-closure cost estimate decreases, the penal sum may be reduced to the amount of the current post-closure cost estimate ~~following~~after written approval by the director. Notice of an increase

or decrease in the penal sum shall be sent to the director ~~by certified mail~~ within sixty days after the change.

- (8) Under the terms of the bond, the surety may cancel the bond by sending notice of cancellation by certified mail to the owner or operator and to the director. Cancellation may not occur, however, during the one hundred twenty days beginning on the date of receipt of the notice of cancellation by both the owner or operator and the director, as evidenced by the return receipts.
- (9) The owner or operator may cancel the bond if the director has given prior written consent based on the director's receipt of evidence of alternate financial assurance as specified in this rule.

(C) Post-closure letter of credit.

- (1) An owner or operator may satisfy the requirements of this rule by obtaining an irrevocable standby letter of credit which conforms to the requirements of ~~paragraphs paragraph (C) to (C)(1)(b)~~ paragraph (C) of this rule and submitting the letter to the director ~~by certified mail~~. The issuing institution shall be an entity which has the authority to issue letters of credit and whose letter of credit operations are regulated and examined by a federal or state agency.
- (2) The wording of the letter of credit shall be identical to the wording specified in paragraph (D) of rule 3745-55-51 of the Administrative Code.
- (3) An owner or operator who uses a letter of credit to satisfy the requirements of this rule also shall ~~also~~ establish a standby trust fund. Under the terms of the letter of credit, all amounts paid pursuant to a draft by the director will be deposited by the issuing institution directly into the standby trust fund in accordance with instructions from the director. The standby trust fund shall meet the requirements of the trust fund specified in paragraph (A) of this rule, except that:
  - (a) An originally signed duplicate of the trust agreement shall be submitted to the director with the letter of credit: and
  - (b) Unless the standby trust fund is funded pursuant to this rule, the following are not required:
    - (i) Payment into the trust fund as specified in paragraph (A) of this rule.
    - (ii) Updating of "Schedule A" of the trust agreement [see paragraph (A) of rule 3745-55-51 of the Administrative Code] to show current post-closure cost estimates.

- (iii) Annual valuations as required by the trust agreement.
  - (iv) Notices of a nonpayment as required by the trust agreement.
- (4) The letter of credit shall be accompanied by a letter from the owner or operator referring to the letter of credit by number, issuing institution, and date, and providing the U.S. EPA identification number, name, and address of the facility, and the amount of funds assured for post-closure care of the facility by the letter of credit.
- (5) The letter of credit shall be irrevocable and issued for a period of at least one year. The letter of credit shall provide that the expiration date will be automatically extended for a period of at least one year unless, at least one hundred twenty days before the current expiration date, the issuing institution notifies both the owner or operator and the director by certified mail of a decision not to extend the expiration date. Under the terms of the letter of credit, the one hundred twenty days ~~will~~ begin on the date when both the owner or operator and the director have received the notice, as evidenced by the return receipts.
- (6) The letter of credit shall be issued in an amount at least equal to the current post-closure cost estimate, except as provided in paragraph (F) of this rule.
- (7) Whenever the current post-closure cost estimate increases to an amount greater than the amount of the credit during the operating life of the facility, the owner or operator, within sixty days after the increase, either shall cause the amount of the credit to be increased so that ~~it~~the amount at least equals the current post-closure cost estimate and submit such evidence to the director, or shall obtain other financial assurance as specified in this rule to cover the increase. Whenever the current post-closure cost estimate decreases during the operating life of the facility, the amount of the credit may be reduced to the amount of the current post-closure cost estimate ~~following~~after written approval by the director.
- (8) During the period of post-closure care, the director may approve a decrease in the amount of the letter of credit if the owner or operator demonstrates to the director that the amount exceeds the remaining cost of post-closure care.
- (9) ~~Following~~After a determination pursuant to Chapter 3734. of the Revised Code or Section 3008 of RCRA by the director that the owner or operator has failed to perform post-closure care in accordance with the approved post-closure plan and other permit requirements, the director may draw on the letter of credit.

- (10) If the owner or operator does not establish alternate financial assurance as specified in this rule and obtain written approval of such alternate assurance from the director within ninety days after receipt by both the owner or operator and the director of a notice from the issuing institution that ~~the~~ the issuing institution has decided not to extend the letter of credit beyond the current expiration date, the director will draw on the letter of credit. The director may delay the drawing if the issuing institution grants an extension of the term of the credit. During the last thirty days of any such extension, the director will draw on the letter of credit if the owner or operator has failed to provide alternate financial assurance as specified in this rule and obtain written approval of such assurance from the director.
- (11) The director will return the letter of credit to the issuing institution for termination when ~~either~~:
- (a) The owner or operator substitutes alternate financial assurance as specified in this rule; or
  - (b) The director releases the owner or operator from the requirements of this rule in accordance with paragraph (H) of this rule.

(D) Post-closure insurance.

- (1) An owner or operator may satisfy the requirements of this rule by obtaining post-closure insurance which conforms to the requirements of ~~paragraphs~~ paragraph (D) ~~to (D)(11)(b)~~ of this rule and submitting a certificate of such insurance to the director. By August 26, 1983, the owner or operator shall submit to the director a letter from an insurer stating that the insurer is considering issuance of post-closure insurance conforming to the requirements of ~~paragraphs~~ paragraph (D) ~~to (D)(11)(b)~~ of this rule to the owner or operator. Within ninety days after August 26, 1983, the owner or operator shall submit the certificate of insurance to the director or establish other financial assurance as specified in this rule. At a minimum, the insurer shall be licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer, in one or more states.
- (2) The wording of the certificate of insurance shall be identical to the wording specified in paragraph (E) of rule 3745-55-51 of the Administrative Code.
- (3) The post-closure insurance policy shall be issued for a face amount at least equal to the current post-closure cost estimate, except as provided in paragraph (F) of this rule. The term "face amount" means the total amount the insurer is obligated to pay under the policy. Actual payments by the insurer will not change the face



amount, although the insurer's future liability will be lowered by the amount of the payments.

- (4) The post-closure insurance policy shall guarantee that funds will be available to provide post-closure care of the facility whenever the post-closure period begins. The policy also shall ~~also~~ guarantee that once post-closure care begins the insurer will be responsible for paying out funds, up to an amount equal to the face amount of the policy, upon the direction of the director, to such party or parties as the director specifies.
- (5) An owner or operator or any other person authorized to perform post-closure care may request reimbursement for post-closure care expenditures by submitting itemized bills to the director. Within sixty days after receiving bills for post-closure care activities, the director will determine whether the post-closure expenditures are in accordance with the approved post-closure plan or otherwise justified, and if so, the director will instruct the insurer to make reimbursement in such amounts as the director specifies in writing. If the director does not instruct the insurer to make such reimbursements, the director will provide a detailed written statement of reasons.
- (6) The owner or operator shall maintain the policy in full force and effect until the director consents to termination of the policy by the owner or operator as specified in paragraph (D)(11) of this rule. Failure to pay the premium; without substitution of alternate financial assurance as specified in this rule; will constitute a significant violation, warranting such remedy as the director deems necessary. Such violation will be deemed to begin upon receipt by the director of a notice of future cancellation, termination, or failure to renew due to nonpayment of the premium; rather than upon the date of expiration.
- (7) Each policy shall contain a provision allowing assignment of the policy to a successor owner or operator. Such assignment may be conditional upon consent of the insurer, provided such consent is not unreasonably refused.
- (8) The policy shall provide that the insurer may not cancel, terminate, or fail to renew the policy except for failure to pay the premium. The automatic renewal of the policy, at a minimum, shall provide the insured with the option of renewal at the face amount of the expiring policy. If there is a failure to pay the premium, the insurer may elect to cancel, terminate, or fail to renew the policy by sending notice by certified mail to the owner or operator and the director. Cancellation, termination, or failure to renew may not occur, however, during the one hundred twenty days beginning with the date of receipt of the notice by both the director and the owner or operator, as evidenced by the return receipts. Cancellation, termination, or failure to renew may not occur and the policy will remain in

full force and effect in the event that on or before the date of expiration, any of the following occurs:

- (a) The director deems the facility abandoned.
  - (b) The "Part A" permit is withdrawn, terminated, or revoked.
  - (c) Closure is ordered by the director or a U.S. district court or other court of competent jurisdiction.
  - (d) The owner or operator is named as debtor in a voluntary or involuntary proceeding under Title 11 (bankruptcy), U.S. Code.
  - (e) The premium due is paid.
- (9) Whenever the current post-closure cost estimate increases to an amount greater than the face amount of the policy during the operating life of the facility, the owner or operator, within sixty days after the increase, either shall ~~either~~ cause the face amount to be increased to an amount at least equal to the current post-closure cost estimate and submit evidence of such increase to the director, or shall obtain other financial assurance as specified in this rule to cover the increase. Whenever the current post-closure cost estimate decreases during the operating life of the facility, the face amount may be reduced to the amount of the current post-closure cost estimate ~~following~~after written approval by the director.
- (10) Commencing on the date that liability to make payments pursuant to the policy accrues, the insurer will thereafter annually increase the face amount of the policy. Such increase shall be equivalent to the face amounts of the policy, less any payments made, multiplied by an amount equivalent to eighty-five per cent of the most recent investment rate or of the equivalent coupon-issue yield announced by the U.S. treasury for twenty-six-week treasury securities.
- (11) The director will give written consent to the owner or operator that the owner or operator may terminate the insurance policy when ~~either~~:
- (a) An owner or operator substitutes alternate financial assurance as specified in this rule; or
  - (b) The director releases the owner or operator from the requirements of this rule in accordance with paragraph (H) of this rule.
- (E) Financial test and corporate guarantee for post-closure care.

(1) An owner or operator may satisfy the requirements of this rule by demonstrating that the owner or operator passes a financial test as specified in ~~paragraphs~~ paragraph (E) to (E)(11)(c) of this rule. To pass this test the owner or operator shall meet the criteria of either paragraph (E)(1)(a) or (E)(1)(b) of this rule.

(a) The owner or operator shall have the following:

(i) Two of the following three ratios: a ratio of total liabilities to net worth less than 2.0; a ratio of the sum of net income plus depreciation, depletion, and amortization to total liabilities greater than 0.1; and a ratio of current assets to current liabilities greater than 1.5.

(ii) Net working capital and tangible net worth each at least six times the sum of the current closure and post-closure cost estimates and the current plugging and abandonment cost estimates.

(iii) Tangible net worth of at least ten million dollars.

(iv) Assets located in the United States amounting to at least ninety per cent of the owner's or operator's total assets or at least six times the sum of the current closure and post-closure cost estimates and the current plugging and abandonment cost estimates.

(b) The owner or operator shall have the following:

(i) A current rating for the owner's or operator's most recent bond issuance of "AAA, AA, A, or BBB" as issued by "Standard and Poor's" or "Aaa, Aa, A, or Baa" as issued by "Moody's."

(ii) Tangible net worth at least six times the sum of the current closure and post-closure cost estimates and the current plugging and abandonment cost estimates.

(iii) Tangible net worth of at least ten million dollars.

(iv) Assets located in the United States amounting to at least ninety per cent of the owner's or operator's total assets or at least six times the sum of the current closure and post-closure cost estimates and the current plugging and abandonment cost estimates.

(2) The phrase "current closure and post-closure cost estimates" as used in paragraph (E)(1) of this rule refers to the cost estimates required to be shown in paragraphs 1-4 of the letter from the owner's or operator's chief financial officer [see

paragraph (F) of rule 3745-55-51 of the Administrative Code]. The phrase "current plugging and abandonment cost estimates" as used in paragraph (E)(1) of this rule refers to the cost estimates required to be shown in paragraphs 1-4 of the letter from the owner's or operator's chief financial officer [see paragraph (F) of rule 3745-55-51 of the Administrative Code].

- (3) To demonstrate that the owner or operator meets this test, the owner or operator shall submit the following items to the director:
- (a) A letter signed by the owner's or operator's chief financial officer and worded as specified in paragraph (F) of rule 3745-55-51 of the Administrative Code.
  - (b) A copy of the independent certified public accountant's report on examination of the owner's or operator's financial statements for the latest completed fiscal year.
  - (c) A special report from the owner's or operator's independent certified public accountant to the owner or operator stating that:
    - (i) The accountant has compared the data which the letter from the chief financial officer specifies as having been derived from the independently audited year-end financial statements for the latest fiscal year with the amounts in such financial statements: and
    - (ii) In connection with that procedure, no matters came to the accountant's attention which caused the accountant to believe that the specified data should be adjusted.
- (4) The owner or operator may obtain an extension of the time allowed for submittal of the documents specified in paragraph (E)(3) of this rule if the fiscal year of the owner or operator ends during the ninety days prior to August 26, 1983 and if the year-end financial statements from that fiscal year will be audited by an independent certified public accountant. The extension will end no later than ninety days after the end of the owner's or operator's fiscal year. To obtain the extension, the owner's or operator's chief financial officer shall send, by August 26, 1983, a letter to the director. This letter from the chief financial officer shall do the following:
- (a) Request the extension.
  - (b) Certify that the chief financial officer has grounds to believe that the owner or operator meets the criteria of the financial test.

- (c) Specify for each facility to be covered by the test the U.S. EPA identification number, name, address, and the current closure and post-closure cost estimates to be covered by the test.
  - (d) Specify the date ending the owner's or operator's latest complete fiscal year before August 26, 1983.
  - (e) Specify the date, no later than ninety days after the end of such fiscal year, when the owner or operator will submit the documents specified in paragraph (E)(3) of this rule.
  - (f) Certify that the year-end financial statements of the owner or operator for such fiscal year will be audited by an independent certified public accountant.
- (5) After the initial submittal of items specified in paragraph (E)(3) of this rule, the owner or operator shall send updated information to the director within ninety days after the close of each succeeding fiscal year. This information shall consist of all three items specified in paragraph (E)(3) of this rule.
- (6) If the owner or operator no longer meets the requirements of paragraph (E)(1) of this rule, the owner or operator shall send notice to the director of intent to establish alternate financial assurance as specified in this rule. The notice shall be sent by certified mail within ninety days after the end of the fiscal year for which the year-end financial data show that the owner or operator no longer meets the requirements. The owner or operator shall provide the alternate financial assurance within one hundred twenty days after the end of such fiscal year.
- (7) The director, based on a reasonable belief that the owner or operator may no longer meet the requirements of paragraph (E)(1) of this rule, may require reports of financial condition at any time from the owner or operator in addition to those specified in paragraph (E)(3) of this rule. If the director finds, on the basis of such reports or other information, that the owner or operator no longer meets the requirements of paragraph (E)(1) of this rule, the owner or operator shall provide alternate financial assurance as specified in this rule within thirty days after notification of such a finding.
- (8) The director may disallow use of this test on the basis of qualifications in the opinion expressed by the independent certified public accountant in the accountant's report on examination of the owner's or operator's financial statements [see paragraph (E)(3)(b) of this rule]. An adverse opinion or a disclaimer of opinion will be cause for disallowance. The director will evaluate

other qualifications on an individual basis. The owner or operator shall provide alternate financial assurance as specified in this rule within thirty days after notification of the disallowance.

- (9) During the period of post-closure care, the director may approve a decrease in the current post-closure cost estimate for which this test demonstrates financial assurance if the owner or operator demonstrates to the director that the amount of the cost estimate exceeds the remaining cost of post-closure care.
- (10) The owner or operator is no longer required to submit the items specified in paragraph (E)(3) of this rule when ~~either~~:
- (a) An owner or operator substitutes alternate financial assurance as specified in this rule: or
  - (b) The director releases the owner or operator from the requirements of this rule in accordance with paragraph (H) of this rule.
- (11) An owner or operator may meet the requirements of this rule by obtaining a written guarantee. The guarantor shall be the direct or higher-tier parent corporation of the owner or operator, a firm whose parent corporation is also the parent corporation of the owner or operator, or a firm with a "substantial business relationship" with the owner or operator. The guarantor shall meet the requirements for owners or operators in paragraphs (E)(1) to (E)(9) of this rule and shall comply with the terms of the guarantee. The wording of the guarantee shall be identical to the wording specified in paragraph (H) of rule 3745-55-51 of the Administrative Code. A certified copy of the guarantee shall accompany the items sent to the director as specified in paragraph (E)(3) of this rule. One of these items shall be the letter from the guarantor's chief financial officer. If the guarantor's parent corporation is also the parent corporation of the owner or operator, the letter shall describe the value received in consideration of the guarantee. If the guarantor is a firm with a "substantial business relationship" with the owner or operator, this letter shall describe this "substantial business relationship" and the value received in consideration of the guarantee. The terms of the guarantee shall provide that:
- (a) If the owner or operator fails to perform post-closure care of a facility covered by the corporate guarantee in accordance with the post-closure plan and other requirements in Chapters 3745-65 to 3745-69 and 3745-256 of the Administrative Code whenever required to do so, the guarantor will do so or establish a trust fund as specified in paragraph (A) of this rule in the name of the owner or operator.

- (b) The corporate guarantee will remain in force unless the guarantor sends notice of cancellation by certified mail to the owner or operator and to the director. Cancellation may not occur, however, during the one hundred twenty days beginning on the date of receipt of the notice of cancellation by both the owner or operator and the director, as evidenced by the return receipts.
  - (c) If the owner or operator fails to provide alternate financial assurance as specified in this rule and obtain the written approval of such alternate assurance from the director within ninety days after receipt by both the owner or operator and the director of a notice of cancellation of the corporate guarantee from the guarantor, the guarantor will provide such alternate financial assurance in the name of the owner or operator.
- (F) Use of multiple financial mechanisms. An owner or operator may satisfy the requirements of this rule by establishing more than one financial mechanism per facility. These mechanisms are limited to trust funds, surety bonds, letters of credit, and insurance. The mechanisms shall be as specified in paragraphs (A) ~~to~~, (B), (C), and (D), respectively, of this rule, except that the combination of mechanisms, rather than the single mechanism, shall provide financial assurance for an amount at least equal to the current post-closure cost estimate. If an owner or operator uses a trust fund in combination with a surety bond or a letter of credit, the owner or operator may use the trust fund as the standby trust fund for the other mechanisms. A single standby trust fund may be established for two or more mechanisms. The director may use any or all of the mechanisms to provide for post-closure care of the facility.
- (G) Use of a financial mechanism for multiple facilities. An owner or operator may use a financial assurance mechanism specified in this rule to meet the requirements of this rule for more than one facility of which he is the owner or operator. Evidence of financial assurance submitted to the director shall include a list showing, for each facility in Ohio and all other appropriate states, the U.S. EPA identification number, name, address, and the amount of funds for post-closure care assured by the mechanism. If the list is changed by addition or subtraction of a facility or by an increase or decrease in the amount of funds assured for post-closure care of one or more facilities, a corrected list shall be sent to the director within sixty days after such change. The amount of funds available through the mechanism shall be no less than the sum of funds that would be available if a separate mechanism had been established and maintained for each facility. In directing funds available through the mechanism for post-closure care of any of the facilities covered by the mechanism, the director may direct only the amount of funds designated for that facility, unless the owner or operator agrees to the use of additional funds available under the mechanism.

(H) Release of the owner or operator from the requirements of this rule. Within sixty days after receiving certifications from the owner or operator and a qualified professional engineer that post-closure care period has been completed for a hazardous waste disposal unit in accordance with the approved plan, the director will notify the owner or operator in writing that the owner or operator is no longer required to maintain financial assurance for post-closure care of that unit, unless the director has reason to believe that post-closure care has not been in accordance with the approved post-closure plan. The director shall provide the owner or operator a detailed written statement of any such reason to believe that post-closure care has not been in accordance with the approved post-closure plan.

[Comment: For dates of non-regulatory government publications, publications of recognized organizations and associations, federal rules, and federal statutory provisions referenced in this rule, see rule 3745-50-11 of the Administrative Code titled "Incorporated by reference."]



Effective: 9/29/2021  
Five Year Review (FYR) Dates: 6/7/2021 and 06/05/2026

CERTIFIED ELECTRONICALLY

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Certification

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12/07/2000, 12/07/2004, 09/05/2010, 03/24/2017

**3745-66-46 Use of a mechanism for financial assurance of both closure and post-closure care.**

An owner or operator may satisfy the requirements for financial assurance for both closure and post-closure care for one or more facilities by using a trust fund, surety bond, letter of credit, insurance, financial test, or corporate guarantee that meets the specifications for the mechanism in rules 3745-66-43 and 3745-66-45 of the Administrative Code. The amount of funds available through the mechanism must be no less than the sum of funds that would be available if a separate mechanism had been established and maintained for financial assurance of closure and of post-closure care.

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Statutory authority: 3734.12  
Rule amplifies: 3734.12  
Prior effective dates: None

3745-66-47

**Liability requirements.**

(A) Coverage for sudden accidental occurrences. An owner or operator of a hazardous waste treatment, storage, or disposal facility, or a group of such facilities, shall demonstrate financial responsibility for bodily injury and property damage to third parties caused by sudden accidental occurrences arising from operations of the facility or group of facilities. The owner or operator shall have and maintain liability coverage for sudden accidental occurrences in the amount of at least one million dollars per occurrence with an annual aggregate of at least two million dollars, exclusive of legal defense costs. This liability coverage may be demonstrated as specified in paragraph (A)(1), (A)(2), (A)(3), (A)(4), (A)(5), or (A)(6) of this rule.

(1) An owner or operator may demonstrate the required liability coverage by having liability insurance as specified in ~~paragraphs~~paragraph (A) to ~~(A)(7)(e)~~ of this rule.

(a) Each insurance policy shall be amended by attachment of the "Hazardous Waste Facility Liability Endorsement" or evidenced by a "Certificate of Liability Insurance." The wording of the endorsement shall be identical to the wording specified in paragraph (I) of rule 3745-55-51 of the Administrative Code. The wording of the certificate of insurance shall be identical to the wording specified in paragraph (J) of rule 3745-55-51 of the Administrative Code. The owner or operator shall submit an originally signed duplicate of the endorsement or the certificate of insurance to the director. If requested by the director, an owner or operator shall provide an originally signed duplicate of the insurance policy.

(b) Each insurance policy shall be issued by an insurer which, at a minimum, is licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer, in one or more states.

(2) An owner or operator may meet the requirements of this rule by passing a financial test or using the guarantee for liability coverage as specified in paragraphs (F) and (G) of this rule.

(3) An owner or operator may meet the requirements of this rule by obtaining a letter of credit for liability coverage as specified in paragraph (H) of this rule.

(4) An owner or operator may meet the requirements of this rule by obtaining a surety bond for liability coverage as specified in paragraph (I) of this rule.

(5) An owner or operator may meet the requirements of this rule by obtaining a trust fund for liability coverage as specified in paragraph (J) of this rule.

- (6) An owner or operator may demonstrate the required liability coverage through the use of combinations of insurance, financial test, guarantee, letter of credit, surety bond, and trust fund, except that the owner or operator may not combine a financial test covering part of the liability coverage requirement with a guarantee unless the financial statement of the owner or operator is not consolidated with the financial statement of the guarantor. The amounts of coverage demonstrated shall total at least the minimum amounts required by this rule. If the owner or operator demonstrates the required coverage through the use of a combination of financial assurances under ~~paragraphs~~ paragraph (A) to (A)(7)(c) of this rule, the owner or operator shall specify at least one such assurance as "primary" coverage and shall specify other assurance as "excess" coverage.
- (7) An owner or operator shall notify the director in writing within thirty days whenever any of the following occurs:
- (a) A claim results in a reduction in the amount of financial assurance for liability coverage provided by a financial instrument authorized in paragraphs (A)(1) to (A)(6) of this rule.
  - (b) A "Certification of Valid Claim" for bodily injury or property damages caused by a sudden or nonsudden accidental occurrence arising from the operation of a hazardous waste treatment, storage, or disposal facility is entered between the owner or operator and third-party claimant for liability coverage under paragraphs (A)(1) to (A)(6) of this rule.
  - (c) A final court order establishing a judgement for bodily injury or property ~~damages~~ damage caused by a sudden or nonsudden accidental occurrence arising from the operation of a hazardous waste treatment, storage, or disposal facility is issued against the owner or operator or an instrument that is providing financial assurance for liability coverage under paragraphs (A)(1) to (A)(6) of this rule.
- (B) Coverage for nonsudden accidental occurrences. An owner or operator of a surface impoundment, landfill, or land treatment facility which is used to manage hazardous waste, or a group of such facilities, shall demonstrate financial responsibility for bodily injury and property damage to third parties caused by nonsudden accidental occurrences arising from operations of the facility or group of facilities. An owner or operator shall have and maintain liability coverage for nonsudden accidental occurrences in the amount of at least three million dollars per occurrence with an annual aggregate of at least six million dollars, exclusive of legal defense costs. The owner or operator who shall meet the requirements of this rule may combine the required per-occurrence coverage levels for sudden and nonsudden accidental

occurrences into a single per-occurrence level, and combine the required annual aggregate coverage levels for sudden and nonsudden accidental occurrences into a single annual aggregate level. Owners or operators who combine coverage levels for sudden and nonsudden accidental occurrences shall maintain liability coverage in the amount of at least four million dollars per occurrence and eight million dollars annual aggregate. This liability coverage may be demonstrated as specified in paragraph (B) (1), (B)(2), (B)(3), (B)(4), (B)(5), or (B)(6) of this rule:

- (1) An owner or operator may demonstrate the required liability coverage by having liability insurance as specified in ~~paragraphs~~paragraph (B) to (B)(7)(e) of this rule.
  - (a) Each insurance policy shall be amended by attachment of the "Hazardous Waste Facility Liability Endorsement" or evidenced by a "Certificate of Liability Insurance." The wording of the endorsement shall be identical to the wording specified in paragraph (I) of rule 3745-55-51 of the Administrative Code. The wording of the certificate of insurance shall be identical to the wording specified in paragraph (J) of rule 3745-55-51 of the Administrative Code. The owner or operator shall submit an originally signed duplicate of the endorsement or the certificate of insurance to the director. If requested by the director, the owner or operator shall provide an originally signed duplicate of the insurance policy.
  - (b) Each insurance policy shall be issued by an insurer which, at a minimum, is licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer, in one or more states.
- (2) An owner or operator may meet the requirements of this rule by passing a financial test or using the guarantee for liability coverage as specified in paragraphs (F) and (G) of this rule.
- (3) An owner or operator may meet the requirements of this rule by obtaining a letter of credit for liability coverage as specified in paragraph (H) of this rule.
- (4) An owner or operator may meet the requirements of this rule by obtaining a surety bond for liability coverage as specified in paragraph (I) of this rule.
- (5) An owner or operator may meet the requirements of this rule by obtaining a trust fund for liability coverage as specified in paragraph (J) of this rule.
- (6) An owner or operator may demonstrate the required liability coverage through the use of combinations of insurance, financial test, guarantee, letter of credit,

surety bond, and trust fund, except that the owner or operator may not combine a financial test covering part of the liability coverage requirement with a guarantee unless the financial statement of the owner or operator is not consolidated with the financial statement of the guarantor. The amounts of coverage demonstrated shall total at least the minimum amount required by this rule. If the owner or operator demonstrates the required coverage through the use of a combination of financial assurances under ~~paragraphs~~paragraph (B) ~~to (B)(7)(e)~~ of this rule, the owner or operator shall specify at least one such assurance as "primary" coverage and shall specify other assurance as "excess" coverage.

- (7) An owner or operator shall notify the director in writing within thirty days whenever any of the following occurs:
- (a) A claim results in a reduction in the amount of financial assurance for liability coverage provided by a financial instrument authorized in paragraphs (B)(1) to (B)(6) of this rule.
  - (b) A "Certification of Valid Claim" for bodily injury or property damages caused by a sudden or nonsudden accidental occurrence arising from the operation of a hazardous waste treatment, storage, or disposal facility is entered between the owner or operator and third-party claimant for liability coverage under paragraphs (B)(1) to (B)(6) of this rule.
  - (c) A final court order establishing a judgement for bodily injury or property ~~damages~~damage caused by a sudden or nonsudden accidental occurrence arising from the operation of a hazardous waste treatment, storage, or disposal facility is issued against the owner or operator or an instrument that is providing financial assurance for liability coverage under paragraphs (B)(1) to (B)(6) of this rule.
- (C) Request for variance. If an owner or operator can demonstrate to the satisfaction of the director that the levels for financial responsibility required by paragraph (A) or (B) of this rule are not consistent with the degree and duration of risk associated with the treatment, storage, or disposal at ~~each~~each the facility or group of facilities, the owner or operator may obtain a variance from the director. The request for a variance shall be submitted ~~by certified mail~~in writing to the director. If granted, the variance will take the form of an adjusted level of required liability coverage, such level to be based on the director's assessment of the degree and duration of risk associated with the ownership or operation of ~~each~~each the facility or group of facilities. The director may require an owner or operator who requests a variance to provide such technical and engineering information as is deemed necessary by the director to determine a level of financial responsibility other than that required by paragraph (A) or (B) of this

rule. The director will process a variance request as if ~~the~~ the variance request were a permit modification request under rule 3745-50-51 of the Administrative Code. Notwithstanding any other provision, the director may hold a public hearing at the director's discretion or whenever the director finds, on the basis of requests for a public hearing, a significant degree of public interest in a tentative decision to grant a variance.

- (D) Adjustments by the director. If the director determines that the levels of financial responsibility required by paragraphs (A) and (B) of this rule are not consistent with the degree and duration of risk associated with treatment, storage, or disposal at the facility or group of facilities, the director may adjust the level of financial responsibility required under paragraph (A) or (B) of this rule as may be necessary to protect human health and the environment. This adjusted level will be based on the director's assessment of the degree and duration of risk associated with the ownership or operation of the facility or group of facilities. In addition, if the director determines that there is a significant risk to human health and the environment from nonsudden accidental occurrences resulting from the operations of a facility that is not a surface impoundment, landfill, or land treatment facility, the director may require that an owner or operator of the facility comply with paragraph (B) of this rule. The owner or operator shall furnish to the director, within a reasonable time, any information which the director requests to determine whether cause exists for such adjustments of level or type of coverage. The director will process an adjustment of the level or type of required coverage as a permit modification request under rule 3745-50-51 of the Administrative Code. Notwithstanding any other provisions, the director may hold a public hearing at the director's discretion or whenever the director finds, on the basis of requests for a public hearing, a significant degree of public interest in a tentative decision to adjust the level or type of required coverage.
- (E) Period of coverage. Within sixty days after receiving certifications from the owner or operator and a qualified professional engineer that final closure has been completed in accordance with the approved closure plan, the director will notify the owner or operator in writing that the owner or operator is no longer required by this rule to maintain liability coverage for that facility, unless the director has reason to believe that closure has not been in accordance with the approved closure plan.
- (F) Financial test for liability coverage.
- (1) An owner or operator may satisfy the requirements of this rule by demonstrating that the owner or operator passes a financial test as specified in ~~paragraphs~~ paragraph (F) to ~~(F)(7)~~ of this rule. To pass this test, the owner or operator shall meet the criteria of paragraph (F)(1)(a) or (F)(1)(b) of this rule.

(a) The owner or operator shall have:

- (i) Net working capital and tangible net worth each at least six times the amount of liability coverage to be demonstrated by this test: and
  - (ii) Tangible net worth of at least ten million dollars: and
  - (iii) Assets in the United States amounting to either:
    - (a) At least ninety per cent of the owner's or operator's total assets: or
    - (b) At least six times the amount of liability coverage to be demonstrated by this test.
- (b) The owner or operator shall have:
- (i) A current rating for the owner's or operator's most recent bond issuance of "AAA, AA, A, or BBB" as issued by "Standard and Poor's" or "Aaa, Aa, A, or Baa" as issued by "Moody's": and
  - (ii) Tangible net worth of at least ten million dollars: and
  - (iii) Tangible net worth of at least six times the amount of liability coverage to be demonstrated by this test: and
  - (iv) Assets in the United States amounting to either:
    - (a) At least ninety per cent of the owner's or operator's total assets: or
    - (b) At least six times the amount of liability coverage to be demonstrated by this test.
- (2) The phrase "amount of liability coverage" as used in paragraph (F)(1) of this rule refers to the annual aggregate amounts for which coverage is required under paragraphs (A) and (B) of this rule.
- (3) To demonstrate that the owner or operator meets this test, the owner or operator shall submit the following three items to the director:
- (a) A letter signed by the owner's or operator's chief financial officer and worded as specified in paragraph (G) of rule 3745-55-51 of the Administrative Code. If an owner or operator is using the financial test to demonstrate both assurance for closure or post-closure care, as specified by paragraph (F) of rule 3745-55-43, paragraph (F) of rule 3745-55-45,



paragraph (E) of rule 3745-66-43, and paragraph (E) of rule 3745-66-45 of the Administrative Code, and liability coverage, the owner or operator shall submit the letter specified in paragraph (G) of rule 3745-55-51 of the Administrative Code to cover both forms of financial responsibility. A separate letter as specified in paragraph (F) of rule 3745-55-51 of the Administrative Code is not required.

- (b) A copy of the independent certified public accountant's report on examination of the owner's or operator's financial statements for the latest completed fiscal year.
- (c) A special report from the owner's or operator's independent certified public accountant to the owner or operator stating that:
  - (i) The accountant has compared the data which the letter from the chief financial officer specifies as having been derived from the independently audited, year-end financial statements for the latest fiscal year with the amounts in such financial statements; and
  - (ii) In connection with that procedure, no matters came to the accountant's attention which caused the accountant to believe that the specified data should be adjusted.
- (4) The owner or operator may obtain a one-time extension of the time allowed for submittal of the documents specified in paragraph (F)(3) of this rule if the fiscal year of the owner or operator ends during the ninety days prior to August 26, 1983 and if the year-end financial statements for that fiscal year will be audited by an independent certified public accountant. The extension will end no later than ninety days after the end of the owner's or operator's fiscal year. To obtain the extension, by August 26, 1983, the owner's or operator's chief financial officer shall send, ~~by August 26, 1983~~, a letter to the director. This letter from the chief financial officer shall do the following:
  - (a) Request the extension.
  - (b) Certify that the owner's or operator's chief financial officer has grounds to believe that the owner or operator meets the criteria of the financial test.
  - (c) Specify for each facility to be covered by the test the U.S. EPA identification number, name, address, the amount of liability coverage and, when applicable, current closure and post-closure cost estimates to be covered by the test.

- (d) Specify the date ending the owner's or operator's last complete fiscal year before August 26, 1983.
  - (e) Specify the date, no later than ninety days after the end of such fiscal year, when the owner's or operator's chief financial officer will submit the documents specified in paragraph (F)(3) of this rule.
  - (f) Certify that the year-end financial statements of the owner or operator for such fiscal year will be audited by an independent certified public accountant.
- (5) After the initial submittal of items specified in paragraph (F)(3) of this rule, the owner or operator shall send updated information to the director within ninety days after the close of each succeeding fiscal year. This information shall consist of all three items specified in paragraph (F)(3) of this rule.
- (6) If the owner or operator no longer meets the requirements of paragraph (F)(1) of this rule, the owner or operator shall obtain insurance, a letter of credit, a surety bond, a trust fund, or a guarantee for the entire amount of required liability coverage as specified in this rule. Evidence of liability coverage shall be submitted to the director within ninety days after the end of the fiscal year for which the year-end financial data show that the owner or operator no longer meets the test requirements.
- (7) The director may disallow use of this test on the basis of qualifications in the opinion expressed by the independent certified public accountant in ~~such~~the accountant's report on examination of the owner's or operator's financial statements [see paragraph (F)(3)(b) of this rule]. An adverse opinion or a disclaimer of opinion will be cause for disallowance. The director will evaluate other qualifications on an individual basis. ~~The~~Within thirty days after notification of disallowance, the owner or operator shall provide evidence of insurance for the entire amount of required liability coverage as specified in this rule ~~within thirty days after notification of disallowance.~~
- (G) Guarantee for liability coverage.
- (1) Subject to paragraph (G)(2) of this rule, an owner or operator may ~~meet the requirements of~~comply with this rule by obtaining a written guarantee, hereinafter referred to as "guarantee." The guarantor shall be the direct or higher-tier parent corporation of the owner or operator, a firm whose parent corporation is also the parent corporation of the owner or operator, or firm with a "substantial business relationship" with the owner or operator. The guarantor shall meet the requirements for owners or operators in paragraphs (F)(1) to (F)

(6) of this rule. The wording of the guarantee shall be identical to the wording specified in paragraph (H)(2) of rule 3745-55-51 of the Administrative Code. A certified copy of the guarantee shall accompany the items sent to the director as specified in paragraph (F)(3) of this rule. One of these items shall be the letter from the guarantor's chief financial officer. If the guarantor's parent corporation is also the parent corporation of the owner or operator, this letter shall describe the value received in consideration of the guarantee. If the guarantor is a firm with a "substantial business relationship" with the owner or operator, this letter shall describe this "substantial business relationship" and the value received in consideration of the guarantee.

(a) If the owner or operator fails to satisfy a judgment based on a determination of liability for bodily injury or property damage to third parties caused by sudden or nonsudden accidental occurrences (or both as the case may be), arising from the operation of facilities covered by this corporate guarantee, or fails to pay an amount agreed to in settlement of claims arising from or alleged to arise from such injury or damage, the guarantor will do so up to the limits of coverage.

(b) [Reserved.]

(2) In the case of corporations incorporated in Ohio, a guarantee executed as described in this rule and paragraph (H)(2) of rule 3745-55-51 of the Administrative Code may be used to satisfy the requirements of this rule. In the case of a corporation incorporated in a state other than Ohio, a guarantee may be used to satisfy the requirements of this rule only if the attorney general or insurance commissioners of that state have submitted a written statement to the director that a guarantee executed as described in this rule and paragraph (H)(2) of rule 3745-55-51 of the Administrative Code is a legally valid and enforceable obligation in that state.

(3) In the case of corporations incorporated outside the United States, a guarantee may be used to satisfy the requirements of this rule only if:

(a) The non-U.S. corporation has identified a registered agent for service of process in Ohio and in the state in which the principal place of business of the guarantor corporation is located; and

(b) The attorney general or insurance commissioner of the state in which the principal place of business of the guarantor corporation is located has submitted a written statement to the director that a guarantee executed as described in this rule and paragraph (H)(2) of rule 3745-55-51 of the

Administrative Code is a legally valid and enforceable obligation in that state.

(H) Letter of credit for liability coverage.

- (1) An owner or operator may satisfy the requirements of this rule by obtaining an irrevocable standby letter of credit that conforms to the requirements of ~~paragraphs~~paragraph (H) to ~~(H)(5)~~ of this rule, and submitting a copy of the letter of credit to the director.
- (2) The financial institution issuing the letter of credit shall be an entity that has the authority to issue letters of credit and whose letter of credit operations are regulated and examined by a federal or state agency.
- (3) The wording of the letter of credit shall be identical to the wording specified in paragraph (K) of rule 3745-55-51 of the Administrative Code.
- (4) An owner or operator who uses a letter of credit to satisfy the requirements of this rule also may ~~also~~ establish a standby trust fund. Under the terms of such a letter of credit, all amounts paid pursuant to a draft by the trustee of the standby trust will be deposited by the issuing institution into the standby trust in accordance with instructions from the trustee. The trustee of the standby trust fund shall be an entity which has the authority to act as a trustee and whose trust operations are regulated and examined by a federal or state agency.
- (5) The wording of the standby trust fund shall be identical to the wording specified in paragraph (N)(1) of rule 3745-55-51 of the Administrative Code.

(I) Surety bond for liability coverage.

- (1) An owner or operator may satisfy the requirements of this rule by obtaining a surety bond that conforms to the requirements of ~~paragraphs~~paragraph (I) to ~~(I)(4)~~ of this rule, and submitting a copy of the bond to the director.
- (2) The surety company issuing the bond shall be among those listed as acceptable sureties on federal bonds in the most recent "Circular 570" of the U.S. department of the treasury.
- (3) The wording of the surety bond shall be identical to the wording specified in paragraph (L) of rule 3745-55-51 of the Administrative Code.
- (4) A surety bond may be used to satisfy the requirements of this rule only if the attorney general or insurance commissioners of the state in which the surety is incorporated, and each state in which a facility covered by the surety bond

is located, have submitted a written statement to Ohio EPA that a surety bond executed as described in this rule and paragraph (L) of rule 3745-55-51 of the Administrative Code, and is legally valid and enforceable obligation in that state.

(J) Trust fund for liability coverage.

- (1) An owner or operator may satisfy the requirements of this rule by establishing a trust fund that conforms to the requirements of ~~paragraphs~~paragraph (J) to (J)(4) of this rule, and submitting an originally signed duplicate of the trust agreement to the director.
- (2) The trustee shall be an entity which has the authority to act as a trustee and whose trust operations are regulated and examined by a federal or state agency.
- (3) The trust fund for liability coverage shall be funded for the full amount of the liability coverage to be provided by the trust fund before the trust fund may be relied upon to satisfy the requirements of this rule. If at any time after the trust fund is created the amount of funds in the trust fund is reduced below the full amount of the liability coverage to be provided, the owner or operator, by the anniversary date of the establishment of the trust fund, either shall ~~either~~ add sufficient funds to the trust fund to cause the value of the trust fund to equal the full amount of liability coverage to be provided, or obtain other financial assurance as specified in this rule to cover the difference. For purposes of ~~paragraphs~~paragraph (J) to (J)(4) of this rule, "the full amount of the liability coverage to be provided" means the amount of coverage for sudden and nonsudden occurrences required to be provided by the owner or operator by this rule, less the amount of financial assurance for liability coverage that is being provided by other financial assurance mechanism being used to demonstrate financial assurance by the owner or operator.
- (4) The wording of the trust fund shall be identical to the wording specified in paragraph (M) of rule 3745-55-51 of the Administrative Code.

[Comment: For dates of non-regulatory government publications, publications of recognized organizations and associations, federal rules, and federal statutory provisions referenced in this rule, see rule 3745-50-11 of the Administrative Code titled "Incorporated by reference."]

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09/05/2010, 03/24/2017

**3745-66-48 Incapacity of owners or operators, guarantors, or financial institutions.**

- (A) An owner or operator must notify the director by certified mail of the commencement of a voluntary or involuntary proceeding under Title 11 (bankruptcy), U.S. Code, naming the owner or operator as debtor, within ten days after commencement of the proceeding. A guarantor of a corporate guarantee as specified in paragraph (E) of rule 3745-66-43 and paragraph (E) of rule 3745-66-45 of the Administrative Code must make such a notification if he is named as debtor, as required under the terms of the corporate guarantee [paragraph (H) of rule 3745-55-51 of the Administrative Code].
- (B) An owner or operator who fulfills the requirements of rules 3745-66-43, 3745-66-45 or 3745-66-47 of the Administrative Code by obtaining a trust fund, surety bond, letter of credit, or insurance policy will be deemed to be without the required financial assurance or liability coverage in the event of bankruptcy of the trustee or issuing institution, or a suspension or revocation of the authority of the trustee institution to act as trustee or of the institution issuing the surety bond, letter of credit, or insurance policy to issue such instruments. The owner or operator must establish other financial assurance or liability coverage within sixty days after such an event.

[Comment: For dates of non-regulatory government publications, publications of recognized organizations and associations, federal rules, and federal statutory provisions referenced in this rule, see rule 3745-50-11 of the Administrative Code titled "Incorporated by reference."]

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3745-66-70

**Applicability\_- use and management of containers.**

Rules 3745-66-70 to ~~3745-66-77~~3745-66-78 of the Administrative Code apply to owners and operators of all hazardous waste facilities that store containers of hazardous waste, except as rule 3745-65-01 of the Administrative Code provides otherwise.



Effective: 6/12/2023

Five Year Review (FYR) Dates: Exempt

CERTIFIED ELECTRONICALLY

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Certification

06/02/2023

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Date

Promulgated Under: 119.03  
Statutory Authority: 3734.12  
Rule Amplifies: 3734.12  
Prior Effective Dates: 04/15/1981, 01/07/1983, 12/07/2004

### **3745-66-71 Conditions of containers.**

If a container holding hazardous waste is not in good condition, or if it begins to leak, the owner or operator must transfer the hazardous waste from such container to a container that is in good condition or manage the waste in another manner that complies with the requirements of Chapters 3745-65 to 3745-69 and 3745-256 of the Administrative Code.

Effective: 12/07/2004

119.032 review dates: Exempt

Promulgated under: 119.03

Statutory authority: 3734.12

Rule amplifies: 3734.12

Prior effective dates: 04/15/1981, 01/07/1983, 12/07/2000

**3745-66-72 Compatibility of waste with container.**

The owner or operator shall use a container made of or lined with materials which will not react with, and are otherwise compatible with, the hazardous waste to be stored, so that the ability of the container to contain the waste is not impaired.

Effective: 01/07/1983

119.032 Review dates: Exempt

Promulgated under: 119.03

Statutory authority: 3734.12

Rule amplifies: 3734.12

Prior effective dates: 04/15/1981

3745-66-73

**Management of containers.**

- (A) A container holding hazardous waste shall always be closed during storage, except when it is necessary to add or remove waste.
- (B) A container holding hazardous waste shall not be opened, handled, or stored in a manner which may rupture the container or cause ~~it~~the container to leak.

~~[Comment: Reuse of containers in transportation is governed by United States department of transportation regulations, including those set forth in 49 CFR Section 173.28.]~~

[Comment 1: Reuse of containers in transportation is governed by United States department of transportation regulations, including those in 49 CFR 173.28.]

[Comment 2: For dates of non-regulatory government publications, publications of recognized organizations and associations, federal rules, and federal statutory provisions referenced in this rule, see rule 3745-50-11 of the Administrative Code titled "Incorporated by reference."]

Effective: 10/23/2022

Five Year Review (FYR) Dates: Exempt

CERTIFIED ELECTRONICALLY

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Certification

10/11/2022

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Date

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Statutory Authority: 3734.12  
Rule Amplifies: 3734.12  
Prior Effective Dates: 04/15/1981, 01/07/1983

3745-66-74

**Inspections- containers.**

At least once during each period from Sunday to Saturday, the owner or operator shall inspect areas where containers are stored. The owner or operator shall look for leaking containers and for deterioration of containers caused by corrosion or other factors. The owner or operator shall record inspections in an inspection log or summary. See rule 3745-66-71 of the Administrative Code for remedial action required if deterioration or leaks are detected.

~~[Comment: See rule 3745-66-71 of the Administrative Code for remedial action required if deterioration or leaks are detected.]~~

Effective: 10/5/2020

Five Year Review (FYR) Dates: 7/13/2020 and 10/05/2025

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Certification

09/21/2020

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Date

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Prior Effective Dates: 04/15/1981, 01/07/1983, 12/30/1989, 04/01/1990,  
03/13/2002, 05/13/2007, 09/05/2010, 03/17/2012,  
02/12/2018

**3745-66-76 Special requirements for ignitable or reactive waste.**

Containers holding ignitable or reactive waste shall be located at least fifteen meters (fifty feet) from the facility's property line.

Effective: 01/07/1983

119.032 Review dates: Exempt

Promulgated under: 119.03

Statutory authority: 3734.12

Rule amplifies: 3734.12

Prior effective dates: 04/15/1981



3745-66-77

**Special requirements for incompatible wastes- containers.**

- (A) Incompatible wastes, or incompatible wastes and materials (see the ~~Appendix~~appendix to rule 3745-66-99 of the Administrative Code for examples), shall not be placed in the same container, unless paragraph (B) of rule 3745-65-17 of the Administrative Code is complied with.
- (B) Hazardous waste shall not be placed in an unwashed container that previously held an incompatible waste (see the ~~Appendix~~appendix to rule 3745-66-99 of the Administrative Code for examples), unless paragraph (B) of rule 3745-65-17 of the Administrative Code is complied with.
- (C) A storage container holding a hazardous waste that is incompatible with any waste or other materials stored nearby in other containers, piles, open tanks, or surface impoundments shall be separated from the other materials or protected from ~~them~~the other materials by means of a dike, berm, wall, or other device.

[Comment: The purpose of this rule is to prevent fires, explosions, gaseous emissions, leaching, or other discharge of hazardous waste or hazardous waste constituents which could result from the mixing of incompatible wastes or materials if containers break or leak.]

Effective: 2/12/2018

Five Year Review (FYR) Dates: Exempt

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Certification

01/10/2018

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Date

Promulgated Under: 119.03  
Statutory Authority: 3734.12  
Rule Amplifies: 3734.12  
Prior Effective Dates: 04/15/1981, 01/07/1983, 02/11/1992

3745-66-78

**Air emission standards - containers.**

The owner or operator shall manage all hazardous waste placed in a container in accordance with the applicable requirements of rules 3745-256-30 to 3745-256-35, 3745-256-50 to 3745-256-64, and 3745-256-80 to 3745-256-90 of the Administrative Code.

Effective: 6/12/2023

Five Year Review (FYR) Dates: Exempt

CERTIFIED ELECTRONICALLY

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Certification

06/02/2023

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Date

Promulgated Under: 119.03  
Statutory Authority: 3734.12  
Rule Amplifies: 3734.12

3745-66-90

**Applicability\_- tanks.**

Rules 3745-66-90 to ~~3745-66-100~~3745-66-102 of the Administrative Code apply to owners and operators of facilities that use tank systems ~~to store~~for storing or ~~treat~~treating hazardous waste except as otherwise provided in paragraphs (A), (B), and (C) of this rule or in rule 3745-65-01 of the Administrative Code.

- (A) Tank systems that are used to store or treat hazardous waste which contains no free liquids and that are situated inside a building with an impermeable floor are exempted from rule 3745-66-93 of the Administrative Code. To demonstrate the absence or presence of free liquids in the stored or treated waste, the following test shall be used: method 9095B ("Paint Filter Liquids Test") as described in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," U.S. EPA publication SW-846.
- (B) Tank systems, including "sumps," as defined in rule 3745-50-10 of the Administrative Code, that serve as part of a secondary containment system to collect or contain releases of hazardous wastes, are exempted from paragraph (A) of rule 3745-66-93 of the Administrative Code.
- (C) Tanks, sumps, and other collection devices used in conjunction with "drip pads," as defined in rule 3745-50-10 of the Administrative Code, and regulated under rules 3745-69-40 to 3745-69-45 of the Administrative Code, shall comply with rules 3745-66-90 to ~~3745-66-100~~3745-66-102 of the Administrative Code.

[Comment: For dates of non-regulatory government publications, publications of recognized organizations and associations, federal rules, and federal statutory provisions referenced in this rule, see rule 3745-50-11 of the Administrative Code titled "Incorporated by reference."]

Effective: 6/12/2023

Five Year Review (FYR) Dates: Exempt

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Certification

06/02/2023

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Date

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Rule Amplifies: 3734.12

Prior Effective Dates: 04/15/1981, 01/07/1983, 12/08/1988, 06/29/1990,  
09/02/1997, 12/07/2004, 02/16/2009, 10/05/2020

3745-66-91

**Assessment of existing tank system's integrity.**

- (A) For each existing tank system that does not have secondary containment meeting the requirements of rule 3745-66-93 of the Administrative Code, the owner or operator ~~shall~~must determine that the tank system is not leaking or is unfit for use. Except as provided in paragraph (C) of this rule, the owner or operator ~~shall~~must obtain and keep on file at the facility a written assessment reviewed and certified by ~~an independent,~~a qualified, ~~registered~~ professional engineer in accordance with paragraph (D) of rule 3745-50-42 of the Administrative Code, that attests to the tank system's integrity within thirty days ~~from~~after December 8, 1988.
- (B) This assessment ~~shall~~must determine that the tank system is adequately designed and has sufficient structural strength and compatibility with the waste(s) to be stored or treated to ensure that it will not collapse, rupture, or fail. At a minimum, this assessment ~~shall~~must consider the following:
- (1) Design standard(s), if available, according to which the tank and ancillary equipment were constructed;
  - (2) Hazardous characteristics of the waste(s) that have been or will be handled;
  - (3) Existing corrosion protection measures;
  - (4) Documented age of the tank system, if available (otherwise, an estimate of the age); and
  - (5) Results of a leak test, internal inspection, or other tank integrity examination such that:
    - (a) For non-enterable underground tanks, this assessment ~~shall~~must consist of a leak test that is capable of taking into account the effects of temperature variations, tank end deflection, vapor pockets, and high water table effects.
    - (b) For other than non-enterable underground tanks and for ancillary equipment, this assessment ~~shall~~must be either a leak test, as described in paragraph (B)(5)(a) of this rule, or an internal inspection and/or other tank integrity examination certified by ~~an independent,~~a qualified, ~~registered~~ professional engineer in accordance with paragraph (D) of rule 3745-50-42 of the Administrative Code that addresses cracks, leaks, corrosion, and erosion.

[~~Note~~Comment: The practices described in the "American Petroleum Institute (API)" publication, "Guide for Inspection of Refinery

Equipment," chapter XIII, "Atmospheric and Low-Pressure Storage Tanks," ~~4<sup>th</sup>~~fourth edition, 1981, may be used, where applicable, as guidelines in conducting the integrity examination of an other than non-enterable underground tank system.]

- (C) Tank systems that store or treat materials that become hazardous wastes subsequent to July 14, 1986, ~~shall~~must conduct this assessment within twelve months after the date that the waste becomes a hazardous waste.
  
- (D) If, as a result of the assessment conducted in accordance with paragraph (A) of this rule, a tank system is found to be leaking or unfit for use, the owner or operator ~~shall~~must comply with the requirements of rule 3745-66-96 of the Administrative Code.



Effective: 09/05/2010

R.C. 119.032 review dates: Exempt

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Certification

07/23/2010

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Date

Promulgated Under: 119.03  
Statutory Authority: 3734.12  
Rule Amplifies: 3734.12  
Prior Effective Dates: 12/08/1988, 12/07/2000

3745-66-92

**Design and installation of new tank systems or components.**

(A) Owners or operators of new tank systems or components ~~must~~shall ensure that the foundation, structural support, seams, connections, and pressure controls (if applicable) are adequately designed and that the tank system has sufficient structural strength, compatibility with the ~~waste(s)~~wastes to be stored or treated, and corrosion protection so that ~~it~~the tank system will not collapse, rupture, or fail. The owner or operator ~~must~~shall obtain a written assessment reviewed and certified by a qualified professional engineer in accordance with paragraph (D) of rule 3745-50-42 of the Administrative Code attesting that the system has sufficient structural integrity and is acceptable for the storing and treating of hazardous waste. This assessment ~~must~~shall include the following information:

- (1) Design ~~standard(s)~~standards according to which the ~~tank(s)~~tanks and ancillary equipment is or will be constructed;.
- (2) Hazardous characteristics of the ~~waste(s)~~wastes to be handled;.
- (3) For new tank systems or components in which the external shell of a metal tank or any external metal component of the tank system is or will be in contact with the soil or with water, a determination by a corrosion expert of:
  - (a) Factors affecting the potential for corrosion including but not limited to:
    - (i) Soil moisture content;
    - (ii) Soil pH;
    - (iii) Soil sulfides level;
    - (iv) Soil resistivity;
    - (v) Structure to soil potential;
    - (vi) Influence of nearby underground metal structures (e.g., piping);
    - (vii) Stray electric current; and
    - (viii) Existing corrosion-protection measures (e.g., coating, cathodic protection); and
  - (b) The type and degree of external corrosion protection that are needed to ensure the integrity of the tank system during the use of the tank system or component, consisting of one or more of the following:

- (i) Corrosion-resistant materials of construction such as special alloys, fiberglass-reinforced plastic;
- (ii) Corrosion-resistant coating (such as epoxy; or fiberglass) with cathodic protection (e.g., impressed current or sacrificial anodes); and
- (iii) Electrical isolation devices such as insulating joints and flanges.

[Comment: The practices described in the "National Association of Corrosion Engineers (NACE)" standard, "Recommended Practice (RP-02-85) - Control of External Corrosion on Metallic Buried, Partially Buried, or Submerged Liquid Storage Systems," and the "American Petroleum Institute (API)" publication 1632, "Cathodic Protection of Underground Petroleum Storage Tanks and Piping Systems," may be used, where applicable, as guidelines in providing corrosion protection for tank systems.]

- (4) For underground tank system components that are likely to be affected by vehicular traffic, a determination of design or operational measures that will protect the tank system against potential damage; and
- (5) Design considerations to ensure that:
  - (a) Tank foundations will maintain the ~~load~~load of a full tank;
  - (b) Tank systems will be anchored to prevent flotation or dislodgement where the tank system is placed in a saturated zone, or is located within a seismic fault zone; and
  - (c) Tank systems will withstand the effects of frost heave.
- (B) The owner or operator of a new tank system ~~must~~shall ensure that proper handling procedures are adhered to in order to prevent damage to the tank system during installation. Prior to covering, enclosing, or placing a new tank system or component in use, an independent, qualified installation inspector or a qualified professional engineer, either of whom is trained and experienced in the proper installation of tank systems, ~~must~~shall inspect the system or component for the presence of any of the following items:
  - (1) Weld breaks;
  - (2) Punctures;

- (3) Scrapes of protective coatings;
- (4) Cracks;
- (5) Corrosion; and
- (6) Other structural damage or inadequate construction or installation. All discrepancies shall be remedied before the tank system is covered, enclosed, or placed in use.

~~All discrepancies must be remedied before the tank system is covered, enclosed, or placed in use.~~

- (C) New tank systems or components and piping that are placed underground and that are backfilled ~~must~~shall be provided with a backfill material that is a noncorrosive, porous, homogeneous substance and that is carefully installed so that the backfill is placed completely around the tank and compacted to ensure that the tank and piping are fully and uniformly supported.
- (D) All new tanks and ancillary equipment ~~must~~shall be tested for tightness prior to being covered, enclosed or placed in use. If a tank system is found not to be tight, all repairs necessary to remedy the ~~leak(s)~~leaks in the system ~~must~~shall be performed prior to the tank system being covered, enclosed, or placed in use.
- (E) Ancillary equipment ~~must~~shall be supported and protected against physical damage and excessive stress due to settlement, vibration, expansion, or contraction.

[Comment: The piping system installation procedures described in "American Petroleum Institute (API)" publication 1615 (November 1979), "Installation of Underground Petroleum Storage Systems," or ANSI standard B31.3, "Petroleum Refinery System," may be used, where applicable, as guidelines for proper installation of piping systems.]

- (F) The owner or operator ~~must~~shall provide the type and degree of corrosion protection necessary, based on the information provided under paragraph (A)(3) of this rule, to ensure the integrity of the tank system during use of the tank system. The installation of a corrosion protection system that is ~~field-fabricated~~must field fabricated shall be supervised by an independent corrosion expert to ensure proper installation.
- (G) The owner or operator ~~must~~shall obtain and keep on file at the facility written statements by those persons required to certify the design of the tank system and supervise the installation of the tank system in accordance with the requirements of paragraphs (B) to (F) of this rule to attest that the tank system was properly designed and installed and that repairs, pursuant to paragraphs (B) and (D) of this rule, were performed. These

written statements ~~must~~ also shall include the certification statement as required in paragraph (D) of rule 3745-50-42 of the Administrative Code.

[Comment: For dates of non-regulatory government publications, publications of recognized organizations and associations, federal rules, and federal statutory provisions referenced in this rule, see rule 3745-50-11 of the Administrative Code titled "Incorporated by reference."]

Effective: 10/23/2022

Five Year Review (FYR) Dates: Exempt

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3745-66-93

**Containment and detection of releases\_- tanks.**

(A) In order to prevent the release of hazardous waste or hazardous constituents to the environment, secondary containment that complies with this rule shall be provided [except as provided in paragraphs (F) and (G) of this rule] for the following:

- (1) For all new and existing tank systems or components, prior to being put into service;
- (2) For tank systems that store or treat materials that become hazardous wastes, within two years after the hazardous waste listing, or when the tank system has reached fifteen years of age, whichever comes later.

(B) Secondary containment systems shall be as follows:

- (1) Designed, installed, and operated to prevent any migration of wastes or accumulated liquid out of the system to the soil, ground water, or surface water at any time during the use of the tank system; and
- (2) Capable of detecting and collecting releases and accumulated liquids until the collected material is removed.

(C) To comply with paragraph (B) of this rule, secondary containment systems shall be, at a minimum, ~~the following~~:

- (1) Constructed of or lined with materials that are compatible with the wastes to be placed in the tank system, and shall have sufficient strength and thickness to prevent failure due to pressure gradients (including static head and external hydrological forces), physical contact with the waste to which the containment systems are exposed, climatic conditions, the stress of installation, and the stress of daily operation (including stresses from nearby vehicular traffic);
- (2) Placed on a foundation or base capable of providing support to the secondary containment system and resistance to pressure gradients above and below the system and capable of preventing failure due to settlement, compression, or uplift;
- (3) Provided with a leak detection system that is designed and operated so that the leak detection system shall detect the failure of either the primary and secondary containment structure or any release of hazardous waste or accumulated liquid in the secondary containment system within twenty-four hours, or at the earliest practicable time if the existing detection technology or site conditions does not allow detection of a release within twenty-four hours;

- (4) Sloped or otherwise designed or operated to drain and remove liquids resulting from leaks, spills, or precipitation. Spilled or leaked waste and accumulated precipitation shall be removed from the secondary containment system within twenty-four hours, or in as timely a manner as is possible to prevent harm to human health or the environment, if removal of the released waste or accumulated precipitation cannot be accomplished within twenty-four hours.

[Comment: If the collected material is hazardous under Chapter 3745-51 of the Administrative Code, the collected material is subject to management as a hazardous waste in accordance with all applicable requirements of Chapters 3745-52, 3745-53, 3745-54 to 3745-57, 3745-65 to 3745-69, 3745-205, and 3745-256 of the Administrative Code. If the collected material is discharged through a point source to waters of Ohio, the collected material is subject to ~~rule 3745-33-04 and Chapters 3745-3 and 3745-33 of the Administrative Code~~ Sections 301, 304, and 402 of the Clean Water Act. If discharged to publicly owned treatment works (POTW), the collected material is subject to ~~Chapters 3745-1 and 3745-3 of the Administrative Code~~ Section 307 of the Clean Water Act. If the collected material is released to the environment, the collected material may be subject to the reporting requirements of 40 ~~C.F.R.~~ CFR Part 302.]

(D) Secondary containment for tanks shall include one or more of the following devices:

- (1) A liner (external to the tank);
- (2) A vault;
- (3) A double-walled tank; or
- (4) An equivalent device as approved by the director.

(E) In addition to paragraphs (B), (C), and (D) of this rule, secondary containment systems shall satisfy the following requirements:

- (1) External liner systems shall be ~~all of the following~~:
  - (a) Designed or operated to contain one hundred per cent of the capacity of the largest tank within the external liner system's boundary;
  - (b) Designed or operated to prevent run-on or infiltration of precipitation into the secondary containment system unless the collection system has sufficient excess capacity to contain run-on or infiltration. Such additional capacity shall be sufficient to contain precipitation from a twenty-five-year, twenty-four-hour rainfall event;



- (c) Free of cracks or gaps;:
  - (d) Designed and installed to completely surround the tank and to cover all surrounding earth likely to come into contact with the waste if released from the tanks (i.e., capable of preventing lateral as well as vertical migration of the waste);:
  - (e) Constructed with chemical-resistant water stops in place at all joints, if any (for concrete liners only);: and
  - (f) Provided with an impermeable interior coating or lining that is compatible with the stored waste and that prevents migration of waste into the concrete (for concrete liners only).
- (2) Vault systems shall be ~~all of the following~~:
- (a) Designed or operated to contain one hundred per cent of the capacity of the largest tank within the vault system's boundary;:
  - (b) Designed or operated to prevent run-on or infiltration of precipitation into the secondary containment system unless the collection system has sufficient excess capacity to contain run-on or infiltration. Such additional capacity shall be sufficient to contain precipitation from a twenty-five-year, twenty-four-hour rainfall event;:
  - (c) Constructed with chemical-resistant water stops in place at all joints (if any);:
  - (d) Provided with an impermeable interior coating or lining that is compatible with the stored waste and that prevents migration of waste into the concrete;:
  - (e) Provided with means to protect against the formation of and ignition of vapors within the vault, if the waste being stored or treated, is either of the following:
    - (i) Meets the description of ignitable waste under rule 3745-51-21 of the Administrative Code;: or
    - (ii) Meets the description of reactive waste under rule 3745-51-23 of the Administrative Code and may form an ignitable or explosive vapor;: and

- (f) Provided with an exterior moisture barrier or be otherwise designed or operated to prevent migration of moisture into the vault if the vault is subject to hydraulic pressure.

(3) Double-walled tanks shall be ~~all of the following~~:

- (a) Designed as an integral structure (i.e., an inner tank within an outer shell) so that any release from the inner tank is contained by the outer shell;~~;~~
- (b) If constructed of metal, protected from both corrosion of the primary tank interior and the external surface of the outer shell;~~;~~ and
- (c) Provided with a built-in, continuous leak detection system capable of detecting a release within twenty-four hours or at the earliest practicable time, if the owner or operator can demonstrate to the director, and the director concurs, that the existing leak detection technology or site conditions do not allow detection of a release within twenty-four hours.

[Comment: The provisions outlined in the "Steel Tank Institute's (STI) Standard for Dual Wall Underground Steel Storage Tank" may be used as guidelines for aspects of design of underground steel double-walled tanks.]

(F) Ancillary equipment shall be provided with full secondary containment (e.g., trench, jacketing double-walled piping) that complies with paragraphs (B) and (C) of this rule, except for all of the following:

- (1) Aboveground piping (exclusive of flanges, joints, valves, and connections) that are visually inspected for leaks on a daily basis;~~;~~
- (2) Welded flanges, welded joints, and welded connections that are visually inspected for leaks on a daily basis;~~;~~
- (3) Sealless or magnetic coupling pumps and sealless valves that are visually inspected for leaks on a daily basis;~~;~~ and
- (4) Pressurized aboveground piping systems with automatic shut-off devices (e.g., excess flow check valves, flow metering shutdown devices, loss of pressure-actuated shut-off devices) that are visually inspected for leaks on a daily basis.

(G) The owner or operator may obtain a variance from this rule if the director finds, as a result of a demonstration by the owner or operator, ~~if the director finds~~ either that alternative design and operating practices, together with location characteristics, prevent the migration of hazardous waste or hazardous constituents into the ground

water or surface water at least as effectively as secondary containment during the active life of the tank system; or that in the event of a release that does migrate to ground water or surface water, no substantial present or potential hazard is posed to human health or the environment. New underground tank systems, per a demonstration in accordance with paragraph (G)(2) of this rule, may not be exempted from the secondary containment requirements of this rule. Application for a variance as allowed in this paragraph does not waive the requirement to comply with rules 3745-66-90 to ~~3745-66-100~~3745-66-102 of the Administrative Code for new tank systems.

- (1) In deciding whether to grant a variance based on a demonstration of equivalent protection of ground water and surface water, the director shall consider ~~all of the following~~:
  - (a) The nature and quantity of the waste;
  - (b) The proposed alternate design and operation;
  - (c) The hydrogeologic setting of the facility, including the thickness of soils between the tank system and ground water; and
  - (d) All other factors that would influence the quality and mobility of the hazardous constituents and the potential for the hazardous constituents to migrate to ground water or surface water.
- (2) In deciding whether to grant a variance, based on a demonstration of no substantial or present or potential hazard, the director shall consider ~~all of the following~~:
  - (a) The potential adverse effects on ground water, surface water, and land quality taking into account ~~the following~~:
    - (i) The physical and chemical characteristics of the waste in the tank system, including the waste's potential for migration;
    - (ii) The hydrogeological characteristics of the facility and surrounding land;
    - (iii) The potential for health risks caused by human exposure to waste constituents;
    - (iv) The potential for damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents; and
    - (v) The persistence and permanence of the potential adverse effects.

- (b) The potential adverse effects of a release on ground water quality, taking into account ~~the following~~:
- (i) The quantity and quality of ground water and the direction of ground water flow;<sub>;</sub>
  - (ii) The proximity and withdrawal rates of water in the area;<sub>;</sub>
  - (iii) The current and future uses of ground water in the area; and
  - (iv) The existing quality of ground water, including other sources of contamination and the cumulative impact of contamination on the ground water quality.
- (c) The potential adverse effects of a release on surface water quality, taking into account ~~the following~~:
- (i) The quantity and quality of ground water and the direction of ground water flow;<sub>;</sub>
  - (ii) The patterns of rainfall in the region;<sub>;</sub>
  - (iii) The proximity of the tank system to surface waters;<sub>;</sub>
  - (iv) The current and future uses of surface waters in the area and any water quality standards established for those surface waters; and
  - (v) The existing quality of surface water, including other sources of contamination and the cumulative impact on surface water quality.
- (d) The potential adverse effects of a release on the land surrounding the tank system, taking into account ~~both of the following~~:
- (i) The patterns of rainfall in the region; and
  - (ii) The current and future uses of the surrounding land.
- (3) The owner or operator of a tank system, for which a variance from secondary containment had been granted in accordance with paragraph (G)(1) of this rule, at which a release of hazardous waste has occurred from the primary tank system but has not migrated beyond the zone of engineering control (as established in the variance), shall ~~comply with all of the following~~:
- (a) Comply with paragraphs (A), (B), (C), (E), and (F) of rule 3745-66-96 of the Administrative Code; and

- (b) Decontaminate or remove contaminated soil to the extent necessary to ~~do~~  
~~all of the following:~~
- (i) Enable the tank system, for which the variance was granted, to resume operation with the capability for the detection of and response to releases at least equivalent to the capability it had prior to the release; and
  - (ii) Prevent the migration of hazardous waste or hazardous constituents to ground water or surface water; and
- (c) If contaminated soil cannot be removed or decontaminated in accordance with paragraph (G)(3)(b) of this rule, comply with paragraph (B) of rule 3745-66-97 of the Administrative Code.
- (4) The owner or operator of a tank system, for which a variance from secondary containment had been granted in accordance with paragraph (G)(1) of this rule, at which a release of hazardous waste has occurred from the primary tank system and has migrated beyond the zone of engineering control (as established in the variance), shall ~~comply with all of the following:~~
- (a) Comply with paragraphs (A), (B), (C), and (D) of rule 3745-66-96 of the Administrative Code; and
  - (b) Prevent the migration of hazardous waste or hazardous constituents to ground water or surface water, if possible, and decontaminate or remove contaminated soil. If contaminated soil cannot be decontaminated or removed, or if ground water has been contaminated, the owner or operator shall comply with paragraph (B) of rule 3745-66-97 of the Administrative Code;
  - (c) If repairing, replacing, or reinstalling the tank system, provide secondary containment in accordance with paragraphs (A) to (F) of this rule or reapply for a variance from secondary containment and meet the requirements for new tank systems in rule 3745-66-92 of the Administrative Code if the tank system is replaced. The owner or operator shall comply with these requirements even if contaminated soil can be decontaminated or removed, and ground water or surface water has not been contaminated.
- (H) The following procedures shall be followed in order to request a variance from secondary containment:

- (1) The director shall be notified in writing by the owner or operator that the owner or operator intends to conduct and submit a demonstration for a variance from secondary containment as allowed in paragraph (G) of this rule according to the following schedule:
  - (a) For existing tank systems, at least twenty-four months prior to the date that the secondary containment shall be provided in accordance with paragraph (A) of this rule; and
  - (b) For new tank systems, at least thirty days prior to entering into a contract for installation of the tank system.
- (2) As part of the notification, the owner or operator also shall submit to the director a description of the steps necessary to conduct the demonstration and a timetable for completing each of the steps. The demonstration shall address each of the factors listed in paragraph (G)(1) or (G)(2) of this rule.
- (3) The demonstration for a variance shall be completed and submitted to the director within one hundred eighty days after notifying the director of intent to conduct the demonstration.
- (4) The director shall inform the public, through a newspaper notice, of the availability of the demonstration for a variance. The notice shall be placed in a daily or weekly major local newspaper of general circulation and shall provide at least thirty days after the date of the notice for the public to review and comment on the demonstration for a variance. The director shall also hold a public hearing in response to a request or at the director's discretion, whenever such a hearing might clarify one or more issues concerning the demonstration for a variance. Public notice of the hearing shall be given at least thirty days prior to the date of the hearing and may be given at the same time as notice of the opportunity for the public to review and comment on the demonstration. These two notices may be combined.
- (5) The director shall approve or disapprove the request for a variance within ninety days after receipt of the demonstration from the owner or operator and shall notify in writing the owner or operator and each person who submitted written comments or requested notice of the variance decision. If the demonstration for a variance is incomplete or does not include sufficient information, the ninety-day time period shall begin when the director receives a complete demonstration, including all information necessary to make a final determination. If the public comment period in paragraph (H)(4) of this rule is extended, the ninety-day time period shall be similarly extended.

(I) All tank systems, until such time as secondary containment that complies with this rule is provided, shall comply with ~~all of~~ the following:

- (1) For non-enterable underground tanks, a leak test that complies with paragraph (B) (5) of rule 3745-66-91 of the Administrative Code shall be conducted at least annually;
- (2) For other than non-enterable underground tanks, and for all ancillary equipment, the owner or operator shall either conduct a leak test, as described in paragraph (I)(1) of this rule or an internal inspection or other tank integrity examination by a qualified professional engineer that addresses cracks, leaks, and corrosion, or erosion at least annually. The owner or operator shall remove the stored waste from the tank, if necessary, to allow the condition of all internal tank surfaces to be assessed.

[Comment: The practices described in the "American Petroleum Institute (API)" publication, "Guide for Inspection of Refinery Equipment," chapter XIII, "Atmospheric and Low-Pressure Storage Tanks," fourth edition, 1981, may be used, when applicable, as guidelines for assessing the overall condition of the tank system.]

- (3) The owner or operator shall maintain on file at the facility a record of the results of the assessments conducted in accordance with paragraphs (I)(1) to (I)(3) of this rule.
- (4) If a tank system or component is found to be leaking or unfit for use as a result of the leak test or assessment in paragraphs (I)(1) to (I)(3) of this rule, the owner or operator shall comply with rule 3745-66-96 of the Administrative Code.

[Comment: For dates of non-regulatory government publications, publications of recognized organizations and associations, federal rules, and federal statutory provisions referenced in this rule, see rule 3745-50-11 of the Administrative Code titled "Incorporated by reference."]

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Certification

06/02/2023

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Date

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08/29/1985, 12/08/1988, 12/30/1989, 06/29/1990,  
02/11/1992, 12/07/2000, 12/07/2004, 09/05/2010,  
10/31/2015, 10/05/2020



**3745-66-94 General operating requirements.**

- (A) Hazardous wastes or treatment reagents shall not be placed in a tank system if they could cause the tank, its ancillary equipment, or the secondary containment system to rupture, leak, corrode, or otherwise fail.
- (B) The owner or operator shall use appropriate controls and practices to prevent spills and overflows from tank or secondary containment systems. These include at a minimum:
  - (1) Spill prevention controls (e.g., check valves, dry disconnect couplings);
  - (2) Overfill prevention controls (e.g., level sensing devices, high level alarms, automatic feed cutoff, or bypass to a standby tank); and
  - (3) Maintenance of sufficient freeboard in uncovered tanks to prevent overtopping by wave or wind action or by precipitation.
- (C) The owner or operator shall comply with the requirements of 3745-66-96 of the Administrative Code if a leak or spill occurs in the tank system.

Effective: 09/02/1997

119.032 Review dates: Exempt

Promulgated under: 119.03

Statutory authority: 3734.05, 3734.12

Rule amplifies: 3734.05, 3734.12

Prior effective dates: 04/15/1981, 01/07/1983, 12/08/1988

3745-66-95

**Inspections- tank systems.**

- (A) The owner or operator shall inspect, where present, at least once each operating day, data gathered from monitoring and leak-detection equipment (e.g., pressure or temperature gauges, monitoring wells) to ensure that the tank system is being operated according to the tank system's design.

[Comment: Paragraph (C) of rule 3745-65-15 of the Administrative Code requires the owner or operator to remedy any deterioration or malfunction that the owner or operator finds. Rule 3745-66-96 of the Administrative Code requires the owner or operator to notify the director within twenty-four hours after confirmation of a release. Also, 40 CFR Part 302 may require the owner or operator to notify the "National Response Center" of a release.]

- (B) Except as noted under paragraph (C) of this rule, the owner or operator shall inspect at least once per operating day all of the following:

- (1) Overfill or spill control equipment (e.g., waste-feed cutoff systems, bypass systems, and drainage systems) to ensure that it is in good working order.
- (2) Above ground portions of the tank system, if any, to detect corrosion or releases of waste.
- (3) The construction materials and the area immediately surrounding the externally accessible portion of the tank system, including the secondary containment structure system (e.g., dikes) to detect erosion or signs of releases of hazardous waste (e.g., wet spots, dead vegetation).

~~[Comment: Paragraph (C) of rule 3745-65-15 of the Administrative Code requires the owner or operator to remedy any deterioration or malfunction that is found. Rule 3745-66-96 of the Administrative Code requires the owner or operator to notify the director within twenty-four hours after confirming a release. Also, 40 CFR Part 302 may require the owner or operator to notify the "National Response Center" of a release.]~~

- (C) Owners and operators of tank systems that either use leak detection equipment to alert facility personnel to leaks, or implement established workplace practices to ensure leaks are promptly identified, shall inspect at least weekly those areas described in paragraphs (B)(1) to (B)(3) of this rule. Use of the alternate inspection schedule shall be documented in the facility's operating record. This documentation shall include a description of the established workplace practices at the facility.

- (D) [Reserved.]

(E) Ancillary equipment that is not provided with secondary containment, as described in paragraphs (F)(1) to (F)(4) of rule 3745-66-93 of the Administrative Code, shall be inspected at least once each operating day.

(F) The owner or operator shall inspect cathodic protection systems, if present, ~~according to~~, at a minimum, according to the following schedule, to ensure that the cathodic protection systems are functioning properly:

- (1) The proper operation of the cathodic protection system shall be confirmed within six months after initial installation and annually thereafter.
- (2) All sources of impressed current shall be inspected or tested, as appropriate, at least bimonthly (i.e., every other month).

[Comment: The practices described in the "National Association of Corrosion Engineers (NACE)" standard, "Recommended Practice (RP-02-85) - Control of External Corrosion on Metallic Buried, Partially Buried, or Submerged Liquid Storage Systems," and the "American Petroleum Institute (API)" publication 1632, "Cathodic Protection of Underground Petroleum Storage Tanks and Piping Systems," may be used, where applicable, as guidelines in maintaining and inspection of cathodic protection systems.]

(G) The owner or operator shall document in the operating record of the facility an inspection of those items in paragraphs (A) and (B) ~~to (B)(3)~~ of this rule.

[Comment: For dates of non-regulatory government publications, publications of recognized organizations and associations, federal rules, and federal statutory provisions referenced in this rule, see rule 3745-50-11 of the Administrative Code titled "Incorporated by reference."]

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Date

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09/05/2010, 10/31/2015

3745-66-96

**Response to leaks or spills and disposition of leaking or ~~unfit for use~~unfit-for-use tank systems.**

A tank system or secondary containment system from which there has been a leak or spill, or which is unfit for use, shall be removed from service immediately, and the owner or operator shall satisfy all of the following ~~requirements~~:

- (A) Cessation of use; prevent flow or addition of wastes. The owner or operator shall immediately stop the flow of hazardous waste into the tank system or secondary containment system and inspect the system to determine the cause of the release.
- (B) Removal of waste from tank system or secondary containment system.
  - (1) If the release was from the tank system, the owner or operator ~~shall~~, within twenty-four hours after detection of the leak or, if the owner or operator demonstrates that that is not possible, at the earliest practicable time, shall remove as much of the waste as is necessary to prevent further release of hazardous waste to the environment and to allow inspection and repair of the tank system to be performed.
  - (2) If the release was to a secondary containment system, all released materials shall be removed within twenty-four hours or in as timely a manner as is possible to prevent harm to human health and the environment.
- (C) Containment of visible releases to the environment. The owner or operator shall immediately conduct a visual inspection of the release and, based upon that inspection, both:
  - (1) Prevent further migration of the leak or spill to soils or surface water; and
  - (2) Remove, and properly dispose of, any visible contamination of the soil or surface water.
- (D) Notifications, reports.
  - (1) Any release to the environment, except as provided in paragraph (D)(2) of this rule, shall be reported to the director within twenty-four hours after detection of the release. If the release has been reported pursuant to 40 CFR Part 302, that report will satisfy this requirement.
  - (2) A leak or spill of hazardous waste that satisfies both of the following requirements is exempted from the requirements of ~~paragraphs~~paragraph (D) to ~~(D)(3)~~ of this rule:
    - (a) Less than or equal to a quantity of one pound; and

- (b) Immediately contained and cleaned up.
- (3) Within thirty days after detection of a release to the environment, a report that contains all of the following information shall be submitted to the director:
- (a) Likely route of migration of the release.
  - (b) Characteristics of the surrounding soil (soil composition, geology, hydrogeology, climate).
  - (c) Results of any monitoring or sampling conducted in connection with the release, (if available). If sampling or monitoring data relating to the release are not available within thirty days, these data shall be submitted to the director as soon as ~~they~~the data become available.
  - (d) Proximity to downgradient drinking water, surface water, and population areas.
  - (e) Description of response actions taken or planned.
- (E) Provision of secondary containment, repair, or closure.
- (1) Unless the owner or operator ~~satisfies the requirements of~~complies with paragraphs (E)(2) to (E)(4) of this rule, the tank system shall be closed in accordance with rule 3745-66-97 of the Administrative Code.
  - (2) If the cause of the release was a spill that has not damaged the integrity of the system, the owner or operator may return the system to service as soon as the released waste is removed and repairs, if necessary, are made.
  - (3) If the cause of the release was a leak from the primary tank system into the secondary containment system, the system shall be repaired prior to returning the tank system to service.
  - (4) If the source of the release was a leak to the environment from a component of a tank system without secondary containment, the owner or operator shall provide the component of the system from which the leak occurred with secondary containment that satisfies the requirements of rule 3745-66-93 of the Administrative Code before ~~it can~~the component may be returned to service, unless the source of the leak is an aboveground portion of a tank system. If the source is an aboveground component that can be inspected visually, the component shall be repaired and may be returned to service without secondary containment as long as ~~the requirements of~~the tank system is in compliance with paragraph (F) of this rule ~~are satisfied~~. If a component is replaced to comply

with this ~~paragraph~~ requirement, that component shall ~~satisfy the requirements for~~ comply with the new tank systems or components requirements in rules 3745-66-92 and 3745-66-93 of the Administrative Code. Additionally, if a leak has occurred in any portion of a tank system component that is not readily accessible for visual inspection (e.g., the bottom of an inground or onground tank), the entire component shall be provided with secondary containment in accordance with rule 3745-66-93 of the Administrative Code prior to being returned to use.

- (F) Certification of major repairs. If the owner or operator has repaired a tank system in accordance with paragraph (E) of this rule, and the repair has been extensive (e.g., installation of an internal liner, repair of a ruptured primary containment or secondary containment vessel), the tank system shall not be returned to service unless the owner or operator has obtained a certification by ~~an independent,~~ a qualified professional engineer in accordance with paragraph (D) of rule 3745-50-42 of the Administrative Code that the repaired system is capable of handling hazardous wastes without release for the intended life of the system. This certification shall be submitted to the director within seven days after returning the tank system to use, placed in the operating record, and maintained until closure of the facility.

[Comment 1: The director, on the basis of any information received that there is or has been a release of hazardous waste or hazardous constituents into the environment, may issue an order under section 3734.20 of the Revised Code requiring corrective action or such other response as deemed necessary to protect human health or the environment.]

[Comment 2: See paragraph (C) of rule 3745-65-15 of the Administrative Code for the requirements necessary to remedy a failure. Also, 40 CFR Part 302 requires the owner or operator to notify the "National Response Center" of a release of any "reportable quantity."]

[Comment 3: For dates of non-regulatory government publications, publications of recognized organizations and associations, federal rules, and federal statutory provisions referenced in this rule, see rule 3745-50-11 of the Administrative Code titled "Incorporated by reference."]

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09/14/2021

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**3745-66-97 Closure and post-closure care.**

- (A) At closure of a tank system, the owner or operator must remove or decontaminate all waste residues, contaminated containment system components (liners, etc.), Contaminated soils, and structures and equipment contaminated with waste, and manage them as hazardous waste, unless excluded under provisions contained in paragraph (D) of rule 3745-51-03 of the Administrative Code. The closure plan, closure activities, cost estimates for closure, and financial responsibility for tank systems must meet all of the requirements specified in rules 3745-66-10 to 3745-66-21 and 3745-66-40 to 3745-66-48 of the Administrative Code.
- (B) If the owner or operator demonstrates that not all contaminated soils can be practicably removed or decontaminated as required in paragraph (A) of this rule, then the owner or operator must close the tank system and perform post-closure care in accordance with the closure and post-closure care requirements that apply to landfills in accordance with rule 3745-68-10 of the Administrative Code. In addition, for the purposes of closure, post-closure, and financial responsibility, such a tank system is then considered to be a landfill, and the owner or operator must meet all of the requirements for landfills specified in rules 3745-66-10 to 3745-66-21 and 3745-66-40 to 3745-66-48 of the Administrative Code.
- (C) If an owner or operator has a tank system which does not have secondary containment that meets the requirements of paragraphs (B) to (F) of rule 3745-66-93 of the Administrative Code and which is not exempt from the secondary containment requirements in accordance with paragraph (G) of rule 3745-66-93 of the Administrative Code, then:
- (1) The closure plan for the tank system must include both a plan for complying with paragraph (A) of this rule and a contingent plan for complying with paragraph (B) of this rule.
  - (2) A contingent post-closure plan for complying with paragraph (B) of this rule must be prepared and submitted as part of the permit application.
  - (3) The cost estimates calculated for closure and post-closure care must reflect the costs of complying with the contingent closure plan and the contingent post-closure plan, if these costs are greater than the costs of complying with the closure plan prepared for the expected closure under paragraph (A) of this rule.
  - (4) Financial assurance must be based on the cost estimates in paragraph (C)(3) of this rule.
  - (5) For the purposes of the contingent closure and post-closure plans, such a tank system is considered to be a landfill, and the contingent plans must meet all of the closure, post-closure, and financial responsibility requirements for landfills under rules 3745-66-10 to 3745-66-21 and 3745-66-40 to 3745-66-48 of the Administrative Code.

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Prior effective dates: 04/15/1981, 01/07/1983, 12/08/1988

3745-66-98

**Special requirements for ignitable waste or reactive waste- tank systems.**

(A) Ignitable waste or reactive waste shall not be placed in a tank system, unless ~~one of these three situations occurs:~~

(1) The waste is treated, rendered, or mixed before or immediately after placement in the tank system so that ~~both:~~

(a) The resulting waste, mixture, or dissolved material no longer meets the description of ignitable waste or reactive waste under rule 3745-51-21 or 3745-51-23 of the Administrative Code; and

(b) Paragraph (B) of rule 3745-65-17 of the Administrative Code is complied with; or

(2) The waste is stored or treated in such a way that the waste is protected from any material or conditions which may cause the waste to ignite or react; or

(3) The tank system is used solely for emergencies.

(B) The owner or operator of a facility where ignitable waste or reactive waste is stored or treated in tanks shall comply with the requirements for the maintenance of protective distances between the waste management area and any public ways, streets, alleys, or an adjoining property line that can be built upon as required in the national fire protection association's (NFPA) "Flammable and Combustible Liquids Code."

[Comment: For dates of non-regulatory government publications, publications of recognized organizations and associations, federal rules, and federal statutory provisions referenced in this rule, see rule 3745-50-11 of the Administrative Code titled "Incorporated by reference."]

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12/07/2000, 12/07/2004, 09/05/2010, 03/24/2017

**3745-66-99 Special requirements for incompatible wastes.**

- (A) Incompatible wastes, or incompatible wastes and materials (see the appendix of this rule for examples), shall not be placed in the same tank system, unless paragraph (B) of rule 3745-65-17 of the Administrative Code is complied with.
- (B) Hazardous waste shall not be placed in a tank system that has not been decontaminated and that previously held an incompatible waste or material, unless paragraph (B) of rule 3745-65-17 of the Administrative Code is complied with.

## Appendix to 3745-66-99

[Note: This appendix is equivalent to appendix V of 40 CFR Part 265.]

## Examples of Potentially Incompatible Waste

Many hazardous wastes, when mixed with other waste or materials at a hazardous waste facility, can produce effects which are harmful to human health and the environment, such as: heat or pressure; fire or explosion; violent reaction, toxic dusts, mists, fumes, or gases; or flammable fumes or gases.

Below are examples of potentially incompatible wastes, waste components, and materials, along with the harmful consequences which result from mixing materials in one group with materials in another group. The list is intended as a guide to owners or operators of treatment, storage, and disposal facilities, and to enforcement and permit granting officials, to indicate the need for special precautions when managing these potentially incompatible waste materials or components.

This list is not intended to be exhaustive. An owner or operator must, as the regulations require, adequately analyze his wastes so that he can avoid creating uncontrolled substances or reactions of the type listed below, whether they are listed below or not.

It is possible for potentially incompatible wastes to be mixed in a way that precludes a reaction (e.g., adding acid to water rather than water to acid) or that neutralizes them (e.g., a strong acid mixed with a strong base), or that controls substances produced (e.g., by generating flammable gases in a closed tank equipped so that ignition cannot occur, and burning the gases in an incinerator).

In the lists below, the mixing of a group A material with a group B material may have the potential consequence as noted.

## Group I-A

- Acetylene sludge
- Alkaline caustic liquids
- Alkaline cleaner
- Alkaline corrosive liquids
- Alkaline corrosive battery fluid
- Caustic waste water
- Lime sludge and other corrosive alkalis
- Lime waste water
- Lime and water
- Spent caustic

## Group 1-B

- Acid sludge
- Acid and water
- Battery acid
- Chemical cleaners
- Electrolyte acid
- Etching acid liquid or solvent
- Pickling liquor and other corrosive acids
- Spent acid

- Spent mixed acid
- Spent sulfuric acid
- Potential consequences: heat generation; violent reaction.
- Group 2-A
  - Aluminum
  - Beryllium
  - Calcium
  - Lithium
  - Magnesium
  - Potassium
  - Sodium
  - Zinc powder
  - Other reactive metals and metal hydrides
- Group 2-B
  - Any waste in Group 1-A or 1-B
  - Potential consequences: fire or explosion; generation of flammable hydrogen gas.
- Group 3-A
  - Alcohols
  - Water
- Group 3-B
  - Any concentrated waste in Groups 1-A or 1-B
  - Calcium
  - Lithium
  - Metal hydrides
  - Potassium
  - $\text{SO}_2\text{Cl}_2$ ,  $\text{SOCl}_2$ ,  $\text{PCl}_3$ ,  $\text{CH}_3\text{SiCl}_3$
  - Other water-reactive waste
  - Potential consequences: fire, explosion, or heat generation; generation of flammable or toxic gases.
- Group 4-A
  - Alcohols
  - Aldehydes
  - Halogenated hydrocarbons
  - Nitrated hydrocarbons
  - Unsaturated hydrocarbons
  - Other reactive organic compounds and solvents
- Group 4-B
  - Concentrated Group 1-A or 1-B wastes
  - Potential consequences: fire, explosion, or violent reaction.
- Group 5-A
  - Spent cyanide and sulfide solutions
- Group 5-B
  - Group 1-B wastes
  - Potential consequences: generation of toxic hydrogen cyanide or hydrogen sulfide gas.
- Group 6-A
  - Chlorates
  - Chlorine
  - Chlorite
  - Chronic acid

- Hypochlorites
- Nitrates
- Nitric acid, fuming
- Perchlorates
- Permanganates
- Peroxides
- Other strong oxidizers

Group 6-B

- Acetic acid and other organic acids
- Concentrated mineral acids
- Group 2-A wastes
- Group 4-A wastes
- Other flammable and combustible wastes

Potential consequences: fire, explosion, or violent reaction.

Effective: 12/08/1988  
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**3745-66-100****Waste analysis and trial tests.**

In addition to performing the waste analysis required by rule 3745-65-13 of the Administrative Code, the owner or operator must, whenever a tank system is to be used to treat chemically or to store a hazardous waste that is substantially different from waste previously treated or stored in that tank system, or treat chemically a hazardous waste with a substantially different process than any previously used in that tank system:

- (A) Conduct waste analyses and trial treatment or storage tests (e.g., bench-scale or pilot-plant scale tests); or
- (B) Obtain written, documented information on similar waste under similar operating conditions to show that the proposed treatment or storage will meet the requirements of paragraph (A) of rule 3745-66-94 of the Administrative Code.

[Comment: Rule 3745-65-13 of the Administrative Code requires the waste analysis plan to include analyses needed to comply with rules 3745-66-98 and 3745-66-99 of the Administrative Code. Rule 3745-65-73 of the Administrative Code requires the owner or operator to place the results from each waste analysis and trial test, or the documented information, in the operating record of the facility.]

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## TO BE RESCINDED

3745-66-101            **Special requirements for generators of between one hundred and one thousand kilograms per month that accumulate hazardous waste in tanks.**

(A) This rule applies to small quantity generators of more than one hundred kilograms but less than one thousand kilograms of hazardous waste in a calendar month, that accumulate hazardous waste in tanks for less than one hundred eighty days (or two hundred seventy days if the generator shall ship the waste greater than two hundred miles), and do not accumulate over six thousand kilograms on-site at any time.

(B) Generators of between one hundred and one thousand kilograms per calendar month of hazardous waste shall comply with the following general operating requirements:

(1) Treatment or storage of hazardous waste in tanks shall comply with paragraph (B) of rule 3745-65-17 of the Administrative Code.

(2) Hazardous wastes or treatment reagents shall not be placed in a tank if such wastes or reagents could cause the tank or the tank's inner liner to rupture, leak, corrode, or otherwise fail before the end of the tank's intended life.

(3) Uncovered tanks shall be operated to ensure at least sixty centimeters (two feet) of freeboard, unless the tank is equipped with a containment structure (e.g., dike or trench), a drainage control system, or a diversion structure (e.g., standby tank) with a capacity that equals or exceeds the volume of the top sixty centimeters (two feet) of the tank.

(4) Where hazardous waste is continuously fed into a tank, the tank shall be equipped with a means to stop this inflow (e.g., waste-feed cutoff system or by-pass system to a stand-by tank).

[Comment: These systems are intended to be used in the event of a leak or overflow from the tank due to a system failure (e.g., a malfunction in the treatment process, a crack in the tank, etc.).]

(C) Except as noted in paragraph (D) of this rule, generators of between one hundred and one thousand kilograms per calendar month that accumulate hazardous waste in tanks shall inspect, where present:

(1) Discharge control equipment (e.g., waste-feed cutoff systems, by-pass systems, and drainage systems) at least once each operating day, to ensure that the discharge control equipment is in good working order.

- (2) Data gathered from monitoring equipment (e.g., pressure and temperature gauges) at least once each operating day to ensure that the tank is being operated according to the tank's design.
- (3) The level of waste in the tank at least once each operating day to ensure compliance with paragraph (B)(3) of this rule.
- (4) The construction materials of the tank at least weekly to detect corrosion or leaking of fixtures or seams.
- (5) The construction materials of, and the area immediately surrounding, discharge confinement structures (e.g., dikes) at least weekly to detect erosion or obvious signs of leakage (e.g., wet spots or dead vegetation).

[Comment: As required by paragraph (C) of rule 3745-65-15 of the Administrative Code, the owner or operator shall remedy any deterioration or malfunction the owner or operator finds.]

- (D) Generators that accumulate between one hundred and one thousand kilograms per calendar month of hazardous waste in tanks or in tank systems that have full secondary containment and that either use leak detection equipment to alert facility personnel to leaks, or that implement established workplace practices to ensure leaks are promptly identified, shall inspect at least weekly, where applicable, the areas identified in paragraphs (C)(1) to (C)(5) of this rule. Use of the alternate inspection schedule shall be documented in the facility's operating record. This documentation shall include a description of the established workplace practices at the facility.

(E) [Reserved.]

- (F) Generators of between one hundred and one thousand kilograms per calendar month that accumulate hazardous waste in tanks shall, upon closure of the facility, remove all hazardous waste in tanks, discharge control equipment, and discharge confinement structures.

[Comment: At closure, as throughout the operating period, unless the owner or operator can demonstrate, in accordance with paragraph (C) or (D) of rule 3745-51-03 of the Administrative Code, that any waste removed from the owner's or operator's tank is not a hazardous waste, the owner or operator becomes a generator of hazardous waste and shall manage the hazardous waste in accordance with all applicable requirements of Chapters 3745-52, 3745-53, 3745-65 to 3745-69, and 3745-256 of the Administrative Code.]

(G) Generators of between one hundred and one thousand kilograms per calendar month shall comply with the following special requirements for ignitable waste or reactive waste:

(1) Ignitable waste or reactive waste shall not be placed in a tank, unless one of the following occurs:

(a) The waste is treated, rendered, or mixed before or immediately after placement in a tank so that:

(i) The resulting waste, mixture, or dissolution of material no longer meets the description of ignitable waste or reactive waste under rule 3745-51-21 or 3745-51-23 of the Administrative Code.

(ii) Paragraph (B) of rule 3745-65-17 of the Administrative Code is complied with.

(b) The waste is stored or treated in such a way that the waste is protected from any material or conditions that may cause the waste to ignite or react.

(c) The tank is used solely for emergencies.

(2) The owner or operator of a facility which treats or stores ignitable waste or reactive waste in covered tanks shall comply with the buffer zone requirements for tanks provided in the national fire protection association's (NFPA) "Flammable and Combustible Liquids Code."

(H) Generators of between one hundred and one thousand kilograms per calendar month shall comply with the following special requirements for incompatible wastes:

(1) Incompatible wastes, or incompatible wastes and materials (see the appendix to rule 3745-66-99 of the Administrative Code for examples), shall not be placed in the same tank, unless paragraph (B) of rule 3745-65-17 of the Administrative Code is complied with.

(2) Hazardous waste shall not be placed in an unwashed tank which previously held an incompatible waste or material, unless paragraph (B) of rule 3745-65-17 of the Administrative Code is complied with.

[Comment: For dates of non-regulatory government publications, publications of recognized organizations and associations, federal rules, and federal statutory provisions referenced in this rule, see rule 3745-50-11 of the Administrative Code titled "Incorporated by reference."]

Effective: 10/5/2020

Five Year Review (FYR) Dates: 7/13/2020

CERTIFIED ELECTRONICALLY

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Certification

09/21/2020

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Date

Promulgated Under: 119.03  
Statutory Authority: 3734.12  
Rule Amplifies: 3734.12  
Prior Effective Dates: 12/08/1988, 12/30/1989, 12/07/2000, 12/07/2004,  
09/05/2010, 03/24/2017

3745-66-102

**Air emission standards - tanks.**

The owner or operator shall manage all hazardous waste placed in a tank in accordance with the applicable requirements of rules 3745-256-30 to 3745-256-35, 3745-256-50 to 3745-256-64, and 3745-256-80 to 3745-256-90 of the Administrative Code.

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Five Year Review (FYR) Dates: Exempt

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06/02/2023

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Date

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