

# \*\*\* DRAFT – NOT FOR FILING \*\*\*

3745-500-01 Multi-program - definitions.

All terms in this rule are defined as follows:

(A)

- (1) "Aggregate volume" means the total volume of all portable containers at a facility designated for receiving solid wastes. The total volume of containers at a facility does not include the volume of an empty portable container being delivered to a facility by a transport vehicle, whose purpose includes removal of a full or partially full container of equal or greater volume, at the time of delivery of the empty container.
- (2) "Airport" means any airport certified by the federal aviation administration and open to the public without prior permission and without restrictions within the physical capacities of available airport facilities.
- (3) "Angle of draw" means the angle of inclination from the vertical of the line connecting the edge of the workings of the underground mine and the edge of the subsidence area.
- (4) "Applicant" means any person who has applied for authorization to conduct an activity that requires a permit to install, registration, license, permit to operate, or other authorization to generate, transport, dispose, or treat solid waste, industrial waste, construction and demolition debris, or infectious waste in accordance with rules adopted under Chapters 3714., 3734., and 6111. of the Revised Code.
- (5) "Approved board of health" means the following:
  - (a) For rules adopted under Chapter 3734. of the Revised Code, a board of health of a health district placed on the approved list by the director in accordance with section 3734.08 of the Revised Code.
  - (b) For rules adopted under Chapter 3714. of the Revised Code, a board of health of a health district placed on the approved list by the director in accordance with section 3714.09 of the Revised Code.
- (6) "Aquifer" means a geologic unit or formation or series of formations that are hydraulically interconnected and that have the ability to receive, store, or transmit water to wells or springs.
- (7) "Aquifer system" means one or more geologic units or formations that are wholly or partially saturated with water and are capable of storing, transmitting, and yielding significant amounts of water to wells or springs.

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For the purposes of this definition, a geologic unit or formation is able to "yield significant amounts of water" if it is capable of yielding ground water at a time-weighted average rate greater than one-tenth of a gallon per minute over a twenty-four hour period.

A wholly or partially saturated geologic unit or formation is not an "aquifer system" if the following are true:

- (a) The yield of the geologic unit or formation is less than three gallons per minute.
  - (b) The yield of the geologic unit or formation is less than fifty per cent of the yield of any underlying or overlying geologic unit or formation that yields more than three gallons per minute over a twenty-four hour period.
  - (c) Both the geologic unit or formation and any underlying or overlying geologic unit or formation as described in paragraph (A)(7)(b) of this rule are present under the potential source of contamination.
  - (d) Any underlying or overlying geologic unit or formation described in paragraph (A)(7)(b) of this rule is a likely source of water that is used for any purpose within one mile of the potential source of contamination.
- (8) "Assets" means all existing and all probable future economic benefits obtained or controlled by a particular entity.
- (9) "Authorized maximum daily waste receipt" (AMDWR) means the maximum amount of solid waste a solid waste disposal facility may receive at the gate in any calendar day. The AMDWR shall be expressed in tons per day for facilities utilizing scales or cubic yards per day at the gate for all other facilities. The conversion factor between tons and cubic yards shall be one ton to three cubic yards unless the solid waste is baled, in which case a one ton to one cubic yard conversion factor shall be used.
- (10) "Authorizing document" means a document that describes activities that a person is either required to do, allowed to do, or prohibited from doing, pursuant to and in compliance with applicable rules, statutes, and orders. "Authorizing document" includes but is not limited to a permit to install; permit to operate; license; plan approved by Ohio EPA or the approved board of health; alteration concurred with by Ohio EPA or the approved board of health; and any order that is issued by the director, an approved board of health, the Ohio environmental review appeals commission, or a court having jurisdiction over the facility.

(B)

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- (1) "Bedrock" means solid rock generally overlain by unconsolidated materials.
- (2) "Biomass fuels" means those fuels from any plant derived organic matter available on a renewable basis, including dedicated energy crops and trees, agricultural food and feed crops, agricultural crop wastes and residues, forestry residues and sawdust, aquatic plants, and refuse derived fuel consisting of waste paper, cardboard, wood waste, or yard wastes.
- (3) "Board of health" means the board of health of a city or general health district, or the authority having the duties of a board of health in any city as authorized by section 3709.05 of the Revised Code.
- (4) "Boring" means any method of mechanical penetration into the subsurface for the purpose of characterizing material properties, collecting material samples, or installing a probe or well.

## (C)

- (1) "Clean hard fill" means reinforced or nonreinforced concrete, asphalt, clay tile, building or paving brick, mortar, block, and building or paving stone generated from construction and demolition activities. "Clean hard fill" does not include materials that are or that are otherwise contaminated with hazardous wastes, solid wastes, industrial wastes, infectious wastes, or other unauthorized materials.
- (2) "Commingled yard waste" means yard waste that has been commingled with other solid wastes. "Commingled yard waste" includes containerized source-separated yard waste including but not limited to yard waste in paper or plastic bags where such bags are commingled with other solid wastes.
- (3) "Consolidated stratigraphic unit" means a discrete layer or body of cemented or solid rock that can be readily and consistently distinguished from adjacent materials and recognized as a unit based on one or any combination of lithologic characteristics or features, usually composition, structure, or physical properties.
- (4) "Constituent" means a type of parameter as defined in this rule.
- (5) "Construction and demolition debris" or "C&DD" means those materials resulting from the alteration, construction, destruction, rehabilitation, or repair of any physical structure that is built by humans, including, without limitation, houses, buildings, industrial or commercial facilities, or roadways. "Construction and demolition debris" includes particles and dust created during demolition activities. "Construction and demolition debris" does not include materials identified or listed as solid wastes, infectious wastes, or hazardous wastes pursuant to Chapter 3734. of the Revised Code and rules adopted under it; or materials from mining operations, nontoxic fly ash, spent nontoxic foundry

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sand, and slag; or reinforced or nonreinforced concrete, asphalt, building or paving brick, or building or paving stone that is stored for a period of less than two years for recycling into a usable construction material.

For the purpose of this definition, "materials resulting from the alteration, construction, destruction, rehabilitation, or repair of any physical structure that is built by humans," are those structural and functional materials comprising the structure and surrounding site improvements, such as brick, concrete and other masonry materials, stone, glass, wall coverings, plaster, drywall, framing and finishing lumber, roofing materials, plumbing fixtures, heating equipment, electrical wiring and components containing no hazardous fluids or refrigerants, insulation, wall-to-wall carpeting, asphaltic substances, metals incidental to any of the above, and weathered railroad ties and utility poles.

"Materials resulting from the alteration, construction, destruction, rehabilitation, or repair" do not include materials required to be removed prior to demolition, and materials that are otherwise contained within or exist outside the structure such as solid wastes, yard wastes, furniture, and appliances. Also excluded in all cases are liquids, including containerized or bulk liquids, fuel tanks, drums and other closed or filled containers, tires, and batteries.

- (6) "Construction and demolition debris-derived constituents" or "C&DD-derived constituents" means those chemical constituents that are derived from disposed construction and demolition debris and includes those naturally occurring constituents that increase in concentration in ground water due to interaction between the C&DD-derived constituents released to ground water beyond the limits of potential sources of contamination and the geologic formations present under and around the construction and demolition debris facility.
- (7) "Construction and demolition debris facility" or "C&DD facility" means any site, location, tract of land, installation, or building used for the disposal of construction and demolition debris. "Construction and demolition debris facility" does not include any construction site where construction debris and trees and brush removed in clearing the construction site are used as fill material on the site where the materials are generated or removed and does not include any site where materials composed exclusively of reinforced or nonreinforced concrete, asphalt, clay tile, building or paving brick, or building or paving stone are used as fill material, either alone or in conjunction with clean soil, sand, gravel, or other clean aggregates, in legitimate fill operations for construction purposes or to bring the site up to a consistent grade.
- (8) "Construction and demolition debris facility license" or "C&DD facility license" means a license issued by the licensing authority in accordance with Chapter 3714. of the Revised Code and rules adopted thereunder.

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(9) "Current assets" means cash or other assets or resources commonly identified as those which are reasonably expected to be realized in cash or sold or consumed during the normal operating cycle of a business.

(10) "Current closure cost estimate" means the following:

(a) For solid waste facilities and industrial facilities, the cost estimate in current dollars at the point in the operating life of the facility when the extent and manner of its operation would make the closure the most expensive. The "current closure cost estimate" is based on a third party conducting the closure activities and paying prevailing wages.

(b) For construction and demolition debris facilities, the estimated cost in current dollars of a third party conducting the required closure activities and paying prevailing wages.

(11) "Current corrective actions cost estimate" means the cost estimate in current dollars at the point when the extent and manner of performing corrective actions activities would make the corrective actions the most expensive. The "current corrective actions cost estimate" is based on a third party conducting the corrective actions activities and paying prevailing wages.

(12) "Current liabilities" means obligations the liquidation of which is reasonably expected to require either the use of existing resources properly classifiable as current assets or the creation of other current liabilities.

(13) "Current post-closure care cost estimate" means the estimated cost in current dollars of a third party conducting the required post-closure care activities for the entire post-closure care period and paying prevailing wages.

(D)

(1) "Developed spring" means any spring that has been modified by the addition of pipes or a collection basin to facilitate the collection and use of the spring water.

(2) "Director" means the director of environmental protection or a representative delegated by the director to act on the director's behalf.

(3) "Disposal" means the following:

(a) For construction and demolition debris, the discharge, deposit, injection, dumping, spilling, leaking, emitting, or placing of any construction and demolition debris into or on any land or ground or surface water or into the air, except if the disposition or placement constitutes storage, reuse, or recycling.

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(b) For solid waste, the same meaning as in section 3734.01 of the Revised Code.

(E)

(1) "Establish" or "establishment" of a facility means to dispose of waste or construction and demolition debris; or construct or install any of the proposed facility components and includes excavation that is related to the construction of a facility or any components thereof. "Establish" or "establishment" does not include clearing, grubbing, or installation of ground water monitoring wells.

(2) "Execute" means the following:

(a) For solid waste facilities and industrial facilities, to complete and sign a document acceptable to the director for the purpose of establishing a financial assurance instrument.

(b) For construction and demolition debris facilities, to complete and sign a document acceptable to the licensing authority for the purpose of establishing a financial assurance instrument.

(F)

(1) "Final slope" means a slope that exists when the final elevations of waste placement or C&DD placement for a facility and the cap system and other associated engineered components that are required have been constructed.

(G)

(1) "Geologic unit or formation" means either of the following:

(a) A body of rock that is prevailingly, but not necessarily, tabular and able to be mapped at the earth's surface or traced in the subsurface and is formally recognized by the Ohio geologic survey based on the following:

(i) Lithic characteristics or features, usually composition, structure, or physical properties.

(ii) Stratigraphic position.

(b) An unconsolidated stratigraphic unit.

(2) "Ground water" means any water below the surface of the earth in a zone of saturation.

(H)

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(1) "Hazardous waste" means hazardous waste as defined in Chapter 3734. of the Revised Code and includes waste that is listed specifically as hazardous waste or exhibits one or more characteristics of hazardous waste as defined in Chapter 3745-51 of the Administrative Code.

(2) "Health commissioner" means the individual occupying the office created by section 3709.11 or 3709.14 of the Revised Code or a representative delegated by the health commissioner to act on the health commissioner's behalf.

(3) "Health district" means a city or general health district created by or under the authority of Chapter 3709. of the Revised Code.

(I)

(1) "Independently audited" means an audit performed by an independent certified public accountant in accordance with generally accepted accounting standards, or for a publicly-owned facility, an equivalent comprehensive audit performed by the auditor of the state of Ohio pursuant to Chapter 117. of the Revised Code.

(2) "Industrial excluded waste" means the following materials not exceeding any limit in the table below. "Industrial excluded waste" does not include municipal solid waste, industrial solid waste, liquid industrial waste, or construction and demolition debris.

(a) Ash.

(b) Foundry sand.

(c) Slag.

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<u>Constituent</u>	<u>Limit (mg/L)</u>	<u>Applicable to paragraph</u>
<u>Arsenic</u>	<u>1.5</u>	<u>(I)(2)(a) and (I)(2)(b) of this rule</u>
<u>Barium</u>	<u>60.0</u>	<u>(I)(2)(a) and (I)(2)(b) of this rule</u>
<u>Cadmium</u>	<u>0.15</u>	<u>(I)(2)(a) and (I)(2)(b) of this rule</u>
<u>Chromium</u>	<u>3.0</u>	<u>(I)(2)(a) and (I)(2)(b) of this rule</u>
<u>Lead</u>	<u>1.5</u>	<u>(I)(2)(a) and (I)(2)(b) of this rule</u>
<u>Mercury</u>	<u>0.06</u>	<u>(I)(2)(a) and (I)(2)(b) of this rule</u>
<u>Selenium</u>	<u>1.0</u>	<u>(I)(2)(a) and (I)(2)(b) of this rule</u>
<u>Phenol</u>	<u>10.5</u>	<u>(I)(2)(a) of this rule</u>
<u>Cyanide</u>	<u>0.6</u>	<u>(I)(2)(a) of this rule</u>
<u>Fluoride</u>	<u>12.0</u>	<u>(I)(2)(a) of this rule</u>

(3) "Industrial excluded waste landfill" means a sanitary landfill facility where exclusively industrial excluded waste is disposed.

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- (4) "Industrial facility" means an industrial landfill or an industrial lagoon.
- (5) "Industrial lagoon" means a lagoon where exclusively industrial liquid waste is disposed and which is not a treatment works as defined in division (F) of section 6111.01 of the Revised Code.
- (6) "Industrial landfill" means an industrial solid waste landfill or an industrial excluded waste landfill.
- (7) "Industrial liquid waste" means sludge or sludge materials or a water-carried or liquid waste resulting from any process of industry, manufacture, trade, or business or from the development, processing, or recovery of any natural resource. "Industrial liquid waste" does not include storm water or manure from any animal feeding facility, as defined in section 903.01 of the Revised Code, sewage, sewage sludge, infectious waste, hazardous waste, or industrial solid waste.
- (8) "Industrial solid waste" means a type of solid waste generated by manufacturing or industrial operations and includes but is not limited to solid waste resulting from the following manufacturing processes: electric power generation; fertilizer and agricultural chemicals; food and food-related products; inorganic chemicals; iron and steel products; leather and leather products; nonferrous metal products; plastics and resins; pulp and paper products; rubber and miscellaneous plastic products; stone, glass, clay, and concrete products; textiles; and transportation equipment. "Industrial solid waste" does not include industrial liquid waste, industrial excluded waste, municipal solid waste, infectious waste, hazardous waste, or construction and demolition debris.
- (9) "Industrial solid waste landfill" means a sanitary landfill facility where exclusively industrial solid waste or a combination of industrial solid waste and industrial excluded waste is disposed. For purposes of Chapter 3745-525 of the Administrative Code, "industrial solid waste landfills" include existing industrial solid waste landfills. An existing "industrial solid waste landfill" means a landfill that is licensed on the effective date of this rule to accept industrial solid waste for disposal, and which, during its operating life, did not receive for disposal significant amounts of municipal solid waste as that term is defined in rule 3745-500-01 of the Administrative Code.
- (10) "Industrial waste" means any liquid or solid substance resulting from any process of industry, manufacture, trade, or business, or from the development, processing, or recovery of any natural resource. "Industrial waste" includes industrial solid waste, industrial excluded waste, and industrial liquid waste.
- (11) "Infectious waste" means the following substances or categories of substances:

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- (a) Cultures and stocks of infectious agents and associated biologicals, including, without limitation, specimen cultures, cultures and stocks of infectious agents, wastes from production of biologicals, and discarded live and attenuated vaccines.
- (b) Laboratory wastes that were, or are likely to have been, in contact with infectious agents that may present a substantial threat to public health if improperly managed.
- (c) Pathological wastes, including, without limitation, human and animal tissues, organs, and body parts, and body fluids and excreta that are contaminated with or are likely to be contaminated with infectious agents, removed or obtained during surgery or autopsy or for diagnostic evaluation, provided that, with regard to pathological wastes from animals, the animals have or are likely to have been exposed to a zoonotic or infectious agent.
- (d) Waste materials from the rooms of humans, or the enclosures of animals, that have been isolated because of diagnosed communicable disease that are likely to transmit infectious agents. Also included are waste materials from the rooms of patients who have been placed on blood and body fluid precautions under the universal precaution system established by the "Centers for Disease Control" in the public health service of the United States department of health and human services, if specific wastes generated under the universal precautions system have been identified as infectious wastes by rules referred to in paragraph (I)(4)(h) of this rule.
- (e) Human and animal blood specimens and blood products that are being disposed of, provided that, with regard to blood specimens and blood products from animals, the animals were or are likely to have been exposed to a zoonotic or infectious agent. "Blood products" does not include patient care waste such as bandages or disposable gowns that are lightly soiled with blood or other body fluids unless those wastes are soiled to the extent that the generator of the wastes determines that they should be managed as infectious waste.
- (f) Contaminated carcasses, body parts, and bedding of animals that were intentionally exposed to infectious agents from zoonotic or human diseases during research, production of biologicals, or testing of pharmaceuticals, and carcasses and bedding of animals otherwise infected by zoonotic or infectious agents that may present a substantial threat to public health if improperly managed.
- (g) Sharp wastes used in the treatment, diagnosis, or inoculation of human beings or animals or that have, or are likely to have, come in contact with infectious agents in medical, research, or industrial laboratories, including, without limitation, hypodermic needles and syringes, scalpel blades, and

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glass articles that have been broken. Such wastes are hereinafter referred to as "sharp infectious waste" or "sharps."

(h) Any other waste materials generated in the diagnosis, treatment, or immunization of human beings or animals, in research pertaining thereto, or in the production of testing of biologicals, that the public health council created in section 3701.33 of the Revised Code, by rules adopted in accordance with Chapter 119. of the Revised Code, identifies as infectious wastes after determining that the wastes present a substantial threat to human health when improperly managed because they are contaminated with, or are likely to be contaminated with, infectious agents.

(i) Any other waste materials the generator designates as infectious waste.

(12) "Interim slope" means a slope that exists at a facility because of disposal or because a phase or unit has reached its limits, including cover soils. An interim slope will exist for only part of the facility life and is not part of the engineered components of the facility. An interim slope is not a final slope.

(13) "Internal slope" means a slope that exists after all engineered components have been constructed that are required to be constructed prior to placing waste or C&DD on the slope.

(J) [Reserved.]

(K) [Reserved.]

(L)

(1) "Lateral expansion" means the extension of the horizontal limits of waste placement or the horizontal limits of C&DD placement that occurs prior to beginning, or being required to begin, closure activities.

(2) "Leachate" means liquid that has come in contact with or been released from solid waste, industrial waste, or construction and demolition debris.

(3) "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.

(4) "Licensing authority" means the following:

(a) For solid waste and infectious waste treatment, the board of health of a health district maintaining a program on the director's approved list established pursuant to section 3734.08 of the Revised Code..

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- (b) For construction and demolition debris, the board of health of a health district maintaining a program on the director's approved list established pursuant to section 3714.09 of the Revised Code.
- (5) "Lime sludge" means a material resulting from the treatment of a water supply used for drinking purposes or of a water supply used for industrial purposes.
- (6) "Limits of construction and demolition debris placement" or "limits of C&DD placement" means the horizontal and vertical boundaries of the portion of a construction and demolition debris facility within which the owner or operator has been authorized to dispose of construction and demolition debris, and includes all portions of the construction and demolition debris facility where construction and demolition debris has been disposed, is being disposed, or will be disposed within those boundaries.
- (7) "Limits of waste placement" means the horizontal and vertical boundaries of the portion of a solid waste facility or an industrial facility within which the owner or operator has been authorized to dispose of solid waste or industrial waste, and includes all portions of the solid waste facility or industrial facility where the waste has been disposed, is being disposed, or will be disposed within those boundaries.

(M)

- (1) "Municipal solid waste" means a type of solid waste that is generated from community, commercial, or agricultural operations. "Municipal solid waste" includes but is not limited to the following:
- (a) Solid waste generated by community operations, i.e. wastes derived from households (including single and multiple household residences, hotels, motels, bunkhouses, ranger stations, crew quarters, campgrounds, picnic grounds, and day-use recreation areas).
- (b) Solid waste generated by commercial operations (including stores, offices, restaurants, warehouses, and other non-manufacturing activities).
- (c) Solid waste generated from agricultural operations (including single-family and commercial farms, greenhouses, and nurseries).
- (d) Sludge from municipal, commercial or industrial waste water treatment plants, water treatment plants, and air pollution control facilities that is co-disposed with wastes specified in paragraph (M)(1)(a), (M)(1)(b), (M)(1)(c), or (M)(1)(e) of this rule in a sanitary landfill facility.

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(e) Fly ash and bottom ash generated from the incineration of municipal solid waste provided the fly ash and bottom ash are not regulated as hazardous wastes.

(N)

- (1) "Net working capital" means current assets minus current liabilities.
- (2) "Net worth" means total assets minus total liabilities and is equivalent to an owner's equity.
- (3) "Nuisance" means anything that is injurious to human health or offensive to the senses; interferes with the comfortable enjoyment of life or property; and affects a community, neighborhood, or any considerable number of persons (although the extent of annoyance or damage inflicted upon individual persons may be unequal).

(O)

- (1) "Open burning" means the burning of solid wastes in an open area or burning of solid wastes in a type of chamber or vessel that is not approved or authorized in rules adopted by the director under section 3734.02 of the Revised Code or, if the solid wastes consist of scrap tires, in rules adopted by the director under section 3734.73 of the Revised Code, or the burning of treated or untreated infectious wastes in an open area or vessel that is not approved in rules adopted by the director under section 3734.021 of the Revised Code.
- (2) "Open dumping" means the following:
  - (a) The deposition of solid wastes, other than scrap tires, into waters of the state, and also means the final deposition of solid wastes on or into the ground at any place other than a solid waste facility operated in accordance with Chapter 3734. of the Revised Code and rules adopted thereunder.
  - (b) The deposition of solid wastes that consist of scrap tires into waters of the state, and also means the final deposition of scrap tires on or into the ground at any place other than a scrap tire collection, storage, monofill, monocell, or recovery facility licensed under section 3734.81 of the Revised Code, or at a site or in a manner not specifically identified in division (C)(2), (C)(3), (C)(4), (C)(5), (C)(7), or (C)(10) of section 3734.85 of the Revised Code, or at any licensed solid waste facility if the deposition is not in accordance Chapter 3734. of the Revised Code and rules adopted thereunder.
  - (c) The deposition of solid wastes that consist of scrap tires in buildings, trailers, or other vehicles at locations other than a scrap tire transporter's registered business location, a licensed scrap tire facility, or an unregistered scrap tire

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facility operating in accordance with rule 3745-27-61 of the Administrative Code (such as pre-positioned trailers in accordance with paragraph (C)(8) of rule 3745-27-56 of the Administrative Code) for longer than seventy-two hours. The scrap tires in trailers or vehicles shall be considered open dumped unless written prior notification is given to the local health department and Ohio EPA that the vehicle or trailer requires mechanical repairs which will take longer than seventy-two hours to complete and that the repairs are being completed in a timely manner.

(d) The deposition of untreated or treated infectious wastes into waters of the state, and also means the final deposition of untreated infectious wastes on or into the ground at any place other than a licensed solid waste facility operated in accordance with Chapter 3734, of the Revised Code and rules adopted thereunder.

(3) "Operator" or "facility operator" means the person responsible for on-site supervision of technical operations and maintenance of a solid waste, construction and demolition debris, infectious waste, or industrial facility, or any parts thereof, which may affect the performance of the facility and its potential health or environmental impact and/or any person who has the authority to make discretionary decisions concerning the daily operation of the solid waste, construction and demolition debris, infectious waste, or industrial facility. "Operator" or "facility operator" also means the person responsible for the supervision of technical operations of a scrap tire transportation business.

(4) "Owner" means the person who holds title to the land on which the solid waste facility, industrial facility, construction and demolition debris facility, infectious waste treatment facility, or scrap tire transportation business is located or the person who owns a majority or controlling interest in the facility.

(P)

(1) "Parameter" means a physical or chemical property the value of which determines the characteristic or behavior of such things including but not limited to the following:

(a) Ground water.

(b) Soils.

(c) Engineered components.

(2) "Parent corporation" means a corporation or the ultimate corporation, which directly owns at least fifty per cent of the voting stock of the corporation which holds a permit or license issued in accordance with applicable program chapters

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of the Administrative Code; the latter corporation is deemed a "subsidiary" of the parent corporation.

- (3) "Person" means the state, any political subdivision of the state or other state or local body, the United States and any agency or instrumentality thereof, and any legal entity or organization defined as a person under section 1.59 of the Revised Code, or other entity.
- (4) "Phase" means a discrete volume of the limits of waste placement or a discrete volume of the limits of C&DD placement to be used for disposal at a sanitary landfill facility, industrial facility, or construction and demolition debris facility defined by the phase limits that have been designated in an authorizing document to facilitate the systematic construction, operation, and closure of the sanitary landfill facility, industrial facility, or construction and demolition debris facility. For a sanitary landfill facility other than an industrial solid waste or residual solid waste facility a phase is also a portion of a unit.
- (5) "Phase limits" means the boundaries that define the volume of a phase.
- (6) "Phreatic surface" means a surface that represents the water level in an unconfined saturated zone.
- (7) "Piezometric surface" means a surface that represents the actual pressure head relative to a confined saturated zone.
- (8) "Potentiometric map" means a map showing the elevation of the potentiometric surface of a significant saturated zone, aquifer, or aquifer system by means of contour lines.
- (9) "Potentiometric surface" means a surface representing the total head (the sum of elevation head, pressure head, and velocity head) of ground water in a significant saturated zone, aquifer, or aquifer system and defined by the levels to which water will rise in tightly cased wells. The water table is a particular potentiometric surface where the pressure head is equal to that of the atmosphere.
- (10) "Premises" means either of the following:
  - (a) Geographically contiguous property owned by a person.
  - (b) Noncontiguous property that is owned by a person and connected by a right-of-way that the person controls and to which the public does not have access. Two or more pieces of property that are geographically contiguous and divided by public or private right-of-way or rights-of-way are a single premises.

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- (11) "Professional engineer" means an individual authorized to practice the profession of engineering pursuant to Chapter 4733. of the Revised Code.
- (12) "Professional surveyor" means an individual authorized to practice the profession of surveying pursuant to Chapter 4733. of the Revised Code.
- (13) "Public water supply well" means any well connected to a public water system as defined by division (A) of section 6109.01 of the Revised Code.
- (14) "Public well field" means any system of wells which is connected to a public water system as defined by division (A) of section 6109.01 of the Revised Code.
- (15) "Publicly available information" means all public records and all other information from public and private sources in oral, written, or published form that is reasonably available to the public. "Publicly available information" includes but is not limited to visual surveys of the area surrounding the facility from public rights-of-way and public lands and written or oral surveys of the landowners around the facility.

(Q)

- (1) "Qualified ground water scientist" means a scientist or engineer who has received a baccalaureate or post-graduate degree in the natural sciences or engineering and has at least five years of relevant experience in ground water hydrogeology and related fields that enable that individual to make sound professional judgments regarding ground water monitoring, contaminant fate and transport, and corrective actions.

(R)

- (1) "Recycling" means the process of converting solid waste, industrial waste, construction and demolition debris, or clean hard fill that would otherwise be disposed and returning the converted material to commerce as a commodity for use or exchange in an established and legitimate market. "Recycling" is not reuse, storage, disposal, or transfer.
- (2) "Regional aquifer" means the aquifer used as a primary source of water to wells within one mile of a solid waste disposal facility, industrial facility, or construction and demolition debris facility.
- (3) "Regulatory floodplain" means an area covered by a one hundred year flood as depicted on a flood insurance rate map published by the federal emergency management agency.
- (4) "Reuse" means taking an object or material that would otherwise be disposed and using it for its original purpose or a similar purpose, without converting the

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object or material. "Reuse" does not include using an object or material as fill. "Reuse" is not recycling, storage, disposal, or transfer.

(5) "Reviewing authority" means the following:

(a) For solid waste permit to install applications and industrial waste permit to install applications, the director.

(b) For construction and demolition debris permit to install applications, a city or general health district as created by or under Chapter 3709. of the Revised Code, which is on the director's approved list in accordance with section 3714.09 of the Revised Code and has jurisdiction over a facility; or the director where the health district is not on the director's approved list; or the director if the approved health district requests that the director review the permit to install application in accordance with division (G) of section 3714.051 of the Revised Code.

(6) "Run-out" means a portion of the following engineered components constructed during a construction event that is used to connect to the same type of engineered component constructed during a subsequent construction event:

(a) Liner system.

(b) Leachate management system.

(c) Separatory leachate barrier and collection system.

(d) Cap system.

(S)

(1) "Sanitary landfill facility" means an engineered facility where the final deposition of solid waste on or into the ground is practiced in accordance with Chapters 3745-525 to 3745-540 of the Administrative Code, as applicable, and includes at a minimum each of the following:

(a) Unit within the limits of waste placement.

(b) Groundwater monitoring and control system structure.

(c) Building.

(d) Explosive gas monitoring, control, and extraction system structure.

(e) Surface water run-on and runoff control structure.

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(f) Sedimentation pond.

(g) Liner system.

(h) Leachate management system structure.

The sanitary landfill facility includes all portions of the facility described above and those areas within three hundred feet of the limits of waste placement unless an alternate setback is deemed acceptable by the director. If the owner or operator has not been issued a permit to install submitted in accordance with section 3734.05 of the Revised Code that delineates the setback from the limits of waste placement, the sanitary landfill facility includes all portions of the facility described above and those areas within three hundred feet of the limits of waste placement unless the property line of the facility is less than three hundred feet from the limits of waste placement, in which case the sanitary landfill facility includes those areas within the property line.

- (2) "Scrap tire" is a type of solid waste and means any unwanted or discarded tire, regardless of size, that has been removed from its original use. "Scrap tire" includes all whole scrap tires and pieces of scrap tires which are readily identifiable as part of a scrap tires by visual inspection.

For purposes of this definition, "unwanted" means the original generator, original owner, or manufacturer of the tire no longer wants to use, or is unable to use the tire for its original purpose, and "discarded" means the original generator, original owner, or manufacturer of the tire has otherwise managed the tire in such a manner that disposal has occurred.

[Comment: While a tire may not be "unwanted or discarded" such that it is a "scrap tire," the tire may still be a "solid waste" as defined in this rule.]

"Scrap tire" does not include the following:

- (a) A tire after it has been retreaded or regrooved for resale or reuse, unless it has been declared defective or has been returned to the seller or manufacturer for warranty adjustment.
- (b) A tire that is mounted and installed on a vehicle or trailer, or carried on the vehicle or trailer as the spare tire. Trucks with more than four wheels or with different size wheels or tires may carry more than one spare tire.

For purposes of this definition "installed" means placing the mounted wheel and tire assembly at any of the positions on a vehicle or trailer where a wheel and tire assembly was initially placed on the vehicle or trailer during manufacture and includes the position normally used for a spare tire or tires.

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For purposes of this definition "mounted" means placing a tire on a wheel rim so that it can be installed on a vehicle. A mounted tire may be a scrap tire unless it is also installed.

- (c) Tires from non-motorized vehicles such as bicycles; or tires from small equipment such as lawn mowers, wheelbarrows, etc.
  - (d) Only at a retreading business, a retreadable casing stored in an enclosed building or stored in a manner otherwise authorized or exempted by the director that the retreading business has inspected and individually labeled or marked the casing as suitable for retreading.
  - (e) Tire derived fuel (TDF) or tire derived chips (TDC) as defined in this rule after the TDF or TDC has been transported from the scrap tire recovery facility for use as a fuel or for an authorized beneficial use.
  - (f) Non-pneumatic, hard, pressed tires, such as forklift tires.
- (3) "Sewage sludge" means sewage sludge as defined in Chapter 6111. of the Revised Code and rules adopted thereunder.
- (4) "Significant zone of saturation" means a zone of saturation that may act as a preferential pathway of migration away from potential sources of contamination.
- (5) "Solid waste" means such unwanted residual solid or semisolid material, including but not limited to, garbage, scrap tires, combustible and noncombustible material, street dirt and debris, as results from industrial, commercial, agricultural, and community operations, excluding earth or material from construction, mining, or demolition operations, or other waste materials of the type that normally would be included in demolition debris, nontoxic fly ash and bottom ash, including at least ash that results from combustion of coal, biomass fuels, and ash that results from the combustion of coal in combination with scrap tires where scrap tires comprise not more than fifty per cent of heat input in any month, spent nontoxic foundry sand, and slag and other substances that are not harmful or inimical to public health, and includes, but is not limited to, garbage, scrap tires, combustible and noncombustible material, street dirt and debris. "Solid waste" does not include any material that is an infectious waste or a hazardous waste.
- (6) "Solid waste disposal facility" means any site, location, tract of land, installation, or building used for incineration, composting, sanitary landfilling, or other approved methods of disposal of solid wastes.
- (7) "Solid waste transfer facility" or "transfer facility" means any site, location, tract of land, installation, or building that is used or intended to be used primarily for the purpose of transferring solid wastes that are generated off the premises of the

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facility from vehicles or containers into other vehicles or containers for transportation to a solid waste disposal facility. The term does not include the following:

- (a) Any facility that consists solely of portable containers that have an aggregate volume of fifty cubic yards or less.
- (b) Any facility that accepts scrap tires other than scrap tires which are accepted incidental to a mixed solid waste shipment.
- (c) Any facility that accepts only source separated recyclables, except scrap tires, and/or commingled recyclables that are currently recoverable utilizing existing technology.
- (d) Any facility that meets the following:
  - (i) Accepts solid waste, except scrap tires.
  - (ii) Recovers for recycling not less than sixty per cent of the weight of solid waste brought to the facility each month (as averaged monthly) for not less than eight months in each calendar year.
  - (iii) Disposes of not more than forty per cent of the total weight of solid waste brought to the facility each month (as averaged monthly) for not less than eight months in each calendar year.

For purposes of paragraphs (S)(7)(a) to (S)(7)(d) of this rule, "facility" does not include any facility identified as a solid waste disposal facility in accordance with paragraph (S)(5) of this rule, nor does it include any facility identified as a scrap tire collection, storage, monofill, monocell, or recovery facility or any premises at which the beneficial use of scrap tires occurs, nor does it include a construction and demolition debris facility.

(8) "Surface water" means any water on the surface of the earth.

(T)

- (1) "Tangible net worth" means the tangible assets that remain after deducting liabilities; such assets do not include such intangibles as goodwill and rights to patents or royalties.
- (2) "Tie-in area" means an area of a facility used to connect one or more of the following engineered components constructed during a construction event to the same type of engineered component constructed during a subsequent construction event:

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(a) Liner system.

(b) Leachate management system.

(c) Separatory leachate barrier and collection system.

(d) Cap system.

(3) "Tire derived fuel" (TDF) or "tire derived chips" (TDC) means a uniformly shredded product obtained from whole tires where the maximum size of ninety-five percent of the shreds are less than four inches in any dimension. TDC may be used as a civil engineering material or as feedstock for the manufacturing of crumb rubber or other tire derived material. TDC is defined using ASTM D6270 as described in rule 3745-500-03 of the Administrative Code, standard practice for use of scrap tires in civil engineering applications, section 3.1.29, for x-minus classified, size reduced scrap tires.

(U)

(1) "Unconsolidated stratigraphic unit" means a discrete layer or body of loosely arranged, unstratified, or uncemented material, including soil, mine spoil, glacially deposited sediments, or other earthen fill materials, that can be readily and consistently distinguished from adjacent materials and recognized as a unit based on one or any combination of characteristics or features, usually composition, structure, or physical properties.

(2) "Unstable area" means a location that is susceptible to natural or human induced events or forces capable of impairing the integrity of some or all of the structural components of a facility that are responsible for preventing releases from the facility and can include areas where on-site or local soil conditions result in significant differential settling; area where the downslope movement of soil or rock due to gravitational influence occurs; or areas where the lowering or collapse of the land surface occurs either locally or over broad regional areas.

(V)

(1) "Vertical expansion" means the extension of the vertical limits of waste placement or the vertical limits of C&DD placement that occurs prior to beginning, or being required to begin, closure activities.

(W)

(1) "Waste-derived constituents" means those chemical constituents that are derived from disposed solid waste or disposed industrial waste and includes those naturally occurring constituents that increase in concentration in ground water due to interaction between the waste-derived constituents released to ground

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water beyond the limits of potential sources of contamination and the geologic units or formations present under and around the facility.

(2) "Water pollution" means the unpermitted release to the waters of the state from one or combination of the following:

(a) Sediment from disturbed areas.

(b) Solid waste.

(c) Waste-derived constituents.

(d) Industrial waste.

(e) Construction and demolition debris.

(f) C&DD-derived constituents.

(g) Leachate.

(h) Naturally occurring constituents that increase in concentration in ground water due to interaction between the waste-derived or C&DD-derived constituents released beyond the limits of potential sources of contamination and into the geologic formations present under and around the facility.

(3) "Waters of the state" means all streams, lakes, ponds, wetlands, watercourses, waterways, wells, springs, irrigation systems, drainage systems, and all other bodies or accumulations of water, surface and underground, natural or artificial, regardless of the depth of the strata in which underground water is located, that are situated wholly or partly within, or border upon, this state, or are within its jurisdiction, except those private waters that do not combine or effect a junction with natural surface or underground waters, including those waters that are presently used, have been used, or are susceptible to use for transporting interstate commerce up to the head of navigation.

(4) "Water supply well" includes potable and non-potable water supply wells.

(5) "Wetland" means any area that is inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances does support, a prevalence of vegetation typically adapted for life in saturated soil conditions. "Wetland" includes swamps, marshes, bogs, and similar areas that are delineated in accordance with the 1987 United States army corps of engineers wetland delineation manual and any other procedures and requirements adopted by the United States army corps of engineers for delineating wetlands.

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(X) [Reserved.]

(Y)

- (1) "Yard waste" means solid waste that includes only leaves, grass clippings, brush, garden waste, tree trunks, tree stumps, holiday trees, and prunings from trees or shrubs. "Yard waste" does not include industrial or agricultural processing wastes.

[Comment: The intent of this definition is to identify a general type of vegetative waste resulting from the care and maintenance of landscaped areas, lawns, and gardens that has been collected for the purpose of disposal or composting. Vegetative waste resulting from the use of commercial products, such as discarded flowers, potted flowers, or grave blankets that do not include plastic, metal, styrofoam, or other non-biodegradable material would be considered a yard waste. Vegetative waste from industrial processing such as food processing waste is not a yard waste.]

(Z)

- (1) "Zone of saturation" or "saturated zone" means that part of the earth's crust in which all voids are filled with water. "Zone of saturation" or "saturated zone" does not include the capillary zone.

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3745-500-02 Signatures.

(A) Definitions. All words contained in this rule have the same meaning as those defined in rule 3745-500-01 of the Administrative Code.

(B) The applicant, owner, or operator signing a document in accordance with this rule shall be one of the following:

(1) In the case of a corporation, a principal executive officer of at least the level of vice president or a duly authorized representative, if such representative is responsible for the overall operation of the facility.

(2) In the case of a partnership, a general partner.

(3) In the case of a limited liability company, a manager, member, or other duly authorized representative of the limited liability company, if such representative is responsible for the overall operation of the facility.

(4) In the case of sole proprietorship, the owner.

(5) In the case of a municipal, state, federal, or other governmental facility, the principal executive officer, the ranking elected official, or other duly authorized employee.

(C) The signature on the document shall constitute personal affirmation that all statements and all assertions of fact made in the document are true, accurate, include all required information, and comply fully with applicable rules.

(D) Unless an alternate certification is specifically required, a document signed in accordance with this rule shall include the following certification statement:

"By signing this document I hereby certify that all statements and all assertions of fact made in the document are true, accurate, include all required information, and comply fully with applicable rules."

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3745-500-03 [Incorporation by reference.](#)

Incorporation by reference. The text of the incorporated materials is not included in the rules contained in Chapters 3745-500 to 3745-599 of the Administrative Code. The materials are hereby made a part of the rules in Chapters 3745-500 to 3745-599. For materials subject to change, only the specific version specified in this rule are incorporated. Any amendment or revision to a referenced document is not incorporated unless and until this rule has been amended to specify the new versions.

(A) Availability. The materials incorporated by reference are available as follows:

- (1) Code of federal regulations (C.F.R.). Information and copies may be obtained by writing to: "Superintendent of Documents, Attn: New Orders, P.O. Box 371954, Pittsburgh, PA 15250-7954." The full text of the C.F.R. is also available in electronic format at <http://www.gpoaccess.gov/cfr/index.html>. The CFR compilations are also available for inspection and copying at most public libraries and "The State Library of Ohio."
- (2) Federal statutes. The full text is available in electronic format at <http://www.gpoaccess.gov/uscode/index.html>. These laws are also available for inspection and copying at most public libraries and "The State Library of Ohio."
- (3) Government literature. The availability of these documents is provided in paragraph (B)(3) of this rule. However, many of the documents are also available for inspection and copying at most public libraries and "The State Library of Ohio."
- (4) Specifications of the "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods, third edition, including Volume II, Field Manual (SW-846)." Information and copies may be obtained by writing to: "U.S. Government Printing Office (GPO) Superintendent of Documents Washington, DC 20402." The full text is also available in electronic format at <http://www.epa.gov/epaoswer/hazwaste/test/main.htm>. These test methods are also available for inspection and copying at most public libraries and "The State Library of Ohio."
- (5) Specifications of the "American Society for Testing and Materials" (ASTM). Information and copies may be obtained by writing to: "ASTM International, 100 Bar Harbor Drive, P.O. Box C700, West Conshohocken, Pennsylvania 19426-2959." These documents are available for purchase at <http://www.astm.org>.
- (6) Other publications. The availability of these documents is provided in paragraph (B)(6) of this rule. However, many of the documents are also available for inspection and copying at most public libraries and "The State Library of Ohio."

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(B) Incorporated materials.

(1) Appropriate "Code of Federal Regulations," the regulations listed in this rule are those published in the July 1, 2006 C.F.R. and include the following:

(a) 10 C.F.R., Part 61 "Licensing Requirements for Land Disposal of Radioactive Waste".

(b) 40 C.F.R., Part 53 "Ambient Air Monitoring Reference and Equivalent Methods".

(c) 40 C.F.R., Part 58, Appendix E, "Probe and Monitoring Path Siting Criteria For Ambient Air Quality Monitoring".

(d) 40 C.F.R., Part 60 "Standards of Performance for New Stationary Sources;" specifically Method 21, "Determination of Volatile Organic Compound Leaks".

(e) 40 C.F.R., Part 61 "National Emission Standards for Hazardous Air Pollutants (NESHAP)".

(f) 40 C.F.R., Part 122 "EPA Administered Permit Programs: The National Pollutant Discharge Elimination System".

(g) 40 C.F.R., Part 136 "Guidelines for Establishing Test Procedures for the Analysis of Pollutants".

(h) 40 C.F.R., Part 141 "National Primary Drinking Water Regulations".

(i) 40 C.F.R., Part 761 "Polychlorinated biphenyls (PCBs) manufacturing, processing, distribution in commerce, and use prohibitions".

(j) 40 C.F.R., Part 792 "Good Laboratory Practice Standards".

(k) 49 C.F.R., Subtitle B, Chapter III "Federal Motor Carrier Safety Regulations".

(2) Appropriate "Federal Statutes," the statutes listed in this rule are those versions of the laws amended through July 1, 2006, including the following:

(a) Act of August 18, 1970, 84 Stat. 825, 16 U.S.C. 1a-5, popularly known as the "National Park System General Authorities Act".

(b) Clean Water Act, 33 U.S.C. 1251 et seq. including the following:

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(i) Chapter 26, section 1341, Certification.

(ii) Chapter 26, section 1344, Permits for Dredged or Fill Material.

(c) Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. 9601 et. seq.

(d) Investment Company Act of 1940, 15 U.S.C. 80A-2(A) et seq.

(e) Investment Company Act of 1940, 15 U.S.C. 80A-1 et seq.

(f) Meat Inspection Act, 81 Stat. 584, 21 U.S.C. 603 et seq.

(g) National Flood Insurance Act of 1968, 82 Stat. 572, 42 U.S.C. 4001 et seq.

(h) Poultry Products Inspection Act, 21 U.S.C. 451-469.

(i) Resource Conservation and Recovery Act (RCRA), 42 U.S.C. 6901 et seq.

(j) Safe Drinking Water Act, 42 U.S.C. 300f et. seq.

(k) Toxic Substance Control Act, 15 U.S.C. 2601 et seq.

(l) U.S.C. Title 11, Bankruptcy.

(m) U.S.C. Title 49, Transportation.

(3) Appropriate "Government Literature," including the following:

(a) U.S. department of agriculture, soil conservation service documents available at <http://www.usda.gov> or by writing to U.S. Department of Agriculture, Washington DC 20250:

(i) "Agricultural Handbook 703, Predicting Soil Erosion By Water: A Guide to Conservation Planning with the Revised Universal Soil Loss Equation (RUSLE)" published in 1997.

(ii) "National Engineering Handbook, part 630 Hydrology" published in March 1985, including revisions through 2004.

(iii) "Urban Hydrology for Small Watersheds" technical release no. 55, second edition, published in June 1986.

(iv) "Water Erosion Prediction Project" this model was publicly released in July 2002 and updated in September 2004 and in May 2006.

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- (b) U.S. Bureau of Economic Analysis available at <http://www.bea.gov> or by writing to U.S. Bureau of Economic Analysis, 1441 L Street NW, Washington DC, 20230: "Survey of Current Business", February 2006.
- (c) National Oceanic and Atmospheric Administration, National Weather Service available at <http://www.weather.gov> or by writing to National Oceanic and Atmospheric Administration, 1325 East West Highway, Silver Spring, MD 20910: "Rainfall Frequency Atlas of the United States," technical paper no. 40, Weather Bureau, 1961.
- (d) U.S. environmental protection agency documents: available at <http://www.epa.gov> or by writing to U.S. Environmental Protection Agency, Ariel Rios Building, 1200 Pennsylvania Avenue N.W., Washington, DC 20460:

  - (i) "Industrial Waste Management Evaluation Model Technical Background Document", published in August 2002.
  - (ii) "Methods for chemical analysis of water and wastes, EPA 600/4-79-020", published in 1983.
- (e) U.S. geological survey <http://www.usgs.gov> or by writing to USGS Information Services, P.O. Box 25286, Denver, CO 80225: "U.S. Geological Survey Manual" published in 1989, includes the following:

  - (i) 1927 North American Datum.
  - (ii) 1929 North American Vertical Sea Level Datum.
  - (iii) 1983 North American Datum.
  - (iv) 1988 North American Vertical Sea Level Datum.
  - (v) State Plane Coordinate System.
- (f) U.S. department of treasury document: "Circular 570" published in the July 1, 2006 C.F.R.
- (4) Appropriate "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (SW-846)," as amended through June 14, 2005, including the following:

  - (a) Method 1311, "Toxicity Characteristic Leaching Procedure".
  - (b) Method 1312, "Synthetic Precipitation Leaching Procedure".

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- (c) Method 3050B, "Acid Digestion of Sediments, Sludges, and Soils".
  - (d) Method 6010B, "Inductively Coupled Plasma-Atomic Emission Spectrometry".
  - (e) Method 7000A, "Atomic Absorption Methods".
  - (f) Method 8260B, "Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)".
  - (g) Method 9060, "Total Organic Carbon".
  - (h) Method 9090A, "Compatibility Test for Wastes and Membrane Liners".
  - (i) Method 9095B, "Paint Filter Liquids Test".
- (5) Appropriate "American Society for Testing and Materials." Each of the following ASTM standards are regulated by the date specified, an alternative to these standards may be used if it is at least equivalent to those cited in this rule and is acceptable to Ohio EPA. ASTM standards include the following:
- (a) ASTM D422-63, "Standard Test Method for Particle-Size Analysis of Soils;" approved November 21, 1963; reapproved in 1998 and 2002.
  - (b) ASTM D698-00ae1, "Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft<sup>3</sup>(600 kN-m/m<sup>3</sup>));" approved in 2000.
  - (c) ASTM D1556-00, "Standard Test Method for Density and Unit Weight of Soil in Place by the Sand Cone Method (Shallow Depth);" approved in 2000.
  - (d) ASTM D1557-02e1, "Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft<sup>3</sup>(2,700 kN-m/m<sup>3</sup>));" approved in 2000; amended in 2002.
  - (e) ASTM D1586-99, "Standard Test Method for Penetration Test and Split-Barrel Sampling of Soils;" approved in 1999.
  - (f) ASTM D1709-04 "Standard Test Methods for Impact Resistance of Plastic Film by the Free-Falling Dart Method;" approved in 1998; amended in 2001, 2003, and 2004.
  - (g) ASTM D2167-94, "Standard Test Method for Density and Unit Weight of Soil in Place by the Rubber Balloon Method;" approved March 15, 1994; reapproved in 2001.

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- (h) ASTM D2434-68, "Standard Test Method for Permeability of Granular Soils (Constant Head);" approved September 13, 1968; reapproved in 1974, 2000, and 2006.
- (i) ASTM D2435-04, "Standard Test Methods for One-Dimensional Consolidation Properties of Soils Using Incremental Loading;" approved in 1996; amended in 2002, 2003, and 2004.
- (j) ASTM D2487-00, "Standard Classification of Soils for Engineering Purposes;" which describes the "Unified Soil Classification System," approved in 2000.
- (k) ASTM D2850-03a, "Standard Test Method for Unconsolidated-Undrained Triaxial Compression Test on Cohesive Soils;" approved May 15, 1995, reapproved in 1999; amended in 2003.
- (l) ASTM D2922-05, "Standard Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth);" approved December 23, 1991; amended in 2001, 2004, and 2005.
- (m) ASTM D3017-05, "Standard Test Method for Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth);" approved May 27, 1988; reapproved in 1993; amended in 2001, 2004, and 2005.
- (n) ASTM D3042-03, "Standard Test Method for Insoluble Residue in Carbonate Aggregates;" approved July 10, 1997; amended in 2003.
- (o) ASTM D3080-04, "Standard Test Method for Direct Shear Test of Soils Under Consolidated Drained Conditions;" approved August 10, 1998; amended in 2003 and 2004.
- (p) ASTM D3385-03, "Standard Test Method for Infiltration Rate of Soils in Field Using Double-Ring Infiltrometer", approved in 1994; amended in 2003.
- (q) ASTM D3441-05, "Standard Test Method for Mechanical Cone Penetration Tests of Soil ;" approved in 1998; amended in 2005.
- (r) ASTM D3987-85, "Standard Test Method for Shake Extraction of Solid Waste with Water;" approved October 21, 1985; reapproved in 1999 and 2004.
- (s) ASTM D4318-05, "Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils;" approved in 2000; amended in 2005.

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- (t) [ASTM D4428/D4428M-00, "Standard Test Methods for Crosshole Seismic Testing;" approved in 2000.](#)
- (u) [ASTM D4437-99, "Standard Practice for Determining the Integrity of Field Seams Used in Joining Flexible Polymeric Sheet Geomembranes;" approved in 1994, reapproved in 1998, and revised in 1999.](#)
- (v) [ASTM D4716-03, "Test Method for Determining the \(In-plane\) Flow Rate per Unit Width and Hydraulic Transmissivity of a Geosynthetic Using a Constant Head;" approved July 10, 2001; amended in 2003.](#)
- (w) [ASTM D4751-04, "Standard Test Method for Determining Apparent Opening Size of a Geotextile;" approved in 2004.](#)
- (x) [ASTM D4767-04, "Standard Test Method for Consolidated Undrained Triaxial Compression Test for Cohesive Soils;" approved December 10, 1995; amended in 2002 and 2004.](#)
- (y) [ASTM D4833-00e1, "Standard Test Method for Index Puncture Resistance of Geotextiles, Geomembranes, and Related Products;" approved in 2000; amended in 2000.](#)
- (z) [ASTM D5084-03, "Standard Test Methods for Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter," approved in 2000; amended in 2003.](#)
- (aa) [ASTM D5093-02, "Standard Test Method for Field Measurement of Infiltration Rate Using a Double-Ring Infiltrometer with a Sealed-Inner Ring;" approved June 29, 1990, reapproved in 1997; amended in 2002.](#)
- (bb) [ASTM D5321-02, "Standard Test Method for Determining the Coefficient of Soil and Geosynthetic or Geosynthetic and Geosynthetic Friction by the Direct Shear Method;" approved October 15, 1992, reapproved in 1998; amended in 2002.](#)
- (cc) [ASTM D5993-99, "Standard Test Method for Measuring Mass Per Unit of Geosynthetic Clay Liners;" approved January 10, 1999; reapproved in 2004.](#)
- (dd) [ASTM D6243-98, "Standard Test Method for Determining the Internal and Interface Shear Resistance of Geosynthetic Clay Liner by the Direct Shear Method;" approved March 10, 1998.](#)
- (ee) [ASTM D6270-98, "Standard Practice for Use of Scrap Tires in Civil Engineering Applications;" approved in 1998; reapproved in 2004.](#)

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(ff) ASTM D6391-06, "Standard Test Method for Field Measurement of Hydraulic Conductivity Limits of Porous Materials Using Two Stages of Infiltration from a Borehole;" approved April 10, 1999; reapproved in 2004, amended in 2006.

(gg) ASTM D6400-04, "Standard Specification for Compostable Plastics;" approved in 1999; amended in 2004.

(hh) ASTM D6467-99, "Standard Test Method for Torsional Ring Shear Test to Determine Drained Residual Shear Strength of Cohesive Soils;" approved October 10, 1999.

(ii) ASTM D6780-05, "Standard Test Method for Water Content and Density of Soil in Place by Time Domain Reflectometry (TDR);" approved in 2002; amended 2005.

(6) Other publications:

(a) Publications that have been made available through the Ohio EPA website at <http://www.epa.state.oh.us> or by writing to Ohio EPA, P.O. Box 1049, Columbus, OH 43216-1049:

(i) "Biological Criteria for the Protection of Aquatic Life, Volumes I, II, and III," Ohio EPA, published July 24, 1987 and updated in 1988 and 1989.

(ii) "Manual of Ohio EPA Surveillance Methods and Quality Assurance Practices," (1989) Ohio EPA.

(iii) "Qualitative Habitat Evaluation Index (QHEI): Rationale, Methods, and Application," Rankin published November 6, 1989.

(iv) "Weekly Review," Ohio EPA, is published weekly.

(b) American public health association book: "Standard Methods for the Exam of Water and Wastewater" (2005) 21st edition. Available for purchase at <http://www.apha.org>.

(c) Association of Official Analytical Chemists book: "Official Methods of Analysis," (2005) 18th edition. Available for purchase at <http://www.aoac.org>.

(d) International chamber of commerce document: "Uniform Customs and Practices for Documentary Credits," effective January 1, 1994. Available for purchase at <http://www.iccbbooksusa.com>.

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(e) Legal information institute document: "Uniform Commercial Code," Cornell Law School, Jan. 2003. For the version of this article adopted by a particular state visit the LII's Uniform Commercial Code Locator page at: <http://www.law.cornell.edu/uniform/ucc.html>.

(f) National fire protection association document: "Standard for Storage of Rubber Tires" NFPA 231D(98) published in 1998. Available to purchase at <http://www.normas.com> or by writing to: "National Fire Protection Association, 470 Atlantic Avenue, Boston MA 02210."

(g) North central region (NCR) document: "Recommended Chemical Soil Test Procedures for the North Central Region," Publication No. 221. Brown, J. R. (ed.). 1998. Missouri Agricultural Experiment Station SB 1001. Columbia, MO. Also available to purchase at <https://muextension.missouri.edu>.

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3745-500-04      Procedures for acting on licenses and permits to install.

- (A) Definitions. All words contained in this rule have the same meaning as those defined in rule 3745-500-01 of the Administrative Code.
- (B) When issuing, denying, suspending, modifying, approving or denying transfer of, or revoking a license or a permit to install for a solid waste facility, an infectious waste treatment facility, or a construction and demolition debris facility, the director shall act in accordance with Chapters 119., 3714., 3734., and 3745. of the Revised Code, as applicable.
- (C) When issuing, denying, suspending, modifying, approving or denying transfer of, or revoking a permit to install or a permit to operate for an industrial excluded waste facility, the director shall act in accordance with Chapters 119., 3745., and 6111. of the Revised Code, as applicable.
- (D) When issuing, denying, suspending, modifying, approving or denying transfer of, or revoking a license for a solid waste facility or an infectious waste treatment facility, the approved board of health shall act in accordance with Chapter 3734. and section 3709.20 of the Revised Code.
- (E) When issuing, denying, suspending, modifying, approving or denying transfer of, or revoking a license or permit to install for a construction and demolition debris facility, the approved board of health shall act in accordance with Chapter 3714. and section 3709.20 of the Revised Code.
- (F) When denying or revoking a license for a solid waste facility, an infectious waste facility, or a license or permit to install for a construction and demolition debris facility, at a minimum the approved board of health shall provide the following:
- (1) To the owner or operator of the facility or the applicant for the license or permit to install, the following:
- (a) Notice of the board of health's intent to deny or revoke a license or permit to install. This notice shall include a provision informing the applicant, owner, or operator of the right to a hearing prior to the board of health's issuance of a final action denying or revoking a license or permit. This notice shall provide a period of thirty days in which to request a hearing.
- (b) A hearing, held in accordance with section 3709.20 of the Revised Code, at which the persons that have requested the hearing are provided the following:
- (i) The right to appear in person, by attorney, or by other such representation permitted to appear before the board of health.

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- (ii) The opportunity to present evidence at the hearing, including the testimony of witnesses under oath and the opportunity to cross examine opposing witnesses.
- (iii) Following the rulings on the admissibility of evidence, the opportunity to proffer evidence that has been determined to be inadmissible.
- (iv) A stenographic record of the hearing.
- (c) Prior to the issuance of a final action and subsequent to a hearing conducted by a referee or examiner in accordance with division (B) of section 3709.20 of the Revised Code, written recommendations presented to the board of health and an opportunity to submit written objections.
- (d) A copy of the final action of the board of health regarding the denial or revocation of the license or permit, with findings of fact and conclusions of law based on the hearing held in accordance with section 3709.20 of the Revised Code. The copy with a statement of how and within what time period the final action may be appealed to the environmental review appeals commission shall be sent by certified mail or any other form of mail accompanied by a receipt. Such copy and statement shall also be sent by certified mail or any other form of mail accompanied by a receipt to persons that have requested a hearing.
- (2) To persons that have requested a hearing, upon receipt of a written signed request for a hearing, notice of the hearing date, time, and place at least twenty days prior to the hearing.

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3745-500-05 Actions to be taken by the owner or operator of a facility if an engineered component fails.

(A) Definitions. All words contained in this rule have the same meaning as those defined in rule 3745-500-01 of the Administrative Code.

(B) This rule applies when an engineered component of a facility fails, such as failure to perform as designed, collapses, or is breached, compromised, or dislocated.

(C) Immediately upon discovery of a failed engineered component and in accordance with applicable federal, state, and local statutes and regulations, the owner or operator shall do the following actions:

(1) Notify the following:

(a) For solid waste facilities and industrial facilities, Ohio EPA and if necessary notify emergency responders and the Ohio EPA emergency response twenty-four-hour telephone service for spill reporting.

(b) For construction and demolition debris facilities, the approved board of health and Ohio EPA, and if necessary notify emergency responders and the Ohio EPA emergency response twenty-four-hour telephone service for spill reporting.

(2) Take all actions in accordance with all applicable federal, state, and local statutes and regulations necessary to protect public health and safety and the environment including but not limited to the following:

(a) Prevent and stop the release of pollution such as waste, construction and demolition debris, and leachate from the facility to waters of the state.

(b) Prevent or stop of the release of pollution such as explosive gas, hydrogen sulfide gas, particulates, and fugitive dust to the air, or control such pollution such that the owner or operator is in compliance with all permits issued under Chapter 3704. of the Administrative Code.

(c) Prevent the failure from worsening.

(d) Prevent another failure.

(e) Prevent interferences with the ability of the owner or operator to respond or allow others to respond to the failure.

(f) Prevent interferences with the thorough investigation of the failure by the owner or operator, the approved board of health, or the Ohio EPA.

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- (D) The owner or operator shall use all testing, analyses, observations, and calculations necessary to investigate the nature and determine the cause of the failure.
- (E) The owner or operator shall comply with applicable construction requirements for all construction activities used to respond to a failed engineered component.
- (F) Not later than thirty days after the date of discovery of the failed engineered component, the owner or operator shall comply with paragraph (H) or (I) of this rule.
- (G) Not later than sixty days after the date of discovery of the failed engineered component, the owner or operator shall comply with paragraph (J) of this rule.
- (H) The owner or operator shall submit to the approved board of health and Ohio EPA a preliminary failure investigation report that contains at a minimum the following information:
- (1) The name and location of the facility.
  - (2) The name, address, and telephone number of the owner and operator.
  - (3) A summary describing the activities taken by the owner and operator to respond to and investigate the failure.
  - (4) The owner's or operator's preliminary explanation of all causes and potential causes of the failure.
  - (5) A description and schedule of additional activities the owner or operator will conduct to continue to respond to and investigation the failure.
  - (6) All results of sampling, testing, and analyses conducted during the investigation.
- (I) The owner or operator shall submit to the approved board of health and Ohio EPA a final failure investigation report that contains at a minimum the following information:
- (1) The name and location of the facility.
  - (2) The name, address, and telephone number of the owner and operator.
  - (3) A summary describing the activities taken by the owner and operator to respond to and investigate the failure.
  - (4) The owner's or operator's final explanation of all causes and potential causes of the failure

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(5) A description and schedule of additional activities the owner or operator will conduct to prevent the failure or a similar failure from occurring in the future.

(6) All results of sampling, testing, and analyses conducted.

(J) If any of the activities that are proposed by the owner or operator in the final failure investigation report require a modification to the facility, the owner or operator shall not implement modifications of the facility until the owner or operator has obtained a permit to install from the permitting authority; or if the owner or operator does not have a permit to install for the facility, the owner or operator has obtained a license modification that includes a revised facility design plan from the licensing authority.

(K) The owner or operator may request an extension of the time frames included in paragraphs (F) and (G) of this rule. The request for an extension shall be submitted to the licensing authority if the owner or operator does not have a permit to install for the facility. The request for an extension shall be submitted to the permitting authority if the owner or operator has a permit to install for the facility. The licensing authority or permitting authority, as appropriate, may grant an extension if the owner or operator demonstrates the following:

(1) The owner or operator has conducted the response and investigation of the failure in a timely manner.

(2) The owner or operator needs the extension to be able to comply with paragraph (D), (E), or (H) of this rule.

(3) The owner or operator is in compliance with paragraphs (A) to (C) of this rule.

(4) The granting of the extension will not adversely affect public health or safety or the environment, or cause or contribute to water pollution or air pollution.

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3745-500-06      Exclusions.

(A) Definitions. All words contained in this rule have the same meaning as those defined in rule 3745-500-01 of the Administrative Code.

(B) Chapters 3745-501 and 3745-525 of the Administrative Code shall not apply to the following:

- (1) Solid wastes generated within a single-family residence, and disposed of on the premises where generated in a manner that does not create a nuisance or a threat to public health or safety or the environment.
- (2) The temporary storage of solid wastes other than scrap tires prior to collection for disposal or transfer. Such disposal or transfer shall be in accordance with Chapter 3734. of the Revised Code and rules adopted thereunder. Temporary storage of putrescible solid wastes in excess of seven days, or temporary storage of any solid wastes where such storage causes a nuisance or health hazard in the judgment of the director or approved board of health shall be considered open dumping.
- (3) Vehicles used for hauling solid wastes other than scrap tires.
- (4) The beneficial use of coal combustion byproducts at coal mining and reclamation operations and abandoned mine lands that are regulated and authorized by the Ohio department of natural resources pursuant to section 1513.02 of the Revised Code.
- (5) Incinerators or energy recovery facilities that incinerate wastes generated on one or more premises owned by the person who owns the incinerator or energy recovery facility. This does not include any such facility that treats infectious waste pursuant to Chapter 3734. of the Revised Code.
- (6) Any junk yard and scrap metal processing facility licensed pursuant to Chapter 4737. of the Revised Code or motor vehicle salvage business licensed pursuant to Chapter 4738. of the Revised Code. This exclusion does not apply to sites where open dumping or open burning has occurred. This exclusion does not apply to the management of scrap tires or other use, collection, storage, recovery, disposal, or beneficial use of scrap tires at a junk yard, scrap metal processing facility, or motor vehicle salvage business.
- (7) Pond operations regulated under Chapter 6111. of the Revised Code.
- (8) Lagoon operations regulated under Chapter 6111. of the Revised Code except for lagoons that are industrial lagoons.

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- (9) Sewage sludge disposal, use, transportation, or storage authorized in accordance with Chapter 6111. of the Revised Code.
- (10) Land application authorized in accordance with Chapter 6111. of the Revised Code of agricultural waste for incorporation into soil for use as a soil amendment and agricultural or horticultural applications, provided that all of the following conditions are met:
- (a) The agricultural waste is limited to source-separated non-processed plant materials, including stems, leaves, vines, roots, and raw vegetables, fruits and grains.
  - (b) The agricultural waste is land applied exclusively on fields owned by the owner of the agricultural production operation that generated the agricultural waste.
  - (c) The land application of the agricultural waste does not create a nuisance or a threat to public health or safety or the environment.
- (11) Industrial processes subject to rule 3745-17-11 of the Administrative Code and fuel-burning equipment subject to rule 3745-17-10 of the Administrative Code that utilize biomass fuels or utilize tire derived fuel as a supplemental fuel.
- (12) Infectious wastes generated on the premises of a single-family residence for the purposes of the care of a resident of the premises and the premises is not utilized for any commercial purpose that generates or treats infectious waste and the infectious wastes are disposed of with solid waste from the premises.
- (13) Infectious wastes generated by individuals for purposes of their own care or treatment that are disposed of with solid wastes from the individual's residence.
- (14) Facilities used for the transfer of solid wastes other than scrap tires that consist solely of portable containers and that have an aggregate volume of fifty cubic yards or less, as long as the waste is not placed on the ground or waste handling floor. Temporary storage of putrescible solid wastes in excess of seven days, or temporary storage of any solid wastes where such storage causes a nuisance or health hazard in the judgment of the director or approved board of health shall be considered open dumping.
- (15) Controlled substances handled in compliance with Chapters 4729. and 3719. of the Revised Code and/or materials that have been ordered destroyed by a court of law that are destroyed at facilities licensed for the treatment of infectious waste.
- (16) The required disposal of animals destroyed because of a dangerously infectious or contagious disease in accordance with section 941.14 of the Revised Code.

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(17) The storage of one hundred or fewer scrap tires provided that such storage does not create a nuisance or a threat to public health or safety or the environment, or a fire hazard.

(C) Land application of yard waste for incorporation into soil for purposes including, but not limited to, use as a soil amendment, agricultural and horticultural applications, or land reclamation, is not subject to the requirements of rules 3745-27-40 to 3745-27-47 and Chapters 3745-28 and 3745-37 of the Administrative Code provided that such land application does not create a nuisance or a threat to public health or safety or the environment.

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3745-500-07      Relationships with other rules.

(A) Definitions. All words contained in this rule have the same meaning as those defined in rule 3745-500-01 of the Administrative Code.

(B) Notwithstanding any provision of Chapters 3745-500 to 3745-507 of the Administrative Code, owners, operators, and applicants are not obligated to comply with those chapters unless required to do so by one or more of the following:

(1) Chapter 3745-520 of the Administrative Code.

(2) Chapter 3745-525 of the Administrative Code.

(3) Administrative orders.

(4) Orders of a court of competent jurisdiction.

(C) Notwithstanding any provision of Chapter 3745-27, 3745-30, or 3745-37 of the Administrative Code, owners, operators, and applicants obligated to comply with Chapter 3745-520 or 3745-525 of the Administrative Code are not subject to Chapter 3745-27, 3745-30, or 3745-37 of the Administrative Code.

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3745-501-01      **Licensing - definitions; licenses required for solid waste facilities, infectious waste treatment facilities, and construction and demolition debris facilities.**

(A) Definitions. All words contained in this chapter have the same meaning as those defined in rule 3745-500-01 of the Administrative Code.

(B) License required.

(1) Notwithstanding any provision of Chapter 3745-37 of the Administrative Code, any party obligated to comply with this chapter is not obligated to comply with Chapter 3745-37 of the Administrative Code.

(2) No person shall operate or maintain a solid waste facility, infectious waste treatment facility, or a construction and demolition debris facility without a separate, valid license for each facility, as required by Chapters 3714. or 3734. of the Revised Code and the rules promulgated thereunder, unless the facility is otherwise exempted from licensing requirements pursuant to Chapters 3714. or 3734. of the Revised Code and the rules promulgated thereunder. For the owner or operator of a construction and demolition debris facility who is not required to have a permit to install as required by Chapter 3745-520 of the Administrative Code, no person shall modify the facility without first modifying the license in accordance with this chapter and Chapter 3745-520 of the Administrative Code.

(C) Infectious waste treatment. The owner or operator of an infectious waste treatment facility required to obtain a license shall hold either an infectious waste treatment facility license or a solid waste disposal facility license that contains a notation on the license stating that the facility also treats infectious wastes.

(D) Closure due to failure to obtain a renewal license. It is mandatory for an owner or operator to begin closure activities for the facility in accordance with applicable closure rules and applicable authorizing documents no later than seven days after the occurrence of any of the following:

(1) The license issued for the facility has expired, and the renewal license has not been applied for in the manner prescribed in this chapter.

(2) The license issued for the facility has expired, a renewal license has been applied for and the licensing authority has denied the license application as a final action.

(3) The licensing authority has revoked the license issued for the facility as a final action.

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[Comment: The events requiring closure specified above are not a comprehensive list of all occurrences that may require closure at a facility; they pertain only to licensing. An owner or operator should look at the specific list of occurrences that may require closure for a particular facility in the appropriate chapters of the Administrative Code.]

[Comment: A current licensee who has filed an application for a renewal license within the time and in the manner provided in this chapter is not obligated to discontinue operations nor initiate closure activities due to the licensing authority not yet taking a final action on the licensee's application in accordance with rule 3745-500-04 of the Administrative Code.]

[Comment: These rules require closure only after a final action of the licensing authority has been issued. Should the licensing authority determine that it is unable to approve a particular operating license application, the licensing authority must first provide notice of intent to deny the license and right to a hearing in accordance with rule 3745-500-04 of the Administrative Code prior to issuing a final action. In the specific situation of a renewal license application, the owner or operator may continue to operate the facility during the pendency of the procedures performed in accordance with rule 3745-500-04 of the Administrative Code. In the event that a licensing authority determines that it is unable to approve the license application and issue a license, it is required to comply with those procedures set forth in rule 3745-500-04 of the Administrative Code before any such license denial becomes effective. In addition, upon issuance of a final action denying a license, the owner or operator would have the opportunity to appeal the licensing authority's final decision to the environmental review appeals commission, which has the authority to determine whether the actions of the licensing authority were lawful and reasonable, and has the authority to grant a stay of the licensing authority's action pending the outcome of the appeal.]

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3745-501-02      **Solid waste, infectious waste treatment, and construction and demolition debris facility license applications.**

(A) Application.

(1) For solid waste facilities and infectious waste treatment facilities:

- (a) The applicant for a solid waste or infectious waste treatment facility license shall be either the owner or operator of the facility. Applications for facility licenses required by rule 3745-501-01 of the Administrative Code shall be made on forms prescribed by the director.
- (b) If the licensing authority determines that an application is incomplete, it shall, not later than sixty days after the receipt of an incomplete application, notify the applicant of the nature of the deficiency. If the applicant has not completed the application and resubmitted it to the licensing authority, the licensing authority may deny the incomplete application. An application shall be deemed to be complete when it is determined that all the statutorily and regulatorily enumerated and mandatory components of the application have been reasonably and fully answered, submitted, and addressed by the applicant and that any required attachments, exhibits, and appropriate data have been included.
- (c) If the licensing authority determines that information in addition to that required by the application form or this rule is necessary to determine whether the application satisfies the requirements of Chapter 3734. of the Revised Code and the rules promulgated thereunder, as applicable, the license applicant shall upon request supply such additional information necessary to satisfy those requirements.
- (d) Not later than thirty days after submitting a license application to the licensing authority, the owner or operator of a solid waste facility or an infectious waste treatment facility proposing to operate a new facility shall publish prominent notice of the license application in a newspaper of general circulation in the county in which the facility is proposed to be located. The notice shall indicate the name and proposed location of the facility, the name of the prospective owner and operator, and type of facility. Not later than fourteen days after the published date of the notice, the owner or operator shall submit verification of the publication of the notice to the licensing authority.

(2) For construction and demolition debris facilities.

- (a) The applicant for a construction and demolition debris facility license shall do the following:

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- (i) Be either the owner or operator of the facility. Applications for facility licenses required by rule 3745-501-01 of the Administrative Code shall be made on forms prescribed by the director.
- (ii) Submit to the licensing authority a license application in accordance with Chapter 3714. of the Revised Code and the rules promulgated thereunder, and this chapter three copies of the license application accompanied by following materials:

  - (a) A facility design plan that complies with rule 3745-520-200 of the Administrative Code, unless one has already been submitted with a permit to install application in accordance with rule 3745-520-400 of the Administrative Code.
  - (b) A general plan for facility operations required by rule 3745-520-606 of the Administrative Code.
  - (c) Application closure cost estimates in accordance with rule 3745-520-907 of the Administrative Code and post-closure care cost estimates in accordance with rule 3745-520-912 of the Administrative Code.

[Comment: Rule 3745-501-03 of the Administrative Code requires an executed and funded financial assurance instrument to be established prior to the issuance of the license.]

  - (d) A compliance disclosure update in accordance with section 3714.052 of the Revised Code if the owner or operator of the facility is required to obtain a permit to install or if the facility license was transferred after the effective date of this rule.
- (iii) For a proposed facility, not later than thirty days after submitting a license application to the licensing authority, publish prominent notice of the license application in a newspaper of general circulation in the county in which the facility is proposed to be located. The notice shall indicate the name and proposed location of the facility, the name of the prospective owner and operator, and type of facility. Not later than fourteen days after the published date of the notice, the owner or operator shall submit verification of the publication of the notice to the licensing authority.
- (b) If the licensing authority determines that an application is incomplete, it shall, not later than sixty days after the receipt of an incomplete application, notify the applicant of the nature of the deficiency. If the applicant has not completed the application and resubmitted it to the licensing authority, the

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licensing authority may deny the incomplete application. An application shall be deemed to be complete when it is determined that all the statutorily and regulatorily enumerated and mandatory components of the application have been reasonably and fully answered, submitted, or responded to by the applicant and that any required attachments, exhibits, and appropriate data have been included.

(c) If the licensing authority determines that information in addition to that required by the application form or this rule is necessary to determine whether the application satisfies the requirements of Chapter 3714. of the Revised Code and the rules promulgated thereunder, as applicable, the license applicant shall upon request supply such additional information necessary to satisfy those requirements.

(d) For the owner or operator of a construction and demolition debris facility who is not required to obtain a permit to install as required by Chapter 3745-520 of the Administrative Code, no person shall modify the facility without first modifying the license in accordance with this chapter and Chapter 3745-520 of the Administrative Code. If the licensing authority issues the license to modify the facility, the license supersedes the previously issued license. The owner or operator shall submit a license application for a modification and the application shall contain sufficient detail to enable the licensing authority to determine whether the change meets applicable requirements in rule or statute, including but not limited to the information required by paragraph (A)(2)(a) of this rule.

(B) Signature. Applications for licenses required by rule 3745-501-01 of the Administrative Code shall be signed by the owner or operator of the facility in accordance with rule 3745-500-02 of the Administrative Code.

(C) Affirmation. Each signature on a license application shall constitute personal affirmation that all statements or assertions of fact made in the application are true, complete, and comply fully with applicable state requirements, and shall subject the signatory to liability under applicable state laws concerning the submittal of false or misleading statements. The signatures shall constitute an agreement that the signatories shall assume responsibility upon issuance of the license for compliance with Chapters 3704., 3714., 3734., and 6111. of the Revised Code and the rules promulgated thereunder, as applicable.

(D) Time frame for application submittal.

(1) License applications shall be considered only if submitted to the licensing authority in accordance with the following:

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- (a) For facilities that will continue operations beyond the thirty-first day of December, on or before the thirtieth day of September of the year preceding that for which the renewal license is sought.
- (b) Any solid waste facility or infectious waste treatment facility renewal license application submitted to the licensing authority between the first day of October and the thirty-first day of December of the current license period shall be considered by the licensing authority if the owner or operator pays the license application fee and the late fees specified in division (A) of section 3734.05 or division (A) of section 3734.81 of the Revised Code.
- (2) Any renewal license application not submitted to the licensing authority by the thirty-first day of December of the current license period shall not be considered for approval or denial, and the facility will be subject to all applicable closure requirements.

[Comment: Chapter 3734. of the Revised Code requires an applicant for a solid waste or infectious waste treatment facility permit to install to concurrently submit an initial application for an operating license even though the facility is not yet constructed or operating.]

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3745-501-03      Criteria for issuing, denying, revoking, suspending, or modifying solid waste, infectious waste treatment, or construction and demolition debris facility licenses.

(A) A licensing authority shall not issue or modify a facility license unless the following criteria are met:

(1) Facility specific criteria.

- (a) The applicant for the license is the owner or operator of the solid waste, infectious waste treatment, or construction and demolition debris facility.
- (b) A permit to install or a registration, if required by Chapters 3714. or 3734. of the Revised Code or the rules promulgated thereunder, has been obtained by the owner or operator.
- (c) The license application is deemed complete pursuant to rule 3745-501-02 of the Administrative Code.
- (d) The owner or operator is not required to conduct closure.
- (e) Financial assurance for the facility has been established, maintained, and documentation of the financial assurance has been submitted in accordance with Chapters 3714. or 3734. of the Revised Code and the rules promulgated thereunder, as applicable.
- (f) For a construction and demolition debris facility, the facility siting and the facility design plan meet the applicable requirements contained in Chapter 3714. of the Revised Code and Chapter 3745-520 of the Administrative Code.
- (g) For a construction and demolition debris facility, the applicant submitted with the license application a general plan for facility operations required by rule 3745-520-606 of the Administrative Code and that plan meets the requirements specified in Chapter 3745-520 of the Administrative Code.
- (h) For a construction and demolition debris facility where the owner or operator of the facility is required to obtain a permit to install or where the facility license was transferred after the effective date of this rule, the owner or operator submitted a compliance disclosure update in accordance with section 3714.052 of the Revised Code.
- (i) For a construction and demolition debris facility where the owner or operator is not required to obtain a permit to install, the applicant submitted with the license application a facility design plan and the facility design plan meets

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the requirements specified in rule 3745-520-200 of the Administrative Code.

(2) The owner and operator of the facility for which the license application is pending meets the following criteria:

(a) Managed or operated the facility in substantial compliance with all applicable provisions of Chapters 3704., 3714., 3734., and 6111. of the Revised Code and any rules, permits, registrations, or other authorizations issued thereunder, and maintained compliance at the facility with all applicable orders issued by the director, or a board of health maintaining a program on the director's approved list, the environmental review appeals commission, or courts having competent jurisdiction, in the course of such previous or current management or operations. In accordance with Chapters 3714. or 3734. of the Revised Code, as applicable, the owner and operator meet the requirements for exhibiting the reliability, expertise, and competence necessary to operate the facility in substantial compliance with all applicable provisions of Chapters 3714. or 3734. of the Revised Code and the rules promulgated thereunder. The owner and operator meet the requirements for maintaining a history of compliance with environmental laws in this state and other jurisdictions in accordance with in Chapters 3714. or 3734. of the Revised Code, as applicable.

[Comment: Among other reasons, an applicant may fail to maintain substantial compliance when, in case-specific circumstances, the owner's or operator's management of the facility has caused actual exposure or the substantial likelihood of exposure of waste, C&DD, or waste-derived or C&DD-derived constituents to the public or the environment, or when an owner or operator of a facility is a chronic violator, or has a pattern of ongoing violations. This may be the case regardless of whether the Ohio EPA or an approved health district has initiated or contemplated any kind of escalated enforcement proceedings against the owner or operator. Please note, however, that mere existence of a violation at a facility may or may not necessarily mean that an owner or operator has failed to maintain substantial compliance.]

(b) Does not have any pending enforcement actions against the owner or operator by the approved health district or Ohio EPA which are based upon any violation which has occurred or is occurring at the facility regarding any provision of Chapters 3714. or 3734. of the Revised Code and the rules promulgated thereunder.

[Comment: The phrase enforcement action pending typically means that the director or the board of health of an approved health district, has issued an invitation to negotiate to the owner or operator to negotiate an administrative remedy for any violation, or that the director or the board of

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health of an approved health district has referred the matter to the Ohio attorney general or local prosecutor, as appropriate, in order to pursue enforcement regarding such violations under Chapters 3704., 3714., 3734., or 6111. of the Revised Code. An inspection letter from Ohio EPA or an approved health district that identifies violations occurring at a particular facility is not considered an enforcement action.]

(3) The owner or operator submitting a license application who currently owns or operates or has previously owned or operated one or more facilities subject to Chapter 3714. or 3734. of the Revised Code meets the following criteria:

(a) Managed or operated each facility in substantial compliance with all applicable provisions of Chapters 3704., 3714., 3734., and 6111. of the Revised Code and any rules, permits, registrations, or other authorizations issued thereunder, and has maintained compliance with all applicable orders issued by the director, a board of health maintaining a program on the director's approved list, the environmental review appeals commission, or courts having competent jurisdiction, in the course of such previous or current management or operations. In accordance with Chapters 3714. or 3734. of the Revised Code, as applicable, the owner and operator meet the requirements for exhibiting the reliability, expertise, and competence necessary to operate the facility in substantial compliance with all applicable provisions of Chapters 3714. or 3734. of the Revised Code and the rules promulgated thereunder. The owner and operator meet the requirements for maintaining a history of compliance with environmental laws in this state and other jurisdictions in accordance with in Chapters 3714. or 3734. of the Revised Code, as applicable.

[Comment: Among other reasons, an applicant may fail to maintain substantial compliance when, in case-specific circumstances, the owner's or operator's management of the facility has caused actual exposure or the substantial likelihood of exposure of waste, C&DD, or waste-derived or C&DD-derived constituents to the public or the environment, or when an owner or operator of a facility is a chronic violator, or has a pattern of ongoing violations. This may be the case regardless of whether the Ohio EPA or an approved health district has initiated or contemplated any kind of escalated enforcement proceedings against the owner or operator. Please note, however, that mere existence of a violation at a facility may or may not necessarily mean that an owner or operator has failed to maintain substantial compliance.]

(b) Does not have any unresolved enforcement actions pending against the owner or operator by an approved health district or Ohio EPA which are based upon any violation which has occurred or is occurring at any facility regarding any provision of Chapters 3714. or 3734. of the Revised Code and the rules promulgated thereunder.

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[Comment: The phrase enforcement action pending typically means that the director or the board of health of an approved health district, has issued an invitation to negotiate to the owner or operator to negotiate an administrative remedy for any violation, or that the director or the board of health of an approved health district has referred the matter to the Ohio attorney general or local prosecutor, as appropriate, in order to pursue enforcement regarding such violations under Chapters 3704., 3714., 3734., or 6111. of the Revised Code. An inspection letter from Ohio EPA or an approved health district that identifies violations occurring at a particular facility is not considered an enforcement action.]

(4) In the case of a proposed facility, the proposed facility has been inspected by Ohio EPA and the approved health district, and has been determined to be constructed and adequately prepared for waste acceptance in accordance with all authorizing documents and applicable rules.

(B) The licensing authority may deny a license application if any of the criteria in paragraph (A) of this rule are not met.

(C) At a minimum, the licensing authority may revoke or suspend a license if any of the following occur:

(1) The owner or operator violates Chapters 3714. or 3734. of the Revised Code or the rules promulgated thereunder.

(2) The owner or operator is not operating or constructing the facility in substantial compliance with applicable provisions of Chapter 3704., 3714., 3734., or 6111. of the Revised Code or any rules adopted thereunder.

(3) The owner or operator is not operating or constructing the facility in strict compliance with authorizing documents.

(4) Significant construction failures, slope stability changes, or improper installation or failure of engineered components at the facility.

(5) The licensing authority determines that a nuisance, fire hazard, or health hazard exists at the facility or that the facility is a threat to public health or safety or the environment.

(6) Any cause that would be grounds for revocation pursuant to Chapter 3714. or 3734. of the Revised Code and rules adopted thereunder.

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3745-501-04      **Action by licensing authority; effective date, expiration date, licensing procedures, and terms and conditions of a license.**

(A) License actions.

(1) The licensing authority shall review license applications promptly, and at a minimum, within the timeframes specified in tables 1 and 2 of the appendix to this rule.

(2) A renewal license shall not be considered for issuance or denial for a facility that the owner or operator is required to conduct closure requirements.

[Comment: Absent any obligation to cease facility operations, any requirement pursuant to Chapter 3714. of the Revised Code or rules adopted thereunder, or any administrative or court order, a current licensee who has filed an application for a renewal license within the time and in the manner provided in this chapter is not required to discontinue operations in the event that the licensing authority has not taken a final action on the licensee's application.]

(B) Effective dates. A license issued pursuant to this chapter shall be effective until the thirty-first day of December of the year for which it is issued, unless the license has been revoked.

(C) Terms and conditions. A licensing authority may impose such special terms and conditions as are necessary to ensure that an owner and operator of a facility will comply with Chapters 3714. and 3734. of the Revised Code, as appropriate, and the regulations promulgated thereunder, as applicable, and to protect public health and safety and the environment.

(D) Copies of license. For a construction and demolition debris facility where a construction and demolition debris permit to install is not required, the licensing authority shall remit one copy of the approved license application to the licensee with the license. When the health district is the licensing authority, it shall also remit one copy of the approved construction and demolition debris license application and license to Ohio EPA.

(E) Procedure. When acting upon a facility license, the licensing authority shall follow the appropriate procedures set forth in rule 3745-500-04 of the Administrative Code and any other applicable procedures set forth in the Revised Code.

(F) License fees. The licensing authority shall collect the required license fees, including any applicable late fees, and manage those funds in accordance with the applicable sections of Chapters 3714. or 3734. of the Revised Code, and rules adopted thereunder.

## Appendix

<u>Table 1 - Renewal licenses</u>			
Date License Application Submitted	Completeness of License Application	Response by Licensing Authority to Applicant Regarding Application	Deadline for License Issuance or Denial
on or before September 30th	Complete	Issue or Deny	December 31
	Incomplete	Issue Notice of Deficiency within 60 days of receipt of application	N/A*
between October 1st and December 31st	Complete	Issue or Deny (with appropriate late fees if applicable)	December 31
	Incomplete	Issue Notice of Deficiency within 60 days of receipt of application	N/A*
after December 31st	N/A	Cannot issue or deny license application. Applicant has triggered closure requirements pursuant to OAC Rule 3745-501-01(D)	N/A

<u>Table 2 - New (initial) licenses</u>		
Completeness of License Application	Response by Licensing Authority to Applicant Regarding Application	Deadline for License Issuance or Denial
Complete	Issue or Deny	NA*
Incomplete	Issue Notice of Deficiency within 60 days of receipt of application	N/A*

\* See rules 3745-501-02 and 3745-501-03 of the Administrative Code.

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3745-501-05      Solid waste facility and infectious waste treatment facility license fees.

Fees for an annual solid waste facility or infectious waste treatment facility license shall be the following:

(A) Application fees. Each application for a solid waste facility or infectious waste treatment facility license shall be accompanied by a nonrefundable fee of one hundred dollars. For annual renewal license applications received by a licensing authority between the first day of October and the thirty-first day of December, the applicant shall pay an additional late fee of ten dollars for each week the application is submitted beyond the thirtieth day of September, which is the application deadline.

(B) License fees.

Not later than thirty days after issuance of a license for a solid waste facility or an infectious waste treatment facility, the owner or operator shall pay a license fee in the amount established by division (A) of section 3734.06, division (C) of section 3734.06, or section 3734.82 of the Revised Code, as applicable. The one hundred dollar license application fee shall be deducted from the license fee. Late fees for license applications shall not be deducted from the license fee amount.

(1) License fees for the annual solid waste license shall be based on the highest authorized maximum daily waste receipt or for scrap tire facilities daily design input capacity that will be in effect in the year to which the license pertains. Any subsequent higher authorized maximum daily waste receipt or for scrap tire facilities daily design input capacity authorized after the effective date of the license shall not be considered in determining the fee for the current license.

(2) License fees for the annual infectious waste treatment facility license shall be based on the average amount of infectious waste the facility is authorized to receive daily as established in the permit for the facility and any modifications to that permit issued under division (B)(2)(b) or (B)(2)(d) of section 3734.05 of the Revised Code; or the annual license for the facility and any revisions to that license issued under division (B)(2)(a) of section 3734.05 of the Revised Code.

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3745-501-06 Transfer of licenses.

(A) License transfer requests.

- (1) A solid waste or infectious waste treatment facility licensee may transfer the license after receiving written authorization by the board of health of an approved health district and the director.
- (2) A construction and demolition debris facility licensee may transfer the license after receiving written authorization by the licensing authority.
- (3) At least one hundred twenty days prior to the proposed date of any license transfer, the licensee shall notify the board of health of an approved health district and the director in writing of the identity of the proposed transferee and of the proposed date for the transferee's assumption of the licensee's obligations. The licensee shall publish prominent notice of the request for transfer of the license, at an interval of at least once every four weeks during the one hundred twenty day period, or such other frequency acceptable to the board of health of an approved health district and the director, in a newspaper of general circulation in the county in which the facility is located. The licensee shall submit verification of the published notices to the board of health of an approved health district and the director. At a minimum, the notice of the proposed transfer shall contain information regarding the name of the facility, the current owner and operator, the prospective owner and operator, the facility location, and the type of facility.
- (4) At least one hundred twenty days prior to the proposed date of a transfer of a construction and demolition debris license, the prospective transferee shall submit to the licensing authority a compliance disclosure update required to be submitted in accordance with section 3714.052 of the Revised Code.

(B) License transfer criteria. A license transfer request shall not be approved unless the following criteria are met:

- (1) The prospective license transferee meets the requirements paragraphs (A)(2) and (A)(3) of rule 3745-501-03 of the Administrative Code.
- (2) The licensee has completed the requirements for publishing prominent notice for the request for transfer, as specified in paragraph (A)(3) of this rule.
- (3) Financial assurance for the facility has been established and documentation of the financial assurance has been submitted by the prospective owner or operator, as applicable, in accordance with Chapters 3714. or 3734. of the Revised Code and the rules promulgated thereunder.

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(4) The prospective transferee of the license is the owner or operator of the solid waste, infectious waste treatment, or construction and demolition debris facility.

(5) For a license for a construction and demolition debris facility, the prospective transferee has complied with section 3714.052 of the Revised Code.

[Comment: Division (D) of section 3714.052 of the Revised Code states that the licensing authority may deny the transfer of a license if the information regarding the transferee indicated any of the reasons for denial specified in division (B) of section 3714.052 of the Revised Code.]

(C) Procedure. When acting upon a license transfer request, Ohio EPA, and an approved health district as applicable, shall follow the appropriate procedures set forth in rule 3745-500-04 of the Administrative Code and any other applicable procedures set forth in the Revised Code.

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3745-503-01      Financial assurance - definitions and relationship with other rules.

- (A) Notwithstanding any provision of Chapter 3745-27 of the Administrative Code, any person obligated to comply with this chapter is not obligated to comply with Chapter 3745-27 of the Administrative Code.
- (B) Definitions. All words contained in this chapter have the same meaning as those defined in rule 3745-500-01 of the Administrative Code.
- (C) For the purposes of this chapter, "owner or operator" includes only those owners and operators who are directed to comply with this chapter by Chapter 3745-525 of the Administrative Code.

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3745-503-05 Financial assurance for a solid waste facility, industrial facility, or scrap tire transporter closure.

(A) [Reserved.]

(B) Implementation.

- (1) The owner or operator of a solid waste facility shall execute and fund the closure financial assurance instrument submitted as a part of a permit to install or registration certification application prior to receipt of waste at a new solid waste facility, prior to acceptance of waste pursuant to a modification that increases closure cost estimates of an existing solid waste facility.
- (2) The owner or operator of an industrial facility shall execute and fund the closure financial assurance instrument submitted as a part of a permit to install or permit to operate prior to receipt of waste at a new facility or prior to acceptance of waste pursuant to a modification that increases closure cost estimates of an existing facility.
- (3) The owner or operator of a sanitary landfill facility as applicable, shall execute and fund the closure financial assurance instrument within sixty days of approval of the closure or post-closure care plan.
- (4) Scrap tire transporters shall execute and fund the closure financial assurance instrument submitted as part of a registration certificate application prior to issuance of a registration certificate.
- (5) [Reserved.]
- (6) Financial assurance for closure shall be maintained and may be released only in accordance with paragraph (O) of this rule.

(C) Closure financial assurance instrument.

(1) Solid waste facilities.

- (a) The closure financial assurance instrument for a sanitary landfill facility, solid waste transfer facility, solid waste incinerator, or Class I composting facility shall contain an itemized written estimate, in current dollars, of the cost of closure. The closure cost estimate shall be based on the closure costs at the point in the operating life of the facility when the extent and manner of its operation would make the closure the most expensive, and shall be based on a third party conducting the closure activities. Ohio EPA may review, approve, and/or require revisions to the closure cost estimate and/or to the closure financial assurance instrument.

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(b) [Reserved.]

(c) The closure financial assurance instrument for a Class II composting facility shall contain a closure cost estimate in the amount of \$2.50 per cubic yard, based on the maximum storage capacity as specified in the authorizing document, unless a higher cost estimate is required by the authorizing document, for each of the following items at the facility: compost waste/material; curing compost; cured compost; and bulking agents. Ohio EPA may review, approve, and/or require revisions to the closure cost estimate and/or to the closure financial assurance instrument.

(d) The closure financial assurance instrument for a mobile scrap tire recovery facility or for portable equipment operated by a licensed class I or II scrap tire recovery facility at a site other than the facility's licensed site shall contain a closure cost estimate that is fifty-thousand dollars.

(2) For a scrap tire transporter, the financial assurance instrument shall contain a closure cost estimate that is twenty-thousand dollars.

(3) [Reserved.]

(4) [Reserved.]

(5) Industrial facilities.

The closure financial assurance instrument for an industrial facility shall contain an itemized written estimate, in current dollars, of the cost of closure. The closure cost estimate shall be based on the closure costs at the point in the operating life of the facility when the extent and manner of its operation would make the closure the most expensive, and shall be based on a third party conducting the closure activities. Ohio EPA may review, approve, and/or require revisions to the closure cost estimate and/or to the closure financial assurance instrument.

(D) Review of closure financial assurance instruments. The owner or operator of a solid waste facility or industrial facility shall submit to the director, by certified mail or any other form of mail accompanied by a receipt, the most recently adjusted closure cost estimate prepared in accordance with this paragraph. The owner or operator of a solid waste facility, industrial facility, or scrap tire transporter that has a closure cost estimate greater than twenty-thousand dollars shall do the following:

(1) Annually review and analyze the closure cost estimate and shall make any appropriate revisions to these estimates and to the financial assurance instrument to account for increases in the costs of closure, including but not limited to design revisions, materials, labor, or additional requirements or activities. Any

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revised closure cost estimate must be adjusted for inflation as specified in paragraph (D)(2) of this rule.

(2) Annually adjust the closure cost estimate for inflation. The adjustment shall be made as specified in this paragraph, using an inflation factor derived from the annual implicit price deflator for gross domestic product as published by the U.S. department of commerce in its February issue of "Survey of Current Business" as described in rule 3745-500-03 of the Administrative Code. The inflation factor is the result of dividing the latest published annual deflator by the deflator for the previous year.

(a) The first adjustment is made by multiplying the closure cost estimate by the inflation factor. The result is the adjusted closure cost estimate.

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

(E) The owner or operator of a solid waste facility, industrial facility, or scrap tire transporter shall select a closure financial assurance mechanism from the list of mechanisms specified in paragraphs (F), (G), (H), (I), (J), (K), and (L) of this rule, except as otherwise specified by this rule, provided the owner or operator satisfies the criteria for use of that mechanism.

(F) Closure trust fund.

(1) The owner or operator may satisfy the requirements of this rule by establishing a closure trust fund which conforms to the requirements of this paragraph and by sending an originally signed duplicate of the trust agreement to the director within the time period outlined in paragraph (B) of this rule. The trustee shall be an entity that has the authority to act as a trustee and which 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 3745-503-20 of the Administrative Code on forms prescribed by the director, and the trust agreement shall be accompanied by a formal certification of acknowledgment. "Schedule A" of the trust agreement shall be updated not later than sixty days after a change in the amount of the current closure cost estimate provided for in the agreement.

(3) A closure trust fund shall be established to secure an amount at least equal to the current closure cost estimate or the scrap tire transporter cost estimate, except as provided in paragraph (M) of this rule. Payments to the trust fund for a scrap tire transporter shall be made prior to the issuance of a scrap tire registration certificate. Payments to the trust fund for industrial facilities shall be made annually over the anticipated operating life not to exceed ten years. Payments to the trust fund except for scrap tire transporters and industrial facilities shall be

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made annually, except as permitted by paragraph (F)(4) of this rule, by the owner or operator over the operating life, which shall be based on the authorized maximum daily waste receipt and the approved volume of the facility; this period is hereafter referred to as the pay-in period. The first payment into the closure trust fund shall be made in accordance with paragraph (B) of this rule. Subsequent payments to the closure trust fund shall be made as follows:

(a) A receipt from the trustee for each payment shall be submitted by the owner or operator to the director. The first payment shall be at least equal to the current closure cost estimate divided by the number of years in the pay-in period, except as provided in paragraph (M) of this rule. Subsequent payments shall be made not later than thirty days after each anniversary date of the first payment. The amount of each subsequent payment shall be determined by performing the following calculation:

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

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.

(b) If the owner or operator establishes a trust fund, as specified in this rule, and the value of the trust fund is less than any revised current closure cost estimate made during the pay-in period, the amount of the current closure cost estimate still to be paid into the trust fund shall be paid in over the pay-in period, as defined in paragraph (F)(3) of this rule. Payments shall continue to be made not later than thirty days after each anniversary date of the first payment pursuant to paragraph (F)(3)(a) of this rule. The amount of each payment shall be determined by performing the following calculation:

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

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.

(c) The owner or operator may make the first installment required under paragraph (F)(3)(a) or (F)(3)(b) of this rule by providing alternate financial insurance using one of the mechanisms specified in paragraph (G), (I), or (J) of this rule in an amount at least equal to the first installment. On the anniversary date of the first installment, the owner or operator shall pay into the trust an amount at least equal to the first and second installments required under paragraph (F)(3)(a) or (F)(3)(b) of this rule or select an alternate financial assurance mechanism.

(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 fund is established. However, the owner or operator shall maintain

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the value of the fund at no less than the value the fund would have if annual payments were made as specified in paragraph (F)(3) of this rule.

- (5) If the owner or operator establishes a closure trust fund after having begun funding closure under any mechanism(s) specified in this rule, the closure trust fund shall be established by depositing the total value of all prior mechanisms into the newly established trust fund. The subsequent annual payments shall be made as specified in paragraph (F)(3) of this rule.
- (6) After the pay-in period of a trust fund has ended and the current closure cost estimate changes, the owner or operator shall compare the revised estimate to 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 revised estimate, the owner or operator shall, not later than sixty days after the change in the cost estimate, either deposit a sufficient amount into the trust fund so that its value after payment at least equals the amount of the current closure cost estimate, or obtain alternate financial assurance as specified in this rule to compensate for the difference.
- (7) The director shall instruct the trustee to release to the owner or operator such funds as the director specifies in writing, after receiving one of the following requests from the owner or operator for a release of funds:
- (a) The owner or operator may submit a written request to the director for the release of the amount in excess of the current closure cost estimate, if the value of the trust fund is greater than the total amount of the current closure cost estimate.
  - (b) The owner or operator may submit a written request to the director for release of the amount in the trust fund that exceeds the amount required as a result of such substitution, if the owner or operator substitutes any of the alternate financial assurance mechanism(s) specified in this rule for all or part of the trust fund.
- (8) Reimbursement for closure at solid waste or industrial facilities.

After beginning closure, the owner or operator, or any other person authorized by the owner, operator, or director to perform closure, may request reimbursement for closure expenditures by submitting itemized bills to the director. After receiving itemized bills for closure activities, the director shall determine whether the closure expenditures are in accordance with the closure or post-closure plan, permit or registration requirements, or applicable rules, or are otherwise justified, and if so, will instruct the trustee to make reimbursement in such amounts as the director specifies in writing. If the director determines that the cost of closure will be greater than the value of the trust fund, the director may withhold reimbursement of such amounts as deemed prudent until the director determines, in accordance with paragraph (O) of this rule, that the

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owner or operator is no longer required to maintain financial assurance for closure of the facility.

(9) If one of the following occurs, an owner or operator may request reimbursement from the scrap tire transporter trust fund:

(a) When the requirements of paragraph (O) of this rule have been met.

(b) To remove and properly dispose of any scrap tires which have been open dumped by the scrap tire transporter.

(c) [Reserved].

(d) To cover the owner's or operator's liability for sudden, accidental occurrences that result in damage or injury to persons or property or to the environment.

(e) For expenditures specified in this rule that may be reimbursed by submitting itemized bills to the director. After receiving itemized bills, the director shall determine whether the expenditures are authorized by this rule and in accordance with applicable requirements or are otherwise justified, and if so, will instruct the trustee to make reimbursement in such amounts as the director specifies in writing. If the director has reason to believe that the value of the trust fund will be insufficient to cover the cost of the required activities, the director may withhold reimbursement of such amounts as deemed prudent until the director determines, in accordance with paragraph (O) of this rule, that the owner or operator is no longer required to maintain scrap tire transporter financial assurance.

(10) The director will agree to termination of trust when one of the following occurs:

(a) The owner or operator substitutes alternate financial assurance for closure as specified in paragraph (F)(6) of this rule.

(b) The director notifies the owner or operator, in accordance with paragraph (O) of this rule that the owner or operator is no longer required by this rule to maintain financial assurance for closure of the facility or for a scrap tire transporter.

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

(1) The owner or operator may satisfy the requirements of this rule by obtaining a surety bond that conforms to the requirements of this paragraph and by delivering the originally signed bond to the director by certified mail or any other form of mail accompanied by a receipt within the time period outlined in paragraph (B) of this rule and by submitting a copy of the bond into the

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operating record, if applicable. The surety company issuing the bond shall, at a minimum, 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 the first day of July; 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 3745-503-20 of the Administrative Code on forms prescribed by the director.
- (3) The owner or operator who uses a surety bond to satisfy the requirements of this rule shall also establish a standby trust fund not later than when the bond is obtained. 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 (F) of this rule, except that:
  - (a) An originally signed duplicate of the trust agreement shall be delivered to the director with the surety bond and placed in the operating record, if applicable.
  - (b) Until the standby trust fund is funded, pursuant to the requirements of this rule, the following are not required:
    - (i) Payments into the trust fund as specified in paragraph (F) of this rule.
    - (ii) Revisions of "Schedule A" of the trust agreement to show current closure cost estimate or scrap tire transporter closure cost estimate.
    - (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 surety will become liable on the bond obligation unless the owner or operator does one of the following, as applicable:
  - (a) Funds the standby trust fund in an amount equal to the penal sum of the bond before the beginning of closure of the facility.
  - (b) For a solid waste or an industrial facility, funds the standby trust fund in an amount equal to the penal sum not later than fifteen days after a mandatory closure in accordance with the closure or post-closure care plan, permit or registration requirements, and applicable rules.

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- (c) For a scrap tire transporter, funds the standby trust fund in an amount equal to the penal sum of the bond in accordance with the following, as applicable:
- (i) Before the registration certificate issued to the scrap tire transporter has expired and a renewal registration has not been applied for.
  - (ii) Within fifteen days of the denial of a renewal registration certificate applied for by the owner or operator.
  - (iii) Within fifteen days of the suspension or revocation of the registration certificate issued to the owner or operator.
- (d) Provides alternate financial assurance as specified in this rule, and obtains the director's written approval of the alternate financial assurance provided, not later than ninety days after both the owner or operator and the director receive 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 current closure cost estimate or the scrap tire transporter closure cost estimate except as provided in paragraph (M) 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 shall, not later than sixty days after the increase in the estimate, 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, and into the operating record, if applicable, or obtain alternate financial assurance, as specified in this rule, to compensate for 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. Notice of an increase or a proposed decrease in the penal sum shall be sent to the director not later than sixty days after the change.
- (8) Under the terms of the bond, the bond shall remain in force unless the surety sends written notice of cancellation by certified mail or any other form of mail accompanied by a receipt to the owner or operator and to the director. Cancellation cannot occur, however, during the one hundred twenty day period beginning on the first day that both the owner or operator and the director have received the notice of cancellation, as evidenced by the return receipts.

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(9) The owner or operator may cancel the bond if the director has given prior written consent. The director will provide such written consent to the surety bond company when one of the following occurs:

(a) The owner or operator substitutes alternative financial assurance for closure of a facility or for a scrap tire transporter as specified in this rule.

(b) The director notifies the owner or operator, in accordance with paragraph (O) of this rule that the owner or operator is no longer required to maintain financial assurance for closure of a facility or for a scrap tire transporter.

(H) Surety bond guaranteeing performance of closure.

(1) The owner or operator may satisfy the requirements of this rule by obtaining a surety bond which conforms to the requirements of this paragraph and by delivering the originally signed bond to the director within the time period outlined in paragraph (B) of this rule and by submitting a copy of the surety bond into the operating record of the facility, if applicable. The surety company issuing the bond shall, at a minimum, 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 the first day of July; 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 (C) of rule 3745-503-20 of the Administrative Code on forms prescribed by the director.

(3) The owner or operator who uses a surety bond to satisfy the requirements of this rule 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 (F) of this rule except that:

(a) An originally signed duplicate of the trust agreement shall be delivered to the director with the surety bond and placed in the operating record, if applicable.

(b) Unless the standby trust fund is funded pursuant to the requirements of this rule, the following are not required:

(i) Payments into the trust fund as specified in paragraph (F) of this rule.

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(ii) Revisions of "Schedule A" of the trust agreement to show current closure cost estimate or the scrap tire transporter cost estimate.

(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 surety will become liable on the bond obligation unless the owner or operator does one of the following, as applicable:

(a) For solid waste or industrial facilities, performs closure in accordance with the closure or post-closure plan, permit or registration requirements, and applicable rules.

(b) For scrap tire transporters, does the following, as applicable:

(i) Removes and properly disposes of any scrap tires in the scrap tire transporter's possession or which have been open dumped by the scrap tire transporter.

(ii) [Reserved.]

(iii) Provides coverage for the owner's or operator's liability for sudden, accidental occurrences that result in damage or injury to persons or property or to the environment.

(c) Provides alternate financial assurance as specified in this rule, and obtains the director's written approval of the alternate financial assurance provided, not later than ninety days after both the owner or operator and the director receive notice of cancellation of the bond from the surety.

(5) Performing activities.

(a) 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. Following a determination by the director that the owner or operator of the solid waste or industrial facility has failed to perform closure activities in accordance with the closure or post-closure care plan, permit or registration requirements, and applicable rules, the surety shall perform closure in accordance with the closure or post-closure care plan, permit or registration requirements, and applicable rules, or will deposit the amount of the penal sum into the standby trust fund.

(b) In the case of a scrap tire transporter, following a determination by the director that the owner or operator has failed to perform the activities specified in paragraph (H)(4)(b) of this rule, the surety shall perform the

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activities specified in paragraph (H)(4)(b) of this rule, or will deposit the amount of the penal sum into the standby trust fund.

- (6) The penal sum of the bond shall be in an amount at least equal to the current closure cost estimate or the scrap tire transporter cost estimate.
- (7) Whenever the current closure cost estimate increases to an amount greater than the penal sum of the bond, the owner or operator shall, not later than sixty days after the increase in the estimate, 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, and into the operating record, if applicable, or obtain alternate financial assurance, as specified in this rule, to compensate for 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. Notice of an increase or a proposed decrease in the penal sum shall be sent to the director by certified mail or any other form of mail accompanied by a receipt not later than sixty days after the change.
- (8) Under the terms of the bond, the bond shall remain in force unless the surety sends written notice of cancellation by certified mail or any other form of mail accompanied by a receipt to the owner or operator and to the director. Cancellation cannot occur, however, during the one hundred twenty day period beginning on the first day that both the owner or operator and the director have received the notice of cancellation as evidenced by the return receipts.
- (9) The owner or operator may cancel the bond if the director has given prior written consent. The director will provide such written consent to the surety bond company when one of the following occurs:
- (a) The owner or operator substitutes alternate financial assurance for closure of a facility or for a scrap tire transporter as specified in this rule.
- (b) The director notifies the owner or operator, in accordance with paragraph (O) of this rule that the owner or operator is no longer required by this rule to maintain financial assurance for closure of a facility or for a scrap tire transporter.
- (10) The surety shall not be liable for deficiencies in the completion of closure of a facility or scrap tire transporter by the owner or operator after the owner or operator has been notified by the director, in accordance with this rule, that the owner or operator is no longer required to maintain financial assurance for closure of a facility or for a scrap tire transporter.

(I) Closure letter of credit.

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- (1) The owner or operator may satisfy the requirements of this rule by obtaining an irrevocable standby letter of credit ("letter of credit") which conforms to the requirements of this paragraph and by having the originally signed letter of credit delivered to the director by certified mail or any other form of mail accompanied by a receipt within the time period outlined in paragraph (B) of this rule by submitting a copy of the letter of credit into the operating record of the facility, if applicable. 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 3745-503-20 of the Administrative Code on forms prescribed by the director.
- (3) An owner or operator who uses a letter of credit to satisfy the requirements of this rule 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 shall be deposited promptly and directly by the issuing institution 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 (F) of this rule, except that:

  - (a) An originally signed duplicate of the trust agreement shall be delivered to the director with the letter of credit, and a copy of the letter placed in the operating record, if applicable.
  - (b) Unless the standby trust fund is funded pursuant to the requirements of this rule, the following are not required:

    - (i) Payments into the trust fund as specified in paragraph (F) of this rule.
    - (ii) Updating of "Schedule A" of the trust agreement to show current closure cost estimate or the scrap tire transporter closure cost estimate.
    - (iii) Annual valuations as required by the trust agreement.
    - (iv) Notices of 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 following information: the names and addresses of the solid waste or industrial facility and the owner and the operator and the amount of funds assured for closure of the facility by the letter of credit or in the case of scrap tire transporters, the name and address of the owner and the operator.

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- (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 prior to the current expiration date, the issuing institution notifies both the owner and operator and the director by certified mail or any other form of mail accompanied by a receipt of a decision not to extend the expiration date. Under the terms of the letter of credit, the one hundred twenty day period shall begin on the day 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, or the scrap tire transporter closure cost estimate except as provided in paragraph (M) 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 shall, not later than sixty days after the increase, either cause the amount of the credit to be increased to an amount at least equal to the current closure cost estimate and submit evidence of such increase to the director, and into the operating record, if applicable, or obtain alternate financial assurance, as specified in this rule, to compensate for the increase. Whenever the current closure cost estimate decreases, the letter of credit may be reduced to the amount of the current closure cost estimate following written approval by the director. Notice of an increase or a proposed decrease in the amount of the letter of credit shall be sent to the director by certified mail or any other form of mail accompanied by a receipt not later than sixty days after the change.
- (8) Under the terms of the letter of credit, the director may draw on the letter of credit following a determination that the owner or operator has failed to:
- (a) For solid waste or industrial facilities, perform closure in accordance with the closure or post-closure care plan, permit or registration requirements, and applicable rules.
- (b) For scrap tire transporters, do the following, as applicable:
- (i) Remove and properly dispose of any scrap tires which have been open dumped by the scrap tire transporter.
- (ii) [Reserved.]
- (iii) To cover the owner's or operator's liability for sudden, accidental occurrences that result in damage or injury to persons or property or to the environment.

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(c) Provide alternate financial assurance as specified in this rule and obtain written approval of such alternate financial assurance from the director not later than ninety days after the owner and operator and the director have received notice from the issuing institution that it will not extend the letter of credit beyond the current expiration date, the director shall 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 thirty days of any such extension the director shall draw on the letter of credit if the owner or operator has failed to provide alternate financial assurance as specified in this rule and has failed to obtain written approval of such alternate financial assurance from the director.

(9) The director shall return the original letter of credit to the issuing institution for termination when either of the following occur:

(a) The owner or operator substitutes alternate financial assurance for closure of a facility or a scrap tire transporter as specified in this rule.

(b) The director notifies the owner or operator, in accordance with paragraph (O) of this rule that the owner or operator is no longer required to maintain financial assurance for closure of a facility or a scrap tire transporter.

(J) Closure insurance.

(1) The owner or operator may satisfy the requirements of this rule by obtaining closure insurance which conforms to the requirements of this paragraph and by submitting an originally signed certificate of such insurance to the director by certified mail or any other form of mail accompanied by a receipt within the time period outlined in paragraph (B) of this rule, and by submitting a copy of the certificate of insurance into the operating record, if applicable. 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 3745-503-20 of the Administrative Code on forms prescribed by the director.

(3) The closure insurance policy shall be issued for a face amount at least equal to the current closure cost estimate or the scrap tire transporter cost estimate, except as provided in paragraph (M) of this rule. 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) Guaranteeing of funds.

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(a) The closure insurance policy shall guarantee that funds will be available to close the facility whenever closure is mandated. The policy shall also guarantee that once 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.

(b) The scrap tire transporter insurance policy shall guarantee that funds will be available to perform the authorized closure activities whenever such activities are mandated. The policy shall also guarantee that once such activities begin, 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) Reimbursement for closure.

The owner or operator, or any other person authorized by the owner, operator, or director to perform closure, may request reimbursement for closure expenditures by submitting itemized bills to the director. After receiving itemized bills for closure activities, the director shall determine whether the closure expenditures are in accordance with the closure or post-closure care plan, permit or registration requirements, and applicable rules, or are otherwise justified, and if so, shall instruct the insurer to make reimbursement in such amounts as the director specifies in writing. If the director has reason to believe that the cost of closure will be greater than the face amount of the policy, the director may withhold reimbursement of such amounts as deemed prudent until the director determines, in accordance with paragraph (O) of this rule that the owner or operator is no longer required to maintain financial assurance for closure of the facility or scrap tire transporter.

(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 (J)(8) of this rule. Failure to pay the premium, without substitution of alternate financial assurance as specified in this rule, will constitute a violation of these rules, warranting such remedy as the director deems necessary. Such violation shall 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

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of the policy shall, at a minimum, 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 or any other form of mail accompanied by a receipt to the owner or operator and to the director. Cancellation, termination, or failure to renew may not occur, and the policy will remain in full force and effect unless on or before the date of expiration:

- (a) For solid waste or industrial facilities, any activities required by the closure or post-closure care plan, permit or registration requirements, and applicable rules have occurred.
  - (b) For a scrap tire transporter, following a determination that the owner or operator has failed to perform the closure activities specified in the registration requirements and applicable rules.
  - (c) Closure of the facility is ordered by the director or a court of competent jurisdiction, or characterization and remediation is ordered by the director or a 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 as described in rule 3745-500-03 of the Administrative 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 shall, not later than sixty days after the increase, 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, and into the operating record, if applicable, or obtain alternate financial assurance as specified in this rule to compensate for 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 written approval by the director.
- (10) The director will give written consent to the owner or operator that owner or operator may terminate the insurance policy when either of the following occurs:
- (a) The owner or operator substitutes alternate financial assurance for closure of a facility or a scrap tire transporter as specified in this rule.
  - (b) The director notifies the owner or operator, in accordance with paragraph (O) of this rule that the owner or operator is no longer required to maintain financial assurance for closure of a facility or a scrap tire transporter.

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(K) Financial test and corporate guarantee for closure of a solid waste or industrial facility or a scrap tire transporter.

(1) The owner or operator may satisfy the requirements of this rule by demonstrating that the owner or operator passes a financial test as specified in this paragraph. The owner or operator who uses this test shall be operating for a minimum of five years. To pass this test the owner or operator shall demonstrate that less than fifty per cent of the parent corporation's gross revenues are derived from solid waste disposal, solid waste transfer facility operations, industrial facility or scrap tire transporter, or if there is no parent corporation, the owner or operator shall demonstrate that less than fifty per cent of its gross revenues are derived from solid waste facility, solid waste transfer facility, industrial facility, or scrap tire transporter operations and either:

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

(i) Satisfaction of at least two of the following 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 minus ten million dollars to total liabilities greater than 0.1; 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 current post-closure care cost estimates, scrap tire transporter closure cost estimates, any ground water corrective actions cost estimates, and any other obligations assured by a financial test.

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

(iv) Assets in the United States amounting to at least ninety per cent of total assets or at least six times the sum of the current closure and current post-closure care cost estimates, scrap tire transporter closure cost estimates, any current ground water corrective actions cost estimates, and any other assured by a financial test.

(b) The owner or operator shall have:

(i) Issued a corporate bond for which the owner or operator, as the issuing entity, has not received a current rating of less than BBB as issued by "Standard and Poor's" or Baa as issued by "Moody's." Owners or operators using bonds that are secured by collateral or a guarantee must meet the minimum rating without that security.



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updated information into the operating record, if applicable, not later than ninety days after the close of each succeeding fiscal year. This information shall include all three items specified in paragraph (K)(3) of this rule.

- (5) If the owner or operator no longer meets the requirements of paragraph (K)(1) of this rule, notice shall be sent to the director of the intent to establish alternate financial assurance as specified in this rule. The notice must be sent by certified mail or any other form of mail accompanied by a receipt not later than 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. A copy of the notice shall also be placed in the operating record, if applicable. The owner or operator shall provide alternate financial assurance not later than one hundred twenty days after the end of such fiscal year.
- (6) The director may, based on a reasonable belief that the owner or operator no longer meets the requirements of paragraph (K)(1) of this rule, require reports of financial condition at any time from the owner or operator in addition to those specified in paragraph (K)(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 (K)(1) of this rule, the owner or operator shall provide alternate financial assurance as specified in this rule not later than thirty days after notification of such a finding.
- (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 his/her report on examination of the owner's or operator's financial statements. An adverse opinion or disclaimer of opinion will be cause for disallowance. The director shall evaluate other qualifications on an individual basis. The owner or operator shall provide alternate financial assurance as specified in this rule not later than thirty days after notification of the disallowance.
- (8) The owner or operator is no longer required to submit the items specified in paragraph (K)(3) of this rule when either of the following occur:

  - (a) The owner or operator substitutes alternate financial assurance for closure of a facility or a scrap tire transporter as specified in this rule.
  - (b) The director notifies the owner or operator, in accordance with paragraph (O) of this rule that the owner or operator is no longer required to maintain financial assurance for closure of a facility or scrap tire transporter.
- (9) The owner or operator may meet the requirements of this rule by obtaining a written guarantee, hereafter referred to as a corporate guarantee. The guarantor shall be the parent corporation of the owner or operator. The guarantor shall meet the requirements for an owner or operator in paragraphs (K)(1) to (K)(7) of this rule and shall comply with the terms of the corporate guarantee. The

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wording of the corporate guarantee shall be identical to the wording specified in paragraph (G) of rule 3745-503-20 of the Administrative Code on forms prescribed by the director. The corporate guarantee shall accompany the items sent to the director as specified in paragraph (K)(3) of this rule. The terms of the corporate guarantee shall provide that:

- (a) The owner or operator shall perform closure of a facility or scrap tire transporter provided for by the corporate guarantee in accordance with the closure or post-closure care plan, permit or registration requirements, and applicable rules.
- (b) The guarantor shall perform the activities in paragraph (K)(9)(a) of this rule or shall establish a trust fund in the name of the owner or operator as specified in paragraph (F) of this rule if the owner or operator fails to perform those activities.
- (c) The corporate guarantee shall remain in force unless the guarantor sends notice of cancellation by certified mail or any other form of mail accompanied by a receipt to the owner or operator and to the director. Cancellation may not occur, however, during the one hundred twenty day period beginning on the first day that both the owner or operator and the director have received notice of cancellation, as evidenced by the return receipts.
- (d) If the owner or operator fails to provide alternate financial assurance as specified in this rule, and fails to obtain the written approval of such alternate financial assurance from the director not later than ninety days after both the owner or operator and the director have received notice of cancellation of the corporate guarantee from the guarantor, the guarantor shall provide such alternate financial assurance in the name of the owner or operator.

(L) Local government financial test for closure.

- (1) For the purposes of this rule, local government means a subdivision of the state of Ohio including, but not limited to, a municipal corporation, a county, a township, a single or joint county solid waste management district, or a solid waste management authority.
- (2) A local government may satisfy the requirements of this rule by demonstrating that the local government passes a financial test as specified in this paragraph. This test consists of a financial component, a public notice component, and a record-keeping and reporting component. In order to satisfy the financial component of the test, a local government must meet the following criteria:

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- (a) A local government's financial statements shall be prepared in accordance with "Generally Accepted Accounting Principles" for local governments.
  - (b) A local government must not have operated at a deficit equal to five per cent or more of total annual revenue in either of the past two fiscal years.
  - (c) A local government must not currently be in default on any outstanding general obligation bonds.
  - (d) A local government must not have any outstanding general obligation bonds rated lower than BBB as issued by "Standard and Poor's" or Baa as issued by "Moody's." Local governments using bonds that are secured by collateral or a guarantee must meet the minimum rating without that security.
- (3) In addition, to satisfy that financial component of the test, a local government must meet either of the following criteria:
- (a) A local government must have the following:

    - (i) A ratio of cash plus marketable securities to total expenditures greater than or equal to 0.05.
    - (ii) A ratio of annual debt service to total expenditures less than or equal to 0.20.
    - (iii) A ratio of long term debt issued and outstanding to capital expenditures less than or equal to 2.00.
    - (iv) A ratio of the current cost estimates for closure, post-closure care, ground water corrective actions, scrap tire transporter closure, and any other obligations assured by a financial test, to total revenue less than or equal to 0.43.
  - (b) The local government shall have the following:

    - (i) Outstanding general obligation bonds for which the local government, as the issuing entity, has not received a current rating of less than BBB as issued by "Standard and Poor's" or Baa as issued by "Moody's." Local governments using bonds that are secured by collateral or a guarantee must meet the minimum rating without that security.
    - (ii) A ratio of the current cost estimates for closure, post-closure care, ground water corrective actions, scrap tire transporter closure, and any other obligations assured by a financial test, to total revenue less than or equal to 0.43.

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- (4) In order to satisfy the public notice component of the test, a local government must in each year that the test is used, identify the current cost estimates in either its budget or its comprehensive annual financial report. The facility covered, the categories of expenditures, including closure, post-closure care, ground water corrective actions, scrap tire transporter closure, the corresponding cost estimate for each expenditure, and the anticipated year of the required activity must be recorded. If the financial assurance obligation is to be included in the budget, it should either be listed as an approved budgeted line item, if the obligation will arise during the budget period, or in an appropriate supplementary data section, if the obligation will not arise during the budget period. If the information is to be included in the comprehensive annual financial report, it is to be included in the financial section as a footnote to the annual financial statements.
- (5) To demonstrate that the local government meets the requirements of this test, the following three items must be submitted to the director, and into the operating record, if applicable:
- (a) A letter signed by the local government's chief financial officer and worded as specified in paragraph (H) of rule 3745-503-20 of the Administrative Code on forms prescribed by the director that:
- (i) Lists all current cost estimates covered by a financial test.
  - (ii) Certifies that the local government meets the conditions of paragraph (L)(1) of this rule.
  - (iii) Provides evidence and certifies that the local governments meets the conditions of either paragraph (L)(2)(a) or (L)(2)(b) of this rule.
- (b) A copy of the local government's independently audited year-end financial statements for the latest fiscal year, including the unqualified opinion of the auditor. The auditor must be an independent, certified public accountant or auditor of state.
- (c) A special report from the independent certified public accountant or auditor of state, in the form of an agreed-upon procedures report, to the local government stating that:
- (i) The certified public accountant or auditor of state 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 most recent fiscal year with the amounts in such financial statements.

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- (ii) In connection with the agreed-upon procedures report, the public accountant states that the public accountant agrees the specified data is accurate.
- (6) After the initial submission of the items specified in this rule, a local government shall send updated information to the director on forms prescribed by the director, and submit updated information into the operating record, if applicable, not later than one hundred eighty days after the close of each succeeding fiscal year. This information shall include all items specified in this rule.
- (7) If a local government no longer meets the requirements of this rule, notice shall be sent to the director of the intent to establish alternate financial assurance as specified in this rule. The notice must be sent by certified mail or any other form of mail accompanied by a receipt not later than one hundred fifty days after the end of the fiscal year for which the year-end financial data show that the local government no longer meets the requirements. A copy of the notice shall also be placed in the operating record, if applicable. The local government shall provide alternate financial assurance not later than one hundred eighty days after the end of such fiscal year.
- (8) The director may, based on a reasonable belief that the local government no longer meets the requirements of this rule, require reports of financial condition at any time from the local government in addition to those specified in this rule. If the director finds, on the basis of such reports or other information, that the local government no longer meets the requirements of this rule, the local government shall provide alternate financial assurance as specified in this rule not later than thirty days after notification of such a finding.
- (9) The director may disallow use of this test on the basis of qualifications in the opinion expressed by the independent certified public accountant or auditor of state in the report on examination of the local government's financial statements. An adverse opinion or disclaimer of opinion will be cause for disallowance. The director shall evaluate other qualifications on an individual basis. The local government shall provide alternate financial assurance as specified in this rule not later than thirty days after notification of the disallowance.
- (10) A local government is no longer required to submit the items specified in this rule when one of the following occur:
- (a) The local government substitutes alternate financial assurance for closure as specified in this rule.
- (b) The director notifies the local government, in accordance with paragraph (O) of this rule, that the local government is no longer required to maintain financial assurance for closure of a facility or a scrap tire transporter.

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## (M) Use of multiple financial assurance mechanisms.

The owner or operator may satisfy the requirements of this rule by establishing more than one financial assurance mechanism for each facility or by establishing more than one financial assurance mechanism for scrap tire transporter financial assurance. These mechanisms are limited to a trust fund, surety bond guaranteeing payment into a closure trust fund, letter of credit, insurance, and the local government financial test. The mechanisms shall be as specified in paragraphs (F), (G), (I), (J), and (L) respectively of this rule, except that it is the combination of mechanisms, rather than each single mechanism, which shall provide financial assurance for an amount at least equal to the current closure cost estimate or scrap tire transporter closure cost estimate. If an owner or operator uses a trust fund in combination with a surety bond or a letter of credit, 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 invoke use of any or all of the mechanisms, in accordance with paragraphs (F), (G), (I), (J), and (L) of this rule, to provide for closure of the facility or provide for the required closure for a scrap tire transporter.

## (N) Use of a financial assurance mechanism for multiple facilities.

The 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 name, address, and the amount of funds for closure assured by the financial assurance mechanism. The amount of funds available through the financial assurance mechanism shall be no less than the sum of the funds that would be available if a separate financial assurance mechanism had been established and maintained for each facility.

## (O) Release of the owner or operator of a solid waste facility, industrial facility, or scrap tire transporter from the requirements of this rule.

The director shall notify the owner or operator in writing that the owner or operator is no longer required, by this rule, to maintain financial assurance for closure of the particular facility or scrap tire transporter, unless the director has reason to believe that closure has not been completed in accordance with the requirements, as applicable, and/or the closure or post-closure care plan after receiving certifications from the owner or operator and an independent professional(s) skilled in the appropriate discipline(s) that closure has been completed in accordance with the closure or post-closure care plan, permit or registration requirements, and applicable rules.

[Comment: The notice releases the owner or operator only from the requirements for financial assurance for closure of the facility; it does not release the owner or

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[operator from legal responsibility for meeting the post-closure care standards or ground water corrective actions, if applicable.](#)

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3745-503-10 Financial assurance for a solid waste facility or industrial facility post-closure care.

(A) [Reserved.]

(B) Implementation.

- (1) The owner or operator of a sanitary landfill facility shall execute and fund the post-closure care financial assurance instrument submitted as a part of a permit to install prior to receipt of waste at a new sanitary landfill facility, a modification that increases post-closure care cost estimates of an existing sanitary landfill facility.
- (2) The owner or operator of an industrial facility shall execute and fund the post-closure care financial assurance instrument submitted as a part of a permit to install or permit to operate prior to receipt of waste at a new facility or prior to acceptance of waste pursuant to a modification that increases post-closure care cost estimates of an existing facility.
- (3) The owner or operator of sanitary landfill facilities, as applicable, shall execute and fund the post-closure care financial assurance instrument within sixty days of approval of the closure or post-closure care plan.
- (4) Financial assurance for post-closure care shall be maintained and may be released only in accordance with paragraph (O) of this rule.

(C) Post-closure care financial assurance instrument.

- (1) The post-closure care financial assurance instrument for a solid waste facility shall contain an itemized written estimate, in current dollars, of the cost of post-closure care for the sanitary landfill facility, as applicable, or for a scrap tire monofill facility if applicable. The estimate shall be based on a third party conducting the post-closure care activities. Ohio EPA may review, approve, and/or require revisions to the post-closure care cost estimate and/or to the post-closure care financial assurance instrument
- (2) The post-closure care financial assurance instrument for an industrial facility shall contain an itemized written estimate, in current dollars, of the cost of post-closure care. The estimate shall be based on a third party conducting the post-closure activities. Ohio EPA may review, approve, and/or require revisions to the post-closure care cost estimate and/or to the closure financial assurance instrument.

(D) Review of post-closure care financial assurance instruments. The owner or operator of a sanitary landfill facility or industrial facility shall submit to the director, by

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certified mail or any other form of mail accompanied by a receipt, the most recently adjusted post-closure care cost estimate prepared in accordance with this paragraph:

- (1) The owner or operator of a sanitary landfill facility or industrial facility shall annually review and analyze the post-closure care cost estimate and shall make any appropriate revisions to these estimates and to the financial assurance instrument to account for increases in the costs of post-closure care, including but not limited to materials, labor, or additional requirements or activities. Any revised post-closure care cost estimate must be adjusted for inflation as specified in paragraph (D)(2) of this rule.
  - (2) The owner or operator of a sanitary landfill facility or industrial facility shall annually adjust the post-closure care cost estimate for inflation. The adjustment shall be made as specified in this paragraph, using an inflation factor derived from the annual implicit price deflator for gross domestic product as published by the U.S. department of commerce in its February issue of "Survey of Current Business" as described in rule 3745-500-03 of the Administrative Code. The inflation factor is the result of dividing the latest published annual deflator by the deflator for the previous year.
    - (a) The first adjustment is made by multiplying the post-closure care cost estimate by the inflation factor. The result is the adjusted post-closure care cost estimate.
    - (b) Subsequent adjustments are made by multiplying the most recently adjusted post-closure care cost estimate by the most recent inflation factor.
- (E) The owner or operator of a sanitary landfill facility or industrial facility shall select a post-closure care financial assurance mechanism from the list of mechanisms specified in paragraph (F), (G), (H), (I), (J), (K), or (L) of this rule, except as otherwise specified by this rule, provided the owner or operator satisfies the criteria for use of that mechanism.
- (F) Post-closure care trust fund.
- (1) The owner or operator may satisfy the requirements of this rule by establishing a post-closure care trust fund which conforms to the requirements of this paragraph and by sending an originally signed duplicate of the trust agreement to the director within the time period outlined in paragraph (B) of this rule. The trustee shall be an entity that has the authority to act as a trustee and which 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 3745-503-20 of the Administrative Code on forms prescribed by the director and the trust agreement shall be accompanied by a formal certification of acknowledgment. "Schedule A" of the trust agreement

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shall be updated not later than sixty days after a change in the amount of the current post-closure care cost estimate provided for in the agreement.

(3) A post-closure care trust fund shall be established to secure an amount at least equal to the current post-closure care cost estimate, except as provided in paragraph (M) of this rule. Payments to the trust fund for industrial facilities shall be made annually over the anticipated operating life not to exceed ten years. Payments to the trust fund except for industrial facilities shall be made annually, except as permitted by paragraph (F)(4) of this rule, by the owner or operator over the operating life of the facility, which shall be based on the authorized maximum daily waste receipt and the approved volume of the sanitary landfill facility; this period is hereafter referred to as the pay-in period. The first payment into the post-closure care trust fund shall be made in accordance with paragraph (B) of this rule. Subsequent payments to the post-closure care trust fund shall be made as follows:

(a) A receipt from the trustee for each payment shall be submitted by the owner or operator to the director. The first payment shall be at least equal to the current post-closure care cost estimate divided by the number of years in the pay-in period, except as provided in paragraph (M) of this rule. Subsequent payments shall be made not later than thirty days after each anniversary date of the first payment. The amount of each subsequent payment shall be determined by performing the following calculation:

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

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

(b) If the owner or operator establishes a trust fund, as specified in this rule, and the value of the trust fund is less than any revised current post-closure care cost estimate made during the pay-in period, the amount of the current post-closure care cost estimate still to be paid into the trust fund shall be paid in over the pay-in period, as defined in paragraph (F)(3) of this rule. Payments shall continue to be made not later than thirty days after each anniversary date of the first payment pursuant to paragraph (F)(3)(a) of this rule. The amount of each payment shall be determined by performing the following calculation:

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

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

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- (c) The owner or operator may make the first installment required under paragraph (F)(3)(a) or (F)(3)(b) of this rule by providing alternate financial insurance using one of the mechanisms specified in paragraph (G), (I), or (J) of this rule in an amount at least equal to the first installment. On the anniversary date of the first installment, the owner or operator shall pay into the trust an amount at least equal to the first and second installments required under paragraph (F)(3)(a) or (F)(3)(b) of this rule or select an alternate financial assurance mechanism.
- (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 care cost estimate at the time the fund is established. However, the owner or operator shall maintain the value of the fund at no less than the value the fund would have if annual payments were made as specified in paragraph (F)(3) of this rule.
- (5) If the owner or operator establishes a post-closure care trust fund after having begun funding post-closure care under any mechanism(s) specified in this rule, the post-closure care trust fund shall be established by depositing the total value of all prior mechanisms into the newly established trust fund. The subsequent annual payments shall be made as specified in paragraph (F)(3) of this rule.
- (6) After the pay-in period of a trust fund has ended and the current post-closure care cost estimate changes, the owner or operator shall compare the revised estimate to 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 revised estimate, the owner or operator shall, not later than sixty days after the change in the cost estimate, either deposit a sufficient amount into the trust fund so that its value after payment at least equals the amount of the current post-closure care cost estimate, or obtain alternate financial assurance as specified in this rule to compensate for the difference.
- (7) The director shall instruct the trustee to release to the owner or operator such funds as the director specifies in writing, after receiving one of the following requests from the owner or operator for a release of funds:
- (a) The owner or operator may submit a written request to the director for the release of the amount in excess of the current post-closure care cost estimate, if the value of the trust fund is greater than the total amount of the current post-closure care cost estimate.
- (b) The owner or operator may submit a written request to the director for release of the amount in the trust fund that exceeds the amount required as a result of such substitution, if the owner or operator substitutes any of the alternate financial assurance mechanism(s) specified in this rule for all or part of the trust fund.

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(8) Reimbursement for post-closure care at sanitary landfill facilities or industrial facilities.

After beginning post-closure care, the owner or operator, or any other person authorized by the owner, operator, or director to perform post-closure care, may request reimbursement for post-closure care expenditures by submitting itemized bills to the director. After receiving itemized bills for post-closure care activities, the director shall determine whether the post-closure care expenditures are in accordance with the closure or post-closure care plan, permit requirements, and applicable rules, or are otherwise justified, and if so, will instruct the trustee to make reimbursement in such amounts as the director specifies in writing. If the director determines that the cost of post-closure care will be greater than the value of the trust fund, the director may withhold reimbursement of such amounts as deemed prudent until the director determines, in accordance with paragraph (O) of this rule, that the owner or operator is no longer required to maintain financial assurance for post-closure care of the facility.

(9) The director will agree to termination of a trust when one of the following occurs:

- (a) The owner or operator substitutes alternate financial assurance for post-closure care as specified in paragraph (F)(6) of this rule.
- (b) The director notifies the owner or operator, in accordance with paragraph (O) of this rule, that the owner or operator is no longer required by this rule to maintain financial assurance for post-closure care of the facility.

(G) Surety bond guaranteeing payment into a post-closure care trust fund.

- (1) The owner or operator may satisfy the requirements of this rule by obtaining a surety bond which conforms to the requirements of this paragraph and by delivering the originally signed bond to the director by certified mail or any other form of mail accompanied by a receipt within the time period outlined in paragraph (B) of this rule by submitting a copy of the bond into the operating record, if applicable.

The surety company issuing the bond shall, at a minimum, 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 the first day of July; interim changes in the circular are also published in the "Federal Register."]

- (2) The wording of the surety bond shall be identical to in paragraph (B) of rule 3745-503-20 of the Administrative Code on forms prescribed by the director.

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- (3) The owner or operator who uses a surety bond to satisfy the requirements of this rule shall also establish a standby trust fund not later than when the bond is obtained. 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 (F) of this rule, except that:
- (a) An originally signed duplicate of the trust agreement shall be delivered to the director with the surety bond and placed in the operating record, if applicable.
  - (b) Until the standby trust fund is funded, pursuant to the requirements of this rule, the following are not required:
    - (i) Payments into the trust fund as specified in paragraph (F) of this rule.
    - (ii) Revisions of "Schedule A" of the trust agreement to show current post-closure care cost estimate.
    - (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 surety shall become liable on the bond obligation unless the owner or operator does one of the following, as applicable:
- (a) Funds the standby trust fund in an amount equal to the penal sum of the bond before the beginning of closure of the facility.
  - (b) Funds the standby trust fund in an amount equal to the penal sum of the bond not later than fifteen days after a mandatory closure requirement in accordance with the closure or post-closure care plan, permit requirements, and applicable rules.
  - (c) Provides alternate financial assurance as specified in this rule, and obtain the director's written approval of the alternate financial assurance provided, not later than ninety days after both the owner or operator and the director receive 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 current post-closure care cost estimate except as provided in paragraph (M) of this rule.

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- (7) Whenever the current post-closure care cost estimate increases to an amount greater than the penal sum of the bond, the owner or operator shall, not later than sixty days after the increase in the estimate, either cause the penal sum of the bond to be increased to an amount at least equal to the current post-closure care cost estimate and submit evidence of such increase to the director, and into the operating record, if applicable, or obtain alternate financial assurance, as specified in this rule, to compensate for the increase. Whenever the current post-closure care cost estimate decreases, the penal sum may be reduced to the amount of the current post-closure care cost estimate following written approval by the director. Notice of an increase or a proposed decrease in the penal sum shall be sent to the director not later than sixty days after the change.
- (8) Under the terms of the bond, the bond shall remain in force unless the surety sends written notice of cancellation by certified mail or any other form of mail accompanied by a receipt to the owner or operator and to the director. Cancellation cannot occur, however, during the one hundred twenty day period beginning on the first day that both the owner or operator and the director have received the notice of cancellation, as evidenced by the return receipts.
- (9) The owner or operator may cancel the bond if the director has given prior written consent. The director will provide such written consent to the surety bond company when one of the following occurs:
- (a) The owner or operator substitutes alternate financial assurance for post-closure care as specified in this rule.
  - (b) The director notifies the owner or operator, in accordance with paragraph (O) of this rule that the owner or operator is no longer required to maintain financial assurance for post-closure care of the facility.

(H) Surety bond guaranteeing performance of post-closure care.

- (1) The owner or operator may satisfy the requirements of this rule by obtaining a surety bond which conforms to the requirements of this paragraph and by delivering the originally signed bond to the director within the time period outlined in paragraph (B) of this rule by submitting a copy of the surety bond into the operating record, if applicable.

The surety company issuing the bond shall, at a minimum, 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 the first day of July; interim changes in the circular are also published in the "Federal Register."]

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- (2) The wording of the surety bond shall be identical to the wording specified in paragraph (C) of rule 3745-503-20 of the Administrative Code on forms prescribed by the director.
- (3) The owner or operator who uses a surety bond to satisfy the requirements of this rule 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 (F) of this rule except that:
- (a) An originally signed duplicate of the trust agreement shall be delivered to the director with the surety bond and placed in the operating record, if applicable.
- (b) Unless the standby trust fund is funded pursuant to the requirements of this rule, the following are not required:
- (i) Payments into the trust fund as specified in paragraph (F) of this rule.
- (ii) Revisions of "Schedule A" of the trust agreement to show current post-closure care cost estimate.
- (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 surety shall become liable on the bond obligation unless the owner or operator does one of the following, as applicable:
- (a) Performs post-closure care in accordance with the closure or post-closure plan, and applicable rules, and other requirements of the permit or registration.
- (b) Provides alternate financial assurance as specified in this rule, and obtains the director's written approval of the alternate financial assurance provided, not later than ninety days after both the owner or operator and the director receives 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. Following a determination by the director that the owner or operator of the solid waste facility or industrial facility has failed to perform post-closure care activities in accordance with the closure or post-closure plan, applicable rules, and permit requirements, the surety shall perform post-closure care in

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accordance with the closure or post-plan and permit requirements, or applicable rules, or will deposit the amount of the penal sum into the standby trust fund.

- (6) The penal sum of the bond shall be in an amount at least equal to the current post-closure care cost estimate.
  - (7) Whenever the current post-closure care cost estimate increases to an amount greater than the penal sum of the bond, the owner or operator shall, not later than sixty days after the increase in the estimate, either cause the penal sum of the bond to be increased to an amount at least equal to the current post-closure care cost estimate and submit evidence of such increase to the director, and into the operating record, if applicable, or obtain alternate financial assurance, as specified in this rule, to compensate for the increase. Whenever the current post-closure care cost estimate decreases, the penal sum may be reduced to the amount of the current post-closure care cost estimate following written approval by the director. Notice of an increase or a proposed decrease in the penal sum shall be sent to the director by certified mail or any other form of mail accompanied by a receipt not later than sixty days after the change.
  - (8) Under the terms of the bond, the bond shall remain in force unless the surety sends written notice of cancellation by certified mail or any other form of mail accompanied by a receipt to the owner or operator and to the director. Cancellation cannot occur, however, during the one hundred twenty day period beginning on the first day that both the owner or operator and the director have received the notice of cancellation as evidenced by the return receipts.
  - (9) The owner or operator may cancel the bond if the director has given prior written consent. The director will provide such written consent to the surety bond company when one of the following occurs:

    - (a) The owner or operator substitutes alternate financial assurance for post-closure care as specified in this rule.
    - (b) The director notifies the owner or operator, in accordance with paragraph (O) of this rule that the owner or operator is no longer required by this rule to maintain financial assurance for post-closure care of the facility.
  - (10) The surety shall not be liable for deficiencies in the completion of post-closure care activities by the owner or operator after the owner or operator has been notified by the director, in accordance with this rule, that the owner or operator is no longer required to maintain financial assurance for post-closure care of the facility.
- (I) Post-closure care letter of credit.

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- (1) The owner or operator may satisfy the requirements of this rule by obtaining an irrevocable standby letter of credit ("letter of credit") which conforms to the requirements of this paragraph and by having the originally signed letter of credit delivered to the director by certified mail or any other form of mail accompanied by a receipt within the time period outlined in paragraph (B) of this rule and by submitting a copy of the letter of credit into the operating record of the facility, if applicable. 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 3745-503-20 of the Administrative Code on forms prescribed by the director.
- (3) An owner or operator who uses a letter of credit to satisfy the requirements of this rule 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 shall be deposited promptly and directly by the issuing institution 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 (F) of this rule, except that:

  - (a) An originally signed duplicate of the trust agreement shall be delivered to the director with the letter of credit, and a copy of the letter placed in the operating record, if applicable.
  - (b) Unless the standby trust fund is funded pursuant to the requirements of this rule, the following are not required:

    - (i) Payments into the trust fund as specified in paragraph (F) of this rule.
    - (ii) Updating of "Schedule A" of the trust agreement to show current post-closure care cost estimate.
    - (iii) Annual valuations as required by the trust agreement.
    - (iv) Notices of 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 following information: the names and addresses of the solid waste facility or industrial facility and the owner and the operator 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

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automatically extended for a period of at least one year unless, at least one hundred twenty days prior to the current expiration date, the issuing institution notifies both the owner and operator and the director by certified mail or any other form of mail accompanied by a receipt of a decision not to extend the expiration date. Under the terms of the letter of credit, the one hundred twenty day period shall begin on the day 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 care cost estimate, except as provided in paragraph (M) of this rule.
- (7) Whenever the current post-closure care cost estimate increases to an amount greater than the amount of the credit, the owner or operator shall, not later than sixty days after this increase, either cause the amount of the credit to be increased to an amount at least equal to the current post-closure care cost estimate and submit evidence of such increase to the director, and into the operating record, if applicable, or obtain alternate financial assurance, as specified in this rule, to compensate for the increase. Whenever the current post-closure care cost estimate decreases, the letter of credit may be reduced to the amount of the current post-closure care cost estimate following written approval by the director. Notice of an increase or a proposed decrease in the amount of the letter of credit shall be sent to the director by certified mail or any other form of mail accompanied by a receipt not later than sixty days after the change.
- (8) Under the terms of the letter of credit, the director may draw on the letter of credit following a determination that the owner or operator has failed to:

  - (a) Perform post-closure care activities in accordance with the closure or post-closure care plan, permit requirements, and applicable rules.
  - (b) Provide alternate financial assurance as specified in this rule and obtain written approval of such alternate financial assurance from the director not later than ninety days after the owner or operator and the director have received notice from the issuing institution that it will not extend the letter of credit beyond the current expiration date, the director shall 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 final thirty days of any such extension the director shall draw on the letter of credit if the owner or operator has failed to provide alternate financial assurance as specified in this rule and has failed to obtain written approval of such alternate financial assurance from the director.
- (9) The director shall return the original letter of credit to the issuing institution for termination when either of the following occur:

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(a) The owner or operator substitutes alternate financial assurance for post-closure care as specified in this rule.

(b) The director notifies the owner or operator, in accordance with paragraph (O) of this rule that the owner or operator is no longer required to maintain financial assurance for post-closure care of the facility.

(J) Post-closure care insurance.

(1) The owner or operator may satisfy the requirements of this rule by obtaining post-closure care insurance which conforms to the requirements of this paragraph and by submitting a originally certificate of such insurance to the director by certified mail or any other form of mail accompanied by a receipt within the time period outlined in paragraph (B) of this rule, and by submitting a copy of the certificate of insurance into the operating record of the facility, if applicable. 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 3745-503-20 of the Administrative Code on forms prescribed by the director.

(3) The post-closure care insurance policy shall be issued for a face amount at least equal to the current post-closure care cost estimate except as provided in paragraph (M) of this rule. 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 care insurance policy shall guarantee that funds will be available to perform post-closure care whenever mandated. The policy 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) Reimbursement for post-closure care.

After beginning post-closure care, the owner or operator, or any other person authorized by the owner, operator, or director to perform post-closure care, may request reimbursement for post-closure care expenditures by submitting itemized bills to the director. After receiving itemized bills for post-closure care activities, the director shall determine whether the post-closure care expenditures are in accordance with the closure or post-closure plan, applicable rules, the permit, and/or are otherwise justified, and if so, shall instruct the

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insurer to make reimbursement in such amounts as the director specifies in writing. If the director has reason to believe that the cost of post-closure care will be greater than the face amount of the policy, the director may withhold reimbursement of such amounts as deemed prudent until the director determines, in accordance with paragraph (O) of this rule, that the owner or operator is no longer required to maintain financial assurance for post-closure care of the facility.

- (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 (J)(8) of this rule. Failure to pay the premium, without substitution of alternate financial assurance as specified in this rule, will constitute a violation of these rules, warranting such remedy as the director deems necessary. Such violation shall 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 shall, at a minimum, 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 or any other form of mail accompanied by a receipt to the owner or operator and to the director. Cancellation, termination, or failure to renew may not occur, and the policy will remain in full force and effect unless on or before the date of expiration:

  - (a) Post-closure care activities required in the closure or post-closure care plan, permit requirements, and applicable rules have occurred.
  - (b) Post-closure care of the facility is ordered by the director or a court of competent jurisdiction.
  - (c) The owner or operator is named as debtor in a voluntary or involuntary proceeding under title 11 (bankruptcy), U.S. Code as described in rule 3745-500-03 of the Administrative Code..
  - (d) The premium due is paid.
- (9) Whenever the current post-closure care cost estimate increases to an amount greater than the face amount of the policy, the owner or operator shall, not later than sixty days after the increase, either cause the face amount to be increased to

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an amount at least equal to the current post-closure care cost estimate and submit evidence of such increase to the director, and into the operating record, if applicable, or obtain alternate financial assurance as specified in this rule to compensate for the increase. Whenever the current post-closure care cost estimate decreases, the face amount may be reduced to the amount of the current post-closure care cost estimate following written approval by the director.

(10) The director will give written consent to the owner or operator that owner or operator may terminate the insurance policy when either of the following occurs:

(a) The owner or operator substitutes alternate financial assurance for post-closure care as specified in this rule.

(b) The director notifies the owner or operator, in accordance with paragraph (O) of this rule that owner or operator is no longer required to maintain financial assurance for post-closure care of the facility.

(K) Financial test and corporate guarantee for post-closure care.

(1) The owner or operator may satisfy the requirements of this rule by demonstrating that the owner or operator passes a financial test as specified in this paragraph. The owner or operator who uses this test shall be operating for a minimum of five years. To pass this test the owner or operator shall demonstrate that less than fifty per cent of the parent corporation's gross revenues are derived from solid waste disposal, solid waste transfer facility operations, industrial facility or scrap tire transporter operations, or if there is no parent corporation, the owner or operator shall demonstrate that less than fifty per cent of its gross revenues are derived from a solid waste facility, solid waste transfer facility, industrial facility or scrap tire transporter operations and either:

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

(i) Satisfaction of at least two of the following 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 minus ten million dollars to total liabilities greater than 0.1; 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 current post-closure cost estimates, scrap tire transporter closure cost estimates, any ground water corrective actions cost estimates, and any other obligations assured by a financial test.

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

(iv) Assets in the United States amounting to at least ninety per cent of total assets or at least six times the sum of the current closure and current post-closure care cost estimates, scrap tire transporter closure cost estimates, any current ground water corrective actions cost estimates, and any other obligations assured by a financial test.

(b) The owner or operator shall have:

(i) Issued a corporate bond for which the owner or operator, as the issuing entity, has not received a current rating of less than BBB as issued by "Standard and Poor's" or Baa as issued by "Moody's." Owners or operators using bonds that are secured by collateral or a guarantee must meet the minimum rating without that security.

(ii) Tangible net worth at least six times the sum of the current closure and current post-closure care cost estimates, scrap tire transporter closure cost estimates, any ground water corrective actions cost estimates, and any other obligations assured by a financial test.

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

(iv) Assets in the United States amounting to at least ninety per cent of total assets or at least six times the sum of the current closure and current post-closure care cost estimates, scrap tire transporter closure cost estimates, any current ground water corrective actions cost estimates, and any other obligations assured by a financial test.

(2) Current closure and current post-closure care cost estimates, scrap tire transporter closure cost estimates, current ground water corrective actions cost estimates, and any other obligations assured by a financial test as used in paragraph (K)(1) of this rule refers to the cost estimates required to be shown in the letter from the owner's or operator's chief financial officer.

(3) To demonstrate that requirements of this test are met, the owner or operator shall submit the following items to the director, and into the operating record, if applicable:

(a) A letter signed by the owner's or operator's chief financial officer and worded as specified in paragraph (F) of rule 3745-503-20 of the Administrative Code on forms prescribed by the director.

(b) A copy of a report by an independent certified public accountant examining the owner's or the operator's financial statements for the most recently completed fiscal year.

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- (c) A special report from the owner's or the operator's independent certified public accountant, in the form of an agreed-upon procedures report, to the owner or operator stating that:
- (i) The public 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 most recent fiscal year with the amounts in such financial statements.
  - (ii) In connection with the agreed-upon procedures report, the public accountant states that the public accountant agrees the specified data is accurate.
- (4) After the initial submission of the items specified in paragraph (K)(3) of this rule, the owner or operator shall send updated information to the director, and submit updated information into the operating record, if applicable, not later than ninety days after the close of each succeeding fiscal year. This information shall include all three items specified in paragraph (K)(3) of this rule.
- (5) If the owner or operator no longer meets the requirements of paragraph (K)(1) of this rule, notice shall be sent to the director of the intent to establish alternate financial assurance as specified in this rule. The notice must be sent by certified mail or any other form of mail accompanied by a receipt not later than 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. A copy of the notice shall also be placed in the operating record, if applicable. The owner or operator shall provide alternate financial assurance not later than one hundred twenty days after the end of such fiscal year.
- (6) The director may, based on a reasonable belief that the owner or operator no longer meets the requirements of paragraph (K)(1) of this rule, require reports of financial condition at any time from the owner or operator in addition to those specified in paragraph (K)(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 (K)(1) of this rule, the owner or operator shall provide alternate financial assurance as specified in this rule not later than thirty days after notification of such a finding.
- (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 the report on examination of the owner's or operator's financial statements. An adverse opinion or disclaimer of opinion will be cause for disallowance. The director shall evaluate other qualifications on an individual basis. The owner or operator shall provide alternate financial assurance as specified in this rule not later than thirty days after notification of the disallowance.

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- (8) The owner or operator is no longer required to submit the items specified in paragraph (K)(3) of this rule when either of the following occur:
- (a) The owner or operator substitutes alternate financial assurance for post-closure care as specified in this rule.
  - (b) The director notifies the owner or operator, in accordance with paragraph (O) of this rule that the owner or operator is no longer required to maintain financial assurance for post-closure care of the facility.
- (9) The owner or operator may meet the requirements of this rule by obtaining a written guarantee, hereafter referred to as a corporate guarantee. The guarantor shall be the parent corporation of the owner or operator. The guarantor shall meet the requirements for an owner or operator in paragraphs (K)(1) to (K)(7) of this rule and shall comply with the terms of the corporate guarantee. The wording of the corporate guarantee shall be identical to the wording specified in paragraph (G) of rule 3745-503-20 of the Administrative Code on forms prescribed by the director. The corporate guarantee shall accompany the items sent to the director as specified in paragraph (K)(3) of this rule. The terms of the corporate guarantee shall provide that:
- (a) The owner or operator shall perform post-closure care of a facility provided for by the corporate guarantee in accordance with the closure or post-closure care plan, permit requirements, and applicable rules.
  - (b) The guarantor shall perform the activities in paragraph (K)(9)(a) of this rule or shall establish a trust fund in the name of the owner or operator as specified in paragraph (F) of this rule if the owner or operator fails to perform those activities.
  - (c) The corporate guarantee shall remain in force unless the guarantor sends notice of cancellation by certified mail or any other form of mail accompanied by a receipt to the owner or operator and to the director. Cancellation may not occur, however, during the one hundred twenty day period beginning on the first day that both the owner or operator and the director have received notice of cancellation, as evidenced by the return receipts.
  - (d) If the owner or operator fails to provide alternate financial assurance as specified in this rule, and fails to obtain the written approval of such alternate financial assurance from the director not later than ninety days after both the owner or operator and the director have received notice of cancellation of the corporate guarantee from the guarantor, the guarantor shall provide such alternate financial assurance in the name of the owner or operator.

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(L) Local government financial test for post-closure care.

- (1) For the purposes of this rule, local government means a subdivision of the state of Ohio including, but not limited to, a municipal corporation, a county, a township, a single or joint county solid waste management district, or a solid waste management authority.
- (2) A local government may satisfy the requirements of this rule by demonstrating that the local government passes a financial test as specified in this paragraph. This test consists of a financial component, a public notice component, and a record-keeping and reporting component. In order to satisfy the financial component of the test, a local government must meet the following criteria:
  - (a) A local government's financial statements shall be prepared in accordance with "Generally Accepted Accounting Principles" for local governments.
  - (b) A local government must not have operated at a deficit equal to five per cent or more of total annual revenue in either of the past two fiscal years.
  - (c) A local government must not currently be in default on any outstanding general obligation bonds.
  - (d) A local government must not have any outstanding general obligation bonds rated lower than BBB as issued by "Standard and Poor's" or Baa as issued by "Moody's." Local governments using bonds that are secured by collateral or a guarantee must meet the minimum rating without that security.
- (3) In addition, to satisfy the financial component of the test, a local government must meet either of the following criteria:
  - (a) The local government must have the following:
    - (i) A ratio of cash plus marketable securities to total expenditures greater than or equal to 0.05.
    - (ii) A ratio of annual debt service to total expenditures less than or equal to 0.20.
    - (iii) A ratio of long term debt issued and outstanding to capital expenditures less than or equal to 2.00.
    - (iv) A ratio of the current cost estimates for closure, post-closure care, ground water corrective actions, scrap tire transporter closure, and any other obligations assured by a financial test, to total revenue less than or equal to 0.43.

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(b) The local government shall have:

(i) Outstanding general obligation bonds for which the local government, as the issuing entity, has not received a current rating of less than BBB as issued by "Standard and Poor's" or Baa as issued by "Moody's." Local governments using bonds that are secured by collateral or a guarantee must meet the minimum rating without that security.

(ii) A ratio of the current cost estimates for closure, post-closure care, ground water corrective actions, scrap tire transporter closure, and any other obligations assured by a financial test, to total revenue less than or equal to 0.43.

(4) In order to satisfy the public notice component of the test, a local government must in each year the test is used, identify the current cost estimates in either its budget or its comprehensive annual financial report. The facility covered, the categories of expenditures, including closure, post-closure care, ground water corrective actions, scrap tire transporter closure, the corresponding cost estimate for each expenditure, and the anticipated year of the required activity must be recorded. If the financial assurance obligation is to be included in the budget, it should either be listed as an approved budgeted line item, if the obligation will arise during the budget period, or in an appropriate supplementary data section, if the obligation will not arise during the budget period. If the information is to be included in the comprehensive annual financial report, it is to be included in the financial section as a footnote to the annual financial statements.

(5) To demonstrate that a local government meets the requirements of this test, the following three items must be submitted to the director, and into the operating record, if applicable:

(a) A letter signed by the local government's chief financial officer and worded as specified in paragraph (H) of rule 3745-503-20 of the Administrative Code on forms prescribed by the director that:

(i) Lists all the current cost estimates covered by a financial test.

(ii) Certifies that the local government meets the conditions of paragraph (L)(2) of this rule.

(iii) Provides evidence and certifies that the local government meets the conditions of either paragraph (L)(3)(a) or (L)(3)(b) of this rule.

(b) A copy of the local government's independently audited year-end financial statements for the latest fiscal year, including the unqualified opinion of the

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auditor. The auditor must be an independent, certified public accountant or auditor of state.

(c) A special report from the independent certified public accountant or auditor of state, in the form of an agreed-upon procedures report, to the local government stating that:

(i) The certified public accountant or auditor of state 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 most recent fiscal year with the amounts in such financial statements.

(ii) In connection with the agreed-upon procedures report, the public accountant states that the public accountant agrees the specified data is accurate.

(6) After the initial submission of the items specified in this rule, a local government shall send updated information to the director on forms prescribed by the director, and submit updated information into the operating record, if applicable, not later than one hundred eighty days after the close of each succeeding fiscal year. This information shall include all items specified in this rule.

(7) If a local government no longer meets the requirements of this rule, notice shall be sent to the director of the intent to establish alternate financial assurance as specified in this rule. The notice must be sent by certified mail or any other form of mail accompanied by a receipt not later than one hundred fifty days after the end of the fiscal year for which the year-end financial data show that the local government no longer meets the requirements. A copy of the notice shall also be placed in the operating record, if applicable. The local government shall provide alternate financial assurance not later than one hundred eighty days after the end of such fiscal year.

(8) The director may, based on a reasonable belief that the local government no longer meets the requirements of this rule, require reports of financial condition at any time from the local government in addition to those specified in this rule. If the director finds, on the basis of such reports or other information, that the local government no longer meets the requirements of this rule, the local government shall provide alternate financial assurance as specified in this rule not later than thirty days after notification of such a finding.

(9) The director may disallow use of this test on the basis of qualifications in the opinion expressed by the independent certified public accountant or auditor of state in the report on examination of the local government's financial statements. An adverse opinion or disclaimer of opinion will be cause for disallowance. The director shall evaluate other qualifications on an individual basis. The local

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government shall provide alternate financial assurance as specified in this rule not later than thirty days after notification of the disallowance.

(10) The local government is no longer required to submit the items specified in this rule when one of the following occur:

(a) The local government substitutes alternate financial assurance for post-closure care as specified in this rule.

(b) The director notifies the local government, in accordance with paragraph (O) of this rule, that the local government is no longer required to maintain financial assurance for post-closure care of the facility.

(M) Use of multiple financial assurance mechanisms.

The owner or operator may satisfy the requirements of this rule by establishing more than one financial assurance mechanism for each facility. These mechanisms are limited to a trust fund, surety bond guaranteeing payment into a post-closure care trust fund, letter of credit, insurance, and the local government financial test. The mechanisms shall be as specified in paragraphs (F), (G), (I), (J), and (L) respectively of this rule, except that it is the combination of mechanisms, rather than each single mechanism, which shall provide financial assurance for an amount at least equal to the current post-closure care 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 invoke use of any or all of the mechanisms, in accordance with paragraphs (F), (G), (I), (J), and (L) of this rule, to provide for post-closure care of the facility.

(N) Use of a financial assurance mechanism for multiple facilities.

The 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 name, address, and the amount of funds for post-closure care assured by the financial assurance mechanism. The amount of funds available through the financial assurance mechanism shall be no less than the sum of the funds that would be available if a separate financial assurance mechanism had been established and maintained for each facility.

(O) Release of the owner or operator of a solid waste facility or industrial facility from the requirements of this rule.

The director shall notify the owner or operator in writing that the owner or operator is no longer required, by this rule, to maintain financial assurance for post-closure care of a particular facility, unless the director has reason to believe that post-closure

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care has not been completed in accordance with the requirements the closure or post-closure plan after receiving certifications from the owner or operator and an independent professional(s) skilled in the appropriate discipline(s) that post-closure care has been completed in accordance with the closure or post-closure care plan, permit requirements, and applicable rules.

[Comment: The notice releases the owner or operator only from the requirements for financial assurance for post-closure care of the facility; it does not release the owner or operator from legal responsibility for meeting the closure standards or ground water corrective actions, if applicable.]

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3745-503-20      Wording of financial assurance instruments.

For the purposes of this rule, "facility" means a facility that accepts "solid waste" or an "industrial facility" as those terms are defined in rule 3745-500-01 of the Administrative Code.

(A)

(1) A trust agreement for a trust fund as specified in paragraph (F) of rules 3745-503-05, 3745-503-10, and/or paragraph (G) of rule 3745-503-15 of the Administrative Code, must be worded as follows on forms prescribed by the director, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

"Trust agreement"

Trust agreement. The "agreement," entered into as of [date] by and between [name of the owner or operator], a [state] [corporation, partnership, association, proprietorship], the "grantor," and [name of corporate trustee], ["incorporated in the state of \_\_\_\_\_" or "a national bank"], the "trustee."

Whereas, the Ohio Environmental Protection Agency, ("Ohio EPA"), has established certain rules applicable to the grantor, requiring that the owner or operator of a facility or a scrap tire transporter provide assurance that funds will be available when needed for closure, post-closure care, and/or, corrective actions at the facility, or for scrap tire transporter closure.

Whereas, the grantor has elected to establish a trust to provide all or part of such financial assurance for the facilities identified herein.

Whereas, the grantor, acting through its duly authorized officers, has selected the trustee to be the trustee under this agreement, and the trustee is willing to act as trustee.

Now, therefore, the grantor and the trustee agree as follows:

Section 1. Definitions. As used in this agreement:

(a) The term "grantor" means the owner or operator who enters into this agreement and any successors or assigns of the grantor.

(b) The term "trustee" means the trustee who enters into this agreement and any successor trustee.

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(c) The term "director" means the director of environmental protection or a representative delegated by the director to act on the director's behalf.

Section 2. Identification of facilities and cost estimates. This agreement pertains to a solid waste facility and/or a scrap tire transporter and cost estimates identified on attached schedule A [on schedule A, for each facility and scrap tire transporter list the name, address, and the current closure, post-closure care, scrap tire transporter closure, and/or corrective actions cost estimates, or portions thereof, for which financial assurance is demonstrated by this agreement].

Section 3. Establishment of fund. The grantor and the trustee hereby establish a trust fund, the "fund," for the benefit of the Ohio EPA. The grantor and the trustee intend that no third party have access to the fund except as herein provided. The fund is established initially as consisting of the property, which is acceptable to the trustee, described in schedule B attached hereto. Such property and any other property subsequently transferred to the trustee is referred to as the fund, together with all earnings and profits thereon, less any payments or distributions made by the trustee pursuant to this agreement. The fund will be held by the trustee, in trust, as hereinafter provided. The trustee shall not be responsible nor shall it undertake any responsibility for the amount or adequacy of, nor any duty to collect from the grantor, any payments necessary to discharge any liabilities of the grantor established by the Ohio EPA.

Section 4. Payment for closure and post-closure care, scrap tire transporter closure, and corrective actions. The trustee will make such payments from the fund as the director will direct, in writing, to provide for the payment of the costs of closure, post-closure care, and/or corrective actions at the facility or scrap tire transporter closure covered by this agreement. The trustee will reimburse the grantor or other persons as specified by the director from the fund for closure, post-closure care, scrap tire transporter closure, and/or corrective actions expenditures in such amounts as the director will direct, in writing. In addition, the trustee will refund to the grantor such amounts as the director specifies in writing. Upon refund, such funds will no longer constitute part of the fund as defined herein.

Section 5. Payments comprising the fund. Payments made to the trustee for the fund will consist of cash or securities acceptable to the trustee.

Section 6. Trustee management. The trustee will invest and reinvest the principal and income of the fund and keep the fund invested as a single fund, without distinction between principal and income, in accordance with general investment policies and guidelines which the grantor may communicate in writing to the trustee periodically, subject, however, to the provisions of this section. In investing, reinvesting, exchanging, selling, and managing the fund, the trustee will discharge the duties with respect to the trust fund solely in the

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interest of the beneficiary and with the care, skill, prudence, and diligence under the circumstances then prevailing which persons of prudence, acting in a like capacity and familiar with such matters, would use in the conduct of an enterprise of a like character and with like aims; except that:

(a) Securities or other obligations of the grantor, or any other owner or operator of the facilities or scrap tire transporter, or any of their affiliates as defined in the Investment Company Act of 1940, as amended, 15 U.S.C. section 80a-2(a), will not be acquired or held, unless they are securities or other obligations of the federal or a state government;

(b) The trustee is authorized to invest the fund in time or demand deposits of the trustee, to the extent insured by an agency of the federal or state government;

(c) The trustee is authorized to hold cash awaiting investment or distribution uninvested for a reasonable time and without liability for the payment of interest thereon.

Section 7. Commingling and investment. The trustee is expressly authorized in its discretion:

(a) To transfer periodically any or all of the assets of the fund to any common, commingled, or collective trust fund created by the trustee in which the fund is eligible to participate, subject to all of the provisions thereof, to be commingled with the assets of other trusts participating therein;

(b) To purchase shares in any investment company registered under the Investment Company Act of 1940, 15 U.S.C. sections 80a-1 et seq., including one which may be created, managed, underwritten, or to which investment advice is rendered or the shares of which are sold by the trustee. The trustee may vote such shares in its discretion.

Section 8. Express powers of trustee. Without in any way limiting the powers and discretion conferred upon the trustee by the other provisions of this agreement or by law, the trustee is expressly authorized and empowered:

(a) To sell, exchange, convey, transfer, or otherwise dispose of any property held by it, by public or private sale. No person dealing with the trustee will be bound to see to the application of the purchase money or to inquire into the validity or expediency of any such sale or other disposition;

(b) To make, execute, acknowledge, and deliver any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted;

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(c) To register any securities held in the fund in its own name or in the name of a nominee and to hold any security in bearer form or in book entry, or to combine certificates representing such securities with certificates of the same issue held by the trustee in other fiduciary capacities, or to deposit or arrange for the deposit of such securities in a qualified central depository even though, when so deposited, such securities may be merged and held in bulk in the name of the nominee of such depository with other securities deposited therein by another person, or to deposit or arrange for the deposit of any securities issued by the United States government, or any agency or instrumentality thereof, with a Federal Reserve Bank, but the books and records of the trustee will at all times show that all such securities are part of the fund;

(d) To deposit any cash in the fund in interest-bearing accounts maintained or savings certificates issued by the trustee, in its separate corporate capacity, or in any other banking institution affiliated with the trustee, to the extent insured by an agency of the federal or state government;

(e) To compromise or otherwise adjust all claims in favor of or against the fund.

Section 9. Taxes and expenses. All taxes of any kind that may be assessed or levied against or in respect of the fund and all brokerage commissions incurred by the fund will be paid from the fund. All other expenses, proper charges, and disbursements, incurred by the trustee in connection with the administration of this trust, including fees for legal services rendered to the trustee, the compensation of the trustee to the extent not paid directly by the grantor, and all other proper charges and disbursements of the trustee will be paid from the fund. Expenses, proper charges, and disbursements include fees for legal services, rendered to the trustee and the compensation of the trustee to the extent the grantor fails to compensate the trustee pursuant to section 12.

Section 10. Annual valuation. The trustee will annually, not later than thirty days prior to the anniversary date of the establishment of the fund, furnish to the grantor and to the director a statement confirming the value of the trust. Any securities in the fund will be valued at market value as of no more than sixty days prior to the anniversary date of establishment of the fund. The failure of the grantor to object in writing to the trustee not later than ninety days after the statement has been furnished to the grantor and the director will constitute a conclusively binding assent by the grantor, barring the grantor from asserting any claim or liability against the trustee with respect to matters disclosed in the statement.

Section 11. Advice of counsel. The trustee may periodically consult with counsel, who may be counsel to the grantor, with respect to any question arising as to the construction of this agreement or any action to be taken hereunder. The trustee will be fully protected, to the extent permitted by law, in acting upon the advice of counsel.

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Section 12. Trustee compensation. The trustee will be entitled to reasonable compensation from the grantor for the trustee's services as agreed upon in writing periodically with the grantor.

Section 13. Successor trustee. The trustee may resign or the grantor may replace the trustee, but such resignation or replacement shall not be effective until the grantor has appointed a successor trustee and this successor accepts the appointment. The successor trustee will have the same powers and duties as those conferred upon the trustee hereunder. Upon the successor trustee's acceptance of the appointment, the trustee will assign, transfer, and pay over to the successor trustee the funds and properties then constituting the fund. If for any reason the grantor cannot or does not act in the event of the resignation of the trustee, the trustee may apply to a court of competent jurisdiction for the appointment of a successor trustee or for instructions. The successor trustee shall specify the date on which it assumes administration of the trust in a writing sent to the grantor, the director, and the present trustee by certified mail not later than ten days before such change becomes effective. Any expenses incurred by the trustee as a result of any of the acts contemplated by this section will be paid as provided in section 9.

Section 14. Instructions to the trustee. All orders, requests, and instructions by the grantor to the trustee will be in writing, signed by such persons as are designated in the attached Exhibit A or such other designees as the grantor may designate by amendment to Exhibit A. The trustee will be fully protected in acting without inquiry in accordance with the grantor's orders, requests, and instructions. All orders, requests, and instructions by the director to the trustee will be in writing, signed by the director, and the trustee will act and will be fully protected in acting in accordance with such orders, requests, and instructions. The trustee will have the right to assume, in the absence of written notice to the contrary, that no event constituting a change or a termination of the authority of any person to act on behalf of the grantor or the director hereunder has occurred. The trustee will have no duty to act in the absence of such orders, requests, and instructions from the grantor and/or the director except as provided for herein.

Section 15. Notice of nonpayment. The trustee will notify the grantor and the director by certified mail not later than ten days after the expiration of the thirty-day period following the anniversary of the establishment of the trust, if no payment is received from the grantor during the period. After the pay-in period is completed, the trustee is not required to send a notice of nonpayment.

Section 16. Amendment of agreement. This agreement may be amended by an instrument in writing executed by the grantor, the trustee, and the director, or by the trustee and the director if the grantor ceases to exist.

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Section 17. Irrevocability and termination. Subject to the right of the parties to amend this agreement as provided in section 16, this trust will be irrevocable and will continue until termination at the written agreement of the grantor, the trustee, and the director, or by the trustee and the director if the grantor ceases to exist. Upon termination of the trust, all remaining trust property, less final trust administration expenses, will be delivered to the grantor, unless the trust is a standby trust fund created in accordance with paragraph (G), (H), or (I) of rule 3745-503-05, 3745-503-10, or paragraph (H), (I), or (J) of 3745-503-15 of the Administrative Code, in which case all remaining trust property, less final trust administration expenses, will be delivered to the provider of the financial assurance.

Section 18. Immunity and indemnification. The trustee will not incur personal liability of any nature in connection with any act or omission, made in good faith, in the administration of this trust, or in carrying out any directions by the grantor or the director issued in accordance with this agreement. The trustee will be indemnified and saved harmless by the grantor or from the trust fund, or both, from and against any personal liability to which the trustee may be subjected by reason of any act or conduct in its official capacity, including all expenses reasonably incurred in its defense in the event the grantor fails to provide such defense.

Section 19. Choice of law. This agreement will be administered, construed, and enforced according to the laws of the state of Ohio.

Section 20. Interpretation. As used in this agreement, words in the singular include the plural and words in the plural include the singular. The descriptive headings for each section of this agreement will not affect the interpretation or the legal efficacy of this agreement.

In witness whereof the parties have caused this agreement to be executed by their respective officers duly authorized and their corporate seals to be hereunto affixed and attested as of the date first above written: the parties below certify that the wording of this agreement is identical to the wording specified in paragraph (A)(1) of rule 3745-503-20 of the Administrative Code as such rule was constituted on the date first above written.

[Signature of grantor]

[Title]

Attest:

[Title]

[Seal]

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[Signature of trustee]

Attest:

[Title]

[Seal]"

(2) The following is an example of the certification of acknowledgment, which must accompany the trust agreement for a trust fund as specified in paragraph (F) of rules 3745-503-05, 3745-503-10, and/or in paragraph (G) of rule 3745-503-15 of the Administrative Code:

"State of \_\_\_\_\_

County of \_\_\_\_\_

On this [date], before me personally came [owner or operator] to me known, who, being by me duly sworn, did depose and say that she/he resides at [address], that she/he is [title] of [corporation], and the corporation described in and which executed the above instrument; that she/he knows the seal of said corporation; that the seal affixed to such instrument is such corporate seal; that it was so affixed by order of the board of directors of said corporation, and that she/he signed her/his name thereto by like order.

[Signature of notary public]"

[Comment: As required in paragraph (F)(2) of rules 3745-503-05, 3745-503-10, or paragraph (G)(2) of rule 3745-503-15 of the Administrative Code, the trust agreement must be accompanied by a formal certification of acknowledgment. The previous paragraph is only an example.]

(B) A surety bond guaranteeing payment into a trust fund, as specified in paragraph (G) of rules 3745-503-05, 3745-503-10, and/or in paragraph (H) of rule 3745-503-15 of the Administrative Code, must be worded as follows on forms prescribed by the director, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

"Financial guarantee bond

Date bond executed: \_\_\_\_\_

Effective date: \_\_\_\_\_

Principal: [legal name and business address of owner or operator]

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Type of organization: [insert "individual," "joint venture," "partnership," or "corporation"]

State of incorporation: \_\_\_\_\_

Surety(ies): [name(s) and business address(es)]

Name, address, and closure, post-closure care, scrap tire transporter closure, and/or corrective actions amount(s) for each facility or scrap tire transporter guaranteed by this bond [indicate closure, post-closure care, scrap tire transporter closure, and/or corrective actions amounts separately]:

\$ \_\_\_\_\_

Total penal sum of bond: \$ \_\_\_\_\_

Surety's bond number: \_\_\_\_\_

Know all persons by these presents, that we, the principal and surety(ies) hereto are firmly bound to the Ohio Environmental Protection Agency ("Ohio EPA"), in the above penal sum for the payment of which we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally; provided that, where the surety(ies) are corporations acting as co-sureties, we, the sureties, bind ourselves in such sum "jointly and severally" only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each surety binds itself, jointly and severally with the principal, for the payment of such sum only as is set forth opposite the name of such surety, but if no limit of liability is indicated, the limit of liability shall be the full amount of the penal sum.

Whereas, said principal is required to have an Ohio EPA permit(s) or registration, in order to operate each facility identified above, or a scrap tire transporter registration;

Whereas, said principal is required to provide financial assurance for closure, or closure and post-closure care, or post-closure care, or corrective actions of the facility or scrap tire transporter closure as a condition of Chapter 3734. of the Revised Code;

Whereas said principal shall establish a standby trust fund in accordance with rule 3745-503-05, 3745-503-10, or 3745-503-15 of the Administrative Code,

Now, therefore, for a facility, the conditions of the obligation are such that if the principal shall faithfully, before the beginning of closure, post-closure care and/or corrective actions, of each facility identified above, fund the standby trust fund in the amount identified above for the facility,

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Now, therefore, for a scrap tire transporter, the conditions of the obligation are such that if the principal shall faithfully, before the registration certificate expires, fund the standby trust fund in the amount identified above for the scrap tire transporter,

Or, if the principal shall fund the standby trust fund in such an amount not later than fifteen days after an order to begin closure is issued by the director, or an Ohio court, or a U.S. district court, or other court of competent jurisdiction, or not later than fifteen days after a notice of revocation of the facility license or the denial, suspension, or revocation of the registration certificate,

Or, if the principal shall provide alternate financial assurance in accordance with rule 3745-503-05, 3745-503-10, or 3745-503-15 of the Administrative Code, as applicable, and obtain the director's written approval of such alternate financial assurance, not later than ninety days after the first day that notice of cancellation has been received by both the principal and the director from the surety(ies), then this obligation will be null and void; otherwise it is to remain in full force and effect.

The surety(ies) shall become liable on this bond obligation only when the principal has failed to fulfill the conditions described above. Upon notification by the director that the principal has failed to perform as guaranteed by this bond, the surety(ies) shall place funds in the amount guaranteed for the facility and/or scrap tire transporter into the standby trust fund as directed by the director.

The liability of the surety(ies) shall not be discharged by any payment or succession of payments hereunder, unless and until such payment or payments shall amount in the aggregate to the penal sum of the bond, but in no event shall the obligation of the surety(ies) hereunder exceed the amount of said penal sum.

The surety(ies) may cancel the bond by sending notice of cancellation by certified mail or any other form of mail accompanied by a receipt to the principal and to the director, provided, however, that cancellation shall not occur during the one hundred twenty day period beginning on the first day of receipt of the notice of cancellation by both the principal and the director as evidenced by the return receipt(s).

The principal may terminate this bond by sending written notice to the surety(ies) and to the director, provided, however, that no such notice shall become effective until the surety(ies) receive(s) written authorization for termination of the bond by the director.

[The following paragraph is an optional rider that may be included but is not required.]

Principal and surety(ies) hereby agree to adjust the penal sum of the bond annually so that it guarantees a new closure, post-closure care, scrap tire transporter closure, or corrective actions amount, provided that the penal sum does not increase by more

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than twenty per cent in any one year, and no decrease in the penal sum takes place without the written permission of the director.

In witness whereof, the principal and surety(ies) have executed this financial guarantee bond and have affixed their seals on the date set forth above.

The persons whose signatures appear below hereby certify that they are authorized to execute this surety bond on behalf of the principal and surety(ies) and that the wording of this surety bond is identical to the wording specified in paragraph (B) of rule 3745-503-20 of the Administrative Code as such rule was constituted on the date this bond was executed.

Principal

Signature(s): \_\_\_\_\_

Name(s) and title(s) [typed]: \_\_\_\_\_

Corporate seal:

Corporate surety(ies)

Name and address: \_\_\_\_\_

State of incorporation: \_\_\_\_\_

Liability limit: \$ \_\_\_\_\_

Signature(s): \_\_\_\_\_

Name(s) and title(s) [typed]: \_\_\_\_\_

Corporate seal:

[For every co-surety, provide signature(s), corporate seal, and other information in the same manner as for surety above.]

Bond premium: \$ \_\_\_\_\_ "

(C) A surety bond guaranteeing performance of closure, post-closure care, scrap tire transporter closure, or corrective actions, as specified in paragraph (H) of rules 3745-503-05, 3745-503-10, and/or paragraph (I) of rule 3745-503-15 of the Administrative Code, must be worded as follows on forms prescribed by the director, except that instructions in brackets are to be replaced by the relevant information and the brackets deleted:

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"Performance bond

Date bond executed: \_\_\_\_\_

Effective date: \_\_\_\_\_

Principal: [legal name and business address of owner or operator]

Type of organization: [insert "individual," "joint venture," "partnership," or "corporation"]

State of incorporation: \_\_\_\_\_

Surety(ies): [name(s) and business address(es)]

Name, address, and closure, post-closure care, scrap tire transporter closure, and/or corrective actions amount for each facility or scrap tire transporter guaranteed by this bond [indicate closure, post-closure care, scrap tire transporter closure, and corrective actions amounts separately]: \$ \_\_\_\_\_

Total penal sum of bond: \$ \_\_\_\_\_

Surety's bond number: \_\_\_\_\_

Know all persons by these presents, that we, the principal and surety(ies) hereto are firmly bound to the Ohio Environmental Protection Agency ("Ohio EPA"), in the above penal sum for the payment of which we bind ourselves, our heirs, executors, administrators, successors, and assigns jointly and severally; provided that, where the surety(ies) are corporations acting as co-sureties, we, the sureties, bind ourselves in such sum "jointly and severally" only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each surety binds itself, jointly and severally with the principal, for the payment of such sum only as is set forth opposite the name of such surety, but if no limit of liability is indicated, the limit of liability shall be the full amount of the penal sum.

Whereas, said principal is required to have an Ohio EPA permit(s) or registration in order to operate each facility or scrap tire transporter identified above, and

Whereas said principal is required to provide financial assurance for closure, or closure and post-closure care, or post-closure care, or corrective actions as a condition of the permit(s) or registration(s), and

Whereas said principal shall establish a standby trust fund as is required when a surety bond is used to provide such financial assurance;

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Now, therefore, for a facility, the conditions of this obligation are such that if the principal shall faithfully perform closure whenever required to do so, of each facility for which this bond guarantees closure, in accordance with the closure or post-closure care plan, and other requirements of the permit as such plan and permit may be amended, pursuant to all applicable laws, statutes, rules, and regulations, as such laws, statutes, rules, and regulations may be amended.

And, for a facility, if the principal shall faithfully perform post-closure care of each facility for which this bond guarantees post-closure care, in accordance with the closure or post-closure care plan and other requirements of the permit, as such plan and permit may be amended, pursuant to all applicable laws, statutes, rules, and regulations, as such laws, statutes, rules, and regulations may be amended.

And, for a facility, if the principal shall faithfully perform corrective actions at each facility for which this bond guarantees corrective actions in accordance with the corrective actions plan and other requirements of the permit, as such plan and permit may be amended, pursuant to all applicable laws, statutes, rules, and regulations, as such laws, statutes, rules, and regulations may be amended.

Now, for a scrap tire transporter, if the principal shall faithfully perform the activities specified in paragraph (H)(4)(b) of rule 3745-503-05 of the Administrative Code for which this bond guarantees, pursuant to all applicable laws, statutes, rules, and regulations, as such laws, statutes, rules, and regulations may be amended.

Or, if the principal shall provide alternate financial assurance as specified in rules 3745-503-05, 3745-503-10, and/or 3745-503-15 of the Administrative Code and obtain the director's written approval of such alternate financial assurance not later than ninety days after the date notice of cancellation is received by both the principal and the director from surety(ies), then this obligation will be null and void, otherwise it is to remain in full force and effect.

The surety(ies) shall become liable on this bond obligation only when the principal has failed to fulfill the conditions described above.

[The following paragraph is only required for those facilities required to conduct closure activities and should not be included in surety bonds for scrap tire transporters.]

Upon notification by the director that the principal has been found in violation of the closure requirements of [Insert "rule 3745-27-11 of the Administrative Code," if the facility is a municipal solid waste landfill facility or scrap tire monocell facility, "rule 3745-525-730 of the Administrative Code," if the facility is an industrial facility "rule 3745-30-09 of the Administrative Code," if the facility is a residual solid waste landfill facility, "rule 3745-27-23 of the Administrative Code," if the facility is a solid waste transfer facility, "rule 3745-27-47 of the Administrative Code," if the facility is a composting facility, "rule 3745-27-53 of the Administrative

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Code," if the facility is a solid waste incinerator, "rule 3745-27-66 of the Administrative Code," if the facility is a scrap tire storage or recovery facility, or "rule 3745-27-73 of the Administrative Code," if the facility is a scrap tire monofill], for a facility for which this bond guarantees performance of closure, the surety(ies) shall either perform closure in accordance with the closure or post-closure care plan and other permit or registration requirements or place the closure amount guaranteed for the facility into the standby trust fund as directed by the director.

[The following paragraph is only required for sanitary landfill facilities or industrial facilities, because only they are required to conduct post-closure care activities.]

Upon notification by the director that the principal has been found in violation of the post-closure care requirements of rule 3745-27-14, 3745-30-10, 3745-27-74, or 3745-525-750 of the Administrative Code, whichever is applicable, for a facility for which this bond guarantees performance of post-closure care, the surety(ies) shall either perform post-closure care in accordance with the closure or post-closure care plan and other permit requirements or place the post-closure care amount guaranteed for the facility into the standby trust fund as directed by the director.

[The following paragraph is only required for municipal solid waste landfill facilities, because only they are required to conduct corrective actions activities.]

Upon notification by the director that the principal has been found in violation of the corrective actions requirements of Chapter 3745-506 of the Administrative Code, for a facility for which this bond guarantees performance of corrective actions, the surety(ies) shall either perform the corrective actions in accordance with the corrective actions plan and other permit requirements or place the corrective actions amount guaranteed for the facility into the standby trust fund as directed by the director.

[The following paragraph is only required for scrap tire transporters.]

Upon notification by the director that the principal has failed to remove accumulations of scrap tires, delivered by the scrap tire transporter to a location not authorized to receive scrap tires by paragraph (C)(1) of rule 3745-27-56 of the Administrative Code, or failed to remove and properly dispose of any scrap tires which have been open dumped by the scrap tire transporter, or has been found to be in violation of rule 3745-27-79 of the Administrative Code, the surety(ies) shall either perform the required activities in accordance with applicable rules or place the amount guaranteed for the scrap tire transporter into the standby trust fund as directed by the director.

Upon notification by the director that the principal has failed to provide alternate financial assurance as specified in rule 3745-503-05, 3745-503-10, or 3745-503-15 of the Administrative Code and obtain written approval of such alternate financial assurance from the director not later than ninety days after receipt by both the

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principal and the director of a notice of cancellation of the bond, the surety(ies) shall place funds in the amount guaranteed for the facility or scrap tire transporter into the standby trust fund as directed by the director.

The surety(ies) hereby waive(s) notification of amendments to the closure or post-closure care plans, permits, applicable laws, statutes, rules, and regulations and agrees that no such amendment shall in any way alleviate its (their) obligation on this bond.

The liability of the surety(ies) shall not be discharged by any payment or succession of payments hereunder, unless and until such payment or payments shall amount in the aggregate to the penal sum of the bond, but in no event shall the obligation of the surety(ies) hereunder exceed the amount of said penal sum.

The surety(ies) may cancel the bond by sending notice of cancellation by certified mail or any other form of mail accompanied by a receipt to the owner or operator and to the director, provided, however, that cancellation cannot occur during the one hundred twenty day period beginning on the first day of receipt of the notice of cancellation by both the principal and the director as evidenced by the return receipts.

The principal may terminate this bond by sending written notice to the surety(ies) and to the director, provided, however, that no such notice shall become effective until the surety(ies) receive(s) written approval for termination of the bond by the director.

[The following paragraph is an optional rider that may be included but is not required.]

Principal and surety(ies) hereby agree to adjust the penal sum of the bond annually so that it guarantees a new closure, post-closure care, scrap tire transporter closure, or corrective actions amount, provided that the penal sum does not increase by more than twenty per cent in any one year, and no decrease in the penal sum occurs without the written approval of the director.

In witness whereof, the principal and surety(ies) have executed this performance bond and have affixed their seals on the date set forth above.

The persons whose signatures appear below hereby certify that they are authorized to execute this surety bond on behalf of the principal and surety(ies) and that the wording of this surety bond is identical to the wording specified in paragraph (C) of rule 3745-503-20 of the Administrative Code, as such rule was constituted on the date this bond was executed.

Principal

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Signature(s): \_\_\_\_\_

Name(s) and title(s) [typed]: \_\_\_\_\_

Corporate seal: \_\_\_\_\_

Corporate surety(ies)

Name and address: \_\_\_\_\_

State of incorporation: \_\_\_\_\_

Liability limit: \$ \_\_\_\_\_

Signature(s): \_\_\_\_\_

Name(s) and title(s) [typed]: \_\_\_\_\_

Corporate seal:

[For every co-surety, provide signature(s), corporate seal, and other information in the same manner as for surety above.]

Bond premium: \$ \_\_\_\_\_ "

(D) A letter of credit as specified in paragraph (I) of rules 3745-503-05, 3745-503-10, and/or paragraph (J) of rule 3745-503-15 of the Administrative Code must be worded as follows on forms prescribed by the director, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted [note: A letter of credit may also contain provisions used by the issuing institution in its regular course of business, provided that such provisions do not alter the terms and conditions in this paragraph]:

"Irrevocable standby letter of credit

[Director]

Ohio Environmental Protection Agency

Dear sir or madam: We hereby establish our irrevocable standby letter of credit no. \_\_\_\_\_ in your favor, at the request and for the account of [owner's or operator's name and address] up to the aggregate amount of [in words] U.S. dollars (\$ \_\_\_\_\_), available upon presentation of

(1) Your sight draft, bearing reference to this letter of credit no. \_\_\_\_\_, and

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(2) Your signed statement reading as follows: "I certify that the amount of the draft is payable pursuant to regulations issued under the authority of Chapter 3734. of the Revised Code as amended."

This letter of credit is effective as of [date] and will expire on [date of at least one year later], but such expiration date will be automatically extended for a period of [at least one year] on [date] and on each successive expiration date, unless, at least one hundred twenty days prior to the current expiration date, we notify both you and [owner's or operator's name] by certified mail that we have decided not to extend this letter of credit beyond the current expiration date. In the event that you are so notified, any unused portion of the credit will be available upon presentation of your sight draft for one hundred twenty days after the first day of receipt by both you and [owner's or operator's name] as evidenced by the return receipts.

Whenever this letter of credit is drawn under and in compliance with the terms of this credit, we will duly honor such draft upon presentation to us, and we will deposit the amount of the draft directly into the standby trust fund by [owner's or operator's name] in accordance with your instructions.

We certify that the wording of this letter of credit is identical to the wording specified in paragraph (D) of rule 3745-503-20 of the Administrative Code as such rule was constituted on the date shown immediately below.

[Signature(s) and title(s) of official(s) of issuing institution] [date]

This credit is subject to [insert "the most recent edition of the "Uniform Customs and Practice for Documentary Credits," published by the International Chamber of Commerce" or "The Uniform Commercial Code"]."

[Comment: In the event that the owner or operator ceases to exist, any unused portion of the credit will be available for the one hundred twenty day period after the date of receipt by the director, as evidenced by the return receipt.]

(E) A certificate of insurance, as specified in rules 3745-503-05, 3745-503-10, and/or 3745-503-15 of the Administrative Code, must be worded as follows on forms prescribed by the director, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

"Certificate of insurance for closure, post-closure care, corrective actions, or scrap tire transporter closure

Name and address of insurer

(Herein called the "insurer"): \_\_\_\_\_

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Name and address of insured

(Herein called the "insured"): \_\_\_\_\_

Facilities or scrap tire transporters covered: [list for each facility or scrap tire transporter: name, address, county in which the facility or scrap tire transporter is located, and the amount of insurance for closure, post-closure care, scrap tire transporter closure and/or corrective actions (these amounts for all facilities or scrap tire transporters covered must total the face amount shown below).]

Face amount: \$ \_\_\_\_\_

Policy number: \_\_\_\_\_

Effective date: \_\_\_\_\_

The insurer hereby certifies that it has issued to the insured the policy of insurance identified above to provide financial assurance for [insert "closure," "closure and post-closure care," "post-closure care," "corrective actions," or "scrap tire transporter closure"] for the facilities or scrap tire transporters identified above. The insurer further warrants that such policy conforms in all respects with the requirements of paragraph (J) of rules 3745-503-05, 3745-503-10, and/or paragraph (K) of rule 3745-503-05 of the Administrative Code, as applicable as such rules were constituted on the date shown immediately below. It is agreed that any provision of the policy inconsistent with such regulations is hereby amended to eliminate such inconsistency.

Whenever requested by the director of the Ohio Environmental Protection Agency, the insurer agrees to furnish to the director a duplicate original of the policy listed above, including all endorsements thereon.

I hereby certify that the wording of this certificate is identical to the wording specified in paragraph (E) of rule 3745-503-20 of the Administrative Code as such rule was constituted on the date shown immediately below.

[Authorized signature for insurer]

[Name of person signing]

[Title of person signing]

Signature of witness or notary: \_\_\_\_\_

[Date]"

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(F) A letter from the chief financial officer, as specified in paragraph (K) of rules 3745-503-05, 3745-503-10, and/or paragraph (L) of rule 3745-503-15 of the Administrative Code must be worded as follows on forms prescribed by the director, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

"Letter from chief financial officer

[Address to director, Ohio Environmental Protection Agency.]

I am the chief financial officer of [name and address of firm]. This letter is in support of this firm's use of the financial test to demonstrate financial assurance, as specified in Chapter 3745-503 of the Administrative Code.

[Fill out the following three paragraphs regarding facilities or scrap tire transporters and associated cost estimates. If your firm has no facilities or scrap tire transporters that belong in a particular paragraph, write "none" in the space indicated. For each facility or scrap tire transporter, include its name, address, county, and current closure, post-closure care, scrap tire transporter closure, and/or corrective actions cost estimates and any other environmental obligations, if any. Identify each cost estimate as to whether it is for closure, post-closure care, scrap tire transporter closure, or corrective actions.]

(1) This firm is the owner or operator of the following facilities and/or scrap tire transporters for which financial assurance for closure, post-closure care, corrective actions, and/or scrap tire transporter closure is demonstrated through the financial test specified in Chapter 3745-503 of the Administrative Code and/or this firm is the owner or operator of the following facilities for which financial assurance for any other environmental obligations are assured by a financial test. The current closure, post-closure care, scrap tire transporter closure, and/or corrective actions cost estimates, and any other environmental obligations, provided for by a financial test are shown for each facility and/or scrap tire transporter: \$ \_\_\_\_\_.

(2) This firm guarantees, through the corporate guarantee specified in Chapter 3745-503 of the Administrative Code, the closure, post-closure care, or corrective actions of the following facilities permitted by subsidiaries of this firm or closure for scrap tire transporters and/or this firm guarantees, through the corporate guarantee, any other environmental obligations of the following facilities permitted by subsidiaries of this firm. The current cost estimates for the closure, post-closure care, scrap tire transporter closure, and/or corrective actions, and any other environmental obligations, so guaranteed are shown for each facility and/or scrap tire transporter closure: \$ \_\_\_\_\_.

(3) This firm is the owner or operator of the following facilities and/or scrap tire transporters for which financial assurance requirements for closure, scrap tire

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transporter closure, post-closure care, or corrective actions and/or any other environmental obligations are satisfied through a financial test other than that required by Chapter 3745-503 of the Administrative Code. The current closure, post-closure care, scrap tire transporter closure, and/or corrective actions cost estimates, and/or any other environmental obligations covered by such financial assurance are shown for each facility and/or scrap tire transporter:

\$ \_\_\_\_\_.

This firm [insert "is required" or "is not required"] to file a form 10k with the Securities and Exchange Commission (SEC) for the most recent fiscal year.

The fiscal year of this firm ends on [month, day]. The figures for the following items marked with an asterisk are derived from this firm's independently audited, year-end financial statements for the most recently completed fiscal year, ended [date].

[Fill in Alternative I if the criteria of paragraph (K)(1)(a) of rules 3745-503-05, 3745-503-10, and/or paragraph (L)(1)(a) of rule 3745-503-15 of the Administrative Code are used. Fill in Alternative II if the criteria of paragraph (K)(1)(b) of rules 3745-503-05, 3745-503-10, and/or of paragraph (L)(1)(b) of rule 3745-503-05 of the Administrative Code are used.]

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Alternative I

- |            |   |
|------------|---|
| <u>1.</u>  | <u>Sum of current closure, post-closure care, scrap tire transporter closure, and/or corrective actions cost estimates, and any other environmental obligations assured by a financial test (total of all cost estimates shown in the three paragraphs above): \$ _____.</u>                    |
| <u>*2.</u> | <u>Total liabilities [if any portion of the closure, post-closure care, scrap tire transporter closure, and/or corrective actions cost estimate is included in total liabilities, you may deduct the amount of that portion from this line and add that amount to lines 3 and 4]: \$ _____.</u> |
| <u>*3.</u> | <u>Tangible net worth: \$ _____.</u>  |
| <u>*4.</u> | <u>Net worth: \$ _____.</u>   |
| <u>*5.</u> | <u>Current assets: \$ _____.</u>  |
| <u>*6.</u> | <u>Current liabilities: \$ _____.</u>   |
| <u>*7.</u> | <u>Net working capital [line 5 minus line 6]: \$ _____.</u>   |
| <u>*8.</u> | <u>The sum of net income plus depreciation, depletion, and amortization minus \$10 million: \$ _____.</u>   |
| <u>*9.</u> | <u>Total assets in U.S. (required only if less than 90% of firm's assets are located in the U.S.): \$ _____.</u>  |

- 
- |            |   |            |           |
|------------|---|------------|-----------|
| <u>10.</u> | <u>Is line 3 at least \$10 million? . . .</u> | <u>Yes</u> | <u>No</u> |
|------------|---|------------|-----------|

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- |             |   |  |  |
|-------------|---|--|--|
| <u>11.</u>  | <u>Is line 3 at least 6 times line 1? . . .</u>   |  |  |
| <u>12.</u>  | <u>Is line 7 at least 6 times line 1? . . .</u>   |  |  |
| <u>*13.</u> | <u>Are at least 90% of firm's assets located in the U.S.? . . . If not, complete line 14.</u> |  |  |
| <u>14.</u>  | <u>Is line 9 at least 6 times line 1? . . .</u>   |  |  |
| <u>15.</u>  | <u>Is line 2 divided by line 4 less than 2.0? . . .</u>                                       |  |  |
| <u>16.</u>  | <u>Is line 8 divided by line 2 greater than 0.1? . . .</u>                                    |  |  |
| <u>17.</u>  | <u>Is line 5 divided by line 6 greater than 1.5? . . .</u>                                    |  |  |

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Alternative II

- |            |  |
|------------|--|
| <u>1.</u>  | <u>Sum of current closure, post-closure care, scrap tire transporter closure, and/or corrective actions cost estimates, and any other environmental obligations assured by a financial test (total of all cost estimates shown in the three paragraphs above): \$ _____.</u>             |
| <u>2.</u>  | <u>Current bond rating of most recent issuance of this firm and name of rating service: _____.</u>   |
| <u>3.</u>  | <u>Date of issuance of bond: _____.</u>  |
| <u>4.</u>  | <u>Date of maturity of bond: _____.</u>  |
| <u>*5.</u> | <u>Tangible net worth [if any portion of the closure, post-closure care, scrap tire transporter closure, and corrective actions cost estimates is included in total liabilities on your firm's financial statements, you may add the amount of that portion to this line]: \$ _____.</u> |
| <u>*6.</u> | <u>Total assets in U.S. (required only if less than 90% of firm's assets are located in the U.S.): \$ _____.</u>   |

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- |            | <u>Yes</u> | <u>No</u> |
|------------|------------|-----------|
| <u>7.</u>  |            |           |
| <u>8.</u>  |            |           |
| <u>*9.</u> |            |           |
| <u>10.</u> |            |           |

I hereby certify that the wording of this letter is identical to the wording specified in paragraph (F) of rule 3745-503-20 of the Administrative Code as such rule was constituted on the date shown immediately below.

[Signature]

[Name]

[Title]

[Date]"

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(G) A corporate guarantee, as specified in paragraph (K) of rules 3745-503-05, 3745-503-10, and/or paragraph (L) of rule 3745-503-15 of the Administrative Code, must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

"Corporate guarantee for closure, post-closure care, corrective actions, and/or scrap tire transporter closure.

Guarantee made this [date] by [name of guaranteeing entity], a business corporation organized under the laws of the state of [insert name of state], herein referred to as guarantor, to the Ohio Environmental Protection Agency ("Ohio EPA"), obligee on behalf of our subsidiary [owner or operator] of [business address].

Recitals

1. Guarantor meets or exceeds the financial test criteria and agrees to comply with the reporting requirements for guarantors as specified in paragraph (K) of rules 3745-503-05, 3745-503-10, and/or paragraph (L) of rule 3745-503-15 of the Administrative Code.

2. [Owner or operator] responsible for the following facility(ies) or scrap tire transporter(s) covered by this guarantee: [List for each facility or scrap tire transporter: name and address. Indicate for each whether guarantee is for closure, post-closure care, both, corrective actions, and/or for scrap tire transporter closure].

3. Closure or post-closure care plans, and/or corrective actions plans as used below refer to the plans maintained as required by Chapter 3745-27 of the Administrative Code for the closure, post-closure care, and corrective actions of a facility, as identified above.

4. For value received from [owner or operator], guarantor guarantees to the Ohio EPA that in the event that [owner or operator] fails to perform [insert "closure," "post-closure care," "closure and post-closure care," or "corrective actions"] of the above facility in accordance with the closure or post-closure care plans or corrective actions plans and other permit requirements, as applicable, or, for a scrap tire transporter, in the event the owner or operator fails to remove and properly dispose of any accumulation of scrap tires delivered to a location not authorized to receive scrap tires by paragraph (C)(1) of rule 3745-27-56 of the Administrative Code, or fails to remove and properly dispose of any scrap tires which have been open dumped by the scrap tire transporter, or has been found to be in violation of rule 3745-27-79 of the Administrative Code, the guarantor shall remove and properly dispose of the scrap tires or establish a trust fund as specified in Chapter 3745-503 of the Administrative Code, as applicable, in the name of [owner or operator] in the amount of the current closure, post-closure care, scrap tire transporter closure, and/or corrective actions cost estimates as specified in Chapter 3745-27 of the Administrative Code.

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5. Guarantor agrees that if, at the end of any fiscal year before termination of this guarantee, the guarantor fails to meet the financial test criteria, guarantor shall send notice to the director, Ohio EPA, and to [owner or operator], not later than ninety days after the end of such fiscal year, by certified mail or any other form of mail accompanied by a receipt, that the guarantor intends to provide alternate financial assurance as specified in Chapter 3745-503 of the Administrative Code, in the name of [owner or operator]. Not later than one hundred twenty days after the end of such fiscal year, the guarantor shall establish such alternate financial assurance unless [owner or operator] has done so.

6. The guarantor agrees to notify the director by certified mail or any other form of mail accompanied by a receipt, of a voluntary or involuntary proceeding under "Title 11 (bankruptcy)," U.S. Code, naming guarantor as debtor, not later than ten days after commencement of the proceeding.

7. Guarantor agrees that not later than thirty days after being notified by the director of a determination that guarantor no longer meets the financial test criteria or that the guarantor is disallowed from continuing as a guarantor of closure, post-closure care, corrective actions, and/or scrap tire transporter closure, the guarantor shall establish alternate financial assurance as specified in Chapter 3745-503 of the Administrative Code, in the name of [owner or operator] unless [owner or operator] has done so.

8. Guarantor agrees to remain bound under this guarantee notwithstanding any or all of the following: amendment or modification of the closure or post-closure care plan and/or corrective actions plan, amendment or modification of the permit or registration certification, extension or reduction of the time of performance of closure, post-closure care, and/or corrective actions, or any other modification or alteration of an obligation of the owner or operator pursuant to Chapter 3745-27 of the Administrative Code.

9. Guarantor agrees to remain bound under this guarantee for so long as [owner or operator] shall comply with the applicable financial assurance requirements of Chapter 3745-503 of the Administrative Code for the above listed facilities and/or scrap tire transporter, except that guarantor may cancel this guarantee by sending notice by certified mail or any other form of mail accompanied by a receipt to the director and [owner or operator], such cancellation to become effective not earlier than one hundred twenty days after receipt of such notice by both Ohio EPA and [owner or operator], as evidenced by the return receipts.

10. Guarantor agrees that if [owner or operator] fails to provide alternate financial assurance as specified in Chapter 3745-503 of the Administrative Code, and obtain written approval of such alternate financial assurance from the director not later than ninety days after a notice of cancellation by the guarantor is received by the director from guarantor, guarantor shall provide such alternate financial assurance in the name of [owner or operator].

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11. Guarantor expressly waives notice of acceptance of this guarantee by the Ohio EPA or by [owner or operator]. Guarantor also expressly waives notice of amendments or modifications of the facility permit(s) or registration(s) or the scrap tire transporter registration.

I hereby certify that the wording of this guarantee is identical to the wording specified in paragraph (G) of rule 3745-503-20 of the Administrative Code as such rule was constituted on the date first above written.

Effective date: \_\_\_\_\_

[Name of guarantor]

[Authorized signature for guarantor]

[Name of person signing]

[Title of person signing]

Signature of witness or notary: \_\_\_\_\_ "

(H) A letter from the chief financial officer of a local government, as specified in paragraph (L) of rules 3745-503-05, 3745-503-10, and/or in paragraph (M) of rule 3745-503-15 of the Administrative Code must be worded as follows on forms prescribed by the director, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

[Comment: For the purposes of this rule, local government is defined as a subdivision of the state of Ohio including, but not limited to, a municipal corporation, a county, a township, a single or joint county solid waste management district, or a solid waste management authority.]

"Letter from chief financial officer of a local government

[Address to director, Ohio Environmental Protection Agency.]

I am the chief financial officer of [name and address of local government]. This letter is in support of this local government's use of the financial test to demonstrate financial assurance, as specified in Chapter 3745-503 of the Administrative Code.

[Fill out the following paragraphs regarding facilities and scrap tire transporters and the associated cost estimates. If there are no facilities or scrap tire transporters that belong in a particular paragraph, write "none" in the space indicated. For each facility or scrap tire transporter, include its name, address, county, and current closure, post-closure care, scrap tire transporter closure, and/or corrective actions

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cost estimates, and any other environmental obligations. Identify each cost estimate as to whether it is for closure, post-closure care, scrap tire transporter closure, and/or corrective actions, and all other environmental obligations.]

(1) This local government is the owner or operator of the following facilities or scrap tire transporters for which financial assurance for closure, post-closure care, scrap tire transporter closure, or corrective actions is demonstrated through the financial test specified in Chapter 3745-503 of the Administrative Code and/or this local government is the owner or operator of the following facilities for which financial assurance for any other environmental obligations are assured by a financial test. The current closure, post-closure care, scrap tire transporter closure, and/or corrective actions cost estimates, and any other environmental obligations provided for by a test are shown: \$ \_\_\_\_\_.

(2) This local government is the owner or operator of the following facilities or scrap tire transporter for which financial assurance requirements for closure, post-closure care, scrap tire transporter closure, corrective actions, and/or any other environmental obligations are satisfied through a financial test other than that required by Chapter 3745-503 of the Administrative Code. The current closure, post-closure care, scrap tire transporter closure, and/or corrective actions cost estimates, and/or any other environmental obligations covered by such financial assurance are shown for each facility or scrap tire transporter: \$ \_\_\_\_\_.

The fiscal year of this local government ends on [month, day]. The figures for the following items marked with an asterisk are derived from this local government's independently audited, year-end financial statements for the most recently completed fiscal year, ended [date]. [Comment: The figures for the following items must be contained in the audited financial statements from the most recently completed fiscal year.]

[Fill in Alternative I if the criteria of paragraph (L)(3)(a) of rule 3745-503-05, 3745-503-10, and/or paragraph (M)(3)(a) of rule 3745-503-15 of the Administrative Code are used. Fill in Alternative II if the criteria of paragraph (L)(3)(b) of rule 3745-503-05, 3745-503-10, and/or of paragraph (M)(3)(b) of rule 3745-503-15 of the Administrative Code are used.]

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Alternative I

- |            |  |
|------------|--|
| <u>1.</u>  | <u>Sum of current closure, post-closure care, scrap tire transporter closure, and/or corrective actions cost estimates, and any other environmental obligations assured by a financial test (total of all cost estimates shown in the paragraphs above): \$ _____.</u> |
| <u>*2.</u> | <u>Sum of cash and marketable securities: \$ _____.</u>  |
| <u>*3.</u> | <u>Total expenditures: \$ _____.</u>   |
| <u>*4.</u> | <u>Annual debt service: \$ _____.</u>  |

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- \*5. Long-term debt: \$ \_\_\_\_\_.
- \*6. Capital expenditures: \$ \_\_\_\_\_.
- \*7. Total assured environmental costs: \$ \_\_\_\_\_.
- \*8. Total annual revenue: \$ \_\_\_\_\_.

--

- |  | <u>Yes</u> | <u>No</u> |
|--|------------|-----------|
| 9. <u>Is line 2 divided by line 3 greater than or equal to 0.05? . . .</u>   |            |           |
| 10. <u>Is line 4 divided by line 3 less than or equal to 0.20? . . .</u>   |            |           |
| 11. <u>Is line 5 divided by line 6 less than or equal to 2.00? . . .</u>   |            |           |
| 12. <u>Is line 7 divided by line 8 less than or equal to 0.43? . . . If not, complete lines 13 and 14.</u>   |            |           |
| 13. <u>Multiply line 8 by 0.43 = \$ _____. This is the maximum amount allowed to assure environmental costs.</u>   |            |           |
| 14. <u>Line 13 subtracted from line 7 = \$ _____. This amount must be assured by another financial assurance mechanism listed in paragraphs (F), (G), (I), and/or (J), in rules 3745-503-05, 3745-503-10, and paragraphs (G), (H), (J), and/or (K) in rule 3745-503-15 of the Administrative Code.</u> |            |           |

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Alternative II

- 1. Sum of current closure, post-closure care, scrap tire transporter closure, corrective actions cost estimates, and any other environmental obligations assured by a financial test (total of all cost estimates shown in the paragraphs above): \$ \_\_\_\_\_.
- 2. Current bond rating of most recent issuance and name of rating service: \_\_\_\_\_.
- 3. Date of issuance of bond: \_\_\_\_\_.
- 4. Date of maturity of bond: \_\_\_\_\_.
- 5. Total assured environmental costs: \$ \_\_\_\_\_.
- \*6. Total annual revenue: \$ \_\_\_\_\_.

--

- |   | <u>Yes</u> | <u>No</u> |
|---|------------|-----------|
| 7. <u>Is line 5 divided by line 6 less than or equal to 0.43? . . . . If not, complete lines 8 and 9.</u>   |            |           |
| 8. <u>Multiply line 6 by 0.43 = \$ _____. This is the maximum amount allowed to assure environmental costs.</u>   |            |           |
| 9. <u>Line 8 subtracted from line 5 = \$ _____. This amount must be assured by another financial assurance mechanism listed in paragraphs (F), (G), (I), and/or (J), in rules 3745-503-05, 3745-503-10, and paragraphs (G), (H), (J), or (K) in rule 3745-503-15 of</u> |            |           |

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the Administrative Code.

I hereby certify that the wording of this letter is identical to the wording specified in paragraph (H) of rule 3745-503-20 of the Administrative Code as such rule was constituted on the date shown immediately below. I further certify the following: (1) that the local government's financial statements are prepared in conformity with generally accepted accounting principles for governments; (2) that the local government has not operated at a deficit equal to five per cent or more of total annual revenue in either of the past two fiscal years; (3) that the local government is not in default on any outstanding general obligation bonds; and, (4) that the local government does not have outstanding general obligations rated less than BBB as issued by "Standard and Poor's" or Baa as issued by "Moody's."

[Signature]

[Name]

[Title]

[Date]"

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3745-507-01      Site investigation and geotechnical and stability analyses - definitions.

As used in this chapter:

(A)

- (1) "Angle of draw" has the same meaning as in rule 3745-500-01 of the Administrative Code.
- (2) "Applicant" has the same meaning as in rule 3745-500-01 of the Administrative Code.
- (3) "Aquifer" has the same meaning as in rule 3745-500-01 of the Administrative Code.
- (4) "Aquifer system" has the same meaning as in rule 3745-500-01 of the Administrative Code.

(B)

- (1) "Bedrock" has the same meaning as in rule 3745-500-01 of the Administrative Code.
- (2) "Boring" has the same meaning as in rule 3745-500-01 of the Administrative Code.

(C)

- (1) "Compressible layer" means a layer of unconsolidated material, C&DD, or waste that may settle after being subjected to increased vertical compressive stress.
- (2) "Compressible material" means in-situ soils, added geologic material, structural fill, recompacted soil liner, or recompacted soil barrier layer; or material comprised of soil, C&DD, or waste that may settle after being subjected to increased vertical compressive stress.
- (3) "Consolidated stratigraphic unit" has the same meaning as in rule 3745-500-01 of the Administrative Code.
- (4) "Constituent" has the same meaning as in rule 3745-500-01 of the Administrative Code.
- (5) "Construction and demolition debris" or "C&DD" has the same meaning as in rule 3745-500-01 of the Administrative Code.

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(6) "Critical layer" means a potentially liquefiable layer, or a thickness of soil, waste, or C&DD that has drained or undrained shear strength that may cause a failure if all or part of the mass of C&DD or waste of a facility were suddenly put in place. Critical layers can be only a few inches thick to many feet thick. Critical layers can include parts of one or more unconsolidated stratigraphic units.

(D) [Reserved.]

(E) [Reserved.]

(F)

(1) "Final slope" has the same meaning as in rule 3745-500-01 of the Administrative Code.

(G)

(1) "Ground water" has the same meaning as in rule 3745-500-01 of the Administrative Code.

(H) [Reserved.]

(I)

(1) "Interim slope" has the same meaning as in rule 3745-500-01 of the Administrative Code.

(2) "Internal slope" has the same meaning as in rule 3745-500-01 of the Administrative Code.

(J) [Reserved.]

(K) [Reserved.]

(L)

(1) "Leachate" has the same meaning as in rule 3745-500-01 of the Administrative Code.

(2) "Limits of construction and demolition debris placement" or "limits of C&DD placement" has the same meaning as "limits of construction and demolition debris placement" in rule 3745-500-01 of the Administrative Code.

(3) "Limits of waste placement" has the same meaning as in rule 3745-500-01 of the Administrative Code.

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(M) [Reserved.]

(N) [Reserved.]

(O)

(1) "Operator" or "facility operator" has the same meaning as in rule 3745-500-01 of the Administrative Code.

(2) "Owner" has the same meaning as in rule 3745-500-01 of the Administrative Code.

(P)

(1) "Parameter" has the same meaning as in rule 3745-500-01 of the Administrative Code.

(2) "Phreatic surface" has the same meaning as in rule 3745-500-01 of the Administrative Code.

(3) "Piezometric surface" has the same meaning as in rule 3745-500-01 of the Administrative Code.

(4) "Potentiometric surface" has the same meaning as in rule 3745-500-01 of the Administrative Code.

(5) "Professional engineer" has the same meaning as in rule 3745-500-01 of the Administrative Code.

(6) "Public water supply well" has the same meaning as in rule 3745-500-01 of the Administrative Code.

(7) "Publicly available information" has the same meaning as in rule 3745-500-01 of the Administrative Code.

(Q)

(1) "Qualified ground water scientist" has the same meaning as in rule 3745-500-01 of the Administrative Code.

(R)

(1) "Regional aquifer" has the same meaning as in rule 3745-500-01 of the Administrative Code.

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(2) "Reviewing authority" has the same meaning as in rule 3745-500-01 of the Administrative Code.

(S)

(1) "Significant zone of saturation" has the same meaning as in rule 3745-500-01 of the Administrative Code.

(2) "Surface water" has the same meaning as in rule 3745-500-01 of the Administrative Code.

(T) [Reserved.]

(U)

(1) "Unconsolidated stratigraphic unit" has the same meaning as in rule 3745-500-01 of the Administrative Code.

(2) "Unstable area" has the same meaning as in rule 3745-500-01 of the Administrative Code.

(V) [Reserved.]

(W)

(1) "Waters of the state" has the same meaning as in rule 3745-500-01 of the Administrative Code.

(2) "Water supply well" has the same meaning as in rule 3745-500-01 of the Administrative Code.

(3) "Wetland" has the same meaning as in rule 3745-500-01 of the Administrative Code.

(X) [Reserved.]

(Y) [Reserved.]

(Z)

(1) "Zone of saturation" or "saturated zone" has the same meaning as in rule 3745-500-01 of the Administrative Code.

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3745-507-100      Site investigation performance standards.

(A) The site investigation shall conform to all the requirements of rules 3745-507-100 to 3745-507-200 of the Administrative Code.

(B) The applicant, owner, or operator shall conduct the site investigation to obtain all information, data, and testing results required by rules 3745-507-100 to 3745-507-200 of the Administrative Code and at a minimum shall determine the location, identification, extent, and characteristics of the following:

(1) The uppermost aquifer system.

(2) All saturated zones above the uppermost aquifer system.

(3) Each consolidated and unconsolidated stratigraphic unit from the ground surface to the bottom of the uppermost aquifer system.

(a) The applicant, owner, or operator may limit the maximum depth of the site investigation to one hundred and fifty feet below the basal elevations of the limits of C&DD placement or the basal elevations of the limits of waste placement.

(b) If the uppermost aquifer system is a consolidated stratigraphic unit, the applicant, owner, or operator may limit the investigation of the uppermost aquifer system to the upper twenty five feet of the saturated portion of the uppermost aquifer system.

(4) All unconsolidated stratigraphic units that are within fifty feet of the basal elevations of the deepest excavation at the facility.

(5) All critical layers due to shear strength.

(6) All critical layers due to liquefaction potential.

(7) All compressible layers.

(8) The highest temporal phreatic surfaces.

(9) The highest temporal piezometric surfaces.

(10) Wetlands, streams, and other surface waters that exist wholly or partially within the boundary of the facility.

(11) If the applicant, owner, or operator is required to conduct explosive gas monitoring, all potential explosive gas migration pathways at the facility.

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(12) If the site investigation is being conducted for a construction and demolition debris facility, all potential hydrogen sulfide gas or other gas migration pathways at the facility.

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3745-507-120

## Preliminary site investigation.

At a minimum, the preliminary site investigation shall include publicly available information of the regional geomorphology, geology, hydrogeology, and surface waters within one mile of the facility. At a minimum, the preliminary site investigation shall be used to obtain the following information:

- (A) A map showing the location of the facility with respect to the sole source aquifer designated by the administrator of the United States environmental protection agency under the "Safe Drinking Water Act," 88 Stat. 1660, 42 U.S.C.A. 300F as defined in rule 3745-500-03 of the Administrative Code. If a sole source aquifer is not in the vicinity, a statement of that fact will be sufficient.
- (B) A map showing the location of the facility with respect to the limits of any drinking water source protection area for a public water system using ground water including the area surrounding a public water supply well that will provide water from an aquifer to the well as delineated or endorsed by Ohio EPA under Ohio's wellhead protection and source water assessment and protection programs. If the limits of any drinking water source protection area for a public water system using ground water including the area surrounding a public water supply well that will provide water from an aquifer to the well as delineated or endorsed by Ohio EPA under Ohio's wellhead protection and source water assessment and protection programs are not in the vicinity of the facility, a statement to that fact will be sufficient.
- (C) A map showing the location of the facility and all public water supply wells within two thousand feet of the limits of C&DD placement. The yield of any public water supply well field shall also be stated.
- (D) A map showing the location of the facility and all water supply wells within one thousand five hundred feet of the limits of C&DD placement.
- (E) All well logs and, where applicable, the decommissioning records for public water supply wells and private water supply wells within one mile of the proposed facility.
- (F) The Ohio department of natural resources, division of water, ground water resource maps or other appropriate regional hydrogeological data.
- (G) The identification and average yield of the regional aquifer.
- (H) The direction of ground water flow in the regional aquifer.
- (I) The identification of recharge and discharge areas of the regional aquifer.

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- (J) The identification of the regional stratigraphy, including any regional stratigraphic or structural features, such as bedrock surface, bedrock dip, or joint systems, which may influence the ground water flow system.
- (K) A description of the regional geomorphology, including but not limited to the location of surface water, floodplains, and all topographic features that may influence the ground water flow system or that may affect the stability of the facility.
- (L) Documentation of the owner of the mineral rights beneath the facility.
- (M) Documentation of the type, location, depth, and status of all oil or gas wells and all pipelines within the boundary of the facility.
- (N) At a minimum, documentation of unstable areas within one mile of the boundary of the facility shall include the following unstable areas:
  - (1) Regional stratigraphic or structural features that are susceptible to bearing capacity failure, failure under static conditions, failure under seismic conditions, or settlement.
  - (2) Areas susceptible to liquefaction.
  - (3) Areas susceptible to mass movement such as landslides and rock falls.
  - (4) Areas impacted by natural and human induced activities such as cutting and filling, draw down of ground water, rapid weathering, heavy rain, seismic activity, and blasting.
  - (5) Karst terrain.
  - (6) Underground mines.
  - (7) Areas susceptible to coastal or river erosion.
- (O) Documentation of wetlands, streams, and surface waters within one thousand feet of the boundary of the facility.
- (P) If the applicant, owner, or operator is required to conduct explosive gas monitoring, documentation of all potential sources of explosive gas and documentation of all potential explosive gas migration pathways at the facility.
- (Q) If the site investigation is being conducted for a construction and demolition debris facility, documentation of all potential sources of hydrogen sulfide gas, or other gases, all potential hydrogen sulfide gas or other gas migration pathways at the facility.

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3745-507-130

**Site characterization and screening activities.**

The applicant, owner, or operator of a facility shall use the site characterization and screening activities to obtain information for a detailed description and analyses of the geology and hydrogeology of the facility. At a minimum, the site characterization and screening activities shall include the following:

(A) Collection of data using appropriate subsurface investigatory methods including but not limited to tensiometers, geophysical surveys, soil gas surveys, and borings such as piezometers, monitoring wells, dutch cone penetrometers, and test pits.

(B) Location, identification, and characterization of each stratigraphic unit from the ground surface to the bottom of the uppermost aquifer system.

(1) The applicant, owner, or operator may limit the maximum depth of the site investigation to one hundred and fifty feet below the basal elevations of the limits of C&DD placement or the basal elevations of the limits of waste placement.

(2) If the uppermost aquifer system is a consolidated stratigraphic unit, the applicant, owner, or operator may limit the investigation of the uppermost aquifer system to the upper twenty five feet of the saturated portion of the uppermost aquifer system.

(C) Logging or recording on drawings information from each site within the boundary of the facility used to obtain information, data, or samples for the site investigation. At a minimum, the information to be logged shall include the following if appropriate for the method:

(1) The location of each site with northings and eastings referenced to the facility grid system.

(2) The surface elevation of each site to the nearest tenth of a foot.

(3) The depth interval for each stratigraphic unit.

(4) The boring diameter or the width and length at the surface.

(5) The total depth of the boring.

(6) The total depth of the well.

(7) The inside diameter of the well casing.

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- (8) The top-of-casing elevation used for water level measurement reference surveyed to the nearest hundredth foot.
- (9) The screened interval depth and elevation, and the screen slot size.
- (10) A description of all construction materials and depth all construction materials were placed.
- (11) The depth to saturation.
- (12) The depth to the static water level in the boring.
- (13) The additional information for geotechnical analyses required by rule 3745-507-140 of the Administrative Code.
- (D) At a minimum, obtaining the following information for each consolidated and unconsolidated stratigraphic unit:

  - (1) Characteristics, composition, and features including the following:

    - (a) For unconsolidated stratigraphic units, the textural classification using the Unified Soil Classification System (USCS), as described in ASTM D2487 as defined in rule 3745-500-03 of the Administrative Code.
    - (b) For consolidated stratigraphic units, the rock type such as limestone, dolomite, coal, shale, siltstone, sandstone.
    - (c) Color.
    - (d) Moisture content.
    - (e) Stratigraphic features such as layering, interbedding, and weathering.
    - (f) Fracturing, jointing, and other types of secondary porosity; and any visible accessory minerals such as pyrite, calcite or gypsum.
    - (g) Thickness.
    - (h) Lateral extent.
    - (i) If the applicant, owner, or operator is required to conduct explosive gas monitoring, potential for gas production and all potential explosive gas migration pathways.

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- (j) If the site investigation is being conducted for a construction and demolition debris facility, potential for hydrogen gas or other gas production, and all potential hydrogen sulfide or other gas migration pathways.
- (2) Hydraulic conductivity. At a minimum, hydraulic conductivity shall be determined in accordance with the following:

  - (a) For saturated unconsolidated stratigraphic units, at least one field measurement of hydraulic conductivity per saturated unconsolidated stratigraphic unit and one additional measurement per saturated unconsolidated stratigraphic unit for each twenty acres.
  - (b) For unconsolidated stratigraphic units from which an undisturbed sample can be collected, at least one laboratory measurement of vertical hydraulic conductivity per unconsolidated stratigraphic unit and one additional measurement per unconsolidated stratigraphic unit for each twenty acres.
  - (c) For saturated consolidated stratigraphic units, at least one field measurement of hydraulic conductivity per saturated consolidated stratigraphic unit and one additional measurement per saturated consolidated stratigraphic unit for each twenty acres.
  - (d) When laboratory measurements of vertical hydraulic conductivity are obtained for unconsolidated stratigraphic units that are wholly or partially saturated, the vertical hydraulic conductivity shall be compared to the field hydraulic conductivity to evaluate the extent to which near-vertical fractures may be contributing to ground water flow through the unit.
  - (e) Hydraulic conductivity data shall be interpreted with respect to the primary and secondary porosity features that are observed or are reasonably expected to occur in the investigated units, as well as the stratigraphic and structural features of the investigated units.
- (3) Variations in texture, saturation, stratigraphy, structure, or mineralogy exhibited by each stratigraphic unit that could influence the ground water flow or quality in the uppermost aquifer system or any overlying significant zones of saturation.
- (4) The geomorphology at the facility including but not limited to surface water or topographic features that may influence the ground water flow in the uppermost aquifer system or in any overlying significant zones of saturation.
- (5) All structural geologic features beneath the facility that may influence the ground water flow in the uppermost aquifer system or in any overlying significant zones of saturation.

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(E) Location, identification, and characterization of the uppermost aquifer system and all significant zones of saturation above the uppermost aquifer system including at a minimum the following:

- (1) The depth, lateral extent, and vertical extent of the uppermost aquifer system and all significant zones of saturation above the uppermost aquifer system.
- (2) Temporal fluctuations in ground water levels over a period of time to determine the seasonal effects on ground water flow directions.
- (3) An interpretation of the ground water flow system, including hydraulic conductivity, rate of flow, direction of flow, vertical and lateral components of flow, and interconnections between and within the uppermost aquifer system and any significant zones of saturation above the uppermost aquifer system. This interpretation shall be described in both narrative and map form.
- (4) Identification and characterization of recharge and discharge areas within the boundaries of the facility. This shall include all relationships of ground water with seeps, springs, streams, or other surface water features.
- (5) Yield of any significant zones of saturation and of the uppermost aquifer system.
- (6) The quality of the ground water in the uppermost aquifer system and all significant zones of saturation above the uppermost aquifer system including at a minimum the following information:
  - (a) A description and quantification of the rate, extent, and concentration of all ground water contamination located under the facility.
  - (b) The results of sampling and analyzing the ground water from the uppermost aquifer system and all significant zones of saturation above the uppermost aquifer system. At a minimum these samples shall be analyzed for all parameters and constituents listed in rule 3745-506-650 of the Administrative Code.
  - (c) The procedures, methodologies, and equipment used to comply with paragraph (G)(6) of this rule shall be the same as those required for the ground water sampling plan in accordance with paragraph (D) of rule 3745-506-150 of the Administrative Code.
- (7) If information from the site investigation indicates that an unconsolidated aquifer system capable of sustaining a yield of one hundred gallons per minute for a twenty-four-hour period may exist beneath the facility, and the applicant proposes to assign a yield of less than one hundred gallons per minute for a twenty-four-hour period, the applicant shall provide adequate site-specific information about the aquifer system to justify the lower yield. The applicant

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shall also include at a minimum the yield of any aquifer systems below the uppermost aquifer system.

(F) Location, identification, characterization, and categorization in accordance with rule 3745-1-54 of the Administrative Code all wetlands, streams, and other surface waters that are wholly or partially within the boundary of the facility.

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3745-507-140

Additional information for geotechnical analyses.

The applicant, owner, or operator shall comply with this rule such that all additional information necessary to comply with rules 3745-507-300 to 3745-507-362 of the Administrative Code is obtained. At a minimum, the applicant, owner, or operator shall comply with the following:

(A) The requirements of this rule shall be applied to each stratigraphic unit beneath the facility.

(B) The application of this rule may be limited to a depth of fifty feet below the basal elevations of the deepest excavation at the facility if there is no information that indicates that an unconsolidated stratigraphic unit may exist deeper that could be susceptible to or cause any engineered component of the facility to be susceptible to any failure listed in paragraphs (C)(1) to (C)(6) of this rule.

(C) The site investigation shall be conducted in the manner and using the methods and the frequency of testing necessary to locate, identify, and characterize the unconsolidated stratigraphic units that are susceptible to or would cause any engineered component of the facility to be susceptible to any of the following:

(1) Failure due to settlement.

(2) Bearing capacity failure.

(3) Failure due to hydrostatic uplift.

(4) Slope failure under static conditions.

(5) Slope failure under seismic conditions.

(6) Failure due to liquefaction.

(D) Detailed descriptions shall be obtained for each unconsolidated stratigraphic unit that include at a minimum the following information:

(1) The characteristics, composition, and features including the following:

(a) Variations in texture, saturation, stratigraphy, structure, or mineralogy within each stratigraphic unit That could influence the strength or compressibility of the material.

(b) For fine-grained unconsolidated stratigraphic units (e.g., silts and clays), field descriptions of consistency, plasticity, and dilatancy.

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(2) The depth interval of all samples collected including those submitted for laboratory testing.

(3) The depth to the highest temporal phreatic surfaces and the highest temporal piezometric surfaces.

[Comment: "Phreatic surface" is synonymous with the term "water table" and "piezometric surface" is synonymous with the term "potentiometric surface." Hydrogeologic investigations generally use "water table" for a water level surface in an unconfined saturated unit and "potentiometric surface" for the pressure head surface associated with a confined saturated unit. In hydrogeologic applications, the "water table" is considered a special type of potentiometric surface where the head pressure is equal to atmospheric pressure.]

(4) All piezometric surfaces associated with bedrock that may affect the facility during excavation or construction shall be identified.

(5) The results from penetration testing following ASTM D1586 as defined in rule 3745-500-03 of the Administrative Code, and the corrected and normalized standard penetration number, or results from mechanical cone penetration testing following ASTM D3441 as defined in rule 3745-500-03 of the Administrative Code.

(6) The vertical hydraulic conductivity of each unsaturated unconsolidated stratigraphic unit.

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3745-507-150

Laboratory analysis of samples from a site investigation.

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

The applicant, owner, or operator shall use the site characterization and screening activities to obtain representative samples to be used for laboratory analysis of each unconsolidated stratigraphic unit. The applicant, owner, or operator shall comply with all of the following for the laboratory analysis of samples from each unconsolidated stratigraphic unit beneath the facility:

(A) The application of this rule may be limited to a depth of fifty feet below the basal elevations of the deepest excavation at the facility if there is no information that indicates that an unconsolidated stratigraphic unit may exist deeper that could be susceptible to or cause any engineered component of the facility to be susceptible to any failure listed in paragraphs (C)(1) to (C)(6) of rule 3745-507-140 of the Administrative Code..

(B) The applicant, owner, or operator shall collect and analyze the number of samples from each unconsolidated stratigraphic unit necessary to provide representative data to adequately characterize the stratigraphic unit for the purpose of complying with this Chapter. At a minimum, the number of undisturbed samples collected at a facility shall be the greater of either of the following:

(1) The number of samples resulting from sampling ten per cent of the borings that extend to or through each unconsolidated stratigraphic unit identified in paragraph (C) of rule 3745-507-140 of the Administrative Code.

(2) Three samples from each unconsolidated stratigraphic unit identified in paragraph (C) of rule 3745-507-140 of the Administrative Code.

(C) Each unconsolidated stratigraphic unit shall be analyzed for the following:

(1) Grain size distribution (sieve and hydrometer curves).

(2) Atterberg limits.

(3) In situ unit weight.

(4) In situ moisture content.

(5) Dry unit weight.

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- (6) For unconsolidated stratigraphic units susceptible to bearing capacity failure, the effective drained or undrained peak shear strength parameters as appropriate using ASTM D3080 (direct shear), ASTM D2850 (unconsolidated undrained compression), or ASTM D4767 (consolidated undrained triaxial compression).
- (7) For unconsolidated stratigraphic units susceptible to failure under static conditions or failure under seismic conditions, the effective shear strength using ASTM D3080 (direct shear), ASTM D4767 (consolidated undrained triaxial compression), or ASTM D6467 (torsional ring shear).
- (8) For unconsolidated stratigraphic units susceptible to failure under static conditions or failure under seismic conditions due to excessive increase in pore pressures from construction or operations activities, the undrained shear strength using fully saturated samples shall be determined using ASTM D2850 (unconsolidated-undrained triaxial compression).
- (D) For all unconsolidated stratigraphic units susceptible to settlement, all of the inputs, intermediate results, outputs, calculations, and parameters resulting from testing samples using ASTM D2435 (one-dimensional consolidation).

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3745-507-200      Site investigation report.

- (A) The applicant, owner, or operator of a facility shall create a site investigation report that shall be in an easily understandable format and shall contain all information necessary to allow the reviewing authority to determine if the applicant, owner, or operator has completed the following:
- (1) Located, identified, characterized, and tested all consolidated and unconsolidated stratigraphic units beneath the facility in accordance with rules 3745-507-100 to 3745-507-150 of the Administrative Code.
  - (2) Located and designed the ground water monitoring wells to conform to Chapter 3745-506 of the Administrative Code.
  - (3) Demonstrated compliance with rules 3745-507-300 to 3745-507-362 of the Administrative Code.
  - (4) Demonstrated compliance with the applicable siting criteria rules.
  - (5) If the applicant, owner, or operator is required to have an explosive gas monitoring system, demonstrated compliance with the applicable explosive gas monitoring rules.
  - (6) If the site investigation is being conducted for a construction and demolition debris facility, demonstrated compliance with the applicable hydrogen sulfide gas or other gas monitoring rules.
- (B) All plan drawings in the site investigation report shall show the boundary of the facility, the limits of waste placement or the limits of C&DD placement, access roads, shall use a scale of one inch equals not more than two hundred feet, and shall be referenced to the facility grid system if one has been established.
- (C) All cross sections shall show the boundary of the facility, the limits of excavation, the limits of waste placement, the limits of C&DD placement, the horizontal scale of the cross section, and the vertical scale of the cross section.
- (D) The site investigation report shall include the following clearly labeled and tabbed pages and sections:
- (1) A cover page that includes the title of the report; the name and location of the facility; and the names of the owner, operator, and the preparer of the site investigation report.

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(2) A section titled "Summary and Conclusions" that includes summaries of information obtained in accordance with rules 3745-507-100 to 3745-507-150 of the Administrative Code for the following:

(a) A description of the site.

(b) A description of the uppermost aquifer system.

(c) A description of all significant zones of saturation above the uppermost aquifer system.

(d) A description of critical layers due to shear strength.

(e) A description of critical layers due to liquefaction potential.

(f) A description of compressible layers.

(g) A description of the highest temporal phreatic surface.

(h) A description of the highest temporal piezometric surface.

(i) If the applicant, owner, or operator is required to have an explosive gas monitoring system, a description of all potential explosive gas migration pathways.

(j) If the site investigation is being conducted for a construction and demolition debris facility, a description of all potential hydrogen sulfide gas or other gas migration pathways.

(k) A scale topographical drawing showing the location, category, and jurisdictional status of the wetlands, streams, and other surface waters that exist wholly or partially within the boundary of the facility.

(l) Summary tables of measurements and test results from the site investigation. The tables shall clearly identify the sample locations, logs, and units of measurement associated with each measurement and test result. The results from all field measurements, field tests, laboratory measurements, and laboratory tests shall be included in the summary tables. The summary tables shall also clearly identify the measurements and test results that are associated with each critical layer, compressible layer, the uppermost aquifer system, and the saturated zones above the uppermost aquifer.

(m) Any figures, drawings, or references needed to provide a clear understanding of the summary information contained in this section of the site investigation report.

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- (n) A topographical map that shows the boundary of the facility, the location and identity of each sample collection location, shows each boring location, and shows all other locations where subsurface measurements were taken at the facility.
- (o) A topographical map that identifies the location of each cross section included in the report.
- (p) Cross sections that clearly show the identification, extent, and characteristics of the following:

  - (i) Consolidated stratigraphic units.
  - (ii) Unconsolidated stratigraphic units.
  - (iii) Critical layers.
  - (iv) Compressible layers.
  - (v) Uppermost aquifer system.
  - (vi) Saturated zones above the uppermost aquifer system.
  - (vii) Highest temporal phreatic surfaces.
  - (viii) Highest temporal piezometric surfaces.
  - (ix) If the applicant, owner, or operator is required to have an explosive gas monitoring system, all potential explosive gas migration pathways.
  - (x) If the site investigation is being conducted for a construction and demolition debris facility, all potential hydrogen sulfide gas or other gas migration pathways.
  - (xi) Boundary of the facility.
  - (xii) Basal elevations of the limits of waste placement or the basal elevations of the limits of C&DD placement.
  - (xiii) Basal elevations of existing and proposed excavations. At least one cross section shall depict the deepest excavation or proposed excavation.
- (q) The rationale of the site investigation.
- (r) The assumptions used during the site investigation.

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- (s) The methodologies used during the site investigation.
- (3) A section titled "Preliminary Site Investigation Results" that contains the following information:

  - (a) All information, results, and conclusions from the preliminary site investigation conducted in accordance with rule 3745-507-120 of the Administrative Code.
  - (b) A summary description of the preliminary site investigation.
  - (c) A specific description of the preliminary site investigation of the uppermost aquifer system, saturated zones above the uppermost aquifer system, critical layers, compressible layers, wetlands, streams, and other waters of the state that exist wholly or partially within the boundary of the facility.
  - (d) All figures, drawings, or references relied upon during the preliminary site investigation marked to show how they relate to the site investigation.
  - (e) Any figures, drawings, or references needed to provide a clear understanding of the summary information contained in this section of the site investigation report.
  - (f) Documentation of who owns the mineral rights below the facility.
  - (g) If any surface or underground mines were identified in accordance with rules 3745-507-100 to 3745-507-150 of the Administrative Code, a letter from the Ohio department of natural resources division of mineral resources management or other appropriate agency verifying the type of mine, mining method, location, depth, and status of the mines.
  - (h) If any oil or gas wells or pipelines were identified in accordance with rules 3745-507-100 to 3745-507-150 of the Administrative Code, a letter from the Ohio department of natural resources or other appropriate agency verifying the type, location, depth, and status of the wells.
- (4) A section titled "Site Characterization and Screening" that contains the following information:

  - (a) A summary of the results and the conclusions from the site characterization and screening activities conducted in accordance with rules 3745-507-130 to 3745-507-140 of the Administrative Code.
  - (b) A description of the site characterization and screening activities.

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- (c) A brief description of each field test method and each laboratory test method used during the site characterization and screening activities.
  - (d) The information and results from each field test or screening activity that was conducted, including completed, failed, or incomplete results.
  - (e) All figures, drawings, or references relied upon marked to show how they relate to the site characterization and screening activities.
  - (f) Any figures, drawings, or references needed to provide a clear understanding of the summary information contained in this section of the site investigation report.
- (5) A section titled "Site Characterization and Screening Procedures, Equipment, and Methodologies" that contains the following information:
- (a) A summary of the procedures, equipment, and methodologies used to comply with rules 3745-507-100 to 3745-507-150 of the Administrative Code.
  - (b) The subsurface investigatory and sampling methods used in characterizing the geomorphologic, geologic, hydrogeologic, and geotechnical properties of the consolidated and unconsolidated stratigraphic units at the facility and an explanation of why the particular subsurface investigatory methods were chosen.
  - (c) The procedures used to ensure samples were protected from damage and adverse affects during transportation of the samples to the place of testing.
  - (d) The analytical procedures and methodology used to characterize the unconsolidated and consolidated materials obtained from borings including but not limited to test pits, drilling, and other investigation methods.
  - (e) The methodology, equipment, and procedures used to define the critical layers, compressible layers, highest temporal phreatic surfaces, and the highest temporal piezometric surfaces.
  - (f) The methodology, equipment, and procedures used to define the uppermost aquifer system and all significant zones of saturation above the uppermost aquifer system, including the following:

    - (i) Well and piezometer construction specifications.
    - (ii) Water level measurement procedures.

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(iii) The methodologies, equipment, and procedures used to determine the ground water quality and contamination in the uppermost aquifer system and the significant zones of saturation above the uppermost aquifer system.

(6) A section for each of the following topics. Each of the sections listed in this paragraph shall contain the information specified in paragraph (D)(8) of this rule.

(a) A section titled "Uppermost Aquifer System."

(b) A section titled "Saturated Zones above the Uppermost Aquifer System."

(c) A section titled "Critical Layers due to Shear Strength."

(d) A section titled "Critical Layers due to Liquefaction Potential."

(e) A section titled "Compressible Layers."

(f) If the applicant, owner, or operator is required to have an explosive gas monitoring system, a section titled "Potential Explosive Gas, Migration Pathways."

(7) A section titled "Wetlands Delineation" that contains the following information:

(a) The wetlands delineation report that was created to comply with rule 3745-1-54 of the Administrative Code that identifies all wetlands and streams that are wholly or partially within the boundary of the facility.

(b) A jurisdictional determination letter from the United States army corps of engineers confirming that the wetland delineation is correct.

(8) The following information from the site investigation conducted in accordance with rules 3745-507-100 to 3745-507-150 of the Administrative Code shall be included in the site investigation report in accordance paragraph (D)(6) of this rule.

(a) A description of the site characterization and screening activities directly related to the item of the section.

(b) The description of site characterization and screening activities presented on logs and drawings appropriate for the subsurface investigatory method used.

(c) A description of each field test method and laboratory test method considered and used to identify, locate, and characterize the item.

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- (d) A description of each field test method and laboratory test method considered and not used to identify, locate, and characterize the item. The description shall include the reasons why the field test method or laboratory test method was not used.
- (e) An explanation of data from field test methods and laboratory test methods that were considered but not used to identify, locate, and characterize the item. The description shall include the reasons why the data were not used.
- (f) The results of each laboratory test that was conducted to locate, identify, and characterize the item. The results of passing, complete, incomplete, and failed tests shall also be included. An explanation shall be provided for any tests that were determined to be failed or incomplete. The results shall include the following information:

  - (i) Quality assurance and quality control testing conducted by the lab to verify the accuracy and precision of testing methods and equipment.
  - (ii) The results of data validation.
  - (iii) The characterization of each specimen used in each test.
  - (iv) Intermediate data produced during testing.
  - (v) The final results of each test.
  - (vi) Any figures, drawings, or references relied upon during the testing marked to show how they relate to the facility.
- (E) The site investigation report shall contain a notarized certification statement that to the best of the applicant, owner, or operator's knowledge the information contained in the report is true and accurate. The report shall be signed by the applicant, owner, or operator making the certification statement.
- (F) The site investigation report shall be signed by a qualified ground water scientist and shall contain a certification statement from the qualified ground water scientist that to the best of the knowledge of the qualified ground water scientist the hydrogeologic information contained in the report is a true and accurate representation of the hydrogeology of the facility.
- (G) The site investigation report shall be signed and, if appropriate, sealed by such other professionals skilled in the appropriate disciplines as is necessary to comply with Ohio laws and rules.
- (H) The notarized statement and signature required by paragraph (E) of this rule shall conform to rule 3745-500-02 of the Administrative Code.

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3745-507-300

## Geotechnical and stability analyses and reporting.

The applicant, owner, or operator shall comply with all of the requirements of rules 3745-507-300 to 3745-507-362 of the Administrative Code to demonstrate that the geotechnical performance of the design, the stability of the design, and the stability of the subsurface foundation are sufficient to support the facility. The demonstration shall include analyses and a report that provide sufficient information to allow for the complete evaluation of the geotechnical performance of the design, the stability of the design, and the stability of the subsurface foundation of the facility by the reviewing authority.

(A) The geotechnical and stability analyses shall not rely on any of the tensile qualities of any of the geosynthetic engineered components included in the design of the liner system or the cap system.

(B) The geotechnical and stability report shall include a section titled "Summary and Conclusions" that shall include at a minimum the following information:

(1) A brief summary of all of the findings and conclusions, including slope limitations and criteria for removal of unacceptable material, from the site investigation report pertinent to the geotechnical and stability analyses.

(2) A summary of the findings and conclusions, including slope limitations and criteria for removal of unacceptable material, from the geotechnical and stability analyses in regard to the evaluation of the design of the facility.

(3) A table summarizing the field measurements and test results, and laboratory measurements and test results, pertinent to the geotechnical and stability analyses associated with the critical layers and compressible layers.

(4) A table summarizing all values used in the geotechnical and stability analyses that were not based on field measurements and test results, or laboratory measurements and test results. This includes but is not limited to such items as saturation levels, phreatic and piezometric surfaces, compressibility characteristics, and shear strengths of non-critical layers, non-compressible layers, and waste layers that were not sampled and tested during the site investigation. The summary shall include an explanation for the rationale used to determine the values and shall include references to any source material that was depended upon to determine the values.

(5) A table summarizing the geotechnical and stability analyses that were conducted and the results of those analyses.

(C) The geotechnical and stability analyses report shall contain all the sections required by rules 3745-507-300 to 3745-507-362 of the Administrative Code.

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- (D) The geotechnical and stability analyses report shall contain a notarized certification statement that to the best of the applicant, owner, or operator's knowledge the information contained in the report is true and accurate. The report shall be signed by the applicant, owner, or operator making the certification statement.
- (E) The geotechnical and stability analyses report shall be signed and, if appropriate, sealed by such professionals skilled in the appropriate disciplines as is necessary to comply with Ohio laws and rules.
- (F) The notarized statement and signature required by paragraph (D) of this rule shall conform to rule 3745-500-02 of the Administrative Code.

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3745-507-310

Hydrostatic uplift analysis and reporting.

(A) The owner or operator does not have to comply with this rule when submitting a permit to install application that includes only a proposal to expand the final elevations of the vertical limits of waste placement or to expand the final elevations of the vertical limits of C&DD placement.

(B) The hydrostatic uplift analysis shall demonstrate that the facility is designed to have a factor of safety of at least 1.40 against failure of any engineered component due to hydrostatic uplift at the points described in paragraphs (C)(1) to (C)(5) of this rule. The factor of safety for paragraphs (C)(1) to (C)(4) of this rule shall not be based on any influence or depression of the phreatic surface or peizometric surface due to the operation or use of temporary or mechanical ground water control structures.

(C) Points of analysis for hydrostatic uplift.

(1) At all points along the surface where recompacted soil liner is to be placed.

(2) If no recompacted soil liner will be used, at all points along the surface where the leachate collection layer will be placed.

(3) If no recompacted soil liner and no leachate collection layer will be used, at all points located two feet below the basal elevations of waste placement or the basal elevations of C&DD placement.

(4) If geosynthetic clay liner is to be used beneath the recompacted soil liner, at all points along the surface where geosynthetic clay liner is to be placed beneath recompacted soil liner.

(5) At all points along the surface of all excavations at the facility.

(D) The geotechnical and stability analyses report identified in rule 3745-507-300 of the Administrative Code shall contain a section titled "Hydrostatic Uplift Analysis" that includes the following information:

(1) The scope, extent, and findings from the site investigation relevant to hydrostatic uplift.

(2) A description of the rationale used for the selection of the analysis input parameters.

(3) A description of the method used to calculate hydrostatic uplift.

(4) A description of the assessed failure modes and conditions.

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- (5) A description of the rationale used for the selection of the critical cross section that, at a minimum, shall consider the worst case interaction of the highest temporal phreatic surface with the points identified in paragraphs (B)(1) to (B)(5) of this rule.
- (6) A description of the rationale used for the selection of the critical cross section that, at a minimum, shall consider the worst case interaction of the highest piezometric surface with the with the points identified in paragraphs (B)(1) to (B)(5) of this rule.
- (7) A plan drawing depicting an isopach map depicting the differences between the temporal high phreatic surface and all points required to be analyzed in accordance with paragraphs (B)(1) to (B)(5) of this rule.
- (8) A plan drawing depicting an isopach map depicting the differences between the temporal high piezometric surface and all points required to be analyzed in accordance with paragraphs (B)(1) to (B)(5) of this rule.
- (9) If any temporary or mechanical means will be used to depress the phreatic surface when analyzing the points identified in paragraph (B)(5) of this rule, a plan drawing with isopachs showing the difference between the depressed phreatic surface and the basal elevations of excavation.
- (10) If any temporary or mechanical means will be used to depress the piezometric surface when analyzing the points identified in paragraph (B)(5) of this rule, a plan drawing with isopachs showing the difference between the depressed piezometric surface and the basal elevations of excavation.
- (11) A drawing of each critical cross section that shows the details of the input information for the analysis model including the following:

  - (a) The material boundaries.
  - (b) The applicable dimensions, including the depth of excavation, and depth to the highest temporal phreatic surface and the highest temporal piezometric surface.
  - (c) The material types.
  - (d) The in situ unit weights and saturated unit weights of the materials.
- (12) All of inputs, outputs, and calculations used for the analysis. If a computer was used for any calculations, the computer inputs and outputs shall also be included.

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3745-507-320

Bearing capacity analysis and reporting.

- (A) If the design of the facility will include vertical sump risers located on the liner system, a bearing capacity analysis shall be conducted for all vertical sump risers located on the liner system and shall demonstrate that the design of the liner system and the vertical sump risers provides a factor of safety of at least 3.0 against bearing capacity failure caused by the vertical sump risers.
- (B) If vertical sump risers located on the liner system will be included in the design of the facility, the geotechnical and stability analyses report identified in rule 3745-507-300 of the Administrative Code shall contain a section titled "Bearing Capacity Analysis of Vertical Sump Risers" that includes the following information:
- (1) The scope, extent, and findings of the site investigation relevant to bearing capacity analysis.
  - (2) A description of the rationale used for the selection of the analysis input parameters.
  - (3) A description of the method used to calculate bearing capacity.
  - (4) A description of the assessed failure modes and conditions.
  - (5) A drawing of each critical cross section that fully depicts the analysis input model including the following:
    - (a) The material boundaries.
    - (b) The temporal high piezometric surface.
    - (c) The material types.
    - (d) The in situ unit weights and saturated unit weights.
  - (6) A plan view showing the location of the critical cross sections including northings and eastings for the endpoints of the section.
  - (7) All of inputs, outputs, and calculations used for the analysis. If a computer was used for any calculations, the computer inputs and outputs shall also be included.

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3745-507-330

## Static stability analysis and reporting.

The static stability analysis shall include the following:

(A) An assessment using two dimensional limit equilibrium methods or other methods acceptable to the reviewing authority of failure modes and conditions that at a minimum shall include the following:

- (1) Deep-seated translational and rotational failure mechanisms of internal slopes, interim slopes, and final slopes for drained conditions and any undrained conditions that represent the presence of excess pore water pressure at the onset of loading or unloading that exist or may occur at the facility. This analysis shall demonstrate the facility has a factor of safety of at least 1.50 against failure.
- (2) Shallow translational and rotational failure mechanisms of internal slopes and final slopes for drained conditions. This analysis shall demonstrate the facility has a factor of safety of at least 1.50 against failure.
- (3) Shallow translational and rotational failure mechanisms of internal slopes for conditions of maximum head and flow through the leachate collection layer expected during the fifty-year, one-hour storm event. This analysis shall demonstrate the facility has a factor of safety of at least 1.10 against failure.
- (4) Shallow translational and rotational failure mechanisms of final slopes for saturated conditions. This analysis shall demonstrate the facility has a factor of safety of at least 1.10 against failure when the drainage layer is at the maximum head and conveying the maximum flow of water expected from the vegetative layer when the vegetative layer is saturated.
- (5) For all slopes greater than 5.0 per cent that may be loaded with one thousand four hundred forty pounds per square foot or more of vertical compressive stress, the residual shear strength shall be used during the assessment of failure mechanisms for all interfaces between geosynthetics and for all interfaces between a geosynthetic and another material.
- (6) The static analyses required by this rule shall be used to determine the minimum shear strengths of engineered components and materials that will provide the factors of safety required by this rule, except that minimum factors of safety do not need to be determined for in situ foundation materials when shear strengths for the materials were determined during the site investigation using laboratory testing.
- (7) If any access roads will be built into or onto internal slopes, the liner system, or the leachate management system, the design of the roads shall be included in the analyses required by this rule.

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(8) If any access roads will be built on or into the cap, the design of the roads shall be included in the analyses required by this rule.

(B) The geotechnical and stability analyses report identified in rule 3745-507-300 of the Administrative Code shall contain a section titled "Static Stability Analysis" that contains the following information:

(1) The scope, extent, and findings of the site investigation and earthen materials testing program relevant to static stability.

(2) A description of the rationale used for the selection of the analysis input parameters.

(3) A description of the method used to calculate static stability.

(4) For each of the failure modes and conditions assessed, a description of the rationale used for the selection of the critical cross sections for the internal slopes, interim slopes, and final slopes.

(5) A drawing of each critical cross sections that fully depicts the analysis input model including the following:

(a) The material boundaries.

(b) The highest temporal phreatic surfaces and highest temporal piezometric surfaces.

(c) The material types.

(d) The in situ unit weights and, where applicable, the in situ saturated unit weights.

(e) The material shear strengths.

(6) The plan view showing the locations of the critical cross sections that includes the northings and eastings for the endpoints of the sections.

(7) A summary of the results using two dimensional limit equilibrium methods or other methods acceptable to the reviewing authority for each of the critical cross sections.

(8) All of inputs, outputs, and calculations used for the analysis. If a computer was used for any calculations, the computer inputs and outputs shall also be included.

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3745-507-340

Seismic stability analysis and reporting.

(A) The seismic stability analysis shall demonstrate using two dimensional limit equilibrium methods or other methods acceptable to the reviewing authority that the facility is designed to have a factor of safety of at least 1.00 against failure. The seismic stability analysis shall include an assessment of failure modes and conditions that at a minimum shall include the following:

- (1) Deep-seated translational and rotational failure mechanisms of final slopes for drained conditions and any undrained conditions that represent the presence of excess pore water pressure at the onset of loading or unloading that exist or may occur at the facility.
- (2) If requested by the reviewing authority, deep-seated translational and rotational failure mechanisms of internal slopes for drained conditions and any undrained conditions that represent the presence of excess pore water pressure at the onset of loading or unloading that exist or may occur at the facility.
- (3) If requested by the reviewing authority, deep-seated translational and rotational failure mechanisms of interim slopes for drained conditions and any undrained conditions that represent the presence of excess pore water pressure at the onset of loading or unloading that exist or may occur at the facility.
- (4) Shallow translational and shallow rotational failure mechanisms of final slopes for unsaturated conditions.
- (5) Liquefaction failure mechanisms.
- (6) For all slopes greater than 5.0 per cent that may be loaded with one thousand four hundred forty pounds per square foot or more of vertical compressive stress, the residual shear strength shall be used during the assessment of failure mechanisms for all interfaces between geosynthetics and for all interfaces between a geosynthetic and another material.
- (7) The seismic analyses required by this rule shall be used to determine the minimum shear strengths of engineered components and materials that will provide the factors of safety required by this rule, except that minimum factors of safety do not need to be determined for in situ foundation materials when shear strengths for the materials were determined during the site investigation using laboratory testing.
- (8) If any access roads will be built into or onto internal slopes, the liner system, or the leachate management system, the design of the roads shall be included in the analyses required by this rule.

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(9) If any access roads will be built on or into the cap, the design of the roads shall be included in the analyses required by this rule.

(B) The geotechnical and stability report shall contain a section titled "Seismic Stability Analysis" that contains the following information:

(1) The scope, extent, and findings of the site investigation and earthen materials testing program relevant to seismic stability.

(2) A description of the rationale used for the selection of the analysis input parameters.

(3) A description of the method used to calculate the seismic stability.

(4) For each of the failure modes and conditions, provide a description of the rationale used for the selection of the critical cross sections for the internal slopes, interim slopes, and final slopes.

(5) A drawing of each critical cross section that fully depicts the analysis input model including the following:

(a) The material boundaries.

(b) The highest temporal phreatic surface and the highest temporal piezometric surface.

(c) The material types.

(d) The in situ weights and the in situ saturated unit weights of the materials.

(e) The material shear strengths.

(6) The plan views showing the location of the critical cross sections that include the northings and eastings for the endpoints of the cross sections.

(7) A summary of the results using two or three dimensional limit equilibrium methods or other methods acceptable to the reviewing authority for each of the critical cross sections.

(8) All of inputs, outputs, and calculations used for the analysis. If a computer was used for any calculations, the computer inputs and outputs shall also be included.

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3745-507-350

**Settlement analysis and reporting for the liner system and leachate management system.**

- (A) The applicant, owner, or operator of a facility that submits an application for a permit to install shall comply with this rule if a liner system or a leachate management system is included or is required to be included in the design of the facility.
- (B) If a liner system is required to be included in the design of the facility, the settlement analysis shall demonstrate that the liner system is designed to meet the design requirements for the liner system after accounting for one hundred percent of the primary consolidation settlement and the secondary consolidation settlement of the compressible materials beneath the surface of the liner system, which includes the in situ foundation, isolation materials, structural fill materials, and the recompacted soil liner. Secondary settlement shall be calculated using a one-hundred-year time frame.
- (C) If a leachate management system is required to be included in the design of the facility, the settlement analysis shall demonstrate that the leachate management system is designed to meet the design requirements for the leachate management system after accounting for one hundred percent of the primary consolidation settlement and the secondary consolidation settlement of the compressible materials beneath the leachate collection system, which includes the in situ foundation, isolation materials, structural fill materials, and the recompacted soil liner. Secondary settlement shall be calculated using a one-hundred-year time frame.
- (D) For a facility where an owner or operator proposes to vertically expand over disposed C&DD or disposed waste that is above a leachate management system that was constructed after December 31, 2003, the owner or operator shall demonstrate that the slope of the existing leachate management system located beneath the vertical expansion with the mass of the vertical expansion in place meets the design standard in paragraph (C) of this rule.
- (E) For a facility where an owner or operator proposes to vertically expand over disposed C&DD or disposed waste that is above a leachate management system that was constructed before December 31, 2003, the owner or operator shall demonstrate that the leachate management system located beneath the vertical expansion with the mass of the vertical expansion in place will maintain the following conditions, after accounting for the additional C&DD or waste and one hundred percent of the primary consolidation settlement and the secondary consolidation settlement of the compressible materials beneath the facility.
- (1) Positive drainage in the leachate collection system to the sumps.
  - (2) No more than one foot of head of leachate above the basal elevations of the leachate collection layer.

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(F) The geotechnical and stability analyses report identified in rule 3745-507-300 of the Administrative Code shall include a section titled "Settlement Analysis of the Liner System and Leachate Management System" that includes the following information:

- (1) The scope, extent, and findings of the site investigation and earthen materials testing program relevant to the settlement analysis.
- (2) A description of the rationale used for the selection of the settlement analysis input parameters.
- (3) A description of the method used to calculate settlement.
- (4) A description of the assessed settlement modes and conditions.
- (5) A drawing of each critical cross section that fully depicts the analysis input model including the following:
  - (a) The liner system.
  - (b) The leachate management system.
  - (c) The material boundaries.
  - (d) The material characteristics.
  - (e) The material types.
  - (f) The in situ unit weights and saturated unit weights of the materials.
- (6) A plan view showing the location of the critical cross sections including northings and eastings for the endpoints of the section.
- (7) A summary of the results.
- (8) All of inputs, outputs, and calculations used for the analysis. If a computer was used for any calculations, the computer inputs and outputs shall also be included.

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3745-507-352

Settlement analysis and reporting for separatory leachate barrier and collection system.

- (A) If a separatory leachate barrier and collection system is included or is required to be included in the design of the facility and the applicant, owner, or operator proposes to design it with a slope less than ten per cent, the settlement analysis shall demonstrate that the design requirements for the separatory leachate barrier and collection system will be met after accounting for one hundred per cent of the initial consolidation settlement, primary consolidation settlement, and the secondary consolidation settlement of the compressible materials beneath the surface of the separatory leachate barrier and collection system, which includes all C&DD or waste, the in situ foundation, isolation materials, structural fill materials, the recompacted soil liner, and the leachate barrier layer. Secondary settlement shall be calculated using a one-hundred-year time frame.
- (B) For a facility where an owner or operator proposes to vertically expand over disposed C&DD or disposed waste that is above a separatory leachate barrier and collection system that was constructed after December 31, 2003, the owner or operator shall demonstrate that the slope of the existing separatory leachate barrier and collection system located beneath the vertical expansion with the mass of the vertical expansion in place meets the design standard in paragraph (A) of this rule.
- (C) For a facility where an owner or operator proposes to vertically expand over disposed C&DD or disposed waste that is above a separatory leachate barrier and collection system that was constructed before December 31, 2003, the owner or operator shall demonstrate that the separatory leachate barrier and collection system located beneath the vertical expansion with the mass of the vertical expansion in place will maintain the following conditions, after accounting for the additional waste and one hundred percent of the primary consolidation settlement and the secondary consolidation settlement of the compressible materials beneath the facility:
- (1) Positive drainage in the leachate collection system to the sumps.
  - (2) No more than one foot of head of leachate above the basal elevations of the leachate collection layer of the separatory leachate barrier and collection system.
- (D) The geotechnical and stability analyses report identified in rule 3745-507-300 of the Administrative Code shall include a section titled "Settlement Analysis of the Separatory Leachate Barrier and Collection System" that includes the following information:
- (1) The scope, extent, and findings of the site investigation and earthen materials testing program relevant to the settlement analysis.

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- (2) A description of the rationale used for the selection of the settlement analysis input parameters.
- (3) A description of the method used to calculate settlement.
- (4) A description of the assessed settlement modes and conditions.
- (5) A drawing of each critical cross section that fully depicts the analysis input model including the following:

  - (a) The liner system.
  - (b) The leachate management system.
  - (c) The material boundaries.
  - (d) The material characteristics.
  - (e) The material types.
  - (f) The in situ unit weights and saturated unit weights of the materials.
- (6) A plan view showing the location of the critical cross sections including northings and eastings for the endpoints of the section.
- (7) A summary of the results.
- (8) All of inputs, outputs, and calculations used for the analysis. If a computer was used for any calculations, the computer inputs and outputs shall also be included.

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3745-507-360      Unstable areas.

- (A) If any of the unstable areas listed in paragraph (N) of rule 3745-507-120 of the Administrative Code were identified during the site investigation, the applicant, owner, or operator shall provide an analysis, using the publicly available information, relevant information from the site investigation, and appropriate calculations, to demonstrate that the facility will not be affected by the unstable areas and is designed to maintain the integrity of the engineered components.
- (B) If any of the unstable areas listed in paragraph (N) of rule 3745-507-120 of the Administrative Code were identified during the site investigation, the geotechnical and stability analyses report identified in rule 3745-507-300 of the Administrative Code shall contain a section titled "Description of Regional Unstable Areas." This section of the report shall include all of the publicly available information, relevant information from the site investigation, drawings, cross sections, and calculations necessary to demonstrate compliance with paragraph (A) of this rule.

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3745-507-362

Underground mines.

- (A) If an underground mine is present within one thousand feet of the boundary of the facility the applicant, owner, or operator shall provide an analysis by a professional engineer experienced in the abatement of abandoned mines that demonstrates that the facility will not be affected by the underground mine and the design of the facility will maintain the integrity of the engineered components.
- (B) If an underground mine is present within one thousand feet of the boundary of the facility the geotechnical and stability report identified in rule 3745-507-300 of the Administrative Code shall contain a section titled "Underground Mines" that at a minimum includes the following information:
- (1) The properties of the consolidated and unconsolidated stratigraphic units above the underground mine, based on the findings of the site investigation.
  - (2) A description of the height and width of the underground mine voids.
  - (3) The angle of draw for the underground mine.
  - (4) A description of the mining method used.
  - (5) The location of the underground mine based on the findings of the site investigation and the letter required by rule 3745-507-200 of the Administrative Code from the Ohio department of natural resources division of mineral resources management or other appropriate agency regarding the underground mine.
  - (6) If the underground mine has been or will be removed:
    - (a) A description of the removal activities.
    - (b) To scale drawings showing the vertical and lateral extent of mine removal activities in relationship to the boundary of the facility and the limits of C&DD placement or the limits of waste placement.
  - (7) If the underground mine will be filled to eliminate the potential for subsidence:
    - (a) An assessment of the condition of the underground mine and the consolidated and unconsolidated stratigraphic units above the underground mine within the angle of draw based on the findings of the site investigation. The assessment of the condition shall at a minimum include an evaluation of the presence and extent of the following:
      - (i) Void spaces.

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(ii) Fracturing.

(iii) Water in the underground mine.

(b) A description of the filling activities, including the grout mixes used and the rationale for their selection.

(c) Drawings showing the vertical and lateral extent of mine filling activities in relationship to the boundary of the facility and the limits of C&DD placement or the limits of waste placement.

(d) The location and findings from confirmation borings used to justify that the potential for subsidence has been eliminated.

(e) A list of abatement projects of abandoned mines, a brief description of each project, and the responsibility the professional engineer had with each project.