



Ohio Administrative Code

Rule 3745-50-44 Contents of "Part B" of the permit application.

Effective: June 12, 2023

"Part B" information requirements in this rule reflect the standards established in Chapters 3745-54 to 3745-57 and 3745-205 of the Administrative Code. These information requirements are necessary in order to determine compliance with Chapters 3745-54 to 3745-57 and 3745-205 of the Administrative Code. If owners and operators of hazardous waste management facilities can demonstrate that the information prescribed in "Part B" cannot be provided to the extent required, the director may make allowance for submittal of such information on a case-by-case basis. Information required in "Part B" shall be submitted to the director and signed in accordance with rule 3745-50-42 of the Administrative Code. Certain technical data, such as design drawings and specifications, and engineering studies shall be certified by a qualified professional engineer. For post-closure permits, only the information specified in paragraph (C)(14) of this rule is required in "Part B" of the permit application. As used in this rule, "in operation" has the same meaning as in rule 3745-50-10 of the Administrative Code. "Part B" of the permit application includes the following:

(A) General information requirements. The following information is required for all hazardous waste management facilities, except as rule 3745-54-01 of the Administrative Code provides otherwise:

(1) A general description of the facility.

(2) Chemical and physical analyses of the hazardous waste and hazardous debris to be handled at the facility. At a minimum, these analyses shall contain all the information which is required to treat, store, or dispose of the wastes properly in accordance with Chapters 3745-54 to 3745-57 and 3745-205 of the Administrative Code.

(3) A copy of the waste analysis plan required by paragraph (B) of rule 3745-54-13 of the Administrative Code and, if applicable, paragraph (C) of rule 3745-54-13 of the Administrative Code.



(4) A description of the security procedures and equipment required by rule 3745-54-14 of the Administrative Code, or a justification demonstrating the reasons for requesting a waiver of this requirement.

(5) A copy of the general inspection schedule required by paragraph (B) of rule 3745-54-15 of the Administrative Code. Include, where applicable, as part of the inspection schedule, specific requirements in paragraph (I) of rule 3745-55-93 and rules 3745-55-74, 3745-55-95, 3745-56-26, 3745-56-54, 3745-56-73, 3745-57-05, 3745-57-47, 3745-57-84, 3745-57-92, 3745-205-33, 3745-205-52, 3745-205-53, 3745-205-58, 3745-205-84, 3745-205-85, 3745-205-86, and 3745-205-88 of the Administrative Code.

(6) A justification of any request for an exemption from the preparedness and prevention requirements of rules 3745-54-30 to 3745-54-37 of the Administrative Code.

(7) A copy of the contingency plan required by rules 3745-54-50 to 3745-54-56 of the Administrative Code.

[Comment: Include, where applicable, as part of the contingency plan, specific requirements in rules 3745-55-100 and 3745-56-27 of the Administrative Code.]

(8) A description of procedures, structures, or equipment used at the facility to:

(a) Prevent hazards in unloading operations (for example, ramps, special forklifts);

(b) Prevent run-off from hazardous waste handling areas to other areas of the facility or environment, or to prevent flooding (for example, berms, dikes, trenches);

(c) Prevent contamination of water supplies;

(d) Mitigate effects of equipment failure and power outages;

(e) Prevent undue exposure of personnel to hazardous waste (for example, protective clothing); and



(f) Prevent releases to the atmosphere.

(9) A description of precautions to prevent accidental ignition or reaction of ignitable wastes, reactive wastes, or incompatible wastes as required to demonstrate compliance with rule 3745-54-17 of the Administrative Code, including documentation demonstrating compliance with paragraph (C) of rule 3745-54-17 of the Administrative Code.

(10) Traffic pattern, estimated volume (number, types of vehicles) and control [for example, show turns across traffic lanes, and stacking lanes (if appropriate), describe access road surfacing and load-bearing capacity, show traffic control signals].

(11) Facility location information:

(a) [Reserved.]

(b) [Reserved.]

(c) Owners and operators of all facilities shall provide an identification of whether the facility is located within a one-hundred-year floodplain. This identification shall indicate the source of data for such determination and include a copy of the relevant federal insurance administration (FIA) flood map, if used, or the calculations and maps used where an FIA map is not available. Information shall be provided identifying the one-hundred-year flood level and any other special flooding factors (e.g., wave action) which shall be considered in designing, constructing, operating, or maintaining the facility to withstand washout from a one-hundred-year flood.

[Comment: Where maps for the "National Flood Insurance Program" produced by the FIA of the federal emergency management agency are available, these maps will normally be determinative of whether a facility is located within or outside of the one-hundred-year floodplain. However, where the FIA maps exclude an area (usually an area of the floodplain less than two hundred feet in width), this area shall be considered and a determination made as to whether the area is in the one-hundred-year floodplain. Where FIA maps are not available for a proposed facility location, the owner or operator shall use equivalent mapping techniques to determine whether the facility is within the one-hundred-year floodplain, and if so located, what the one-hundred-year flood elevation would be.]



(d) Owners and operators of facilities located in the one-hundred-year floodplain shall provide the following information:

(i) Engineering analysis to indicate the various hydrodynamic and hydrostatic forces expected to result at the site as a consequence of a one-hundred-year flood.

(ii) Structural or other engineering studies showing the design of operational units (e.g., tanks, incinerators) and flood protection devices (e.g., floodwalls, dikes) at the facility and how these will prevent washout.

(iii) If applicable, and in lieu of paragraphs (A)(11)(d)(i) and (A)(11)(d)(ii) of this rule, a detailed description of procedures to be followed to remove hazardous waste to safety before the facility is flooded, including:

(a) Timing of such movement relative to flood levels, including estimated time to move the waste, to show that such movement can be completed before floodwaters reach the facility.

(b) A description of the locations to which the waste will be moved and demonstration that those facilities will be eligible to receive hazardous waste:

(i) In accordance with rules 3745-50-40 to 3745-50-235 and Chapters 3745-54 to 3745-57, 3745-65 to 3745-69, 3745-205, 3745-256, and 3745-266 of the Administrative Code; or

(ii) If the waste is moved to a facility in another state administering a hazardous waste program under 40 CFR Part 271, in accordance with the rules of such state.

(c) The planned procedures, equipment, and personnel to be used and the means to ensure that such resources will be available in time for use.

(d) The potential for accidental discharges of the waste during movement.

(e) Owners and operators of facilities in operation immediately prior to October 9, 1980 which are



not in compliance with paragraph (B) of rule 3745-54-18 of the Administrative Code shall provide a plan showing how the facility will be brought into compliance and a schedule for compliance.

(12) An outline of both the introductory and continuing training programs by owners or operators to prepare persons to operate or maintain the hazardous waste facility in a safe manner as required to demonstrate compliance with rule 3745-54-16 of the Administrative Code. A brief description of how training will be designed to meet actual job tasks in accordance with paragraph (A)(3) of rule 3745-54-16 of the Administrative Code.

(13) A copy of the closure plan and, where applicable, the post-closure plan required by rules 3745-55-12, 3745-55-18, and 3745-55-97 of the Administrative Code. Where applicable, include as part of the plans specific requirements in rules 3745-55-78, 3745-55-97, 3745-56-28, 3745-56-58, 3745-56-80, 3745-57-10, 3745-57-51, 3745-57-91, and 3745-57-93 of the Administrative Code.

(14) For hazardous waste disposal units that were closed, documentation that notices were filed as required by rule 3745-55-19 of the Administrative Code.

(15) The most recent closure cost estimate for the facility prepared in accordance with rule 3745-55-42 of the Administrative Code and a copy of the documentation required to demonstrate financial assurance in rule 3745-55-43 of the Administrative Code. For a new facility, a copy of the required documentation may be submitted sixty days prior to the initial receipt of hazardous wastes, if that is later than the submittal of the "Part B".

(16) Where applicable, the most recent post-closure cost estimate for the facility prepared in accordance with rule 3745-55-44 of the Administrative Code plus a copy of the documentation required to demonstrate financial assurance in rule 3745-55-45 of the Administrative Code. For a new facility, a copy of the required documentation may be submitted sixty days prior to the initial receipt of hazardous wastes, if that is later than the submittal of the "Part B".

(17) Where applicable, a copy of the insurance policy or other documentation which comprises compliance with rule 3745-55-47 of the Administrative Code. For a new facility, documentation showing the amount of insurance meeting the specification of paragraph (A) of rule 3745-55-47 of the Administrative Code, and, if applicable, paragraph (B) of rule 3745-55-47 of the Administrative



Code, that the owner or operator plans to have in effect before initial receipt of hazardous waste for treatment, storage, or disposal. A request for a variance in the amount of required coverage may be submitted as specified in paragraph (C) of rule 3745-55-47 of the Administrative Code.

(18) [Reserved.]

(19) A topographic map showing a distance of one thousand feet around the facility at a scale of 2.5 centimeters (one inch) equal to but not more than sixty-one meters (two hundred feet). Contours shall be shown on the map. The contour interval shall be sufficient to clearly show the pattern of surface water flow in the vicinity of and from each operational unit of the facility. For example, contours with an interval of 1.5 meters (five feet), if relief is greater than 6.1 meters (twenty feet), or an interval of 0.6 meters (two feet), if relief is less than 6.1 meters (twenty feet). Owners and operators of hazardous waste facilities located in mountainous areas should use larger contour intervals to adequately show topographic profiles of facilities. The map shall clearly show the following:

- (a) Map scale and date.
- (b) One-hundred-year floodplain area.
- (c) Surface waters including intermittent streams.
- (d) Surrounding land uses (residential, commercial, agricultural, recreational).
- (e) A wind rose (i.e., prevailing wind speed and direction).
- (f) Orientation of the map (north arrow).
- (g) Legal boundaries of the hazardous waste facility site.
- (h) Access control (fences, gates).
- (i) Injection and withdrawal wells both on-site and off-site.



(j) Buildings; treatment, storage, or disposal operations; or other structures (recreation areas, run-off control systems, access and internal roads, storm, sanitary, and process sewerage systems, loading and unloading areas, fire control facilities, etc.).

(k) Barriers for drainage or flood control.

(l) Location of operational units within the hazardous waste facility site, where hazardous waste is (or will be) treated, stored, or disposed (include equipment cleanup areas).

[Comment: For large hazardous waste facilities, the director may allow the use of other scales on a case-by-case basis.]

(20) Applicants may be required to submit such information as may be necessary to enable the director to carry out the director's duties under other Ohio laws.

(21) For land disposal facilities, if a case-by-case extension has been approved pursuant to rule 3745-270-05 of the Administrative Code or a petition has been approved pursuant to rule 3745-270-06 of the Administrative Code, a copy of the notice of approval for the extension or petition is required.

(22) A summary of the pre-application meeting, with a list of attendees and attendees' addresses, and copies of any written comments or materials submitted at the meeting, as required in paragraph (A)(3) of rule 3745-50-39 of the Administrative Code.

(B) Additional information requirements. The following additional information regarding protection of ground water is required from owners or operators of hazardous waste facilities containing a regulated unit except as provided in paragraph (B) of rule 3745-54-90 of the Administrative Code:

(1) A summary of the ground water monitoring data obtained in rules 3745-65-90 to 3745-65-94 of the Administrative Code, where applicable.

(2) Identification of the uppermost aquifer and aquifers hydraulically interconnected beneath the facility property, including ground water flow direction and rate, and the basis for such identification



(i.e., the information obtained from hydrogeologic investigations of the facility area).

(3) On the topographic map required in paragraph (A)(19) of this rule, a delineation of the waste management area, the property boundary, the proposed "point of compliance" as defined in rule 3745-54-95 of the Administrative Code, the proposed location of ground water monitoring wells as required in rule 3745-54-97 of the Administrative Code and, to the extent possible, the information required in paragraph (B)(2) of this rule.

(4) A description of any plume of contamination that has entered the ground water from a regulated unit at the time that the application is submitted that:

(a) Delineates the extent of the plume on the topographic map required in paragraph (A)(19) of this rule;

(b) Identifies the concentration of each constituent in the appendix to rule 3745-54-98 of the Administrative Code throughout the plume or identifies the maximum concentrations of each constituent in the appendix to rule 3745-54-98 of the Administrative Code in the plume.

(5) Detailed plans and an engineering report describing the proposed ground water monitoring program to be implemented to comply with rule 3745-54-97 of the Administrative Code.

(6) If the presence of hazardous constituents has not been detected in the ground water at the time of permit application, the owner or operator shall submit sufficient information, supporting data, and analyses to establish a detection monitoring program which complies with rule 3745-54-98 of the Administrative Code. This submittal shall address the following items as specified in rule 3745-54-98 of the Administrative Code:

(a) A proposed list of indicator parameters, waste constituents, or reaction products that can provide a reliable indication of the presence of hazardous constituents in the ground water;

(b) A proposed ground water monitoring system;

(c) Background values for each proposed monitoring parameter or constituent, or procedures to



calculate such values; and

(d) A description of proposed sampling, analysis, and statistical comparison procedures to be utilized in evaluating ground water monitoring data.

(7) If the presence of hazardous constituents has been detected in the ground water at the point of compliance at the time of permit application, the owner or operator shall submit sufficient information, supporting data, and analyses to establish a compliance monitoring program which complies with rule 3745-54-99 of the Administrative Code. Except as provided in paragraph (G)(5) of rule 3745-54-98 of the Administrative Code, the owner or operator shall submit an engineering feasibility plan for a corrective action program necessary to comply with rule 3745-54-100 of the Administrative Code, unless the owner or operator obtains written authorization in advance from the director to submit a proposed permit schedule for submittal of such plan. To demonstrate compliance with rule 3745-54-99 of the Administrative Code, the owner or operator shall address the following items:

(a) A description of the wastes previously handled at the facility;

(b) A characterization of the contaminated ground water, including concentrations of hazardous constituents;

(c) A list of hazardous constituents for which compliance monitoring will be undertaken in accordance with rules 3745-54-97 and 3745-54-99 of the Administrative Code;

(d) Proposed concentration limits for each hazardous constituent, based on the criteria provided in paragraph (A) of rule 3745-54-94 of the Administrative Code, including a justification for establishing any alternate concentration limits;

(e) Detailed plans and an engineering report describing the proposed ground water monitoring system, in accordance with rule 3745-54-97 of the Administrative Code; and

(f) A description of proposed sampling, analysis and statistical comparison procedures to be utilized in evaluating ground water monitoring data.



(8) If hazardous constituents are measured in the ground water which exceed the concentration limits established in the table in rule 3745-54-94 of the Administrative Code, or if ground water monitoring conducted at the time of permit application in rules 3745-65-90 to 3745-65-94 of the Administrative Code at the waste boundary indicates the presence of hazardous constituents from the facility in ground water over background concentrations, the owner or operator shall submit sufficient information, supporting data, and analyses to establish a corrective action program which complies with rule 3745-54-100 of the Administrative Code. However, an owner or operator is not required to submit information to establish a corrective action program if, after consideration of the criteria listed in paragraph (B) of rule 3745-54-94 of the Administrative Code, the owner or operator demonstrates to the director that alternate concentration limits are protective of human health and the environment. An owner or operator who is not required to establish a corrective action program for this reason instead shall submit sufficient information to establish a compliance monitoring program which complies with rule 3745-54-99 of the Administrative Code and paragraph (B)(6) of this rule. To demonstrate compliance with rule 3745-54-100 of the Administrative Code, at a minimum, the owner or operator shall address, the following items:

- (a) A characterization of the contaminated ground water, including concentrations of hazardous constituents;
 - (b) The concentration limit for each hazardous constituent found in the ground water as provided in rule 3745-54-94 of the Administrative Code;
 - (c) Detailed plans and an engineering report describing the corrective action to be taken; and
 - (d) A description of how the ground water monitoring program will assess the adequacy of the corrective action.
 - (e) The permit may contain a schedule for submittal of the information required in paragraphs (B)(8)(c) and (B)(8)(d) of this rule, provided the owner or operator obtains written authorization from the director prior to submittal of the complete permit application.
- (C) The following additional information is required from owners or operators of specific types of



hazardous waste facilities that are used or to be used for storage, treatment, or disposal:

(1) Containers. For facilities that store containers of hazardous waste, except as otherwise provided in rule 3745-55-70 of the Administrative Code.

(a) A description of the containment system to demonstrate compliance with rule 3745-55-75 of the Administrative Code. Show at least the following:

(i) Basic design parameters, dimensions, and materials of construction.

(ii) How the design promotes drainage or how containers are kept from contact with standing liquids in the containment system.

(iii) Capacity of the containment system relative to the number and volume of containers to be stored.

(iv) Provisions for preventing or managing run-on.

(v) How accumulated liquids can be analyzed and removed to prevent overflow.

(b) For storage areas that store containers holding wastes that do not contain free liquids, a demonstration of compliance with paragraph (C) of rule 3745-55-75 of the Administrative Code, including:

(i) Test procedures and results or other documentation or information to show that the wastes do not contain free liquids; and

(ii) A description of how the storage area is designed or operated to drain and remove liquids or how containers are kept from contact with standing liquids.

(c) Sketches, drawings, or data demonstrating compliance with rule 3745-55-76 of the Administrative Code (location or buffer zone and containers holding ignitable wastes or reactive wastes) and paragraph (C) of rule 3745-55-77 of the Administrative Code (location of incompatible wastes),



where applicable.

(d) Where incompatible wastes are stored or otherwise managed in containers, a description of the procedures used to ensure compliance with paragraphs (A) and (B) of rule 3745-55-77 of the Administrative Code and paragraphs (B) and (C) of rule 3745-54-17 of the Administrative Code.

(e) Information on air emission control equipment, as required in paragraph (C)(13) of this rule.

(2) Tanks. Except as otherwise provided in rule 3745-55-90 of the Administrative Code, owners and operators of facilities that use tanks to store or treat hazardous waste shall provide the following additional information:

(a) A written assessment that is reviewed and certified by a qualified professional engineer as to the structural integrity and suitability for handling hazardous waste of each tank system, as required in rules 3745-55-91 and 3745-55-92 of the Administrative Code;

(b) Dimensions, capacity and shell thickness of each tank;

(c) Description of feed systems, safety cutoff, bypass systems, and pressure controls (e.g., vents);

(d) A diagram of piping, instrumentation, and process flow for each tank system;

(e) A description of materials and equipment used to provide external corrosion protection, as required in paragraph (A)(3)(b) of rule 3745-55-92 of the Administrative Code;

(f) For new tank systems, a detailed description of how the tank systems will be installed in compliance with paragraphs (B) to (E) of rule 3745-55-92 of the Administrative Code;

(g) Detailed plans and description of how the secondary containment system for each tank system is or will be designed, constructed, and operated to comply with paragraphs (A) to (F) of rule 3745-55-93 of the Administrative Code;

(h) For tank systems for which a variance from the requirements of rule 3745-55-93 of the



Administrative Code is sought, as provided by paragraph (G) of rule 3745-55-93 of the Administrative Code:

(i) Detailed plans and engineering and hydrogeologic reports, as appropriate, describing alternate design and operating practices that will, in conjunction with location aspects, prevent the migration of any hazardous waste or hazardous constituents into the ground water or surface water during the life of the facility; or

(ii) A detailed assessment of the substantial present or potential hazards posed to human health or the environment should a release enter the environment;

(i) Description of controls and practices to prevent spills and overflows, as required in paragraph (B) of rule 3745-55-94 of the Administrative Code;

(j) For tank systems in which ignitable wastes, reactive wastes, or incompatible wastes are to be stored or treated, a description of how operating procedures and tank system and facility design will achieve compliance with rules 3745-55-98 and 3745-55-99 of the Administrative Code; and

(k) Information on air emission control equipment, as required in paragraph (C)(13) of this rule.

(3) Surface impoundments. For facilities that store, treat, or dispose of hazardous waste in surface impoundments, except as otherwise provided in rule 3745-56-20 of the Administrative Code, the following additional information is required:

(a) A list of the hazardous wastes placed or to be placed in each surface impoundment;

(b) Detailed plans and an engineering report describing how the surface impoundment is designed and is or will be constructed, operated, and maintained to comply with rules 3745-54-19, 3745-56-21, 3745-56-22, and 3745-56-23 of the Administrative Code, addressing the following items:

(i) The liner system. If an exemption from the requirement for a liner is sought as provided by paragraph (B) of rule 3745-56-21 of the Administrative Code, submit detailed plans and engineering and hydrogeologic reports, as appropriate, describing alternate design and operating practices that



will, in conjunction with location aspects, prevent the migration of any hazardous constituents into the ground water or surface water at any future time;

(ii) The double liner and leak (leachate) detection, collection, and removal system, if the surface impoundment shall comply with paragraph (C) of rule 3745-56-21 of the Administrative Code. If an exemption from the requirements for double liners and a leak detection, collection, and removal system or alternative design is sought as provided by paragraph (D) or (E) of rule 3745-56-21 of the Administrative Code;

(iii) If the leak detection system is located in a saturated zone, submit detailed plans and an engineering report explaining the leak detection system design and operation, and the location of the saturated zone in relation to the leak detection system;

(iv) The construction quality assurance plan if required in rule 3745-54-19 of the Administrative Code;

(v) Proposed action leakage rate, with rationale, if required in rule 3745-56-22 of the Administrative Code, and response action plan if required in rule 3745-56-23 of the Administrative Code;

(vi) Prevention of overtopping; and

(vii) Structural integrity of dikes;

(c) A description of how each surface impoundment, including the double liner system, leak detection system, cover system, and appurtenances for control of overtopping, will be inspected in order to comply with paragraphs (A), (B), and (D) of rule 3745-56-26 of the Administrative Code. This information shall be included in the inspection plan submitted under paragraph (A)(5) of this rule;

(d) A certification by a qualified professional engineer which attests to the structural integrity of each dike, as required in paragraph (C) of rule 3745-56-26 of the Administrative Code. For new units, the owner or operator shall submit a statement by a qualified professional engineer that the qualified professional engineer will provide such a certification upon completion of construction in accordance



with the plans and specifications;

(e) A description of the procedure to be used for removing a surface impoundment from service, as required in paragraphs (B) and (C) of rule 3745-56-27 of the Administrative Code. This information should be included in the contingency plan submitted under paragraph (A)(7) of this rule;

(f) A description of how hazardous waste residues and contaminated materials will be removed from the unit at closure, as required in paragraph (A)(1) of rule 3745-56-28 of the Administrative Code. For any wastes not to be removed from the unit upon closure, the owner or operator shall submit detailed plans and an engineering report describing how paragraphs (A)(2) and (B) of rule 3745-56-28 of the Administrative Code will be complied with. This information should be included in the closure plan and, where applicable, the post-closure plan submitted under paragraph (A)(13) of this rule;

(g) If ignitable wastes or reactive wastes are to be placed in a surface impoundment, an explanation of how rule 3745-56-29 of the Administrative Code will be complied with;

(h) If incompatible wastes, or incompatible wastes and materials, will be placed in a surface impoundment, an explanation of how rule 3745-56-30 of the Administrative Code will be complied with;

(i) A waste management plan for EPA hazardous waste numbers F020, F021, F022, F023, F026, and F027 describing how the surface impoundment is or will be designed, constructed, operated, and maintained to comply with rule 3745-56-31 of the Administrative Code. This submittal shall address the following items as specified in rule 3745-56-31 of the Administrative Code:

(i) The volume, physical, and chemical characteristics of the wastes, including the potential for the wastes to migrate through soil or to volatilize or escape into the atmosphere;

(ii) The attenuative properties of underlying and surrounding soils or other materials;

(iii) The mobilizing properties of other materials co-disposed with these wastes; and



(iv) The effectiveness of additional treatment, design, or monitoring techniques;

(j) Information on air emission control equipment, as required in paragraph (C)(13) of this rule.

(4) Waste piles. For facilities that store or treat hazardous waste in waste piles, except as otherwise provided in paragraph (A) of rule 3745-56-50 of the Administrative Code, the following additional information is required:

(a) A list of hazardous wastes placed or to be placed in each waste pile;

(b) If an exemption is sought to rule 3745-56-51 and rules 3745-54-90 to 3745-54-101 of the Administrative Code as provided by paragraph (C) of rule 3745-56-50 or paragraph (B)(2) of rule 3745-54-90 of the Administrative Code, an explanation of how paragraph (C) of rule 3745-56-50 of the Administrative Code will be complied with, or detailed plans and an engineering report describing how paragraph (B)(2) of rule 3745-54-90 of the Administrative Code will be complied with.

(c) Detailed plans and an engineering report describing how the pile is designed and is or will be constructed, operated, and maintained to comply with rules 3745-54-19, 3745-56-51, 3745-56-52, and 3745-56-53 of the Administrative Code, addressing the following items:

(i)

(a) The liner system (except for an existing portion of a waste pile), if the waste pile shall comply with paragraph (A) of rule 3745-56-51 of the Administrative Code. If an exemption from the requirement for a liner is sought, as provided by paragraph (B) of rule 3745-56-51 of the Administrative Code, the owner or operator shall submit detailed plans, and engineering and hydrogeologic reports, as appropriate, describing alternate design and operating practices that will, in conjunction with location aspects, prevent the migration of any hazardous constituents into the ground water or surface water at any future time;

(b) The double liner and leak (leachate) detection, collection, and removal system, if the waste pile shall comply with paragraph (C) of rule 3745-56-51 of the Administrative Code. If an exemption



from the requirements for double liners and a leak detection, collection, and removal system or alternative design is sought as provided by paragraph (D), (E), or (F) of rule 3745-56-51 of the Administrative Code, submit appropriate information;

(c) If the leak detection system is located in a saturated zone, submit detailed plans and an engineering report explaining the leak detection system design and operation, and the location of the saturated zone in relation to the leak detection system;

(d) The construction quality assurance plan if required in rule 3745-54-19 of the Administrative Code;

(e) Proposed action leakage rate, with rationale, if required in rule 3745-56-52 of the Administrative Code, and response action plan, if required in rule 3745-56-53 of the Administrative Code;

(ii) Control of run-on;

(iii) Control of run-off;

(iv) Management of collection and holding units associated with run-on and run-off control systems; and

(v) Control of wind dispersal of particulate matter, where applicable.

(d) A description of how each waste pile, including the double liner system, leachate collection and removal system, leak detection system, cover system, and appurtenances for control of run-on and run-off, will be inspected in order to comply with paragraphs (A), (B), and (C) of rule 3745-56-54 of the Administrative Code. This information shall be included in the inspection plan submitted under paragraph (A)(5) of this rule;

(e) If treatment is carried out on or in the pile, details of the process and equipment used, and the nature and quality of the residuals;

(f) If ignitable wastes or reactive wastes are to be placed in a waste pile, an explanation of how rule



3745-56-56 of the Administrative Code will be complied with;

(g) If incompatible wastes, or incompatible wastes and materials, will be placed in a waste pile, an explanation of how rule 3745-56-57 of the Administrative Code will be complied with;

(h) A description of how hazardous waste residues and contaminated materials will be removed from the waste pile at closure, as required in paragraph (A) of rule 3745-56-58 of the Administrative Code. For any waste not to be removed from the waste pile upon closure, the owner or operator shall submit detailed plans and an engineering report describing how paragraphs (A) and (B) of rule 3745-57-10 of the Administrative Code will be complied with. This information should be included in the closure plan and, where applicable, the post-closure plan submitted under paragraph (A)(13) of this rule.

(i) A waste management plan for EPA hazardous waste numbers F020, F021, F022, F023, F026, and F027 describing how a waste pile that is not enclosed [as described in paragraph (C) of rule 3745-56-50 of the Administrative Code] is or will be designed, constructed, operated, and maintained to comply with rule 3745-56-59 of the Administrative Code. This submittal shall address the following items as specified in rule 3745-56-59 of the Administrative Code:

(i) The volume, physical, and chemical characteristics of the wastes to be disposed in the waste pile, including the potential for the wastes to migrate through soil or to volatilize or escape into the atmosphere;

(ii) The attenuative properties of underlying and surrounding soils or other materials;

(iii) The mobilizing properties of other materials co-disposed with these wastes; and

(iv) The effectiveness of additional treatment, design, or monitoring techniques.

(5) Land treatment. Except as otherwise provided in rule 3745-54-01 of the Administrative Code, owners and operators of facilities that use land treatment to treat or dispose of hazardous waste shall provide the following additional information:

(a) A description of plans to conduct a treatment demonstration as required in rule 3745-56-72 of the



Administrative Code. The description shall include the following information:

(i) The wastes for which the demonstration will be made and the potential hazardous constituents in the wastes;

(ii) The data sources to be used to make the demonstration (e.g., literature, laboratory data, field data, or operating data);

(iii) Any specific laboratory or field test that will be conducted, including:

(a) The type of test (e.g., column leaching, degradation);

(b) Materials and methods, including analytical procedures;

(c) Expected time for completion;

(d) Characteristics of the unit that will be simulated in the demonstration, including treatment zone characteristics, climatic conditions, and operating practices.

(b) A description of a land treatment program, as required in rule 3745-56-71 of the Administrative Code. This information shall be submitted with the plans for the treatment demonstration, and updated following the treatment demonstration. The land treatment program shall address the following items:

(i) The wastes to be land treated;

(ii) Design measures and operating practices necessary to maximize treatment in accordance with paragraph (A) of rule 3745-56-73 of the Administrative Code, including:

(a) Waste application method and rate;

(b) Measures to control soil pH;



- (c) Enhancement of microbial or chemical reactions;
 - (d) Control of moisture content.
- (iii) Provisions for unsaturated zone monitoring, including:
- (a) Sampling equipment, procedures, and frequency;
 - (b) Procedures for selecting sampling locations;
 - (c) Analytical procedures;
 - (d) Chain of custody control;
 - (e) Procedures for establishing background values;
 - (f) Statistical methods for interpreting results;
 - (g) The justification for any hazardous constituents recommended for selection as principal hazardous constituents, in accordance with the criteria for such selection in paragraph (A) of rule 3745-56-78 of the Administrative Code;
- (iv) A list of hazardous waste constituents reasonably expected to be in, or derived from, the wastes to be land treated based on waste analysis performed pursuant to rule 3745-54-13 of the Administrative Code;
- (v) The proposed dimensions of the treatment zone;
- (c) A description of how the unit is or will be designed, constructed, operated, and maintained in order to comply with rule 3745-56-73 of the Administrative Code. This submittal shall address the following items:
- (i) Control of run-on;



- (ii) Collection and control of run-off;
 - (iii) Minimization of run-off of hazardous constituents from the treatment zone;
 - (iv) Management of collection and holding facilities associated with run-on and run-off control systems;
 - (v) Periodic inspection of the unit. This information should be included in the inspection plan submitted under paragraph (A)(5) of this rule;
 - (vi) Control of wind dispersal of particulate matter, if applicable.
- (d) If food-chain crops are to be grown in or on the treatment zone of the land treatment unit, a description of how the demonstration required in paragraph (A) of rule 3745-56-76 of the Administrative Code will be conducted, including:
- (i) Characteristics of the food-chain crop for which the demonstration will be made;
 - (ii) Characteristics of the waste, treatment zone, and waste application method and rate to be used in the demonstration;
 - (iii) Procedures for crop growth, sample collection, sample analysis, and data evaluation;
 - (iv) Characteristics of the comparison crop including the location and conditions under which the comparison crop was or will be grown.
- (e) If food-chain crops are to be grown, and cadmium is present in the land treatment waste, a description of how paragraph (B) of rule 3745-56-76 of the Administrative Code will be complied with;
- (f) A description of the vegetative cover to be applied to closed portions of the facility, and a plan for maintaining such cover during the post-closure care period, as required in paragraphs (A)(8) and



(C)(2) of rule 3745-56-80 of the Administrative Code. This information should be included in the closure plan and, where applicable, the post-closure care plan submitted under paragraph (A)(13) of this rule;

(g) If ignitable wastes or reactive wastes will be placed in or on the treatment zone, an explanation of how rule 3745-56-81 of the Administrative Code will be complied with;

(h) If incompatible wastes, or incompatible wastes and materials, will be placed in or on the same treatment zone, an explanation of how rule 3745-56-82 of the Administrative Code will be complied with;

(i) A waste management plan for EPA hazardous waste numbers F020, F021, F022, F023, F026, and F027 describing how a land treatment facility is or will be designed, constructed, operated and maintained to comply with rule 3745-56-83 of the Administrative Code. This submittal shall address the following items as specified in rule 3745-56-83 of the Administrative Code:

(i) The volume, physical, and chemical characteristics of the wastes, including the potential for the wastes to migrate through soil or to volatilize or escape into the atmosphere;

(ii) The attenuative properties of underlying and surrounding soils or other materials;

(iii) The mobilizing properties of other materials co-disposed with these wastes; and

(iv) The effectiveness of additional treatment, design, or monitoring techniques.

(6) Landfills. Except as otherwise provided in rule 3745-54-01 of the Administrative Code, owners and operators of facilities that dispose of hazardous waste in landfills shall provide the following additional information:

(a) A list of the hazardous wastes placed or to be placed in each landfill or landfill cell;

(b) Detailed plans and an engineering report describing how the landfill is designed and is or will be constructed, operated, and maintained to comply with rules 3745-54-19, 3745-57-03, 3745-57-04,



and 3745-57-05 of the Administrative Code, addressing the following items:

(i)

(a) The liner system (except for an existing portion of a landfill), if the landfill shall comply with paragraph (A) of rule 3745-57-03 of the Administrative Code. If an exemption from the requirement for a liner is sought as provided by paragraph (B) of rule 3745-57-03 of the Administrative Code, submit detailed plans, and engineering and hydrogeologic reports, as appropriate, describing alternate designs and operating practices that will, in conjunction with location aspects, prevent the migration of any hazardous constituent into the ground water or surface water at any future time;

(b) The double liner and leak (leachate) detection, collection, and removal system, if the landfill shall comply with paragraph (C) of rule 3745-57-03 of the Administrative Code. If an exemption from the requirements for double liners and a leak detection, collection, and removal system or alternative design is sought as provided by paragraph (D), (E), or (F) of rule 3745-57-03 of the Administrative Code, submit appropriate information;

(c) If the leak detection system is located in a saturated zone, submit detailed plans and an engineering report explaining the leak detection system design and operation, and the location of the saturated zone in relation to the leak detection system;

(d) The construction quality assurance plan if required in rule 3745-54-19 of the Administrative Code;

(e) Proposed action leakage rate, with rationale if required in rule 3745-57-04 of the Administrative Code, and response action plan if required in rule 3745-57-05 of the Administrative Code;

(ii) Control of run-on;

(iii) Control of run-off;

(iv) Management of collection and holding facilities associated with run-on and run-off control systems; and



(v) Control of wind dispersal of particulate matter, where applicable.

(c) A description of how each landfill, including the double liner system, leachate collection and removal system, leak detection system, cover system, and appurtenances for control of run-on and run-off, will be inspected in order to comply with paragraphs (A), (B), and (C) of rule 3745-57-05 of the Administrative Code. This information shall be included in the inspection plan submitted under paragraph (A)(5) of this rule;

(d) A description of how each landfill, including the liner and cover systems, will be inspected in order to comply with paragraphs (A) and (B) of rule 3745-57-05 of the Administrative Code. This information should be included in the inspection plan submitted under paragraph (A)(5) of this rule;

(e) Detailed plans and an engineering report describing the final cover which will be applied to each landfill or landfill cell at closure in accordance with paragraph (A) of rule 3745-57-10 of the Administrative Code, and a description of how each landfill will be maintained and monitored after closure in accordance with paragraph (B) of rule 3745-57-10 of the Administrative Code. This information should be included in the closure and post-closure plans submitted pursuant to paragraph (A)(13) of this rule;

(f) If ignitable wastes or reactive wastes will be landfilled, an explanation of how rule 3745-57-12 of the Administrative Code will be complied with;

(g) If incompatible wastes, or incompatible wastes and materials, will be landfilled, an explanation of how rule 3745-57-13 of the Administrative Code will be complied with;

(h) [Reserved;]

(i) If containers of hazardous waste are to be landfilled, an explanation of how rule 3745-57-15 or 3745-57-16 of the Administrative Code, as applicable, will be complied with;

(j) A waste management plan for EPA hazardous waste numbers F020, F021, F022, F023, F026, and F027 describing how a landfill is or will be designed, constructed, operated, and maintained to



comply with rule 3745-57-17 of the Administrative Code. This submittal shall address the following items as specified in rule 3745-57-17 of the Administrative Code:

- (i) The volume, physical, and chemical characteristics of the wastes, including the potential for the wastes to migrate through soil or to volatilize or escape into the atmosphere;
- (ii) The attenuative properties of underlying and surrounding soils or other materials;
- (iii) The mobilizing properties of other materials co-disposed with these wastes; and
- (iv) The effectiveness of additional treatment, design, or monitoring techniques.

(7) Incinerators. Except as rule 3745-57-40 of the Administrative Code and paragraph (C)(7)(e) of this rule provide otherwise, owners and operators of facilities that incinerate hazardous waste shall comply with paragraph (C)(7)(a), (C)(7)(b), or (C)(7)(c) of this rule.

(a) When seeking exemption in paragraph (B) or (C) of rule 3745-57-40 of the Administrative Code (ignitable waste, corrosive waste, or reactive waste only):

- (i) Documentation that the waste is listed as a hazardous waste in rules 3745-51-30 to 3745-51-35 of the Administrative Code solely because the waste is ignitable (hazard code I), corrosive (hazard code C), or both; or
- (ii) Documentation that the waste is listed as a hazardous waste in rules 3745-51-30 to 3745-51-35 of the Administrative Code solely because the waste is reactive (hazard code R) for characteristics other than those listed in paragraphs (A)(4) and (A)(5) of rule 3745-51-23 of the Administrative Code, and will not be burned when other hazardous wastes are present in the combustion zone; or
- (iii) Documentation that the waste is a hazardous waste solely because the waste possesses the characteristic of ignitability, characteristic of corrosivity, or both, as determined by the tests for characteristics of hazardous wastes in rules 3745-51-20 to 3745-51-24 of the Administrative Code; or



(iv) Documentation that the waste is a hazardous waste solely because the waste possesses the reactivity characteristics listed in paragraph (A)(1), (A)(2), (A)(3), (A)(6), (A)(7), or (A)(8) of rule 3745-51-23 of the Administrative Code, and that the waste will not be burned when other hazardous wastes are present in the combustion zone; or

(b) Submit a trial burn plan or the results of a trial burn, including all required determinations, in accordance with rule 3745-50-62 of the Administrative Code; or

(c) In lieu of a trial burn, the applicant may submit the following information.

(i) An analysis of each waste or mixture of wastes to be burned including:

(a) Heat value of the waste in the form and composition in which the waste will be burned.

(b) Viscosity (if applicable), or description of physical form of the waste.

(c) An identification of any hazardous organic constituents listed in the appendix of rule 3745-51-11 to the Administrative Code which are present in the waste to be burned, except that the applicant need not analyze for constituents listed in such appendix which would reasonably not be expected to be found in the waste. The constituents excluded from analysis shall be identified and the basis for the exclusion of the constituents shall be stated. The waste analysis shall rely on appropriate analytical techniques.

(d) An approximate quantification of the hazardous constituents identified in the waste, within the precision produced by appropriate analytical methods.

(e) A quantification of those hazardous constituents in the waste which may be designated as "principal organic hazardous constituents" (POHCs) based on data submitted from other trial or operational burns which demonstrate compliance with the performance standard in rule 3745-57-43 of the Administrative Code.

(ii) A detailed engineering description of the incinerator, including:



- (a) Manufacturer's name and model number of incinerator.
- (b) Type of incinerator.
- (c) Linear dimension of incinerator unit including cross-sectional area of combustion chamber.
- (d) Description of auxiliary fuel system (type or feed).
- (e) Capacity of prime mover.
- (f) Description of automatic waste feed cut-off systems.
- (g) Stack gas monitoring and pollution control monitoring system.
- (h) Nozzle and burner design.
- (i) Construction materials.
- (j) Location and description of temperature, pressure, and flow-indication devices and control devices.
- (iii) A description and analysis of the waste to be burned compared with the waste for which data from operational or trial burns are provided to support the contention that a trial burn is not needed. The data should include those items listed in paragraph (C)(7)(c)(i) of this rule. This analysis should specify the POHCs which the applicant has identified in the waste for which a permit is sought, and any differences from the POHCs in the waste for which burn data are provided.
- (iv) The design and operating conditions of the incinerator unit to be used, compared with that for which comparative burn data are available.
- (v) A description of the results submitted from any previously conducted trial burns including:
 - (a) Sampling and analysis techniques used to calculate performance standards in rule 3745-57-43 of



the Administrative Code.

(b) Methods and results of monitoring temperatures, waste feed rates, carbon monoxide, and an appropriate indicator of combustion gas velocity (including a statement concerning the precision and accuracy of this measurement).

(vi) The expected incinerator operation information to demonstrate compliance with rules 3745-57-43 and 3745-57-45 of the Administrative Code, including:

(a) Expected carbon monoxide level in the stack exhaust gas.

(b) Waste feed rate.

(c) Combustion zone temperature.

(d) Indication of combustion gas velocity.

(e) Expected stack gas volume, flow rate, and temperature.

(f) Computed residence time for waste in the combustion zone.

(g) Expected hydrochloric acid removal efficiency.

(h) Expected fugitive emissions and control procedures for such emissions.

(i) Proposed waste feed cut-off limits based on the identified significant operating parameters.

(vii) Such supplemental information as the director finds necessary to achieve the purposes of paragraph (C)(7)(c) of this rule.

(viii) Waste analysis data, including that submitted in paragraph (C)(7)(c)(i) of this rule, sufficient to allow the specification as permit "principal organic hazardous constituents" (permit POHCs) those constituents for which destruction and removal efficiencies will be required.



(d) The director will approve a permit application without a trial burn if the director finds that:

(i) The wastes are sufficiently similar; and

(ii) The incinerator units are sufficiently similar, and the data from other trial burns are adequate to specify (in rule 3745-57-45 of the Administrative Code) operating conditions that ensure that the performance standards in rule 3745-57-43 of the Administrative Code are met by the incinerator.

(e) When an owner or operator of a hazardous waste incineration unit becomes subject to hazardous waste permit requirements after February 16, 2009, or when an owner or operator of an existing hazardous waste incineration unit demonstrates compliance with the air emission standards and limitations in 40 CFR Part 63 subpart EEE [i.e., by conducting a comprehensive performance test and submitting a notification of compliance under 40 CFR 63.1207(j) and 40 CFR 63.1210(d) documenting compliance with all applicable requirements of 40 CFR Part 63 subpart EEE], paragraph (C)(7) of this rule does not apply, except those provisions the director determines are necessary to ensure compliance with paragraphs (A) and (C) of rule 3745-57-45 of the Administrative Code, if the owner or operator elects to comply with paragraph (A)(1)(a) of rule 3745-50-235 of the Administrative Code to minimize emissions of toxic compounds from startup, shutdown, and malfunction events. Nevertheless, the director may apply paragraph (C)(7) of this rule, on a case-by-case basis, for purposes of information collection in accordance with paragraphs (A)(5), (D)(6), (H), and (I) to (I)(2) of rule 3745-50-40 of the Administrative Code and paragraphs (D)(3)(b) and (D)(4)(a)(v) of rule 3745-50-51 of the Administrative Code.

(8) Miscellaneous units. Except as otherwise provided in rule 3745-57-90 of the Administrative Code, owners and operators of facilities that treat, store, or dispose of hazardous waste in miscellaneous units shall provide the following additional information:

(a) A detailed description of the unit used or proposed for use, including the following:

(i) Physical characteristics, materials of construction, and dimensions of the unit;

(ii) Detailed plans and engineering reports describing how the unit will be located, designed,



constructed, operated, maintained, monitored, inspected, and closed to comply with rules 3745-57-91 and 3745-57-92 of the Administrative Code; and

(iii) For disposal units, a detailed description of the plans to comply with the post-closure requirements of rule 3745-57-93 of the Administrative Code.

(b) Detailed hydrologic, geologic, and meteorologic assessments and land-use maps for the region surrounding the site that address and ensure compliance of the unit with each factor in the environmental performance standards of rule 3745-57-91 of the Administrative Code. If the applicant can demonstrate that the applicant does not violate the environmental performance standards of rule 3745-57-91 of the Administrative Code and the director agrees with such demonstration, preliminary hydrologic, geologic, and meteorologic assessments will suffice.

(c) Information on the potential pathways of exposure of humans or environmental receptors to hazardous waste or hazardous constituents and on the potential magnitude and nature of such exposures.

(d) For any treatment unit, a report on a demonstration of the effectiveness of the treatment based on laboratory or field data.

(e) Any additional information determined by the director to be necessary for evaluation of compliance of the unit with the environmental performance standards of rule 3745-57-91 of the Administrative Code.

(9) Boilers and industrial furnaces burning hazardous waste. When an owner or operator of a cement kiln, lightweight aggregate kiln, solid fuel boiler, liquid fuel boiler, or hydrochloric acid production furnace becomes subject to hazardous waste permit requirements after February 16, 2009, or when an owner or operator of an existing cement kiln, lightweight aggregate kiln, solid fuel boiler, liquid fuel boiler, or hydrochloric acid production furnace demonstrates compliance with the air emission standards and limitations in 40 CFR Part 63 subpart EEE [i.e., by conducting a comprehensive performance test and submitting a notification of compliance under 40 CFR 63.1207(j) and 40 CFR 63.1210(d) documenting compliance with all applicable requirements of 40 CFR Part 63 subpart EEE], paragraph (C)(9) of this rule does not apply. However, paragraph (C)(9) of this rule does



apply, if the director determines that certain provisions are necessary to ensure compliance with paragraphs (E)(1) and (E)(2)(c) of rule 3745-266-102 of the Administrative Code if the owner or operator elects to comply with paragraph (A)(1)(a) of rule 3745-50-235 of the Administrative Code to minimize emissions of toxic compounds from startup, shutdown, and malfunction events, or if the facility is an area source and the owner or operator elects to comply with the rules 3745-266-105, 3745-266-106, and 3745-266-107 of the Administrative Code standards and associated requirements for particulate matter, hydrogen chloride and chlorine gas, and non-mercury metals, or if the director determines certain provisions apply, on a case-by-case basis, for purposes of information collection in accordance with paragraphs (A)(5), (D)(6), (H), and (I) to (I)(2) of rule 3745-50-40 of the Administrative Code and paragraphs (D)(3)(b) and (D)(4)(a)(v) of rule 3745-50-51 of the Administrative Code.

(a) Trial burns.

(i) General. Except as provided in this paragraph, owners and operators who are subject to the standards to control organic emissions provided by rule 3745-266-104 of the Administrative Code, standards to control particulate matter provided by rule 3745-266-105 of the Administrative Code, standards to control metals emissions provided by rule 3745-266-106 of the Administrative Code, or standards to control hydrogen chloride or chlorine gas emissions provided by rule 3745-266-107 of the Administrative Code shall conduct a trial burn to demonstrate conformance with those standards and shall submit a trial burn plan or the results of a trial burn, including all required determinations in accordance with rule 3745-50-66 of the Administrative Code.

(a) A trial burn to demonstrate conformance with a particular emission standard may be waived under rules 3745-266-104 to 3745-266-107 of the Administrative Code and paragraphs (C)(9)(a)(ii) to (C)(9)(a)(v)(g) of this rule; and

(b) The owner or operator may submit data in lieu of a trial burn, as prescribed in paragraph (C)(9)(a)(vi) of this rule.

(ii) Waiver of trial burn for destruction and removal efficiency (DRE).

(a) Boilers operated under special operating requirements. When seeking to be permitted under rule



3745-266-110 and paragraph (A)(4) of rule 3745-266-104 of the Administrative Code that automatically waive the DRE trial burn, the owner or operator of a boiler shall submit documentation that the boiler operates under the special operating requirements provided by rule 3745-266-110 of the Administrative Code.

(b) Boilers and industrial furnaces burning low risk waste. When seeking to be permitted under the provisions for low risk waste provided by paragraph (A)(5) of rule 3745-266-104 of the Administrative Code and paragraph (A) of rule 3745-266-109 of the Administrative Code that waive the DRE trial burn, the owner or operator shall submit:

(i) Documentation that the device is operated in conformance with paragraph (A)(1) of rule 3745-266-109 of the Administrative Code.

(ii) Results of analyses of each waste to be burned, documenting the concentrations of nonmetal compounds listed in the appendix to rule 3745-51-11 of the Administrative Code, except for those constituents that reasonably would not be expected to be in the waste. The constituents excluded from analysis shall be identified and the basis for the exclusion of the constituent shall be explained. The analysis shall rely on appropriate analytical techniques.

(iii) Documentation of hazardous waste firing rates and calculations of reasonable, worst-case emission rates of each constituent identified in paragraph (C)(9)(a)(ii)(b)(ii) of this rule using procedures provided by paragraph (A)(2)(b) of rule 3745-266-109 of the Administrative Code.

(iv) Results of emissions dispersion modeling for emissions identified in paragraph (C)(9)(a)(ii)(b)(ii) of this rule using modeling procedures prescribed by paragraph (H) of rule 3745-266-106 of the Administrative Code. The director will review the emission modeling conducted by the applicant to determine conformance with these procedures. The director will either approve the modeling or determine that alternate or supplementary modeling is appropriate.

(v) Documentation that the maximum annual average ground level concentration of each constituent identified in paragraph (C)(9)(a)(ii)(b)(ii) of this rule quantified in conformance with paragraph (C)(9)(a)(ii)(b)(iv) of this rule does not exceed the allowable ambient level established in appendix A to rule 3745-266-109 of the Administrative Code or in appendix B to rule 3745-266-109 of the



Administrative Code. The acceptable ambient concentration for emitted constituents for which a specific reference air concentration has not been established in appendix A to rule 3745-266-109 of the Administrative Code or risk-specific dose has not been established in appendix B to rule 3745-266-109 of the Administrative Code is 0.1 micrograms per cubic meter, as noted in the footnote to appendix A to rule 3745-266-109 of the Administrative Code.

(iii) Waiver of trial burn for metals. When seeking to be permitted under the "Tier I" (or "Adjusted Tier I") metals feed rate screening limits provided by paragraphs (B) and (E) of rule 3745-266-106 of the Administrative Code that control metals emissions without requiring a trial burn, the owner or operator shall submit:

(a) Documentation of the feed rate of hazardous waste, other fuels, and industrial furnace feedstocks;

(b) Documentation of the concentration of each metal controlled by paragraph (B) or (E) of rule 3745-266-106 of the Administrative Code in the hazardous waste, other fuels, and industrial furnace feedstocks, and calculations of the total feed rate of each metal;

(c) Documentation of how the applicant will ensure that the "Tier I" feed rate screening limits provided by paragraph (B) or (E) of rule 3745-266-106 of the Administrative Code will not be exceeded during the averaging period provided by that paragraph;

(d) Documentation to support the determination of the terrain-adjusted effective stack height, good engineering practice stack height, terrain type, and land use as provided by paragraphs (B)(3) to (B)(5) of rule 3745-266-106 of the Administrative Code;

(e) Documentation of compliance with paragraph (B)(6) of rule 3745-266-106 of the Administrative Code, if applicable, for facilities with multiple stacks;

(f) Documentation that the facility does not fail the criteria provided by paragraph (B)(7) of rule 3745-266-106 of the Administrative Code for eligibility to comply with the screening limits; and

(g) Proposed sampling and metals analysis plan for the hazardous waste, other fuels, and industrial furnace feedstocks.



(iv) Waiver of trial burn for particulate matter. When seeking to be permitted under the low risk waste provisions of paragraph (B) of rule 3745-266-109 of the Administrative Code which waives the particulate standard (and trial burn to demonstrate conformance with the particulate standard), applicants shall submit documentation supporting conformance with paragraphs (C)(9)(a)(ii)(b) and (C)(9)(a)(iii) of this rule.

(v) Waiver of trial burn for hydrogen chloride and chlorine gas. When seeking to be permitted under the "Tier I" (or "Adjusted Tier I") feed rate screening limits for total chloride and chlorine provided by paragraphs (B)(1) and (E) of rule 3745-266-107 of the Administrative Code that control emissions of hydrogen chloride and chlorine gas without requiring a trial burn, the owner or operator shall submit:

(a) Documentation of the feed rate of hazardous waste, other fuels, and industrial furnace feedstocks;

(b) Documentation of the levels of total chloride and chlorine in the hazardous waste, other fuels, and industrial furnace feedstocks, and calculations of the total feed rate of total chloride and chlorine;

(c) Documentation of how the applicant will ensure that the "Tier I" (or "Adjusted Tier I") feed rate screening limits provided by paragraph (B)(1) or (E) of rule 3745-266-107 of the Administrative Code will not be exceeded during the averaging period provided by that paragraph;

(d) Documentation to support the determination of the terrain-adjusted effective stack height, good engineering practice stack height, terrain type, and land use as provided by paragraph (B)(3) of rule 3745-266-107 of the Administrative Code;

(e) Documentation of compliance with paragraph (B)(4) of rule 3745-266-107 of the Administrative Code, if applicable, for facilities with multiple stacks;

(f) Documentation that the facility does not fail the criteria provided by paragraph (B)(3) of rule 3745-266-107 of the Administrative Code for eligibility to comply with the screening limits; and



(g) Proposed sampling and analysis plan for total chloride and chlorine for the hazardous waste, other fuels, and industrial furnace feedstocks.

(vi) Data in lieu of trial burn. The owner or operator may seek an exemption from the trial burn requirements to demonstrate conformance with rules 3745-266-104 to 3745-266-107 and 3745-50-66 of the Administrative Code by providing the information required by rule 3745-50-66 of the Administrative Code from previous compliance testing of the device in conformance with rule 3745-266-103 of the Administrative Code, 40 CFR 266.103 as incorporated by reference in rule 3745-50-11 of the Administrative Code, or from compliance testing or trial or operational burns of similar boilers or industrial furnaces burning similar hazardous wastes under similar conditions. If data from a similar device is used to support a trial burn waiver, the design and operating information required by rule 3745-50-66 of the Administrative Code shall be provided for both the similar device and the device to which the data is to be applied, and a comparison of the design and operating information shall be provided. The director shall approve a permit application without a trial burn if the director finds that the hazardous wastes are sufficiently similar, the devices are sufficiently similar, the operating conditions are sufficiently similar, and the data from other compliance tests, trial burns, or operational burns are adequate to specify (in rule 3745-266-102 of the Administrative Code) operating conditions that ensure conformance with paragraph (C) of rule 3745-266-102 of the Administrative Code. In addition, the following information shall be submitted:

[Comment: Owners or operators of boilers and industrial furnaces operating pursuant to hazardous waste permit from U.S. EPA to burn hazardous waste fuels who seek an exemption from the trial burn requirements may submit the approved trial burn plan and results of the most recent trial burn performed.]

(a) For a waiver from any trial burn:

(i) A description and analysis of the hazardous waste to be burned compared with the hazardous waste for which data from compliance testing, or operational or trial burns are provided to support the contention that a trial burn is not needed;

(ii) The design and operating conditions of the boiler or industrial furnace to be used, compared with



that for which comparative burn data are available; and

(iii) Such supplemental information as the director finds necessary to achieve the purposes of paragraph (C)(9)(a)(vi) of this rule.

(b) For a waiver of the DRE trial burn, the basis for selection of POHCs used in the other trial or operational burns which demonstrate compliance with the DRE performance standard in paragraph (A) of rule 3745-266-104 of the Administrative Code. This analysis should specify the constituents in the appendix to rule 3745-51-11 of the Administrative Code, that the applicant has identified in the hazardous waste for which a permit is sought, and any differences from the POHCs in the hazardous waste for which burn data are provided.

(b) Alternative hydrocarbon limit for industrial furnaces with organic matter in raw materials. At a minimum, owners and operators of industrial furnaces requesting an alternative hydrocarbon limit under paragraph (F) of rule 3745-266-104 of the Administrative Code shall submit the following information:

(i) Documentation that the furnace is designed and operated to minimize hydrocarbon emissions from fuels and raw materials;

(ii) Documentation of the proposed baseline flue gas hydrocarbons (and carbon monoxide) concentration, including data on hydrocarbons (and carbon monoxide) levels during tests when the facility produced normal products under normal operating conditions from normal raw materials while burning normal fuels and when not burning hazardous waste;

(iii) Test burn protocol to confirm the baseline hydrocarbon (and carbon monoxide) level including information on the type and flow rate of all feedstreams, point of introduction of all feedstreams, total organic carbon content (or other appropriate measure of organic content) of all nonfuel feedstreams, and operating conditions that affect combustion of fuels and destruction of hydrocarbon emissions from nonfuel sources;

(iv) Trial burn plan to:



- (a) Demonstrate that flue gas hydrocarbon (and carbon monoxide) concentrations when burning hazardous waste do not exceed the baseline hydrocarbon (and carbon monoxide) level; and
- (b) Identify the types and concentrations of organic compounds listed in the appendix to rule 3745-51-11 of the Administrative Code, that are emitted when burning hazardous waste in conformance with procedures prescribed by the director.
- (v) Implementation plan to monitor over time changes in the operation of the facility that could reduce the baseline hydrocarbon level and procedures to periodically confirm the baseline hydrocarbon level; and
- (vi) Such other information as the director finds necessary to achieve the purposes of paragraph (C)(9)(b) of this rule.
- (c) Alternative metals implementation approach. When seeking to be permitted under an alternative metals implementation approach in paragraph (F) of rule 3745-266-106 of the Administrative Code, the owner or operator shall submit documentation specifying how the approach ensures compliance with the metals emissions standards of paragraph (C) or (D) of rule 3745-266-106 of the Administrative Code and how the approach can be effectively implemented and monitored. Further, the owner or operator shall provide such other information that the director finds necessary to achieve the purposes of this paragraph.
- (d) Automatic waste feed cutoff system. Owners and operators shall submit information describing the automatic waste feed cutoff system, including any pre-alarm systems that may be used.
- (e) Direct transfer. Owners and operators who use direct transfer operations to feed hazardous waste from transport vehicles ("containers," as defined in rule 3745-266-111 of the Administrative Code) directly to the boiler or industrial furnace shall submit information supporting conformance with the standards for direct transfer provided by rule 3745-266-111 of the Administrative Code.
- (f) Residues. Owners and operators who claim that the residues are excluded from regulation under rule 3745-266-112 of the Administrative Code shall submit information adequate to demonstrate conformance with those provisions.



(10) Process vents. Except as otherwise provided in rule 3745-54-01 of the Administrative Code, owners and operators of facilities that have process vents to which rules 3745-205-30 to 3745-205-36 of the Administrative Code apply shall provide the following additional information:

(a) For facilities that cannot install a closed-vent system and control device to comply with the provisions of rules 3745-205-30 to 3745-205-36 or 3745-256-30 to 3745-256-35 of the Administrative Code on the effective date that the facility becomes subject to the provisions of rules 3745-205-30 to 3745-205-36 of the Administrative Code, an implementation schedule as specified in paragraph (A)(2) of rule 3745-205-33 of the Administrative Code.

(b) Documentation of compliance with the process vent standards in rule 3745-205-32 of the Administrative Code, including:

(i) Information and data identifying all affected process vents, annual throughput and operating hours of each affected unit, estimated emission rates for each affected vent and for the overall facility (i.e., the total emissions for all affected vents at the facility), and the approximate location within the facility of each affected unit (e.g., identify the hazardous waste management units on a facility plot plan).

(ii) Information and data supporting estimates of vent emissions and emission reduction achieved by add-on control devices based on engineering calculations or source tests. For the purpose of determining compliance, estimates of vent emissions and emission reductions must be made using operating parameter values (e.g., temperatures, flow rates, or concentrations) that represent the conditions that exist when the waste management unit is operating at the highest load or capacity level reasonably expected to occur.

(iii) Information and data used to determine whether or not a process vent is subject to the requirements of rule 3745-205-32 of the Administrative Code.

(c) Where an owner or operator applies for permission to use a control device other than a thermal vapor incinerator, catalytic vapor incinerator, flare, boiler, process heater, condenser, or carbon adsorption system to comply with the requirements of rule 3745-205-32 of the Administrative Code,



and chooses to use test data to determine the organic removal efficiency or the total organic compound concentration achieved by the control device, a performance test plan as specified in paragraph (B)(3) of rule 3745-205-35 of the Administrative Code.

(d) Documentation of compliance with rule 3745-205-33 of the Administrative Code, including:

(i) A list of all information references and sources used in preparing the documentation.

(ii) Records, including the dates, of each compliance test required by paragraph (K) of rule 3745-205-33 of the Administrative Code.

(iii) A design analysis, specifications, drawings, schematics, and piping and instrumentation diagrams based on the appropriate sections of "APTI Course 415: Control of Gaseous Emissions" or other engineering texts acceptable to the director that present basic control device information. The design analysis shall address the vent stream characteristics and control device operation parameters as specified in paragraph (B)(4)(c) of rule 3745-205-35 of the Administrative Code.

(iv) A statement signed and dated by the owner or operator certifying that the operating parameters used in the design analysis reasonably represent the conditions that exist when the hazardous waste management unit is or would be operating at the highest load or capacity level reasonably expected to occur.

(v) A statement signed and dated by the owner or operator certifying that the control device is designed to operate at an efficiency of ninety-five weight per cent or greater unless the total organic emission limits of paragraph (A) of rule 3745-205-32 of the Administrative Code for affected process vents at the facility can be attained by a control device involving vapor recovery at an efficiency less than ninety-five weight per cent.

(11) Equipment. Except as otherwise provided in rule 3745-54-01 of the Administrative Code, owners and operators of facilities that have equipment to which rules 3745-205-50 to 3745-205-65 of the Administrative Code apply shall provide the following additional information:

(a) For each piece of equipment to which rules 3745-205-50 to 3745-205-65 of the Administrative



Code applies:

- (i) Equipment identification number and hazardous waste management unit identification.
 - (ii) Approximate locations within the facility (e.g., identify the hazardous waste management unit on a facility plot plan).
 - (iii) Type of equipment (e.g., a pump or pipeline valve).
 - (iv) Per cent by weight total organics in the hazardous waste stream at the equipment.
 - (v) Hazardous waste state at the equipment (e.g., gas or vapor or liquid).
 - (vi) Method of compliance with the standard (e.g., "monthly leak detection and repair" or "equipped with dual mechanical seals").
- (b) For facilities that cannot install a closed-vent system and control device to comply with the provisions of rules 3745-205-50 to 3745-205-65 of the Administrative Code on the effective date that the facility becomes subject to the provisions of rules 3745-205-50 to 3745-205-65 of the Administrative Code or rules 3745-256-50 to 3745-256-64 of the Administrative Code, an implementation schedule as specified in paragraph (A)(2) of rule 3745-205-33 of the Administrative Code.
- (c) Where an owner or operator applies for permission to use a control device other than a thermal vapor incinerator, catalytic vapor incinerator, flare, boiler, process heater, condenser, or carbon adsorption system and chooses to use test data to determine the organic removal efficiency or the total organic compound concentration achieved by the control device, a performance test plan as specified in paragraph (B)(3) of rule 3745-205-35 of the Administrative Code.
- (d) Documentation that demonstrates compliance with the equipment standards in rules 3745-205-52 to 3745-205-59 of the Administrative Code. This documentation shall contain the records required under rule 3745-205-64 of the Administrative Code. The director may request further documentation before deciding if compliance has been demonstrated.



(e) Documentation to demonstrate compliance with rule 3745-205-60 of the Administrative Code shall include the following information:

(i) A list of all information references and sources used in preparing the documentation.

(ii) Records, including the dates, of each compliance test required by paragraph (J) of rule 3745-205-33 of the Administrative Code.

(iii) A design analysis, specifications, drawings, schematics, and piping and instrumentation diagrams based on the appropriate sections of "APTI Course 415: Control of Gaseous Emissions" or other engineering texts acceptable to the director that present basic control device information. The design analysis shall address the vent stream characteristics and control device operation parameters as specified in paragraph (B)(4)(c) of rule 3745-205-35 of the Administrative Code.

(iv) A statement signed and dated by the owner or operator certifying that the operating parameters used in the design analysis reasonably represent the conditions that exist when the hazardous waste management unit is operating at the highest load or capacity level reasonably expected to occur.

(v) A statement signed and dated by the owner or operator certifying that the control device is designed to operate at an efficiency of ninety-five weight per cent or greater.

(12) Drip pads. Except as otherwise provided by rule 3745-54-01 of the Administrative Code, owners and operators of hazardous waste treatment, storage, or disposal facilities that collect, store, or treat hazardous waste on drip pads shall provide the following additional information:

(a) A list of hazardous wastes placed or to be placed on each drip pad.

(b) If an exemption is sought to rules 3745-54-90 to 3745-54-101 of the Administrative Code, as provided by rule 3745-54-90 of the Administrative Code, detailed plans and an engineering report describing how paragraph (B)(2) of rule 3745-54-90 of the Administrative Code will be met.

(c) Detailed plans and an engineering report describing how the drip pad is or will be designed,



constructed, operated, and maintained to comply with rule 3745-57-83 of the Administrative Code, including the as-built drawings and specifications. This submittal shall address the following items as specified in rule 3745-57-81 of the Administrative Code:

- (i) The design characteristics of the drip pad;
- (ii) The liner system;
- (iii) The leakage detection system, including the leak detection system and how the leakage detection system is designed to detect the failure of the drip pad or the presence of any releases of hazardous waste or accumulated liquid at the earliest practicable time;
- (iv) Practices designed to maintain drip pads;
- (v) The associated collection system;
- (vi) Control of run-on to the drip pad;
- (vii) Control of run-off from the drip pad;
- (viii) The interval at which drippage and other materials will be removed from the associated collection system and a statement demonstrating that the interval will be sufficient to prevent overflow onto the drip pad;
- (ix) Procedures for cleaning the drip pad at least once every seven days to ensure the removal of any accumulated residues of waste or other materials, including but not limited to rinsing, washing with detergents or other appropriate solvents, or steam cleaning, and provisions for documenting the date, time, and cleaning procedure used each time the pad is cleaned.
- (x) Operating practices and procedures that will be followed to ensure that tracking of hazardous waste or waste constituents off the drip pad due to activities by personnel or equipment is minimized;



(xi) Procedures for ensuring that, after removal from the treatment vessel, treated wood from pressure and non-pressure processes is held on the drip pad until drippage has ceased, including recordkeeping practices;

(xii) Provisions for ensuring that collection and holding units associated with the run-on and run-off control systems are emptied or otherwise managed as soon as possible after storms to maintain design capacity of the system;

(xiii) If treatment is carried out on the drip pad, details of the process equipment used, and the nature and quality of the residuals.

(xiv) A description of how each drip pad, including appurtenances for control of run-on and run-off, will be inspected in order to comply with rule 3745-57-83 of the Administrative Code. This information should be included in the inspection plan submitted under paragraph (A)(5) of this rule.

(xv) A certification, in accordance with paragraph (D) of rule 3745-50-42 of the Administrative Code, signed by a qualified professional engineer, stating that the drip pad design complies with paragraphs (A) to (F) of rule 3745-57-83 of the Administrative Code.

(xvi) A description of how hazardous waste residues and contaminated materials will be removed from the drip pad at closure, as required in paragraph (A) of rule 3745-57-85 of the Administrative Code. For any waste not to be removed from the drip pad upon closure, the owner or operator shall submit detailed plans and an engineering report describing how paragraphs (A) and (B) of rule 3745-57-10 of the Administrative Code will be complied with. This information should be included in the closure plan and, where applicable, the post-closure plan submitted under paragraph (A)(13) of this rule.

(13) Air emission controls for tanks, surface impoundments, and containers. Except as otherwise provided in rule 3745-54-01 of the Administrative Code, owners and operators of tanks, surface impoundments, or containers that use air emission controls in accordance with the requirements of rules 3745-205-80 to 3745-205-90 of the Administrative Code shall provide the following additional information:



- (a) Documentation for each floating roof cover installed on a tank subject to paragraph (D)(1) or (D)(2) of rule 3745-205-84 of the Administrative Code that includes information prepared by the owner or operator or provided by the cover manufacturer or vendor describing the cover design, and certification by the owner or operator that the cover meets the applicable design specifications as listed in paragraph (E)(1) or (F)(1) of rule 3745-205-84 of the Administrative Code.
- (b) Identification of each container area subject to the requirements of rules 3745-205-80 to 3745-205-90 of the Administrative Code and certification by the owner or operator that the requirements of this rule are met.
- (c) Documentation for each enclosure used to control air pollutant emissions from tanks or containers in accordance with the requirements of paragraph (D)(5) of rule 3745-205-84 or paragraph (E)(1)(b) of rule 3745-205-86 of the Administrative Code that includes records for the most recent set of calculations and measurements performed by the owner or operator to verify that the enclosure meets the criteria of a permanent total enclosure as specified in "Procedure T Criteria for and Verification of a Permanent or Temporary Total Enclosure" under 40 CFR 52.741 appendix B.
- (d) Documentation for each floating membrane cover installed on a surface impoundment in accordance with the requirements of paragraph (C) of rule 3745-205-85 of the Administrative Code that includes information prepared by the owner or operator or provided by the cover manufacturer or vendor describing the cover design, and certification by the owner or operator that the cover meets the specifications listed in paragraph (C)(1) of rule 3745-205-85 of the Administrative Code.
- (e) Documentation for each closed vent system and control device installed in accordance with the requirements of rule 3745-205-87 of the Administrative Code that includes design and performance information as specified in paragraphs (C)(10)(c) and (C)(10)(d) of this rule.
- (f) An emission monitoring plan for both method 21 in 40 CFR Part 60 appendix A and control device monitoring methods. This plan shall include monitoring points, monitoring methods for control devices, monitoring frequency, procedures for documenting exceedances, and procedures for mitigating noncompliances.
- (g) When an owner or operator of a facility subject to rules 3745-256-80 to 3745-256-90 of the



Administrative Code cannot comply with rules 3745-205-80 to 3745-205-90 of the Administrative Code by the date of permit issuance, the schedule of implementation required under rule 3745-256-82 of the Administrative Code.

(14) Post-closure permits. For post-closure permits, the owner or operator is required to submit only the information specified in paragraphs (A)(1), (A)(4) to (A)(6), (A)(11), (A)(13), (A)(14), (A)(16), (A)(19), (B), and (D) of this rule, unless the director determines that additional information from paragraph (A), (B), (C)(2), (C)(3), (C)(4), (C)(5), or (C)(6) of this rule is necessary. The owner or operator is required to submit the same information when an alternative authority is used in lieu of a post-closure permit as provided in paragraph (G) of rule 3745-50-45 of the Administrative Code.

(D) Information requirements for waste management units.

(1) The following information is required for each waste management unit at a facility seeking a permit:

(a) The location of the unit on the topographic map required in paragraph (A)(19) of this rule.

(b) Designation of type of unit.

(c) General dimensions and structural description (supply any available drawings).

(d) When the unit was operated.

(e) Specification of all wastes that were managed at the unit, to the extent available.

(2) The owner or operator of any facility containing one or more waste management units shall submit all available information pertaining to any release of hazardous wastes or hazardous constituents from such unit or units.

(3) The owner or operator shall conduct and provide results of sampling and analysis of ground water, land surface and subsurface strata, surface water, or air, which may include the installation of wells, where the director ascertains the necessity to complete a RCRA facility assessment (RFA) to



determine if a more complete investigation is necessary.

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