

3745-54-01

**Purpose, scope, and applicability of Chapters 3745-54 to 3745-57 and 3745-205 of the Administrative Code.**

- (A) The purpose of Chapters 3745-54 to 3745-57 and 3745-205 of the Administrative Code is to establish minimum standards which define the acceptable management of hazardous waste.
- (B) Chapters 3745-54 to 3745-57 and 3745-205 of the Administrative Code apply to owners and operators of all facilities which treat, store, or dispose of hazardous waste, except as specifically provided otherwise in Chapters 3745-54 to 3745-57 and 3745-205 of ~~the Administrative Code~~ or in Chapter 3745-51 of the Administrative Code.

(C) [Reserved.]

- (D) ~~Underground injection.~~ Chapters 3745-54 to 3745-57 and 3745-205 of the Administrative Code apply to a person disposing of hazardous waste by means of underground injection subject to a permit issued under an underground injection control program approved or promulgated under the Safe Drinking Water Act, only to the extent specified in rule 3745-34-09 of the Administrative Code.

[Comment: Chapters 3745-54 to 3745-57 and 3745-205 of the Administrative Code apply to the above-ground treatment or storage of hazardous waste before the hazardous waste is injected underground.]

- (E) Chapters 3745-54 to 3745-57 and 3745-205 of the Administrative Code apply to the owner or operator of a publicly owned treatment works (POTW) which treats, stores, or disposes of hazardous waste only to the extent such activities are included in a permit ~~by rule~~ granted to such a person under ~~rule 3745-50-46~~ Chapter 3745-50 of the Administrative Code.

(F) [Reserved.]

- (G) Chapters 3745-54 to 3745-57 and 3745-205 of the Administrative Code do not apply to ~~the following~~:

(1) ~~[Reserved.]~~ The owner or operator of a facility permitted, licensed, or registered by a state to manage municipal or industrial waste, if the only hazardous waste the facility treats, stores, or disposes of is excluded from regulation under Chapters 3745-54 to 3745-57 and 3745-205 of the Administrative Code by rule 3745-52-14 of the Administrative Code;

(2) The owner or operator of a facility managing recyclable materials described in paragraphs (A)(2), (A)(3), and (A)(4) of rule 3745-51-06 of the Administrative Code, except to the extent recyclable materials are referred to in Chapter

3745-279 or rules 3745-266-20 to 3745-266-23, 3745-266-70, 3745-266-80, or 3745-266-100 to 3745-266-112 of the Administrative Code;

- (3) A generator accumulating ~~or conducting treatment of~~ hazardous waste ~~that is generated~~ on-site in compliance with rule 3745-52-14, 3745-52-15, 3745-52-16, or 3745-52-17 of the Administrative Code;
- (4) A farmer disposing of waste pesticides from the farmer's own use in compliance with rule 3745-52-70 of the Administrative Code; or
- (5) The owner or operator of a "totally enclosed treatment facility," as defined in rule 3745-50-10 of the Administrative Code.
- (6) The owner or operator of an "elementary neutralization unit" or a "wastewater treatment unit" as defined in rule 3745-50-10 of the Administrative Code, provided that if the owner or operator is diluting hazardous ignitable (D001) waste ~~(D001)~~ [other than the D001 high total organic carbon (TOC) subcategory described in rule 3745-270-40 of the Administrative Code in the table of treatment standards for hazardous waste], or reactive (D003) waste ~~(D003)~~, to remove the characteristic before land disposal, the owner or operator shall comply with paragraph (B) of rule 3745-54-17 of the Administrative Code.
- (7) [Reserved.]
- (8) ~~Regarding response situations.~~
  - (a) Except as provided in paragraph (G)(8)(b) of this rule, a person engaged in treatment or containment activities during immediate response to any of the following situations:
    - (i) A discharge of a hazardous waste;
    - (ii) An imminent and substantial threat of a discharge of hazardous waste;
    - (iii) A discharge of a material which, when discharged, becomes a hazardous waste; or
    - (iv) An immediate threat to human health, public safety, property, or the environment, from the known or suspected presence of military munitions, other explosive material, or an explosive device, as determined by an "explosives or munitions emergency response specialist" as defined in rule 3745-50-10 of the Administrative Code.

- (b) An owner or operator of a facility otherwise regulated by Chapters 3745-54 to 3745-57 and 3745-205 of the Administrative Code shall comply with all applicable requirements of rules 3745-54-30 to 3745-54-37 and 3745-54-50 to 3745-54-56 of the Administrative Code.
- (c) Any person who is covered by paragraph (G)(8)(a) of this rule and who continues or initiates hazardous waste treatment or containment activities after the immediate response is over is subject to all applicable requirements of Chapters 3745-54 to 3745-57 and 3745-205 of the Administrative Code and ~~40 C.F.R.~~ CFR Part 122, 40 CFR Part 123, and 40 CFR Part 124 for those activities.
- (d) In the case of an explosives or munitions emergency response, if a federal, state, or local official acting within the scope of the official's official responsibilities, or an explosives or munitions emergency response specialist, determines that immediate removal of the material or waste is necessary to protect human health or the environment, that official or specialist may authorize the removal of the material or waste by transporters who do not have U.S. EPA identification numbers and without the preparation of a manifest. In the case of emergencies involving military munitions, the responding military emergency response specialist's organizational unit shall retain records for three years identifying the dates of the response, the names of the responsible persons responding, the type and description of material addressed, and the disposition of the material.
- (9) A transporter storing manifested shipments of hazardous waste in containers ~~that~~ comply in compliance with rule 3745-52-30 of the Administrative Code at a transfer facility for a period of ten days or less.
- (10) The addition of ~~orbent~~ absorbent material to waste in a "container," as defined in rule 3745-50-10 of the Administrative Code, or the addition of waste to ~~orbent~~ absorbent material in a container, provided that these actions occur at the time waste is first placed in the container, ~~and~~ rules 3745-55-71, ~~and~~ 3745-55-72, and paragraph (B) of rule 3745-54-17 of the Administrative Code are complied with.
- (11) "Universal waste handlers" and "universal waste transporters," as defined in rule 3745-50-10 of the Administrative Code, handling the wastes listed in paragraphs (G)(11)(a) to ~~(G)(11)(d)~~ (G)(11)(e) and ~~(G)(11)(e)~~ (G)(11)(f) of this rule, ~~except to the extent Chapters 3745-54 to 3745-57 and 3745-205 of the Administrative Code are referred to in Chapter 3745-273 of the Administrative~~

~~Code.~~ These handlers are subject to regulation under Chapter 3745-273 of the Administrative Code when handling ~~the following~~these universal wastes:

- (a) Batteries as described in rule 3745-273-02 of the Administrative Code;
- (b) Pesticides as described in rule 3745-273-03 of the Administrative Code;
- (c) Mercury-containing equipment as described in rule 3745-273-04 of the Administrative Code;
- (d) Lamps as described in rule 3745-273-05 of the Administrative Code;
- (e) Aerosol cans as described in rule 3745-273-06 of the Administrative Code;  
and

~~(e)~~(f) Ohio-specific universal wastes, which include ~~the following~~:

- ~~(i) Aerosol containers as described in paragraph (A) of rule 3745-273-89 of the Administrative Code.~~
- ~~(ii)~~(i) Antifreeze as described in ~~paragraph (B)~~ of rule 3745-273-89 of the Administrative Code; and
- ~~(iii)~~(ii) Paint and paint-related waste as described in ~~paragraph (C)~~ of rule 3745-273-89 of the Administrative Code.

(12) [Reserved.]

(13) Reverse distributors accumulating "potentially creditable hazardous waste pharmaceuticals" and "evaluated hazardous waste pharmaceuticals," as defined in rule 3745-266-500 of the Administrative Code. Reverse distributors are subject to regulation under rules 3745-266-500 to 3745-266-510 of the Administrative Code in lieu of Chapters 3745-54 to 3745-57 and 3745-205 of the Administrative Code for the accumulation of potentially creditable hazardous waste pharmaceuticals and evaluated hazardous waste pharmaceuticals.

(H) Chapters 3745-54 to 3745-57 and 3745-205 of the Administrative Code apply to owners or operators of all facilities which treat, store, or dispose of hazardous wastes referred to in Chapter 3745-270 of the Administrative Code.

(I) Rule 3745-266-205 of the Administrative Code identifies when Chapters 3745-54 to 3745-57 and 3745-205 of the Administrative Code apply to the storage of military munitions classified as waste under rule 3745-266-202 of the Administrative Code.

The treatment and disposal of hazardous waste military munitions are subject to the applicable permitting, procedural, and technical standards in Chapters 3745-50, 3745-51, 3745-52, 3745-53, 3745-54 to 3745-57, 3745-65 to 3745-69, 3745-205, 3745-256, 3745-266, and 3745-270 of the Administrative Code.

- (J) Rules 3745-54-10 to 3745-54-19, 3745-54-30 to 3745-54-37, 3745-54-50 to 3745-54-56, and 3745-54-101 of the Administrative Code do not apply to remediation waste management sites. (However, some remediation waste management sites may be a part of a facility that is subject to an Ohio hazardous waste permit because the facility is also treating, storing, or disposing of hazardous wastes that are not remediation wastes. In these cases, rules 3745-54-10 to 3745-54-19, 3745-54-30 to 3745-54-37, 3745-54-50 to 3745-54-56, and 3745-54-101 of the Administrative Code do apply to the facility subject to the Ohio hazardous waste permit.) Instead of rules 3745-54-10 to 3745-54-19, 3745-54-30 to 3745-54-37, and 3745-54-50 to 3745-54-56 of the Administrative Code, owners or operators of remediation waste management sites shall ~~do the following:~~

- (1) Obtain a U.S. EPA identification number by applying to Ohio EPA using Ohio EPA form EPA 9029-;
- (2) Obtain a detailed chemical and physical analysis of a representative sample of the hazardous remediation wastes to be managed at the site. At a minimum, the analysis shall contain all of the information which is required to be known to treat, store, or dispose of the waste according to Chapters 3745-54 to 3745-57, 3745-205, and 3745-270 of the Administrative Code, and shall be kept accurate and up to date-;
- (3) Prevent people who are unaware of the danger from entering, and minimize the possibility for livestock or unauthorized people to enter onto the active portion of the remediation waste management site, unless the owner or operator can demonstrate to the director that ~~both:~~
  - (a) Physical contact with the waste, structures, or equipment within the active portion of the remediation waste management site will not injure livestock or people who may enter the active portion of the remediation waste management site-; and
  - (b) Disturbance of the waste or equipment by livestock or people who enter onto the active portion of the remediation waste management site will not cause a violation of Chapters 3745-54 to 3745-57 and 3745-205 of the Administrative Code-;

- (4) Inspect the remediation waste management site for malfunctions, deterioration, operator errors, and discharges that may be causing, or may lead to, a release of hazardous waste constituents to the environment, or a threat to human health. The owner or operator shall conduct these inspections often enough to identify problems in time to correct the problems before the problems harm human health or the environment, and shall remedy the problem before the problem leads to a human health or environmental hazard. Where a hazard is imminent or has already occurred, the owner or operator shall take remedial action immediately;
- (5) Provide personnel with classroom or on-the-job training on how to perform the personnel's duties in a way that ensures the remediation waste management site complies with Chapters 3745-54 to 3745-57 and 3745-205 of the Administrative Code, and on how to respond effectively to emergencies;
- (6) Take precautions to prevent accidental ignition or reaction of ignitable waste or reactive waste, and prevent threats to human health and the environment from ignitable waste, reactive waste, and incompatible waste;
- (7) For remediation waste management sites subject to regulation under rules 3745-55-70 to 3745-55-78, 3745-55-90 to 3745-55-99, 3745-57-02 to 3745-57-17, 3745-57-40 to 3745-57-51, 3745-57-90 to 3745-57-93, and Chapter 3745-56 of the Administrative Code, the owner or operator shall design, construct, operate, and maintain a unit within a one-hundred-year floodplain to prevent washout of any hazardous waste by a one-hundred-year flood, unless the owner or operator can meet the demonstration of paragraph (B) of rule 3745-54-18 of the Administrative Code;
- (8) Not place any non-containerized or bulk liquid hazardous waste in any salt dome formation, salt bed formation, underground mine, or cave;
- (9) Develop and maintain a construction quality assurance program for all surface impoundments, waste piles, and landfill units that are required to comply with paragraphs (C) and (D) of rule 3745-56-21, paragraphs (C) and (D) of rule 3745-56-51, and paragraphs (C) and (D) of rule 3745-57-03 of the Administrative Code at the remediation waste management site, according to rule 3745-54-19 of the Administrative Code;
- (10) Develop and maintain procedures to prevent accidents and a contingency and emergency plan to control accidents that occur. These procedures shall address proper design, construction, maintenance, and operation of remediation waste management units at the site. The goal of the contingency plan shall be to minimize the possibility of, and the hazards from, a fire, explosion, or any

unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water that could threaten human health or the environment. The contingency plan shall explain specifically how to treat, store, and dispose of the hazardous remediation waste in question, and shall be implemented immediately when a fire, explosion, or release of hazardous waste or hazardous waste constituents which could threaten human health or the environment occurs;

- (11) Designate at least one employee, either on the facility premises or on call (that is, available to respond to an emergency by reaching the facility quickly), to coordinate all emergency response measures. This emergency coordinator shall be thoroughly familiar with all aspects of the facility's contingency plan, all operations and activities at the facility, the location and characteristics of waste handled, the location of all records within the facility, and the facility layout. In addition, this person shall have the authority to commit the resources needed to carry out the contingency plan;
- (12) Develop, maintain, and implement a plan to comply with paragraphs (J)(2) to (J)(6) and (J)(9) to (J)(10) of this rule; and
- (13) Maintain records documenting compliance with paragraphs (J)(1) to (J)(12) of this rule.

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

Effective: 10/23/2022  
Five Year Review (FYR) Dates: 7/20/2022 and 07/20/2027

CERTIFIED ELECTRONICALLY

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Certification

10/11/2022

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Date

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Rule Amplifies: 3734.12  
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12/30/1989, 04/01/1990, 09/02/1997, 10/20/1998,  
12/07/2000, 03/13/2002, 12/07/2004, 09/05/2010,  
10/31/2015, 12/21/2017, 10/05/2020



3745-54-03

**Relationship to interim facility standards.**

An owner or operator of a hazardous waste facility that was in operation immediately prior to October 9, 1980 or was in existence on the effective date of any new, amended, or rescinded rule or statute on or after October 9, 1980 that renders the facility or its operations subject to the permitting requirements of Chapter 3734. of the Revised Code, must comply with the standards set forth in Chapters 3745-65 to 3745-69 and 3745-256 of the Administrative Code in lieu of the standards in Chapters 3745-54 to 3745-57 and 3745-205 of the Administrative Code until final administrative disposition of his permit application is made pursuant to the "Part B" permit requirements, except as provided under rules 3745-57-70 to 3745-57-75 of the Administrative Code.

~~[Comment: The dates set forth in this rule are from division (E) of section 3734.05 of the Revised Code.]~~

Effective: 09/05/2010

R.C. 119.032 review dates: 04/14/2010 and Exempt

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08/29/1985, 12/30/1989, 12/07/2000, 12/07/2004

**3745-54-10 Applicability- general facility standards.**

- (A) Rules 3745-54-10 to 3745-54-19 of the Administrative Code apply to owners and operators of all hazardous waste facilities, except as provided in rule 3745-54-01 of the Administrative Code and in paragraph (B) of this rule.
- (B) Paragraph (B) of rule 3745-54-18 of the Administrative Code applies only to facilities subject to regulation under rules 3745-55-70 to 3745-55-78, 3745-55-90 to 3745-55-99, 3745-56-20 to 3745-56-31, 3745-56-50 to 3745-56-59, 3745-56-70 to 3745-56-83, 3745-57-02 to 3745-57-17, 3745-57-40 to 3745-57-51, and 3745-57-90 to 3745-57-93 of the Administrative Code.

Effective: 12/07/2004

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3745-54-11

**U.S. EPA identification number.**

Every facility owner and operator must apply to Ohio EPA for a U.S. EPA identification number. Notification forms for this purpose may be obtained from Ohio EPA.

Effective: 09/05/2010

R.C. 119.032 review dates: 04/14/2010 and Exempt

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3745-54-12**Required notices.**

(A) The owner or operator of a facility that is arranging or has arranged to receive hazardous waste subject to 40 C.F.R. Part 262 subpart H from a foreign source shall comply with 40 C.F.R. 264.12(a).

[Comment: The exercise of foreign relations and international commerce powers is reserved to the federal government under the Constitution. These responsibilities are not delegable to the states. Therefore, the importation and exportation of hazardous waste into and out of the United States is solely regulated by the federal government.]

(B) The owner or operator of a facility that receives hazardous waste from an off-site source (except where the owner or operator is also the generator) shall inform the generator in writing that the owner or operator of the receiving facility has the appropriate permits for, and shall accept, the waste the generator is shipping. The owner or operator shall keep a copy of this written notice as part of the operating record.

(C) Before transferring ownership or operation of a facility during the facility's operating life, or of a disposal facility during the post-closure care period, the owner or operator shall notify the new owner or operator in writing of the requirements of rules 3745-50-40 to 3745-50-235 and Chapters 3745-54 to 3745-57 and 3745-205 of the Administrative Code.

[Comment: An owner's or operator's failure to notify the new owner or operator of the requirements of Chapters 3745-54 to 3745-57 and 3745-205 of the Administrative Code does not relieve the new owner or operator of the obligation to comply with all applicable requirements.]

[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."]

Replaces: 3745-54-12 rescinded  
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## TO BE RESCINDED

3745-54-12                    **Required notices.**

## (A) Prior notice.

- (1) The owner or operator of a facility who has arranged to receive hazardous waste from a foreign source shall notify the regional administrator in writing at least four weeks in advance of the date the waste is expected to arrive at the facility. Notice of subsequent shipments of the same waste from the same foreign source is not required.
- (2) The owner or operator of a recovery facility that has arranged to receive hazardous waste subject to 40 CFR Part 262 subpart H shall provide a copy of the movement document bearing all required signatures to the foreign exporter, to the "Office of Federal Activities, International Compliance Assurance Division (2254A), United States Environmental Protection Agency, 1200 Pennsylvania Ave., NW., Washington, DC" 20460, and to the competent authorities of all other countries concerned. This shall occur within three working days after receipt of the shipment. The original signed copy of the movement document shall be maintained at the facility for at least three years after the date of signature. In addition, such owner or operator, as soon as possible but no later than thirty days after the completion of recovery and no later than one calendar year after the receipt of the hazardous waste, shall submit a certificate of recovery to the foreign exporter, to the competent authority of the country of export, and to U.S. EPA's "Office of Enforcement and Compliance Assurance" at the above address. This submittal may be by mail, e-mail without a digital signature followed by mail, or fax followed by mail.

[Comment: The exercise of foreign relations and international commerce powers is reserved to the federal government under the Constitution. These responsibilities are not delegable to the states. Therefore, the importation and exportation of hazardous waste into and out of the United States is solely regulated by the federal government.]

- (B) The owner or operator of a facility that receives hazardous waste from an off-site source, except where the owner or operator is also the generator, shall inform the generator in writing that the owner or operator of the receiving facility has the appropriate permits for, and will accept, the waste the generator is shipping. The owner or operator shall keep a copy of this written notice as part of the operating record.



(C) Before transferring ownership or operation of a facility during the facility's operating life, or of a disposal facility during the post-closure care period, the owner or operator shall notify the new owner or operator in writing of the requirements of rules 3745-50-40 to 3745-50-235 and Chapters 3745-54 to 3745-57 and 3745-205 of the Administrative Code.

[Comment 1: An owner's or operator's failure to notify the new owner or operator of the requirements of Chapters 3745-54 to 3745-57 and 3745-205 of the Administrative Code does not relieve the new owner or operator of the obligation to comply with all applicable requirements.]

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

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3745-54-13

**General waste analysis.****(A) The analysis.**

- (1) Before an owner or operator treats, stores, or disposes of any hazardous wastes, or nonhazardous wastes if applicable under paragraph (D) of rule 3745-55-13 of the Administrative Code, the owner or operator shall obtain a detailed chemical and physical analysis of a representative sample of the wastes. At a minimum, this analysis shall contain all the information which shall be known to treat, store, or dispose of the waste in accordance with Chapters 3745-54 to 3745-57, 3745-205, and 3745-270 of the Administrative Code.
- (2) The analysis may include data developed under Chapter 3745-51 of the Administrative Code and existing published or documented data on the hazardous waste or on hazardous waste generated from similar processes.

[Comment: For example, the facility's records of analyses performed on the waste before April 15, 1981, or studies conducted on hazardous waste generated from processes similar to that which generated the waste to be managed at the facility, may be included in the data base required to comply with paragraph (A)(1) of this rule. The owner or operator of an off-site facility may arrange for the generator of the hazardous waste to supply part of the information required by paragraph (A)(1) of this rule, except as otherwise specified in paragraphs (B) and (C) of rule 3745-270-07 of the Administrative Code. If the generator does not supply the information, and the owner or operator chooses to accept a hazardous waste, the owner or operator is responsible for obtaining the information required to comply with this rule.]

- (3) The analysis shall be repeated as necessary to ensure that the analysis is accurate and up to date. At a minimum, the analysis shall be repeated:
  - (a) When the owner or operator is notified, or has reason to believe, that the process or operation generating the hazardous waste, or nonhazardous waste if applicable under paragraph (D) of rule 3745-55-13 of the Administrative Code, has changed; and
  - (b) For off-site facilities, when the results of the inspection required in paragraph (A)(4) of this rule indicate that the hazardous waste received at the facility does not match the waste designated on the accompanying manifest or shipping paper.
- (4) The owner or operator of an off-site facility shall inspect and, if necessary, analyze each hazardous waste movement received at the facility to determine

whether the hazardous waste matches the identity of the waste specified on the accompanying manifest or shipping paper.

- (B) The owner or operator shall develop and follow a written waste analysis plan which describes the procedures to be implemented in order to comply with paragraph (A) of this rule. The owner or operator shall keep this waste analysis plan at the facility. At a minimum, the waste analysis plan shall specify:
- (1) The parameters for which each hazardous waste, or nonhazardous waste if applicable under paragraph (D) of rule 3745-55-13 of the Administrative Code, will be analyzed and the rationale for the selection of these parameters [i.e., how analysis for these parameters will provide sufficient information on the waste's properties to comply with paragraph (A) of this rule].
  - (2) The test methods which will be used to test for these parameters.
  - (3) The sampling method which will be used to obtain a representative sample of the waste to be analyzed. A representative sample may be obtained using either:
    - (a) One of the sampling methods described in the appendix to rule 3745-51-20 of the Administrative Code.
    - (b) An "equivalent ~~sampling~~ method" as defined in rule 3745-50-10 of the Administrative Code.
  - (4) The frequency with which the initial analysis of the waste will be reviewed or repeated to ensure that the analysis is accurate and up to date.
  - (5) For off-site facilities, the waste analyses that hazardous waste generators have agreed to supply.
  - (6) Where applicable, the methods which will be used to meet the additional waste analysis requirements for specific waste management methods as specified in rules 3745-54-17, 3745-57-14, 3745-57-41, and 3745-270-07 of the Administrative Code.
  - (7) For surface impoundments exempted from land disposal restrictions under paragraph (A) of rule 3745-270-04 of the Administrative Code, the procedures and schedules for:
    - (a) The sampling of impoundment contents;
    - (b) The analysis of test data; and

- (c) The annual removal of residues which are not delisted under rule 3745-50-19 of the Administrative Code or which exhibit a characteristic of hazardous waste and either:
- (i) ~~Do~~ Such residues do not meet the applicable treatment standards of rules 3745-270-40 to 3745-270-49 of the Administrative Code; or
  - (ii) Where no treatment standards have been established, such residues are prohibited from land disposal under any of the following:
    - (a) ~~Such residues are prohibited from land disposal under section~~ Section 3004(d) of RCRA; or
    - (b) ~~Reserved~~ Rule 3745-270-32 of the Administrative Code.
    - (c) Rule 3745-270-33 of the Administrative Code.

(8) [Reserved.]

- (C) For off-site facilities, the waste analysis plan required in paragraph (B) of this rule also shall specify the procedures which will be used to inspect and, if necessary, analyze each movement of hazardous waste received at the facility to ensure that the hazardous waste matches the identity of the waste designated on the accompanying manifest or shipping paper. At a minimum, the waste analysis plan shall describe:
- (1) The procedures which will be used to determine the identity of each movement of waste managed at the facility; and
  - (2) The sampling method which will be used to obtain a representative sample of the waste to be identified, if the identification method includes sampling.
  - (3) The procedures that the owner or operator of an off-site landfill receiving containerized hazardous waste will use to determine whether a hazardous waste generator or treater has added a biodegradable sorbent to the waste in the container. (See rule 3745-57-14 of the Administrative Code.)

[Comment 1: The waste analysis plan shall be submitted with "Part B" of the permit application.]

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

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02/11/1992, 09/02/1997, 10/20/1998, 12/07/2000,  
03/13/2002, 12/07/2004, 02/16/2009, 10/31/2015

**3745-54-14 Security.**

- (A) The owner or operator must prevent the unknowing entry, and minimize the possibility for the unauthorized entry, of persons or livestock onto the active portion of the facility, unless he can satisfactorily demonstrate in the permit application that:
- (1) Physical contact with the waste, structures, or equipment within the active portion of the facility will not injure livestock or unknowing or unauthorized persons which may enter the active portion of a facility; and
  - (2) Disturbance of the waste or equipment, by livestock or the unknowing or unauthorized entry of persons onto the active portion of a facility, will not cause a violation of the requirements of Chapters 3745-54 to 3745-57 and 3745-205 of the Administrative Code.
- (B) Unless the owner or operator has made a successful demonstration under paragraphs (A)(1) and (A)(2) of this rule, a facility must have:
- (1) A twenty-four-hour surveillance system (e.g., television monitoring or surveillance by guards or facility personnel) which continuously monitors and controls entry onto the active portion of the facility; or
  - (2)
    - (a) An artificial or natural barrier (e.g., a fence in good repair or a fence combined with a cliff), which completely surrounds the active portion of the facility; and
    - (b) A means to control entry, at all times, through the gates or other entrances to the active portion of the facility (e.g., an attendant, television monitors, locked entrance, or controlled roadway access to the facility).
- [Comment: The requirements of paragraph (B) of this rule are satisfied if the facility or plant within which the active portion is located itself has a surveillance system, or a barrier and a means to control entry, which complies with the requirements of paragraph (B)(1) or (B)(2) of this rule.]
- (C) Unless the owner or operator has made a successful demonstration under paragraphs (A)(1) and (A)(2) of this rule, a sign with the legend, "Danger - Unauthorized Personnel keep Out," must be posted at each entrance to the active portion of a facility, and at other locations, in sufficient numbers to be seen from any approach in the active portion. The legend must be written in English and be legible from a distance of at least twenty-five feet. Existing signs with a legend other than "Danger - Unauthorized Personnel Keep Out" may be used if the legend on the sign indicates that only authorized personnel are allowed to enter the active portion, and that entry onto the active portion can be dangerous.

[Comment: See paragraph (B) of rule 3745-55-17 of the Administrative Code for discussion of security requirements at disposal facilities during the post-closure care period.]

Effective: 12/07/2004

119.032 review dates: Exempt

Promulgated under: 119.03

Statutory authority: 3734.12

Rule amplifies: 3734.12

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



3745-54-15

**General inspection requirements.**

(A) The owner or operator shall inspect the facility for malfunctions and deterioration, operator errors, and discharges which may be causing or may lead to either of the following:

- (1) Release of hazardous waste constituents to the environment.
- (2) A threat to human health. The owner or operator shall conduct these inspections with such regularity as to be able to identify problems in time to correct ~~them~~ the problems before such problems harm human health or the environment.

(B) Inspection schedule.

- (1) The owner or operator shall develop and follow a written schedule for inspecting monitoring equipment, safety and emergency equipment, security devices, and operating and structural equipment (such as dikes and sump pumps) that are important to preventing, detecting, or responding to environmental or human health hazards.
- (2) The owner or operator shall keep this schedule at the facility.
- (3) The schedule shall identify the types of problems (e.g., malfunctions or deterioration) which are to be looked for during the inspection (e.g., inoperative sump pump, leaking fitting, eroding dike, and other such problems).
- (4) The frequency of inspection may vary for the items on the schedule. However, the frequency of inspection should be based on the rate of deterioration of the equipment and the probability of an environmental or human health incident if the deterioration, malfunction, or any operator error goes undetected between inspections. Areas subject to spills, such as loading and unloading areas, shall be inspected daily when in use. At a minimum, the inspection schedule shall include the terms and frequencies called for in rules 3745-55-74, 3745-55-93, 3745-55-95, 3745-56-26, 3745-56-54, 3745-56-78, 3745-57-05, 3745-57-47, and 3745-57-92 of the Administrative Code, where applicable.

~~Comment:~~ Rules 3745-50-40 to 3745-50-235 of the Administrative Code require the inspection schedule to be submitted with "Part B" of the permit application. Ohio EPA ~~will~~ shall evaluate the schedule along with the rest of the application to ensure that the inspection schedule is adequately protective of human health and the environment. As part of this review, Ohio EPA may modify or amend the schedule as may be necessary.}

(5) [Reserved.]

- (C) The owner or operator shall remedy any deterioration or malfunction of equipment or structures which the inspection reveals on a schedule which ensures that the problem does not lead to an environmental or human health hazard. Where a hazard is imminent or has already occurred, remedial action shall be taken immediately.
- (D) The owner or operator shall record inspections in an inspection log or summary. The owner or operator shall keep these records for at least three years after the date of inspection. At a minimum, these records shall include the date and time of the inspection, the name of the inspector, a notation of the observations made, and the date and nature of any repairs or other remedial actions.

Effective: 10/5/2020  
Five Year Review (FYR) Dates: 7/13/2020 and 10/05/2025

CERTIFIED ELECTRONICALLY

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Certification

09/21/2020

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Date

Promulgated Under: 119.03  
Statutory Authority: 3734.12  
Rule Amplifies: 3734.12  
Prior Effective Dates: 04/15/1981, 01/07/1983, 05/29/1985 (Emer.),  
08/29/1985, 12/08/1988, 12/30/1989, 06/29/1990,  
12/07/2004, 09/05/2010, 10/31/2015

3745-54-16

**Personnel training.****(A) ~~Training program.~~**

- (1) Facility personnel shall successfully complete a program of classroom instruction or on-the-job training that teaches facility personnel to perform facility personnel's duties in a way that ensures the facility's compliance with Chapters 3745-54 to 3745-57 and 3745-205 of the Administrative Code. The owner or operator shall ensure that this training program includes all the elements described in the document required under paragraph (D)(3) of this rule.

[Comment: Rules 3745-50-40 to 3745-50-235 of the Administrative Code require that owners and operators submit, with "Part B" of the permit application, an outline of the training program used (or to be used) at the facility, and a brief description of how the training program is designed to meet actual job tasks.]

- (2) This training program shall be directed by a person trained in hazardous waste management procedures, and shall include instruction which teaches facility personnel hazardous waste management procedures; ~~(including contingency plan implementation;)~~ relevant to the positions in which facility personnel are employed.
- (3) At a minimum, the training program shall be designed to ensure that facility personnel are able to respond effectively to emergencies by familiarizing facility personnel with emergency procedures, emergency equipment, and emergency systems, including, where applicable:
- (a) Procedures for using, inspecting, repairing, and replacing facility emergency and monitoring equipment;:
  - (b) Key parameters for automatic waste feed cutoff systems;:
  - (c) Communications or alarm systems;:
  - (d) Response to fire or explosions;:
  - (e) Response to ground water contamination incidents;: and
  - (f) Shutdown of operations.

- (4) For facility employees who receive emergency response training pursuant to "Occupational Safety and Health Administration" (OSHA) regulations 29 CFR 1910.120(p)(8) and 29 CFR 1910.120(q), the facility is not required to provide separate emergency response training pursuant to this rule, provided that the overall facility training meets all the requirements of this rule.
- (B) Facility personnel shall successfully complete the training program required in paragraph (A) of this rule within six months after April 15, 1981 or six months after the date of employment or assignment to a facility, or to a new position at a facility, whichever is later. Employees hired after April 15, 1981 shall not work in unsupervised positions until such employees have completed the training requirements of paragraph (A) of this rule.
- (C) Facility personnel shall take part in an annual review of the initial training required in paragraph (A) of this rule during each period from January first to December thirty-first. The review shall occur within fifteen months after the previous review.
- (D) The owner or operator shall maintain the following documents and records at the facility:
- (1) The job title for each position at the facility related to hazardous waste management, and the name of the employee filling each job;
  - (2) A written job description for each position listed under paragraph (D)(1) of this rule. This description may be consistent in the degree of specificity with descriptions for other similar positions in the same company location or bargaining unit, but shall include the requisite skill, education, or other qualifications, and duties of employees assigned to each position;
  - (3) A written description of the type and amount of both introductory and continuing training that will be given to each person filling a position listed under paragraph (D)(1) of this rule; and
  - (4) Records that document that the training or job experience required under paragraphs (A), (B), and (C) of this rule has been given to, and completed by, facility personnel.
- (E) Training records on current personnel shall be kept until closure of the facility. Training records on former employees shall be kept for at least three years ~~from~~after the date the employee last worked at the facility. Personnel training records may accompany personnel transferred within the same company.

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

Effective: 10/23/2022  
Five Year Review (FYR) Dates: 7/20/2022 and 07/20/2027

CERTIFIED ELECTRONICALLY

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Certification

10/11/2022

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Date

Promulgated Under: 119.03  
Statutory Authority: 3734.12  
Rule Amplifies: 3734.12  
Prior Effective Dates: 04/15/1981, 01/07/1983, 12/07/2000, 12/07/2004,  
02/16/2009, 09/05/2010, 03/17/2012, 02/12/2018

### **3745-54-17 General requirements for ignitable, reactive, or incompatible wastes.**

- (A) The owner or operator must take precautions to prevent accidental ignition or reaction of ignitable or reactive waste. This waste must be separated and protected from sources of ignition or reaction including but not limited to: open flames, smoking, cutting and welding, hot surfaces, frictional heat, sparks (static, electrical, or mechanical), spontaneous ignition (e.g., from heat-producing chemical reactions), and radiant heat. While ignitable or reactive waste is being handled, the owner or operator must confine smoking and open flame to specially designated locations. "No Smoking" signs must be conspicuously placed wherever there is a hazard from ignitable or reactive waste.
- (B) Where specifically required by Chapters 3745-54 to 3745-57 and 3745-205 of the Administrative Code, the owner or operator of a facility that treats, stores or disposes of ignitable or reactive waste, or mixes incompatible waste or incompatible wastes and other materials, must take precautions to prevent reactions which:
  - (1) Generate extreme heat or pressure, fire or explosions, or violent reactions;
  - (2) Produce uncontrolled toxic mists, fumes, dusts, or gases in sufficient quantities to threaten human health or the environment;
  - (3) Produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosions;
  - (4) Damage the structural integrity of the device or facility;
  - (5) Through other like means threaten human health or the environment.
- (C) When required to comply with paragraph (A) or (B) of this rule the owner or operator must document that compliance. This documentation may be based on references to published scientific or engineering literature, data from trial tests (e.g., bench scale or pilot scale tests), waste analyses (as specified in rule 3745-54-13 of the Administrative Code), or the results of the treatment of similar wastes by similar treatment processes and under similar operating conditions.

Effective: 12/07/2004

119.032 review dates: Exempt

Promulgated under: 119.03

Statutory authority: 3734.12

Rule amplifies: 3734.12

Prior effective dates: 01/07/1983, 12/07/2000



3745-54-18

**Location standards.****(A) Seismic considerations.**

(1) Portions of new facilities where treatment, storage, or disposal of hazardous waste will be conducted shall not be located within sixty-one meters (two hundred feet) of a fault which has had displacement in Holocene time.

(2) As used in paragraph (A)(1) of this rule:

(a) "Fault" means a fracture along which rocks on one side have been displaced with respect to those on the other side.

(b) "Displacement" means the relative movement of any two sides of a fault measured in any direction.

(c) "Holocene" means the most recent epoch of the Quaternary period, extending from the end of the Pleistocene to the present.

[Comment: Procedures for demonstrating compliance with this standard in the hazardous waste permit application are specified in paragraphs (A)(11) to (A)(11)(e) of rule 3745-50-44 of the Administrative Code. Facilities located in political jurisdictions other than those listed in 40 CFR Part 264 appendix VI are assumed to be in compliance with this requirement.]

**(B) Floodplains.**

(1) A facility located in a one-hundred-year floodplain shall be designed, constructed, operated, and maintained to prevent washout of any hazardous waste by a one-hundred-year flood unless the owner or operator can demonstrate in the permit application that:

(a) Procedures are in effect which will cause the waste to be removed safely, before flood waters can reach the facility, to a location where the wastes will not be vulnerable to floodwaters; or

(b) For existing surface impoundments, waste piles, land treatment units, landfills, and miscellaneous units, no adverse effects on human health or the environment will result if washout occurs, considering:

(i) The volume and physical and chemical characteristics of the waste in the facility;

- (ii) The concentration of hazardous constituents that would potentially affect surface waters as a result of washout;
- (iii) The impact of such concentrations on the current or potential uses of and water quality standards established for the affected surface waters; and
- (iv) The impact of hazardous constituents on the sediments of affected surface waters or the soils of the one-hundred-year floodplain that could result from washout.

[Comment: The location where wastes are moved shall be a facility which is either permitted by the state of Ohio, authorized to manage hazardous waste by a state with a hazardous waste management program authorized under 40 CFR Part 271, or subject to rules 3745-50-40 to 3745-50-235 and Chapters 3745-65 to 3745-69 and 3745-256 of the Administrative Code.]

(2) As used in paragraph (B)(1) of this rule:

- (a) "One-hundred-year floodplain" means any land area which is subject to a one per cent or greater chance of flooding in any given year from any source.
- (b) "Washout" means the movement of hazardous waste from the active portion of the facility as a result of flooding.
- (c) "One-hundred-year flood" means a flood that has a one per cent chance of being equalled or exceeded in any given year.

[Comment: Requirements pertaining to other federal laws which affect the location and permitting of facilities are in 40 CFR 270.3. For details relative to these laws, see U.S. EPA's manual for SEA (Special Environmental Area) requirements for hazardous waste facility permits. Though U.S. EPA is responsible for complying with these requirements, applicants are advised to consider ~~them~~ these requirements in planning the location of a facility to help prevent subsequent project delays.]

- (C) Salt dome formations, salt bed formations, underground mines, and caves. The placement of any noncontainerized or bulk liquid hazardous waste in any salt dome formation, salt bed formation, underground mine, or cave is prohibited.

[Comment 1: There are additional requirements for location of hazardous waste facilities in division (D) of section 3734.05 of the Revised Code.]

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

Effective: 9/29/2021

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

CERTIFIED ELECTRONICALLY

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Certification

09/14/2021

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Date

Promulgated Under: 119.03

Statutory Authority: 3734.12

Rule Amplifies: 3734.12

Prior Effective Dates: 01/07/1983, 12/30/1989, 02/14/1995, 12/07/2000,  
12/07/2004, 02/16/2009, 10/31/2015

**3745-54-19 Construction quality assurance (CQA) program.****(A) CQA program.**

- (1) A CQA program is required for all surface impoundment, waste pile, and landfill units that are required to comply with paragraphs (C) and (D) of rule 3745-56-21, paragraphs (C) and (D) of rule 3745-56-51, and paragraphs (C) and (D) of rule 3745-57-03 of the Administrative Code. The program must ensure that the constructed unit meets or exceeds all design criteria and specifications in the permit. The program must be developed and implemented under the direction of a CQA officer who is a registered professional engineer.
- (2) The CQA program must address the following physical components, where applicable:
  - (a) Foundations;
  - (b) Dikes;
  - (c) Low-permeability soil liners;
  - (d) Geomembranes (flexible membrane liners);
  - (e) Leachate collection and removal systems and leak detection systems; and
  - (f) Final cover systems.

**(B) Written CQA plan.** The owner or operator of units subject to the CQA program under paragraph (A) of this rule must develop and implement a written CQA plan. The plan must identify steps that will be used to monitor and document the quality of materials and the condition and manner of their installation. The CQA plan must include:

- (1) Identification of applicable units, and a description of how they will be constructed.
- (2) Identification of key personnel in the development and implementation of the CQA plan, and CQA officer qualifications.
- (3) A description of inspection and sampling activities for all unit components identified in paragraph (A)(2) of this rule, including observations and tests that will be used before, during, and after construction to ensure that the construction materials and the installed unit components meet the design specifications. The description must cover:
  - (a) Sampling size and locations;
  - (b) Frequency of testing;

- (c) Data evaluation procedures;
  - (d) Acceptance and rejection criteria for construction materials;
  - (e) Plans for implementing corrective measures; and
  - (f) Data or other information to be recorded and retained in the operating record under rule 3745-54-73 of the Administrative Code.
- (C) Contents of program.
- (1) The CQA program must include observations, inspections, tests, and measurements sufficient to ensure:
    - (a) Structural stability and integrity of all components of the unit identified in paragraph (A)(2) of this rule;
    - (b) Proper construction of all components of the liners, leachate collection and removal system, leak detection system, and final cover system, according to permit specifications and good engineering practices, and proper installation of all components (e.g., pipes) according to design specifications;
    - (c) Conformity of all materials used with design and other material specifications under rules 3745-56-21, 3745-56-51, and 3745-57-03 of the Administrative Code.
  - (2) The CQA program must include test fills for compacted soil liners, using the same compaction methods as in the full scale unit, to ensure that the liners are constructed to meet the hydraulic conductivity requirements of paragraph (C)(1)(a)(ii) of rule 3745-56-21, paragraph (C)(1)(a)(ii) of rule 3745-56-51, and paragraph (C)(1)(a)(ii) of rule 3745-57-03 of the Administrative Code in the field. Compliance with the hydraulic conductivity requirements must be verified by using in-situ testing on the constructed test fill. The director may accept an alternative demonstration, in lieu of a test fill, where data are sufficient to show that a constructed soil liner will meet the hydraulic conductivity requirements of paragraph (C)(1)(a)(ii) of rule 3745-56-21, paragraph (C)(1)(a)(ii) of rule 3745-56-51, and paragraph (C)(1)(a)(ii) of rule 3745-57-03 of the Administrative Code in the field.
- (D) Certification. Waste must not be received in a unit subject to this rule until the owner or operator has submitted to the director by certified mail or hand delivery a certification signed by the CQA officer that the approved CQA plan has been successfully carried out and that the unit meets the requirements of paragraph (C) or (D) of rule 3745-56-21, paragraph (C) or (D) of rule 3745-56-51, or paragraph (C) or (D) of rule 3745-57-03 of the Administrative Code; and the procedure in paragraph (L)(2)(b) of rule 3745-50-58 of the Administrative Code has been completed. Documentation supporting the CQA officer's certification must be furnished to the director upon request.

Effective: 12/07/2004  
119.032 review dates: Exempt  
Promulgated under: 119.03  
Statutory authority: 3734.12  
Rule amplifies: 3734.12  
Prior effective dates: None

**3745-54-30 Applicability- preparedness and prevention.**

Rules 3745-54-30 to 3745-54-37 of the Administrative Code apply to owners or operators of all hazardous waste facilities, except as rule 3745-54-01 of the Administrative Code provides otherwise.

Effective: 12/07/2004

119.032 review dates: Exempt

Promulgated under: 119.03

Statutory authority: 3734.12

Rule amplifies: 3734.12

Prior effective dates: 04/15/1981



**3745-54-31 Design and operation of facility.**

Facilities shall be designed, constructed, maintained, and operated to minimize the possibility of a fire, explosion or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment.

Effective: 04/15/1981  
119.032 review dates: Exempt  
Promulgated under: 119.03  
Statutory authority: 3734.12  
Rule amplifies: 3734.12  
Prior effective dates: None

### **3745-54-32 Required equipment.**

All facilities shall be equipped with the following, unless it can be satisfactorily demonstrated in the permit application that none of the hazards posed by waste handled at the facility could require a particular kind of equipment specified below:

- (A) An internal communications or alarm system capable of providing immediate emergency instruction (voice or signal) to facility personnel.
- (B) A device, such as a telephone (immediately available at the scene of operations) or a hand-held two-way radio, capable of summoning emergency assistance from local police departments, fire departments, or Ohio EPA or local emergency response teams.
- (C) Portable fire extinguishers, fire control equipment, including but not limited to, special extinguishing equipment, such as that using foam, inert gas, or dry chemicals, spill control equipment, and decontamination equipment.
- (D) Water at adequate volume and pressure to supply water hose streams, or foam producing equipment, or automatic sprinklers, or water spray systems.

Effective: 01/07/1983

119.032 review dates: Exempt

Promulgated under: 119.03

Statutory authority: 3734.12

Rule amplifies: 3734.12

Prior effective dates: 04/15/1981

**3745-54-33 Testing and maintenance of equipment.**

All facility communications or alarm systems, fire protection equipment, spill control equipment, and decontamination equipment, where required, shall be tested and maintained as necessary to assure its proper operation in time of emergency.

Effective: 04/15/1981  
119.032 review dates: Exempt  
Promulgated under: 119.03  
Statutory authority: 3734.12  
Rule amplifies: 3734.12  
Prior effective dates: None

**3745-54-34 Access to communications or alarm system.**

- (A) Whenever hazardous waste is being poured, mixed, spread, or otherwise handled, all personnel involved in the operation shall have immediate access to an internal alarm or emergency communication device, either directly or through visual or voice contact with another employee, unless such a device is not required under rule 3745-54-32 of the Administrative Code.
- (B) If there is only one employee on the premises while the facility is operating, such employee shall have immediate access to a device, such as a telephone, immediately available at the scene of operation, or a hand-held two-way radio, capable of summoning external emergency assistance, unless such a device is not required under rule 3745-54-32 of the Administrative Code.

Effective: 01/07/1983

119.032 review dates: Exempt

Promulgated under: 119.03

Statutory authority: 3734.12

Rule amplifies: 3734.12

Prior effective dates: 04/15/1981

**3745-54-35 Required aisle space.**

The owner or operator shall maintain aisle space to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of facility operation in an emergency unless it can be satisfactorily demonstrated in the permit application that aisle space is not needed for any of these purposes.

Effective: 01/07/1983

119.032 review dates: Exempt

Promulgated under: 119.03

Statutory authority: 3734.12

Rule amplifies: 3734.12

Prior effective dates: 04/15/1981

3745-54-37

**~~Arrangements/agreements~~ Arrangements with local authorities.**

- (A) The owner or operator shall attempt to make the following ~~arrangements/agreements~~ arrangements, as appropriate for the type of waste handled at the facility and the potential need for the services of ~~these~~ the following organizations:
- (1) Arrangements to familiarize police, fire departments, and local emergency response teams with the layout of the facility, properties of hazardous waste handled at the facility and associated hazards, places where facility personnel would normally be working, entrances to and roads inside the facility, and possible evacuation routes; ~~and~~.
  - (2) Where more than one police and fire department may respond to an emergency, ~~agreements~~ arrangements designating primary emergency authority to a specific police and a specific fire department, and ~~agreements~~ arrangements with any others to provide support to the primary emergency authority; ~~and~~.
  - (3) Arrangements with ~~Ohio EPA~~ local emergency response team, emergency response contractors, and equipment suppliers; ~~and~~.
  - (4) Arrangements to familiarize local hospitals with the properties of hazardous waste handled at the facility and the types of injuries or illnesses which could result from fires, explosions, or releases at the facility.
- (B) Where local authorities decline to enter into such ~~agreements~~ or arrangements, the owner or operator shall document the refusal in the operating record.

Effective: 10/31/2015

Five Year Review (FYR) Dates: Exempt

CERTIFIED ELECTRONICALLY

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Certification

10/07/2015

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Date

Promulgated Under: 119.03  
Statutory Authority: 3734.12  
Rule Amplifies: 3734.12  
Prior Effective Dates: 04/15/1981

**3745-54-50 Applicability- contingency plan and emergency procedures.**

Rules 3745-54-50 to 3745-54-56 of the Administrative Code apply to owners or operators of all hazardous waste facilities, except as rule 3745-54-01 of the Administrative Code provides otherwise.

Effective: 12/07/2004

119.032 review dates: Exempt

Promulgated under: 119.03

Statutory authority: 3734.12

Rule amplifies: 3734.12

Prior effective dates: 04/15/1981



**3745-54-51 Purpose and implementation of contingency plan.**

- (A) Each owner or operator shall have a contingency plan for the facility. The contingency plan shall be designed to minimize hazards to human health or the environment from fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water.
- (B) The provisions of the contingency plan shall be implemented immediately whenever there is a fire, explosion, or release of hazardous waste or hazardous waste constituents which could threaten human health or the environment.

Effective: 04/15/1981  
119.032 review dates: Exempt  
Promulgated under: 119.03  
Statutory authority: 3734.12  
Rule amplifies: 3734.12  
Prior effective dates: None

3745-54-52

**Content of contingency plan.**

- (A) The contingency plan ~~must~~shall describe the actions facility personnel ~~must~~shall take to comply with rules 3745-54-51 and 3745-54-56 of the Administrative Code in response to fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water at the facility.
- (B) If the owner or operator has already prepared a "Spill Prevention, Control, and Countermeasures Plan" in accordance with 40 CFR Part 112 or some other emergency or contingency plan, ~~the owner or operator~~ need only amend that plan to incorporate hazardous waste management provisions that are sufficient to comply with ~~the requirements~~ of Chapters 3745-54 to 3745-57 and 3745-205 of the Administrative Code. The owner or operator may develop one contingency plan which meets all regulatory requirements. Ohio EPA recommends that the plan be based on the "National Response Team's Integrated Contingency Plan Guidance" ("One Plan"). When modifications are made to non-hazardous waste management provisions in an integrated contingency plan, the changes do not trigger the need for a hazardous waste management permit modification.
- (C) The contingency plan ~~must~~shall describe arrangements ~~agreed to by~~with local police departments, fire departments, hospitals, contractors, and state and local emergency response teams to coordinate emergency services, pursuant to rule 3745-54-37 of the Administrative Code.
- (D) The contingency plan ~~must~~shall list names, home addresses, and ~~phone numbers~~ ~~(office and home)~~home or cellular telephone numbers of all persons qualified to act as emergency coordinator (see rule 3745-54-55 of the Administrative Code), and this list ~~must~~shall be kept up to date. Where more than one person is listed, one person ~~must~~shall be named as primary emergency coordinator and others ~~must~~shall be listed in the order in which they will assume responsibility as alternates. For new facilities, this information ~~must~~shall be submitted to the director at the time of issuance of an Ohio hazardous waste permit, rather than at the time of permit application.
- (E) The contingency plan ~~must~~shall include a list of all emergency equipment at the facility [such as fire extinguishing systems, spill control equipment, communications and alarm systems (internal and external), and decontamination equipment], where this equipment is required. This list ~~must~~shall be kept up to date. In addition, the contingency plan ~~must~~shall include the location and a physical description of each item on the list, and a brief outline of its capabilities.

(F) The contingency plan ~~must~~shall include an evacuation plan for facility personnel where there is a possibility that evacuation could be necessary. This evacuation plan ~~must~~shall describe ~~signal(s)~~signals to be used to begin evacuation, evacuation routes, and alternate evacuation routes (in cases where the primary routes could be blocked by releases of hazardous waste or fires).

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

Effective: 10/31/2015

Five Year Review (FYR) Dates: Exempt

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10/07/2015

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Date

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Prior Effective Dates: 04/15/1981, 01/07/1983, 05/29/1985 (Emer.),  
08/29/1985, 12/07/2004, 09/05/2010, 03/17/2012

3745-54-53

**Copies of contingency plan.**

A copy of the contingency plan and all revisions to the contingency plan shall be both:

(A) Maintained at the facility.

(B) Submitted to all local police departments, fire departments, hospitals, and local emergency response teams described in the contingency plan pursuant to paragraph (C) of rule 3745-54-52 of the Administrative Code that may be called upon to provide emergency services.

[Comment: A copy of the contingency plan ~~shall be~~ submitted to Ohio EPA as part of "Part B" permit application pursuant to rule 3745-50-44 of the Administrative Code. If the contingency plan is revised, that constitutes a permit modification pursuant to rule 3745-50-51 of the Administrative Code, and the revised contingency plan shall be submitted to Ohio EPA in the permit modification process, ~~and shall be maintained and submitted as required by this rule.~~]

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

CERTIFIED ELECTRONICALLY

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Certification

09/14/2021

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Date

Promulgated Under: 119.03  
Statutory Authority: 3734.12  
Rule Amplifies: 3734.12  
Prior Effective Dates: 04/15/1981, 10/31/2015

3745-54-54

**Amendment of contingency plan.**

- (A) The contingency plan shall be reviewed, and immediately amended if necessary, whenever any of the following:
- (1) The facility's Ohio hazardous waste permit is modified.
  - (2) The contingency plan fails in an emergency.
  - (3) The facility changes - in ~~its~~ design, construction, operation, maintenance, or other circumstances - in a way that materially increases the potential for fires, explosions, or releases of hazardous waste or hazardous waste constituents, or changes the response necessary in an emergency.
  - (4) The list of emergency coordinators changes.
  - (5) The list of emergency equipment changes.
  - (6) Required by the director.
- (B) A change in the list of facility emergency coordinators or equipment in the contingency plan constitutes a minor modification to the facility's Ohio hazardous waste permit to which the contingency plan is a condition.

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**3745-54-55 Emergency coordinator.**

At all times, there shall be at least one employee either on the facility premises or on call (i.e., available to respond to an emergency by reaching the facility within a short period of time) with the responsibility for coordinating all internal emergency response measures. This emergency coordinator shall be thoroughly familiar with all aspects of the facility's contingency plan, all operations and activities at the facility, the location and characteristics of waste handled, the location of all records within the facility, and the facility layout. In addition, this person shall have the authority to commit the resources needed to implement the contingency plan.

Effective: 01/07/1983

119.032 review dates: Exempt

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Statutory authority: 3734.12

Rule amplifies: 3734.12

Prior effective dates: 04/15/1981

3745-54-56

**Emergency procedures.**

- (A) Whenever there is an imminent or actual emergency situation, the emergency coordinator, or the emergency coordinator's designee when the emergency coordinator is on call, shall immediately:
- (1) Activate internal facility alarms or communication systems, where applicable, to notify all facility personnel: and
  - (2) Notify the Ohio EPA "Emergency Response Unit" at 800/282-9378, and appropriate local authorities with designated response roles.
- (B) Whenever there is a release, fire, or explosion, the emergency coordinator shall immediately identify the character, exact source, amount, and areal extent of any released materials. The emergency coordinator may do this by observation or review of facility records or manifests, and, if necessary, by chemical analysis.
- (C) In addition to the requirements in paragraphs (A) and (B) of this rule, the emergency coordinator shall assess possible hazards to human health or the environment that may result from the release, fire, or explosion. This assessment shall consider both direct and indirect effects of the release, fire, or explosion (e.g., the effects of any toxic, irritating, or asphyxiating gases that are generated, or the effects of any hazardous surface water run-off from water or chemical agents used to control fire and heat-induced explosions).
- (D) If the emergency coordinator determines that the facility has had a release, fire, or explosion which could threaten human health or the environment outside the facility:
- (1) If the emergency coordinator's assessment indicates that evacuation of local areas may be advisable, the emergency coordinator shall immediately notify appropriate local authorities, and shall be available to help appropriate officials decide whether local areas should be evacuated.
  - (2) The emergency coordinator shall immediately notify the Ohio EPA "Emergency Response Unit" at 800/282-9378. The report shall include all of the following:
    - (a) Name and telephone number of the emergency coordinator who is making the notification.
    - (b) Name and address of facility.
    - (c) Time and type of incident (e.g., release, fire).
    - (d) Name and quantity of materials involved, to the extent known.

- (e) The extent of injuries, if any.
  - (f) The possible hazards to human health or the environment outside the facility.
- (E) During an emergency, the emergency coordinator shall take all reasonable measures necessary to ensure that fires, explosions, and releases do not occur, recur, or spread to other hazardous waste at the facility. These measures shall include, where applicable, stopping processes and operations, collecting and containing release waste, and removing or isolating containers.
- (F) If the facility stops operations in response to a fire, explosion, or release, the emergency coordinator shall monitor for leaks, pressure buildup, gas generation, or ruptures in valves, pipes, or other equipment, wherever this is appropriate.
- (G) Immediately after an emergency, the emergency coordinator shall provide for treating, storing, or disposing of recovered waste, contaminated soil or surface water, or any other material that results from a release, fire, or explosion at the facility.
- [Comment: Unless the owner or operator can demonstrate, in accordance with paragraph (C) or (D) of rule 3745-51-03 of the Administrative Code, that the recovered material is not a hazardous waste, the owner or operator becomes a generator of hazardous waste and shall manage such waste in accordance with all applicable requirements of Chapters 3745-52, 3745-53, 3745-54 to 3745-57, and 3745-205 of the Administrative Code.]
- (H) The emergency coordinator shall ensure that in the affected areas of the facility:
- (1) No waste that may be incompatible with the released material is treated, stored, or disposed of until cleanup procedures are completed.
  - (2) All emergency equipment listed in the contingency plan is cleaned and fit for ~~its~~the equipment's intended use before operations are resumed.

- (I) The owner or operator shall note in the operating record the time, date, and details of any incident that requires the contingency plan to be implemented. Within fifteen days after the incident, the owner or operator shall submit a written report on the incident to the director. The report shall include all of the following:
- (1) Name, address, and telephone number of the owner or operator.
  - (2) Name, address, and telephone number of the facility.
  - (3) Date, time, and type of incident (e.g., fire, explosion).
  - (4) Name and quantity of materials involved.
  - (5) The extent of injuries, if any.
  - (6) An assessment of actual or potential hazards to human health or the environment, where this is applicable.
  - (7) Estimated quantity and disposition of recovered material that resulted from the incident.

Effective: 9/29/2021  
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09/05/2010, 10/31/2015

3745-54-70

**Applicability - manifest system, recordkeeping, and reporting.****(A) Applicability.**

- (1) ~~The requirements in rules~~ Rules 3745-54-70 to 3745-54-77 of the Administrative Code apply to owners and operators of both on-site and off-site facilities, except as rule 3745-54-01 of the Administrative Code provides otherwise.
- (2) Paragraphs (A) and (B) of rule 3745-54-71 and rules 3745-54-72 and 3745-54-76 of the Administrative Code do not apply to owners and operators of on-site facilities that do not receive any hazardous waste from off-site sources, and to owners and operators of off-site facilities with respect to waste military munitions exempted from manifest requirements under paragraph (A) of rule 3745-266-203 of the Administrative Code.
- (3) Paragraph (B)(9) of rule 3745-54-73 of the Administrative Code only applies to permittees who treat, store, or dispose of hazardous wastes on-site where such wastes were generated.

**(B) Reserved.**

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10/07/2015

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02/16/2009

3745-54-71

**Use of manifest system.****(A) Receipt of a shipment of hazardous waste accompanied by a manifest.**

(1) If a facility receives hazardous waste accompanied by a manifest, the owner or operator or the owner's or operator's agent shall sign and date the manifest, as indicated in paragraph (A)(2) of this rule, to certify that the hazardous waste covered by the manifest was received, that the hazardous waste was received except as noted in the discrepancy space of the manifest, or that the hazardous waste was rejected as noted in the discrepancy space of the manifest.

(2) If a facility receives a hazardous waste shipment accompanied by a manifest, the owner or operator or the owner's or operator's agent shall do all of the following:

(a) Sign and date, by hand, each copy of the manifest.

(b) Note any discrepancies [as described in paragraph (A) of rule 3745-54-72 of the Administrative Code] on each copy of the manifest.

[Comment: It is not the intent of Ohio EPA that the owner or operator of a facility whose procedures under paragraph (C) of rule 3745-54-13 of the Administrative Code include waste analysis shall perform that analysis before signing the manifest and giving the manifest to the transporter. Paragraph (C) of rule 3745-54-72 of the Administrative Code, however, requires reporting an unreconciled discrepancy discovered during later analysis.]

(c) Immediately give the transporter at least one copy of the manifest.

(d) Within thirty days after delivery, send a copy (page 1) of the manifest to the generator.

(e) Paper manifest submittal requirements are as follows:

(i) Options for compliance on June 30, 2018. Beginning on June 30, 2018, send the top copy (page 1) of any paper manifest and any paper continuation sheet to the U.S. EPA's e-manifest system for purposes of data entry and processing, or in lieu of submitting the paper copy to U.S. EPA, the owner or operator may transmit to the U.S. EPA system an image file of page 1 of the manifest and any continuation sheet, or both a data file and image file corresponding to page 1 of the manifest and any continuation sheet, within thirty days after the date of delivery. Submittals of copies to the e-manifest system shall be made at the mailing address or electronic mail or submittal



address specified at the e-manifest program website's directory of services. Beginning on June 30, 2021, U.S. EPA shall not accept mailed paper manifests from facilities for processing in e-manifest.

(ii) Options for compliance on June 30, 2021. Beginning on June 30, 2021, the requirement to submit the top copy (page 1) of the paper manifest and any paper continuation sheet to the e-manifest system for purposes of data entry and processing may be met by the owner or operator only by transmitting to the U.S. EPA system an image file of page 1 of the manifest and any continuation sheet, or by transmitting to the U.S. EPA system both a data file and the image file corresponding to page 1 of the manifest and any continuation sheet, within thirty days after the date of delivery. Submittals of copies to the e-manifest system shall be made to the electronic mail or submittal address specified at the e-manifest program website's directory of services.

(f) Retain at the facility a copy of each manifest for at least three years after the date of delivery.

(3) The owner or operator of a facility receiving hazardous waste subject to 40 C.F.R. Part 262 subpart H from a foreign source shall do all of the following:

(a) Additionally list the relevant consent number from consent documentation supplied by U.S. EPA to the facility for each waste listed on the manifest, matched to the relevant list number for the waste from block 9b. If additional space is needed, the owner or operator should use a continuation sheet (U.S. EPA form 8700-22A).

(b) Send a copy of the manifest within thirty days after delivery to U.S. EPA using the addresses listed in 40 C.F.R. 262.82(e) until the facility can submit such a copy to the e-manifest system in accordance with paragraph (A)(2)(e) of this rule.

[Comment: The exercise of foreign relations and international commerce powers is reserved to the federal government under the Constitution. These responsibilities are not delegable to the states. Therefore, the importation and exportation of hazardous waste into and out of the United States is solely regulated by the federal government.]

(B) If a facility receives, from a rail or water (bulk shipment) transporter, hazardous waste which is accompanied by a shipping paper containing all the information required on the manifest, excluding the U.S. EPA identification numbers, generator's

certification, and signatures, the owner or operator, or the owner's or operator's agent, shall do all of the following:

- (1) Sign and date each copy of the manifest or shipping paper (if the manifest has not been received) to certify that the hazardous waste covered by the manifest or shipping paper was received.
- (2) Note any significant discrepancies [as described in paragraph (A) of rule 3745-54-72 of the Administrative Code] in the manifest or shipping paper (if the manifest has not been received) on each copy of the manifest or shipping paper.

[Comment: It is not the intent of Ohio EPA that the owner or operator of a facility whose procedures under paragraph (C) of rule 3745-54-13 of the Administrative Code include waste analysis shall perform that analysis before signing the shipping paper and giving the shipping paper to the transporter. Paragraph (C) of rule 3745-54-72 of the Administrative Code, however, requires reporting an unreconciled discrepancy discovered during later analysis.]

- (3) Immediately give the rail or water (bulk shipment) transporter at least one copy of the manifest or shipping paper if the manifest has not been received.
- (4) Within thirty days after the delivery, send a copy of the signed and dated manifest or a signed and dated copy of the shipping paper (if the manifest has not been received within thirty days after delivery) to the generator; however, if the manifest has not been received within thirty days after delivery, the owner or operator, or the owner's or operator's agent, shall send a copy of the shipping paper signed and dated to the generator.

[Comment: Paragraph (C) of rule 3745-52-23 of the Administrative Code requires the generator to send three copies of the manifest to the facility when hazardous waste is sent by rail or water (bulk shipment).]

- (5) Retain at the facility a copy of the manifest and shipping paper (if signed in lieu of the manifest at the time of delivery) for at least three years after the date of delivery.

- (C) When a shipment of hazardous waste is initiated from a facility, the owner or operator of that facility shall comply with Chapter 3745-52 of the Administrative Code. Rules 3745-52-15, 3745-52-16, and 3745-52-17 of the Administrative Code are applicable to the on-site accumulation of hazardous wastes by generators. Therefore, rules 3745-52-15, 3745-52-16, and 3745-52-17 of the Administrative Code apply only to owners or operators who are shipping hazardous waste which the owners or operators generated at that facility or are operating as a large quantity generator consolidating hazardous waste from very small quantity generators under paragraph (F) of rule 3745-52-17 of the Administrative Code.
- (D) Pursuant to 40 C.F.R. 262.84(d)(2)(xv), within three working days after the receipt of a shipment subject to 40 C.F.R. Part 262 subpart H, the owner or operator of a facility shall provide a copy of the movement document bearing all required signatures to the foreign exporter; to competent authorities of the countries of export and transit that control the shipment as an export and transit of hazardous waste respectively; and on or after the electronic import-export reporting compliance date, to U.S. EPA electronically using U.S. EPA's waste import export tracking system (WIETS) or the successor system. The original signed copy of the movement document shall be maintained at the facility for at least three years after the date of signature. The owner or operator of a facility may satisfy this recordkeeping requirement by retaining electronically submitted documents in the facility's account on U.S. EPA's WIETS, or the successor system, provided that copies are readily available to view and produce if requested by any U.S. EPA or Ohio EPA inspector. No owner or operator of a facility may be held liable for the inability to produce the documents for inspection under this rule if the owner or operator of a facility can demonstrate that the inability to produce the document is due exclusively to technical difficulty with U.S. EPA's WIETS, or the successor system, for which the owner or operator of a facility bears no responsibility.
- (E) An owner or operator of a facility shall determine whether the consignment state for a shipment regulates any additional wastes (beyond those regulated by U.S. EPA) as hazardous wastes under the consignment state's hazardous waste program. Owners or operators of facilities also shall determine whether the consignment state or generator state requires the facility to submit any copies of the manifest to these states.
- (F) Legal equivalence to paper manifests. Electronic manifests that are obtained, completed, and transmitted in accordance with paragraph (A)(3) of rule 3745-52-20 of the Administrative Code, and used in accordance with this rule in lieu of the paper manifest form, are the legal equivalent of paper manifest forms bearing handwritten signatures, and satisfy for all purposes any requirement in the hazardous waste rules to obtain, complete, sign, provide, use, or retain a manifest.

- (1) Any requirement in the hazardous waste rules for the owner or operator of a facility to sign a manifest or manifest certification by hand, or to obtain a handwritten signature, is satisfied by signing with or obtaining a valid and enforceable electronic signature within the meaning of 40 C.F.R. 262.25.
  - (2) Any requirement in the hazardous waste rules to give, provide, send, forward, or to return to another person a copy of the manifest is satisfied when a copy of an electronic manifest is transmitted to the other person.
  - (3) Any requirement in the hazardous waste rules for a manifest to accompany a hazardous waste shipment is satisfied when a copy of an electronic manifest is accessible during transportation and forwarded to the person or persons who are scheduled to receive delivery of the waste shipment.
  - (4) Any requirement in the hazardous waste rules for an owner or operator to keep or retain a copy of each manifest is satisfied by the retention of the facility's electronic manifest copies in the facility's account on the e-manifest system, provided that such copies are readily available to view and produce if requested by any U.S. EPA or Ohio EPA inspector.
  - (5) No owner or operator may be held liable for the inability to produce an electronic manifest for inspection under this rule if the owner or operator can demonstrate that the inability to produce the electronic manifest is due exclusively to a technical difficulty with the electronic manifest system for which the owner or operator bears no responsibility.
- (G) An owner or operator may participate in the electronic manifest system either by accessing the electronic manifest system from the owner's or operator's electronic equipment, or by accessing the electronic manifest system from portable equipment brought to the owner's or operator's site by the transporter who delivers the waste shipment to the facility.
- (H) Special procedures applicable to replacement manifests. If a facility receives hazardous waste that is accompanied by a paper replacement manifest for a manifest that was originated electronically, all of the following procedures apply to the delivery of the hazardous waste by the final transporter:
- (1) Upon delivery of the hazardous waste to the designated facility, the owner or operator shall sign and date each copy of the paper replacement manifest by hand in item 20 (designated facility certification of receipt) and note any discrepancies in item 18 (discrepancy indication space) of the paper replacement manifest.

- (2) The owner or operator of the facility shall give back to the final transporter one copy of the paper replacement manifest.
- (3) Within thirty days after delivery of the waste to the designated facility, the owner or operator of the facility shall send one signed and dated copy of the paper replacement manifest to the generator, and shall send an additional signed and dated copy of the paper replacement manifest to the electronic manifest system.
- (4) The owner or operator of the facility shall retain at the facility one copy of the paper replacement manifest for at least three years after the date of delivery.
- (I) Special procedures applicable to electronic signature methods undergoing tests. If an owner or operator using an electronic manifest signs this manifest electronically using an electronic signature method which is undergoing pilot or demonstration tests aimed at demonstrating the practicality or legal dependability of the signature method, then the owner or operator shall also sign with an ink signature the facility's certification of receipt or discrepancies on the printed copy of the manifest provided by the transporter. Upon executing the ink signature on this printed copy, the owner or operator shall retain this original copy in the facility's records for at least three years after the date of delivery of the waste.
- (J) Imposition of user fee for manifest submittals.

  - (1) As prescribed in 40 C.F.R. 264.1311, and determined in 40 C.F.R. 264.1312, an owner or operator who is a user of the electronic manifest system shall be assessed a user fee by U.S. EPA for the submittal and processing of each electronic and paper manifest. U.S. EPA shall update the schedule of user fees and publish these updates to the user community, as provided in 40 C.F.R. 264.1313.
  - (2) An owner or operator subject to user fees under this rule shall make user fee payments in accordance with 40 C.F.R. 264.1314, subject to the informal fee dispute resolution process of 40 C.F.R. 264.1316, and subject to the sanctions for delinquent payments under 40 C.F.R. 264.1315.
- (K) Electronic manifest signatures. Electronic manifest signatures shall meet the criteria described in 40 C.F.R. 262.25.
- (L) Post-receipt manifest data corrections. After owners or operators of facilities have certified to the receipt of hazardous wastes by signing item 20 of the manifest, any post-receipt data corrections may be submitted at any time by any interested person (e.g., waste handler) shown on the manifest.

- (1) Interested persons shall make all corrections to manifest data by electronic submittal, either by directly entering corrected data to the web based service provided in the e-manifest system for such corrections, or by an upload of a data file containing data corrections relating to one or more previously submitted manifests.
- (2) Each correction submittal shall include all of the following:
  - (a) The manifest tracking number and date of receipt by the facility of the original manifest for which data are being corrected.
  - (b) The item number of the original manifest that is the subject of the submitted correction.
  - (c) For each item number with corrected data, the data previously entered and the corresponding data as corrected by the correction submittal.
- (3) Each correction submittal shall include a statement that the person submitting the corrections certifies that to the best of the submitter's knowledge or belief, the corrections that are included in the submittal shall cause the information reported about the previously received hazardous wastes to be true, accurate, and complete including both of the following:
  - (a) The certification statement shall be executed with a valid electronic signature.
  - (b) A batch upload of data corrections may be submitted under one certification statement.
- (4) Upon receipt by the system of any correction submittal, other interested persons shown on the manifest shall be provided electronic notice of the submitter's corrections.
- (5) Other interested persons shown on the manifest may respond to the submitter's corrections with comments to the submitter, or by submitting another correction to the system, certified by the respondent as specified in paragraph (L)(3) of this rule, and with notice of the corrections to other interested persons shown on the manifest.

[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."]

Replaces: 3745-54-71 rescinded  
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03/17/2012, 02/12/2018

## TO BE RESCINDED

3745-54-71            **Use of manifest system.**

## (A) Receipt of a shipment of hazardous waste accompanied by a manifest.

(1) If a facility receives hazardous waste accompanied by a manifest, the owner or operator or the owner's or operator's agent shall sign and date the manifest, as indicated in paragraphs (A)(2) to (A)(2)(e) of this rule, to certify that the hazardous waste covered by the manifest was received, that the hazardous waste was received except as noted in the discrepancy space of the manifest, or that the hazardous waste was rejected as noted in the discrepancy space of the manifest.

(2) If a facility receives a hazardous waste shipment accompanied by a manifest, the owner or operator or the owner's or operator's agent shall do all of the following:

(a) Sign and date, by hand, each copy of the manifest.

(b) Note any discrepancies [as described in paragraphs (A) and (B) of rule 3745-54-72 of the Administrative Code] on each copy of the manifest.

[Comment: It is not the intent of Ohio EPA that the owner or operator of a facility whose procedures under paragraph (C) of rule 3745-54-13 of the Administrative Code include waste analysis shall perform that analysis before signing the manifest and giving the manifest to the transporter. Paragraph (B) of rule 3745-54-72 of the Administrative Code, however, requires reporting an unreconciled discrepancy discovered during later analysis.]

(c) Immediately give the transporter at least one copy of the manifest.

(d) Within thirty days after delivery, send a copy of the manifest to the generator.

(e) Retain at the facility a copy of each manifest for at least three years after the date of delivery.

(3) If a facility receives hazardous waste imported from a foreign source, the receiving facility shall mail a copy of the manifest and documentation confirming U.S. EPA's consent to the import of hazardous waste to the following address within thirty days after delivery: "Office of Enforcement and Compliance Assurance, Office of Federal Activities, International Compliance Assurance Division (2254A), United States Environmental Protection Agency, 1200 Pennsylvania Avenue, NW., Washington, DC" 20460-



[Comment: The exercise of foreign relations and international commerce powers is reserved to the federal government under the Constitution. These responsibilities are not delegable to the states. Therefore, the importation and exportation of hazardous waste into and out of the United States is solely regulated by the federal government.]

(B) If a facility receives, from a rail or water (bulk shipment) transporter, hazardous waste which is accompanied by a shipping paper containing all the information required on the manifest, excluding the U.S. EPA identification numbers, generator's certification, and signatures, the owner or operator, or the owner's or operator's agent, shall do all of the following:

- (1) Sign and date each copy of the manifest or shipping paper (if the manifest has not been received) to certify that the hazardous waste covered by the manifest or shipping paper was received.
- (2) Note any significant discrepancies [as described in paragraphs (A) and (B) of rule 3745-54-72 of the Administrative Code] in the manifest or shipping paper (if the manifest has not been received) on each copy of the manifest or shipping paper.

[Comment: It is not the intent of Ohio EPA that the owner or operator of a facility whose procedures under paragraph (C) of rule 3745-54-13 of the Administrative Code include waste analysis shall perform that analysis before signing the shipping paper and giving the shipping paper to the transporter. Paragraph (B) of rule 3745-54-72 of the Administrative Code, however, requires reporting an unreconciled discrepancy discovered during later analysis.]

- (3) Immediately give the rail or water (bulk shipment) transporter at least one copy of the manifest or shipping paper if the manifest has not been received.
- (4) Within thirty days after the delivery, send a copy of the signed and dated manifest or a signed and dated copy of the shipping paper (if the manifest has not been received within thirty days after delivery) to the generator; however, if the manifest has not been received within thirty days after delivery, the owner or operator, or his agent, must send a copy of the shipping paper signed and dated to the generator.

[Comment: Paragraph (C) of rule 3745-52-23 of the Administrative Code requires the generator to send three copies of the manifest to the facility when hazardous waste is sent by rail or water (bulk shipment).]

(5) Retain at the facility a copy of the manifest and shipping paper (if signed in lieu of the manifest at the time of delivery) for at least three years after the date of delivery.

(C) Whenever a shipment of hazardous waste is initiated from a facility, the owner or operator of that facility shall comply with Chapter 3745-52 of the Administrative Code.

[Comment: Rule 3745-52-34 of the Administrative Code is applicable to the on-site accumulation of hazardous wastes by generators. Therefore, rule 3745-52-34 of the Administrative Code applies only to owners or operators who are shipping hazardous waste which is generated at that facility.]

(D) Within three working days after the receipt of a shipment subject to 40 CFR Part 262 subpart H, the owner or operator of a facility shall provide a copy of the movement document bearing all required signatures to the exporter, to the "Office of Enforcement and Compliance Assurance, Office of Federal Activities, International Compliance Assurance Division (2254A), United States Environmental Protection Agency, 1200 Pennsylvania Ave., NW., Washington, DC" 20460, and to competent authorities of all other concerned countries. The original signed copy of the movement document shall be maintained at the facility for at least three years after the date of signature.

(E) A facility shall determine whether the consignment state for a shipment regulates any additional wastes (beyond those regulated by U.S. EPA) as hazardous wastes under the consignment state's hazardous waste program. Facilities shall also determine whether the consignment state or generator state requires the facility to submit any copies of the manifest to these states.

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

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03/17/2012, 02/12/2018

3745-54-72

**Manifest discrepancies.**

(A) Manifest discrepancies are:

- (1) Significant differences [as described in paragraph (B) of this rule] between the quantity or type of hazardous waste designated on the manifest or shipping paper, and the quantity and type of hazardous waste a facility actually receives;
- (2) Rejected wastes, which may be a full or partial shipment of hazardous waste that the treatment, storage, or disposal facility cannot accept; or
- (3) Container residues, which are residues that exceed the quantity limits for "empty" containers ~~set forth~~provided in paragraph (B) of rule 3745-51-07 of the Administrative Code.

(B) Significant differences in quantity are: ~~For, for~~ bulk waste, variations greater than ten per cent in weight; for batch waste, any variation in piece count, such as a discrepancy of one drum in a truckload. Significant differences in type are obvious differences which can be discovered by inspection or waste analysis, such as waste solvent substituted for waste acid, or toxic constituents not reported on the manifest or shipping paper.

(C) Upon discovering a significant difference in quantity or type, the owner or operator ~~must~~shall attempt to reconcile the discrepancy with the waste generator or transporter (e.g., with telephone conversations). If the discrepancy is not resolved within fifteen days after receiving the waste, the owner or operator ~~must~~shall immediately submit to the director a letter describing the discrepancy and ~~the~~the attempts to reconcile ~~it~~the discrepancy, and a copy of the manifest or shipping paper at issue.

(D)

(1) Upon rejecting waste or identifying a container residue that exceeds the quantity limits for "empty" containers ~~set forth~~provided in paragraph (B) of rule 3745-51-07 of the Administrative Code, the owner or operator ~~must~~shall consult with the generator prior to forwarding the waste to another facility that can manage the waste. If ~~it is impossible to locate~~is impossible to locate, the owner or operator may return the rejected waste or residue to the generator. The owner or operator ~~must~~shall send the waste to the alternative facility or to the generator within sixty days after the rejection or the container residue identification.

(2) While the owner or operator is making arrangements for forwarding rejected wastes or residues to another facility under this rule, ~~he must~~the owner or operator shall ensure that ~~either~~ the delivering transporter retains custody of

the waste, or; the owner or operator ~~must~~shall provide for secure, temporary custody of the waste, pending delivery of the waste to the first transporter designated on the manifest prepared under paragraph (E) or (F) of this rule.

(E) Except as provided in paragraph (E)(7) of this rule, for full or partial load rejections and residues that are to be sent off-site to an alternate facility, the ~~facility owner or operator~~ operator is required to prepare a new manifest in accordance with paragraph (A) of rule 3745-52-20 of the Administrative Code and the following instructions:

- (1) Write the generator's U.S. EPA identification number in item 1 of the new manifest. Write the generator's name and mailing address in item 5 of the new manifest. If the mailing address is different from the generator's site address, ~~then~~ write the generator's site address in the designated space for item 5.
- (2) Write the name of the alternate designated facility and the facility's U.S. EPA identification number in the "Designated Facility" block (item 8) of the new manifest.
- (3) Copy the manifest tracking number ~~found~~ in item 4 of the old manifest to the "Special Handling and Additional Information" block of the new manifest, and indicate that the shipment is a residue or rejected waste from the previous shipment.
- (4) Copy the manifest tracking number ~~found~~ in item 4 of the new manifest to the manifest reference number line in the "Discrepancy" block of the old manifest (item 18a).
- (5) Write the U.S. department of transportation (U.S. DOT) description for the rejected load or the residue in item 9 ("U.S. DOT Description") of the new manifest and write the container types, quantity, and ~~volume(s)~~ volumes of waste.
- (6) Sign the "Generator's/Offeror's Certification" to certify, as the offeror of the shipment, that the waste ~~has been~~ is properly packaged, marked, and labeled, and is in proper condition for transportation, and mail a signed copy of the manifest to the generator identified in item 5 of the new manifest.

- (7) For full load rejections that are made while the transporter remains present at the facility, the facility owner or operator may forward the rejected shipment to the alternate facility by completing item 18b of the original manifest and supplying the information on the next destination facility in the "Alternate Facility" block. The ~~facility must~~ owner or operator shall retain a copy of this manifest for ~~its~~ the facility's records, and ~~then~~ give the remaining copies of the manifest to the transporter to accompany the shipment. If the original manifest is not used, ~~then~~ the ~~facility must~~ owner or operator shall use a new manifest and comply with paragraphs (E)(1) to (E)(6) of this rule.
- (F) Except as provided in paragraph (F)(7) of this rule, for rejected wastes and residues that ~~must~~ shall be sent back to the generator, the facility owner or operator is required to prepare a new manifest in accordance with paragraph (A) of rule 3745-52-20 of the Administrative Code and the following instructions:
- (1) Write the facility's U.S. EPA identification number in item 1 of the new manifest. Write the facility's name and mailing address in item 5 of the new manifest. If the mailing address is different from the facility's site address, ~~then~~ write the facility's site address in the designated space for item 5 of the new manifest.
  - (2) Write the name of the initial generator and the generator's U.S. EPA identification number in the "Designated Facility" block (item 8) of the new manifest.
  - (3) Copy the manifest tracking number ~~found~~ in item 4 of the old manifest to the "Special Handling and Additional Information" block of the new manifest, and indicate that the shipment is a residue or rejected waste from the previous shipment.
  - (4) Copy the manifest tracking number ~~found~~ in item 4 of the new manifest to the manifest reference number line in the "Discrepancy" block of the old manifest (item 18a).
  - (5) Write the DOT description for the rejected load or the residue in item 9 ("U.S. DOT Description") of the new manifest and write the container types, quantity, and ~~volume(s)~~ volumes of waste.
  - (6) Sign the "Generator's/Offerrer's Certification" to certify, as offeror of the shipment, that the waste ~~has been~~ is properly packaged, marked, and labeled and is in proper condition for transportation.
  - (7) For full load rejections that are made while the transporter remains at the facility, the facility owner or operator may return the shipment to the generator with the original manifest by completing item 18a and item 18b of the manifest

and supplying the generator's information in the "Alternate Facility" block. The ~~facility must~~ owner or operator shall retain a copy for ~~its~~ the facility's records, and ~~then~~ give the remaining copies of the manifest to the transporter to accompany the shipment. If the original manifest is not used, ~~then~~ the ~~facility must~~ owner or operator shall use a new manifest and comply with paragraphs (F)(1) to (F)(6) and (F)(8) of this rule.

(8) For full or partial load rejections and container residues contained in non-empty containers that are returned to the generator, the ~~facility must~~ owner or operator also shall comply with the exception reporting requirements in paragraph (A) of rule 3745-52-42 of the Administrative Code.

(G) If ~~a facility~~ an owner or operator rejects a waste or identifies a container residue that exceeds the quantity limits for "empty" containers ~~set forth~~ provided in paragraph (B) of rule 3745-51-07 of the Administrative Code after ~~it~~ the owner or operator has signed, dated, and returned a copy of the manifest to the delivering transporter or to the generator, the ~~facility must~~ owner or operator shall amend ~~its~~ the facility's copy of the manifest to indicate the rejected wastes or residues in the "Discrepancy" block of the amended manifest. The ~~facility must~~ owner or operator also shall copy the manifest tracking number from item 4 of the new manifest to the "Discrepancy" block of the amended manifest, and ~~must~~ re-sign and date the manifest to certify to the information as amended. The ~~facility must~~ owner or operator shall retain the amended manifest for at least three years ~~from~~ after the date of amendment, and ~~must~~ within thirty days, shall send a copy of the amended manifest to the transporter and to the generator that received copies prior to ~~their being amended~~ the manifest's ~~amedndment~~.

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

Effective: 9/29/2021

Five Year Review (FYR) Dates: Exempt

CERTIFIED ELECTRONICALLY

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Certification

09/14/2021

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Date

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Statutory Authority: 3734.12  
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Prior Effective Dates: 04/15/1981, 02/16/2009, 09/05/2010, 03/17/2012



3745-54-73

**Operating record.**

- (A) The owner or operator shall keep a written operating record at the facility.
- (B) The following information shall be recorded, as ~~it~~the information becomes available, and maintained in the operating record for three years unless noted as follows:
- (1) A description and the quantity of each hazardous waste received, and the methods and dates of ~~its~~the hazardous waste's treatment, storage, or disposal at the facility as required by the appendix to this rule. This information shall be maintained in the operating record until closure of the facility.
  - (2) The location of each hazardous waste within the facility and the quantity at each location. For disposal facilities, the location and quantity of each hazardous waste shall be recorded on a map or diagram that shows each cell or disposal area. For all facilities, this information shall include cross-references to manifest document numbers if the waste was accompanied by a manifest. This information shall be maintained in the operating record until closure of the facility.  
  
[Comment: See rule 3745-55-19 of the Administrative Code for related requirements.]
  - (3) Records and results of waste analyses performed as specified in paragraph (A) of rule 3745-270-04 and in rules 3745-54-13, 3745-54-17, 3745-57-14, 3745-57-41, and 3745-270-07 of the Administrative Code.
  - (4) Summary reports and details of all incidents that require implementation of the contingency plan as specified in paragraph (I) of rule 3745-54-56 of the Administrative Code.
  - (5) Records and results of inspections as required by paragraph (D) of rule 3745-54-15 of the Administrative Code, except these data need be kept only three years.
  - (6) Monitoring, testing or analytical data, and corrective action where required by rules 3745-54-19, 3745-54-90 to 3745-54-101, 3745-55-91, 3745-55-93, 3745-55-95, 3745-56-22, 3745-56-23, 3745-56-26, 3745-56-52 to 3745-56-54, 3745-56-76, 3745-56-78, 3745-56-80, 3745-57-04 to 3745-57-06, 3745-57-09, and 3745-57-92 of the Administrative Code. Maintain in the operating record for three years, except for records and results pertaining to ground water monitoring and cleanup which shall be maintained in the operating record until closure of the facility.

- (7) For off-site facilities, notices to generators as specified in paragraph (B) of rule 3745-54-12 of the Administrative Code.
- (8) All closure cost estimates under rule 3745-55-42 of the Administrative Code, and, for hazardous waste disposal facilities, all post-closure estimates under rule 3745-55-44 of the Administrative Code. This information shall be maintained in the operating record until closure of the facility.
- (9) A certification by the permittee, no less often than annually, that the permittee has a program in place to reduce the volume and toxicity of hazardous waste that the permittee generates to the degree determined by the permittee to be economically practicable; and the proposed method of treatment, storage, or disposal is that practicable method currently available to the permittee which minimizes the present and future threat to human health and the environment.
- (10) Records of the quantities and date of placement for each shipment of hazardous waste placed in land disposal units under an extension to the effective date of any land disposal restriction granted pursuant to rule 3745-270-05 of the Administrative Code, a petition pursuant to rule 3745-270-06 of the Administrative Code, and the applicable notice required by a generator under paragraph (A) of rule 3745-270-07 of the Administrative Code. ~~This~~ All of this information shall be maintained in the operating record until closure of the facility.
- (11) For an off-site treatment facility, a copy of the notice required by the generator or the owner or operator under rule 3745-270-07 of the Administrative Code.
- (12) For an on-site treatment facility, the information ~~contained~~ in the notice (except the manifest number) required by the generator or the owner or operator under rule 3745-270-07 of the Administrative Code.
- (13) For an off-site land disposal facility a copy of the notice required by the generator or the owner or operator of a treatment facility under rule 3745-270-07 of the Administrative Code.
- (14) For an on-site land disposal facility, the information ~~contained~~ in the notice required by the generator or the owner or operator of a treatment facility under rule 3745-270-07 of the Administrative Code, except for the manifest number.
- (15) For an off-site storage facility, a copy of the notice required by the generator or the owner or operator under rule 3745-270-07 of the Administrative Code.

- (16) For an on-site storage facility, the information ~~contained~~ in the notice (except the manifest number) required by the generator or the owner or operator under rule 3745-270-07 of the Administrative Code.
- (17) Any records required under paragraph (J)(13) of rule 3745-54-01 of the Administrative Code.
- (18) Monitoring, testing, or any analytical data where required by rule 3745-57-47 of the Administrative Code shall be maintained in the operating record for five years.
- (19) Certifications as required by paragraph (F) of rule 3745-55-96 of the Administrative Code shall be maintained in the operating record until closure of the facility.

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

CERTIFIED ELECTRONICALLY

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Certification

09/14/2021

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02/11/1992, 09/02/1997, 12/07/2000, 03/13/2002,  
12/07/2004, 09/05/2010, 10/31/2015

3745-54-73

## APPENDIX

1

## Appendix to rule 3745-54-73 of the Administrative Code

## Recordkeeping Instructions

The recordkeeping provisions of rule 3745-54-73 of the Administrative Code specify that an owner or operator shall keep a written operating record at the facility. This appendix provides additional instructions for keeping portions of the operating record. See paragraph (B) of rule 3745-54-73 of the Administrative Code for additional recordkeeping requirements.

The following information shall be recorded, as the information becomes available, and maintained in the operating record until closure of the facility in the following manner:

Records of each hazardous waste received, treated, stored, or disposed of at the facility which include all of the following:

- (1) A description by ~~its~~ the hazardous waste's common name and the EPA hazardous waste numbers from Chapter 3745-51 of the Administrative Code which apply to the waste. The waste description also shall include the waste's physical form, i.e., liquid, sludge, solid, or contained gas. If the waste is not listed as a hazardous waste in rules 3745-51-30 to 3745-51-35 of the Administrative Code, the description also shall include the process that produced the waste (for example, solid filter cake from production of ----, EPA hazardous waste number W051).

Each hazardous waste listed in rules 3745-51-30 to 3745-51-35 of the Administrative Code and each hazardous waste characteristic identified in rules 3745-51-20 to 3745-51-24 of the Administrative Code has a four-digit EPA hazardous waste number assigned to the hazardous waste. This number shall be used for recordkeeping and reporting purposes. Where a hazardous waste contains more than one listed hazardous waste, or where more than one hazardous waste characteristic applies to the waste, the waste description shall include all applicable EPA hazardous waste numbers.

Unit of measure	Code <sup>1</sup>
Gallons	G
Gallons per hour	E
Gallons per day	U
Liters	L
Liters per hour	H
Liters per day	V
Short tons per hour	D
Metric tons per hour	W

Table 1	
Unit of measure	Code <sup>1</sup>
Short tons per day	N
Metric tons per day	S
Pounds per hour	J
Kilograms per hour	R
Cubic yards	Y
Cubic meters	C
Acres	B
Acre-feet	A
Hectares	Q
Hectare-meter	F
British thermal units (Btu's) per hour	I
Pounds	P
Short tons	T
Kilograms	K
Tons	M
1 Single digit symbols are used here for data processing purposes.	

- (2) The estimated or manifest-reported weight, or volume and density, where applicable, in one of the units of measure specified in Table 1 of this appendix.
- (3) The methods [by handling codes as specified in Table 2 of this appendix] and dates of treatment, storage, or disposal.

Table 2- Handling Codes for Treatment, Storage, and Disposal Methods	
Enter the handling codes listed below that most closely represents the techniques used at the facility to treat, store, or dispose of each quantity of hazardous waste received.	
1.	Storage
	S01 Container (barrel, drum, etc.)
	S02 Tank
	S03 Waste pile
	S04 Surface impoundment
	S05 Other (specify)
	S06 Containment building (storage)

Table 2- Handling Codes for Treatment, Storage, and Disposal Methods	
	S99 Other storage (specify)
2.	Treatment
	(a) Thermal Treatment
	T06 Liquid injection incinerator
	T07 Rotary kiln incinerator
	T08 Fluidized bed incinerator
	T09 Multiple hearth incinerator
	T10 Infrared furnace incinerator
	T11 Molten salt destructor
	T12 Pyrolysis
	T13 Wet Air oxidation
	T14 Calcination
	T15 Microwave discharge
	T18 Other (specify)
	(b) Chemical Treatment
	T19 Absorption mound
	T20 Absorption field
	T21 Chemical fixation
	T22 Chemical oxidation
	T23 Chemical precipitation
	T24 Chemical reduction
	T25 Chlorination
	T26 Chlorinolysis
	T27 Cyanide destruction
	T28 Degradation
	T29 Detoxification
	T30 Ion exchange
	T31 Neutralization
	T32 Ozonation
	T33 Photolysis
	T34 Other (specify)

Table 2- Handling Codes for Treatment, Storage, and Disposal Methods	
(c)	Physical Treatment
(1)	Separation of components
	T35 Centrifugation
	T36 Clarification
	T37 Coagulation
	T38 Decanting
	T39 Encapsulation
	T40 Filtration
	T41 Flocculation
	T42 Flotation
	T43 Foaming
	T44 Sedimentation
	T45 Thickening
	T46 Ultrafiltration
	T47 Other (specify)
(1)	Removal of Specific Components
	T48 Absorption-molecular sieve
	T49 Activated carbon
	T50 Blending
	T51 Catalysis
	T52 Crystallization
	T53 Dialysis
	T54 Distillation
	T55 Electrodialysis
	T56 Electrolysis
	T57 Evaporation
	T58 High gradient magnetic separation
	T59 Leaching
	T55 Electrodialysis
	T56 Electrolysis
	T57 Evaporation



Table 2- Handling Codes for Treatment, Storage, and Disposal Methods		
	T58	High gradient magnetic separation
	T59	Leaching
	T60	Liquid ion exchange
	T61	Liquid-liquid extraction
	T62	Reverse osmosis
	T63	Solvent recovery
	T64	Stripping
	T65	Sand filter
	T66	Other (specify)
(d)	Biological Treatment	
	T67	Activated sludge
	T68	Aerobic lagoon
	T69	Aerobic tank
	T70	Anaerobic lagoon
	T71	Composting
	T72	Septic tank
	T73	Spray irrigation
	T74	Thickening filter
	T75	Trickling filter
	T76	Waste stabilization pond
	T77	Other (specify)
	T78	[Reserved]
	T79	[Reserved]
(e)	Boilers and Industrial Furnaces	
	T80	Boiler
	T81	Cement kiln
	T82	Lime kiln
	T83	Aggregate kiln
	T84	Phosphate kiln
	T85	Coke oven
	T86	Blast furnace

Table 2- Handling Codes for Treatment, Storage, and Disposal Methods		
	T87	Smelting, melting, or refining furnace
	T88	Titanium dioxide chloride process oxidation reactor
	T89	Methane reforming furnace
	T90	Pulping liquor recovery furnace
	T91	Combustion device used in the recovery of sulfur values from spent sulfuric acid
	T92	Halogen acid furnaces
	T93	Other industrial furnaces listed in rule 3745-50-10 of the Administrative Code (specify)
	(f)	Other Treatment
	T94	Containment building (treatment)
3.	Disposal	
	D79	Underground injection
	D80	Landfill
	D81	Land treatment
	D82	Ocean disposal
	D83	Surface impoundment (to be closed as a landfill)
	D99	Other disposal (specify)
4.	Miscellaneous (Subpart X)	
	X01	Open burning or Open detonation
	X02	Mechanical processing
	X03	Thermal unit
	X04	Geologic repository
	X99	Other Subpart X (specify)

**3745-54-74 Availability, retention, and disposition of records.**

- (A) All records, including plans, required under Chapters 3745-54 to 3745-57 and 3745-205 of the Administrative Code must be furnished upon request to, and made available at all reasonable times for inspection by, any employee or representative of Ohio EPA who is duly designated by the director.
- (B) The retention period for all records required under Chapters 3745-54 to 3745-57 and 3745-205 of the Administrative Code is extended automatically during the course of any unresolved enforcement action regarding the facility or as requested by the director.
- (C) A copy of records of waste disposal locations and quantities under paragraph (B)(2) of rule 3745-54-73 of the Administrative Code must be submitted to the director and local land authority upon closure of the facility.

Effective: 12/07/2004

119.032 review dates: Exempt

Promulgated under: 119.03

Statutory authority: 3734.12

Rule amplifies: 3734.12

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

3745-54-75

**Biennial report.**

The owner or operator shall complete and submit to the director the biennial report, on the forms supplied by the director, by March first of the following even numbered year, and shall cover activities during the previous year.

Replaces: 3745-54-75 rescinded  
Effective: 10/5/2020  
Five Year Review (FYR) Dates: Exempt

CERTIFIED ELECTRONICALLY

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Certification

09/21/2020

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Date

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(Emer.), 08/29/1985, 12/08/1988, 12/30/1989,  
03/13/2002, 05/13/2007, 02/05/2013

## TO BE RESCINDED

3745-54-75            **Biennial report.**

The owner or operator must prepare and submit a single copy of a biennial report to the director by March first of each even numbered year. The biennial report must be submitted on the form and instructions supplied by the director. The report must cover facility activities during the previous calendar year and must include the following information:

- (A) The U.S. EPA identification number, name, and address of the facility;
- (B) The calendar year covered by the report;
- (C) For off-site facilities, U.S. EPA identification number of each hazardous waste generator from which the facility received a hazardous waste during the year; for imported shipments, the report must give the name and address of the foreign generator;
- (D) A description and the quantity of each hazardous waste the facility received during the year. For off-site facilities, this information must be listed by U.S. EPA identification number of each generator;
- (E) The method of treatment, storage, or disposal for each hazardous waste;
- (F) Reserved;
- (G) The most recent closure cost estimate under rule 3745-55-42 of the Administrative Code, and, for hazardous waste disposal facilities, the most recent post-closure cost estimate under rule 3745-55-44 of the Administrative Code;
- (H) For generators who treat, store, or dispose of hazardous waste on-site, a description of the efforts undertaken during the year to reduce the volume and toxicity of waste generated;
- (I) For generators who treat, store, or dispose of hazardous waste on-site, a description of the changes in volume and toxicity of waste actually achieved during the year in comparison to previous years to the extent such information is available for the years prior to 1984; and
- (J) The certification signed by the owner or operator of the facility or his authorized representative.

Effective: 10/5/2020

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

CERTIFIED ELECTRONICALLY

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Certification

09/21/2020

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Date

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Statutory Authority: 3734.12  
Rule Amplifies: 3734.12 (D)  
Prior Effective Dates: 04/15/1981, 01/07/1983, 08/30/1984, 05/29/1985  
(Emer.), 08/29/1985, 12/08/1988, 12/30/1989,  
03/13/2002, 05/13/2007, 02/05/2013

3745-54-76

**Unmanifested waste report.**

(A) If a facility accepts for treatment, storage, or disposal any hazardous waste from an off-site source without an accompanying manifest, or without an accompanying shipping paper as described in paragraph (E) of rule 3745-53-20 of the Administrative Code, and if the waste is not excluded from the manifest requirement by the hazardous waste rules, then the owner or operator shall prepare and submit an unmanifested waste report in the form of a letter to the director within fifteen days after receiving the waste. The report shall include all of the following information:

- (1) The U.S. EPA identification number, name, and address of the facility.
- (2) The date the facility received the waste.
- (3) The U.S. EPA identification number, name, and address of the generator and the transporter, if available.
- (4) A description and the quantity of each unmanifested hazardous waste the facility received.
- (5) The method of treatment, storage, or disposal for each hazardous waste.
- (6) A certification signed by the owner or operator of the facility or his authorized representative.

[Comment: This certification language is located in paragraph (D) of rule 3745-50-42 of the Administrative Code.]

- (7) A brief explanation of why the waste was unmanifested, if known.

(B) [Reserved.]



Effective: 2/12/2018

Five Year Review (FYR) Dates: Exempt

CERTIFIED ELECTRONICALLY

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Certification

01/10/2018

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Date

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08/29/1985, 12/30/1989, 03/13/2002, 12/07/2004,  
02/16/2009, 10/31/2015

3745-54-77

**Additional reports.**

In addition to submitting the biennial report and unmanifested waste report described in rules 3745-54-75 and 3745-54-76 of the Administrative Code, the owner or operator also shall report to the director ~~all of the following~~:

- (A) Releases, fires, and explosions as specified in paragraph (I) of rule 3745-54-56 of the Administrative Code~~;~~;
- (B) Facility closure as specified in rule 3745-55-15 of the Administrative Code~~;~~ and
- (C) As otherwise required by rules 3745-54-90 to 3745-54-101, 3745-56-20 to 3745-56-31, 3745-56-50 to 3745-56-59, 3745-56-70 to 3745-56-83, and 3745-57-02 to 3745-57-17 of the Administrative Code.

Effective: 10/23/2022  
Five Year Review (FYR) Dates: 7/20/2022 and 07/20/2027

CERTIFIED ELECTRONICALLY

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Certification

10/11/2022

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Date

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08/29/1985, 12/07/2000, 03/13/2002, 05/13/2007,  
09/05/2010, 02/05/2013, 02/12/2018

**3745-54-90 Applicability- ground water protection.**

## (A)

- (1) Except as provided in paragraph (B) of this rule, rules 3745-54-90 to 3745-54-101 of the Administrative Code apply to owners or operators of facilities that treat, store, or dispose of hazardous waste. The owner or operator must satisfy the requirements identified in paragraph (A)(2) of this rule for all wastes (or constituents thereof) contained in waste management units at the facility, regardless of the time at which waste was placed in such units.
- (2) All waste management units must comply with the requirements in rule 3745-54-101 of the Administrative Code. A surface impoundment, waste pile, and land treatment unit or landfill that receives hazardous waste after July 26, 1982 (hereinafter referred to as a "regulated unit") must comply with the requirements of rules 3745-54-91 to 3745-54-100 of the Administrative Code in lieu of rule 3745-54-101 of the Administrative Code for purposes of detecting, characterizing, and responding to releases to the uppermost aquifer. The financial responsibility requirements of rule 3745-54-101 of the Administrative Code apply to regulated units.

## (B) The owner or operator's regulated unit or units are not subject to regulation for releases into the uppermost aquifer under rules 3745-54-90 to 3745-54-101 of the Administrative Code if:

- (1) The owner or operator is exempted under rule 3745-54-01 of the Administrative Code; or
- (2) He operates a unit which the director finds:
  - (a) Is an engineered structure,
  - (b) Does not receive or contain liquid waste or waste containing free liquids,
  - (c) Is designed and operated to exclude liquid, precipitation, and other run-on and run-off,
  - (d) Has both inner and outer layers of containment enclosing the waste,
  - (e) Has a leak detection system built into each containment layer,
  - (f) The owner or operator will provide continuing operation and maintenance of these leak detection systems during the active life of the unit and the closure and post-closure care periods, and

- (g) To a reasonable degree of certainty, will not allow hazardous constituents to migrate beyond the outer containment layer prior to the end of the post-closure care period.
  - (3) The director finds, pursuant to paragraph (D) of rule 3745-56-80 of the Administrative Code, that the treatment zone of a land treatment unit that qualifies as a regulated unit does not contain levels of hazardous constituents that are above background levels of those constituents by an amount that is statistically significant, and if an unsaturated zone monitoring program meeting the requirements of rule 3745-56-78 of the Administrative Code has not shown a statistically significant increase in hazardous constituents below the treatment zone during the operating life of the unit. An exemption under paragraphs (B) to (B)(5) of this rule can only relieve an owner or operator of responsibility to meet the requirements of rules 3745-54-90 to 3745-54-101 of the Administrative Code during the post-closure care period; or
  - (4) The director finds that there is no potential for migration of liquid from a regulated unit to the uppermost aquifer during the active life of the regulated unit (including the closure period) and the post-closure care period specified under rule 3745-55-17 of the Administrative Code. This demonstration must be certified by a qualified geologist or geotechnical engineer. In order to provide an adequate margin of safety in the prediction of potential migration of liquid, the owner or operator must base any predictions made under paragraphs (B) to (B)(5) of this rule on assumptions that maximize the rate of liquid migration.
  - (5) He designs and operates a pile in compliance with paragraph (C) of rule 3745-56-50 of the Administrative Code.
- (C) Rules 3745-54-90 to 3745-54-101 of the Administrative Code apply during the active life of the regulated unit (including the closure period). After closure of the regulated unit, rules 3745-54-90 to 3745-54-101 of the Administrative Code:
- (1) Do not apply if all waste, waste residues, contaminated containment system components, and contaminated subsoils are removed or decontaminated at closure;
  - (2) Apply during the post-closure care period under rule 3745-55-17 of the Administrative Code if the owner or operator is conducting a detection monitoring program under rule 3745-54-98 of the Administrative Code; or
  - (3) Apply during the compliance period under rule 3745-54-96 of the Administrative Code if the owner or operator is conducting a compliance monitoring program under rule 3745-54-99 of the Administrative Code or a corrective action program under rule 3745-54-100 of the Administrative Code.
- (D) Rules 3745-54-90 to 3745-54-101 of the Administrative Code may apply to miscellaneous units when necessary to comply with rules 3745-57-91 to 3745-57-93 of the Administrative Code.

- (E) Rules 3745-54-90 to 3745-54-101 of the Administrative Code apply to all owners and operators subject to the requirements of paragraph (G) of rule 3745-50-45 of the Administrative Code, when Ohio EPA issues either a post-closure permit or an enforceable document [as defined in paragraph (G) of rule 3745-50-45 of the Administrative Code] at the facility. When Ohio EPA issues an enforceable document, references to "in the permit" mean "in the enforceable document" in rules 3745-54-90 to 3745-54-101 of the Administrative Code.
- (F) The director may replace all or part of the requirements of rules 3745-54-91 to 3745-54-100 of the Administrative Code that apply to a regulated unit with alternative requirements for ground water monitoring and corrective action for releases to ground water set out in the permit [or in an enforceable document, as defined in paragraph (G) of rule 3745-50-45 of the Administrative Code] where the director determines that:
- (1) The regulated unit is situated among waste management units (or areas of concern), a release has occurred, and both the regulated unit and one or more waste management unit(s) (or areas of concern) are likely to have contributed to the release; and
  - (2) It is not necessary to apply the ground water monitoring and corrective action requirements of rules 3745-54-91 to 3745-54-100 of the Administrative Code because alternative requirements will protect human health and the environment.

Effective: 12/07/2004

119.032 review dates: Exempt

Promulgated under: 119.03

Statutory authority: 3734.12

Rule amplifies: 3734.12

Prior effective dates: 08/30/1984, 05/29/1985 (Emer.), 08/29/1985, 12/30/1989, 02/11/1992, 10/20/1998, 03/13/2002

**3745-54-91 Required programs.**

- (A) Owners or operators subject to rules 3745-54-90 to 3745-54-101 of the Administrative Code must conduct a monitoring and response program as follows:
- (1) Whenever hazardous constituents under rule 3745-54-93 of the Administrative Code from a regulated unit are detected at the compliance point under rule 3745-54-95 of the Administrative Code, the owner or operator must institute a compliance monitoring program under rule 3745-54-99 of the Administrative Code. "Detected" is defined as statistically significant evidence of contamination as described in paragraph (F) of rule 3745-54-98 of the Administrative Code.
  - (2) Whenever the ground water protection standard under rule 3745-54-92 of the Administrative Code is exceeded, the owner or operator must institute a corrective action program under rule 3745-54-100 of the Administrative Code. "Exceeded" is defined as statistically significant evidence of increased contamination as described in paragraph (D) of rule 3745-54-99 of the Administrative Code.
  - (3) Whenever hazardous constituents under rule 3745-54-93 of the Administrative Code from a regulated unit exceed concentration limits under rule 3745-54-94 of the Administrative Code in ground water between the compliance point under rule 3745-54-95 of the Administrative Code and the downgradient facility property boundary, the owner or operator must institute a corrective action program under rule 3745-54-100 of the Administrative Code; or
  - (4) In all other cases, the owner or operator must institute a detection monitoring program under rule 3745-54-98 of the Administrative Code.
- (B) The permit must specify the specific elements of the monitoring and response program. The permit may include one or more of the programs identified in paragraph (A) of this rule as may be necessary to protect human health and the environment and will specify the circumstances under which each of the programs will be required. In deciding whether to require the owner or operator to be prepared to institute a particular program, the director will consider the potential adverse effects on human health and the environment that might occur before final administrative action on a permit modification application to incorporate such a program could be taken.

Effective: 12/07/2004

119.032 review dates: Exempt

Promulgated under: 119.03

Statutory authority: 3734.12

Rule amplifies: 3734.12

Prior effective dates: 08/30/1984, 06/29/1990, 10/20/1998, 03/13/2002



### **3745-54-92 Ground water protection standard.**

The owner or operator must comply with conditions specified in the facility permit that are designed to ensure that hazardous constituents under rule 3745-54-93 of the Administrative Code detected in the ground water from a regulated unit do not exceed the concentration limits under rule 3745-54-94 of the Administrative Code in the uppermost aquifer underlying the waste management area beyond the point of compliance under rule 3745-54-95 of the Administrative Code during the compliance period under rule 3745-54-96 of the Administrative Code. The ground water protection standard will be established in the facility permit when hazardous constituents have been detected in the ground water.

Effective: 06/29/1990

119.032 review dates: Exempt

Promulgated under: 119.03

Statutory authority: 3734.12

Rule amplifies: 3734.12

Prior effective dates: 08/30/1984

3745-54-93

**Hazardous constituents.**

- (A) The ~~permit~~director will specify in the facility permit the hazardous constituents to which the ground water protection standard of rule 3745-54-92 of the Administrative Code applies. Hazardous constituents are constituents identified in the appendix to rule 3745-51-11 of the Administrative Code that have been detected in ground water in the uppermost aquifer underlying a regulated unit and that are reasonably expected to be in or derived from waste contained in a regulated unit, unless the director has excluded such hazardous constituents ~~have been excluded~~ under paragraph (B) of this rule.
- (B) ~~A constituent listed in the appendix to rule 3745-51-11 will be excluded from the list of hazardous constituents specified in the facility permit if it is found~~The director will exclude from the list of hazardous constituents in the facility permit any constituent shown in the appendix to rule 3745-51-11 of the Administrative Code if the director finds that the constituent is not capable of posing a substantial present or potential hazard to human health or the environment. In deciding whether to grant an exemption, the director shall consider the following:
- (1) Potential adverse effects on ground water quality, considering ~~the following~~:
    - (a) The physical and chemical characteristics of the waste in the regulated unit, including the potential for migration: of the waste;
    - (b) The hydrogeological characteristics of the facility and surrounding land: ;
    - (c) The quantity of ground water and the direction of ground water flow: ;
    - (d) The proximity and withdrawal rates of ground water users: ;
    - (e) The current and future uses of ground water in the area: ;
    - (f) The existing quality of ground water, including other sources of contamination and the cumulative impact of other sources of contamination on the ground water quality: ;
    - (g) The potential for health risks caused by human exposure to waste constituents: ;
    - (h) The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents: ;
    - (i) The persistence and permanence of the potential adverse effects: ; and

- (2) Potential adverse effects on hydraulically connected surface water quality, considering ~~the following~~:
- (a) The volume and physical and chemical characteristics of the waste in the regulated unit;
  - (b) The hydrogeological characteristics of the facility and surrounding land;
  - (c) The quantity and quality of ground water, and the direction of ground water flow;
  - (d) The patterns of rainfall in the region;
  - (e) The proximity of the regulated unit to surface waters;
  - (f) The current and future uses of surface waters in the area and any water quality standards established for those surface waters;
  - (g) The existing quality of surface water, including other sources of contamination and the cumulative impact on surface water quality;
  - (h) The potential for health risks caused by exposure to waste constituents;
  - (i) The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents; and
  - (j) The persistence and permanence of the potential adverse effects.

(C) In making any decision under paragraph (B) of this rule about the use of ground water in the area around the facility, the director will consider any identification of underground sources of drinking water and exempted aquifers made under 40 CFR 144.8.

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

Effective: 10/23/2022

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

CERTIFIED ELECTRONICALLY

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Certification

10/11/2022

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Date

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Rule Amplifies: 3734.12

Prior Effective Dates: 08/30/1984, 01/30/1986, 11/13/1987, 12/08/1988,  
06/29/1990, 02/11/1992, 02/12/2018

3745-54-94

**Concentration limits.**

- (A) The facility permit shall specify the concentration limits in the ground water for hazardous constituents established under rule 3745-54-93 of the Administrative Code. The concentration of a hazardous constituent ~~shall meet one or more of the following:~~
- (1) Shall not exceed the background level of that constituent in the ground water at the time that limit is specified in the permit; or
  - (2) For any of the constituents listed in the table in this rule, the concentration of the constituent shall not exceed the respective value given in the table in this rule if the background level of the constituent is below the value given in the table in this rule; or
  - (3) Shall not exceed an alternate limit established in the permit under paragraph (B) of this rule.
- (B) ~~If approved by the~~ The director; will establish an alternate concentration limit ~~may be established~~ for a hazardous constituent if ~~it is found~~ the director finds that the constituent ~~shall~~ will not pose a substantial present or potential hazard to human health or the environment as long as the alternate concentration limit is not exceeded. ~~The~~ In establishing alternate concentration limits, the director shall consider the following factors ~~when making a determination on the alternate concentration limit:~~
- (1) Potential adverse effects on ground water quality, considering ~~the following:~~
    - (a) The physical and chemical characteristics of the waste in the regulated unit, including the waste's potential for migration;:
    - (b) The hydrogeological characteristics of the facility and surrounding land;:
    - (c) The quantity of ground water and the direction of ground water flow;:
    - (d) The proximity and withdrawal rates of ground water users;:
    - (e) The current and future use of ground water in the area;:
    - (f) The existing quality of ground water, including other sources of contamination and the cumulative impact of such contamination on the ground water quality;:
    - (g) The potential for health risks caused by human exposure to waste constituents;:

- (h) The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents;:
- (i) The persistence and permanence of the potential adverse effects;: and
- (2) Potential adverse effects on hydraulically-connected surface water quality, considering ~~the following~~:
  - (a) The volume and physical and chemical characteristics of the waste in the regulated unit;:
  - (b) The hydrogeological characteristics of the facility and surrounding land;:
  - (c) The quantity and quality of ground water, and the direction of ground water flow;:
  - (d) The patterns of rainfall in the region;:
  - (e) The proximity of the regulated unit to surface waters;:
  - (f) The current and future uses of surface waters in the area and any water quality standards established for those surface waters;:
  - (g) The existing quality of surface water, including other sources of contamination and the cumulative impact of such contamination on surface water quality;:
  - (h) The potential for health risks caused by human exposure to waste constituents;:
  - (i) The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents;: and
  - (j) The persistence and permanence of the potential adverse effects.

(C) In making any decision under paragraph (B) of this rule about the use of ground water in the area around the facility, the director will consider any identification of underground sources of drinking water and exempted aquifers made under 40 CFR 144.8.

Table: Maximum Concentration of Constituents for Ground Water Protection

Constituent	Maximum Contaminant Concentration (milligrams per liter)
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Antimony	0.006
Arsenic	0.010
Barium	2.0
Benzene	0.005
Benzo(a)pyrene (PAHs)	0.0002
Beryllium	0.004
Bis(2ethylhexyl)phthalate	0.006
Cadmium	0.005
Carbofuran	0.04
Carbon tetrachloride	0.005
Chlordane	0.002
Chlorobenzene	0.1
Chromium (total)	0.1
Copper	1.3 *
Cyanide (as free cyanide)	0.2
2,4-D	0.07
1,2-Dibromo-3-chloropropane (DBCP)	0.0002
o-Dichlorobenzene	0.6
p-Dichlorobenzene	0.075
1,2-Dichloroethane	0.005
1,1-Dichloroethylene	0.007
cis-1,2-Dichloroethylene	0.07
trans-1,2-Dichloroethylene	0.1
Dichloromethane (Methylene chloride)	0.005

1,2-Dichloropropane (Propylene dichloride)	0.005
Dinoseb	0.007
Endrin	0.002
Ethylbenzene	0.7
Ethylene dibromide	0.00005
Heptachlor	0.0004
Heptachlor epoxide	0.0002
Hexachlorobenzene	0.001
Hexachlorocyclopentadiene	0.05
Lead	0.015 *
Lindane	0.0002
Mercury (inorganic)	0.002
Methoxychlor	0.04
Pentachlorophenol	0.001
Polychlorinated biphenyls (PCBs)	0.0005
Selenium	0.05
Styrene	0.1 *
Tetrachloroethylene	0.005
Thallium	0.002
Toluene	1.0
Toxaphene	0.003
2,4,5-TP (Silvex)	0.05
1,2,4-Trichlorobenzene	0.07
1,1,1-Trichloroethane (Methyl chloroform)	0.2



1,1,2-Trichloroethane	0.005
Trichloroethylene	0.005
Vinyl chloride	0.002
Xylene	10.0
* Action level, not a maximum contaminant limit.	

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

Effective: 10/23/2022  
Five Year Review (FYR) Dates: 7/20/2022 and 07/20/2027

CERTIFIED ELECTRONICALLY

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Certification

10/11/2022

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Date

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Prior Effective Dates: 08/30/1984, 04/01/1990, 12/07/2004, 03/17/2012,  
02/12/2018

### **3745-54-95 Point of compliance**

- (A) The permit will specify the point of compliance at which the ground water protection standard of rule 3745-54-92 of the Administrative Code applies and at which monitoring must be conducted. The point of compliance is a vertical surface located at the hydraulically downgradient limit of the waste management area that extends down into the uppermost aquifer underlying the regulated units.
- (B) The waste management area is the limit projected in the horizontal plane of the area on which waste will be placed during the active life of a regulated unit.
  - (1) The waste management area includes horizontal space taken up by any liner, dike or other barrier designed to contain waste in a regulated unit.
  - (2) If the facility contains more than one regulated unit, the waste management area is described in an imaginary line circumscribing the several regulated units.

Effective: 08/30/1984  
119.032 review date: Exempt  
Promulgated under: 119.03  
Statutory authority: 3734.12  
Rule amplifies: 3734.12  
Prior effective dates: None

**3745-54-96 Compliance period.**

- (A) The permit will specify the compliance period during which the ground water protection standard of rule 3745-54-92 of the Administrative Code applies. The "compliance period" is the number of years equal to the active life of the waste management area (including any waste management activity prior to permitting, and the closure period).
- (B) The compliance period begins when the owner or operator initiates a compliance monitoring program meeting the requirements of rule 3745-54-99 of the Administrative Code.
- (C) If the owner or operator is engaged in a corrective action program at the end of the compliance period specified in paragraph (A) of this rule, the compliance period is extended until the owner or operator can demonstrate that the ground water protection standard of rule 3745-54-92 of the Administrative Code has not been exceeded for a period of three consecutive years.

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Promulgated under: 119.03  
Statutory authority: 3734.12  
Rule amplifies: 3734.12  
Prior effective dates: None

3745-54-97

**General ground water monitoring requirements.**

The owner or operator must comply with the following requirements for any ground water monitoring program developed to satisfy rule 3745-54-98, 3745-54-99, or ~~3745-55-01~~3745-54-100 of the Administrative Code.

(A) The ground water monitoring system must consist of a sufficient number of wells, installed at appropriate locations and depths to yield ground water samples from the uppermost aquifer that:

(1) Represent the quality of background ground water that has not been affected by leakage from a regulated unit;

(a) A determination of background ground water quality may include sampling of wells that are not hydraulically upgradient of the waste management area where:

(i) Hydrogeologic conditions do not allow the owner or operator to determine what wells are hydraulically upgradient; and

(ii) Sampling at other wells will provide an indication of background ground water quality that is representative or more representative than that provided by the upgradient wells; and

(b) Reserved.

(2) Represent the quality of ground water passing the point of compliance; and

(3) Allow for the detection of contamination when hazardous waste or hazardous constituents have migrated from the waste management area to the uppermost aquifer.

(B) If a facility contains more than one regulated unit, separate ground water monitoring systems are not required for each regulated unit provided that provisions for sampling the ground water in the uppermost aquifer will enable detection and measurement at the compliance point of hazardous constituents from the regulated units that have entered the ground water in the uppermost aquifer.

(C) All monitoring wells must be cased in a manner that maintains the integrity of the monitoring well bore hole. This casing must be screened or perforated and packed with gravel or sand, where necessary, to enable collection of ground water samples. The annular space (i.e., the space between the bore hole and well casing) above the sampling depth must be sealed to prevent contamination of samples and the ground

water.

- (D) The ground water monitoring program must include consistent sampling and analysis procedures that are designed to ensure monitoring results that provide a reliable indication of ground water quality below the waste management area. At a minimum the program must include procedures and techniques for:
- (1) Sample collection;
  - (2) Sample preservation and shipment;
  - (3) Analytical procedures; and
  - (4) Chain of custody control.
- (E) The ground water monitoring program must include sampling and analytical methods that are appropriate for ground water sampling and that accurately measure hazardous constituents in ground water samples.
- (F) The ground water monitoring program must include a determination of the ground water surface elevation each time ground water is sampled.
- (G) In detection monitoring or where appropriate in compliance monitoring, data on each hazardous constituent specified in the permit will be collected from background wells and wells at the compliance point(s). The number and kinds of samples collected to establish background must be appropriate for the form of statistical test employed, following generally accepted statistical principles. The sample size must be as large as necessary to ensure with reasonable confidence that a contaminant release to ground water from a facility will be detected. The owner or operator will determine an appropriate sampling procedure and interval for each hazardous constituent listed in the facility permit which must be specified in the unit permit. This sampling procedure must be:
- (1) A sequence of at least four samples, taken at an interval that assures, to the greatest extent technically feasible, that an independent sample is obtained, by reference to the uppermost aquifer's effective porosity, hydraulic conductivity, and hydraulic gradient, and the fate and transport characteristics of the potential contaminants; or
  - (2) An alternate sampling procedure proposed by the owner or operator and approved in the permit.

- (H) The owner or operator will specify one of the following statistical methods to be used in evaluating ground water monitoring data for each hazardous constituent which will be specified in the unit permit. The statistical test chosen must be conducted separately for each hazardous constituent in each well. Where practical quantification limits (PQL's) are used in any of the following statistical procedures to comply with paragraph (I)(5) of this rule, the PQL must be proposed by the owner or operator and approved by the director. Use of any of the following statistical methods must be protective of human health and the environment and must comply with the performance standards outlined in paragraph (I) of this rule.
- (1) A parametric analysis of variance (ANOVA) followed by multiple comparisons procedures to identify statistically significant evidence of contamination. The method must include estimation and testing of the contrasts between each compliance well's mean and the background mean levels for each constituent.
  - (2) An ~~analysis of variance~~ (ANOVA) based on ranks followed by multiple comparisons procedures to identify statistically significant evidence of contamination. The method must include estimation and testing of the contrasts between each compliance well's median and the background median levels for each constituent.
  - (3) A tolerance or prediction interval procedure in which an interval for each constituent is established from the distribution of the background data, and the level of each constituent in each compliance well is compared to the upper tolerance or prediction limit.
  - (4) A control chart approach that gives control limits for each constituent.
  - (5) Another statistical test method submitted by the owner or operator and approved in the permit.
- (I) Any statistical method chosen under paragraph (H) of this rule for specification in the unit permit must comply with the following performance standards, as appropriate:
- (1) The statistical method used to evaluate ground water monitoring data must be appropriate for the distribution of chemical parameters or hazardous constituents. If the distribution of the chemical parameters for hazardous constituents is shown by the owner or operator to be inappropriate for a normal theory test, then the data should be transformed or a distribution-free theory test should be used. If the distributions for the constituents differ, more than one statistical method may be needed.

- (2) If an individual well comparison procedure is used to compare an individual compliance well constituent concentration with background constituent concentrations or ground water protection standard, the test must be done at a "Type I" error level no less than 0.01 for each testing period. If a multiple comparisons procedure is used, the "Type I" experimentwise error rate for each testing period must be no less than 0.05; however, the "Type I" error of no less than 0.01 for individual well comparisons must be maintained. This performance standard does not apply to tolerance intervals, prediction intervals, or control charts.
  - (3) If a control chart approach is used to evaluate ground water monitoring data, the specific type of control chart and its associated parameter values must be proposed by the owner or operator and approved in the permit if it is found to be protective of human health and the environment.
  - (4) If a tolerance interval or a prediction interval is used to evaluate ground water monitoring data, the levels of confidence and, for tolerance intervals, the percentage of the population that the interval must contain, must be proposed by the owner or operator and approved in the permit if these parameters are found to be protective of human health and the environment. These parameters will be determined after considering the number of samples in the background data base, the data distribution, and the range of the concentration values for each constituent of concern.
  - (5) The statistical method must account for data below the limit of detection with one or more statistical procedures that are protective of human health and the environment. Any practical quantification limit (PQL) approved in the permit under paragraph (H) of this rule that is used in the statistical method must be the lowest concentration level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions that are available to the facility.
  - (6) If necessary, the statistical method must include procedures to control or correct for seasonal and spatial variability as well as temporal correlation in the data.
- (J) Ground water monitoring data collected in accordance with paragraph (G) of this rule including actual levels of constituents must be maintained in the facility operating record. The permit will specify when the data must be submitted for review.



Effective: 09/05/2010

R.C. 119.032 review dates: Exempt

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Certification

07/23/2010

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Date

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3745-54-98

**Detection monitoring program.**

An owner or operator required to establish a detection monitoring program under rules 3745-54-90 to 3745-54-101 of the Administrative Code must, at a minimum, discharge the following responsibilities:

- (A) The owner or operator must monitor for indicator parameters (e.g., specific conductance, total organic carbon, or total organic halogen), waste constituents, or reaction products that provide a reliable indication of the presence of hazardous constituents in ground water. The director will specify the parameters or constituents to be monitored in the facility permit, after considering the following factors:
- (1) The types, quantities, and concentrations of constituents in wastes managed at the regulated unit;
  - (2) The mobility, stability, and persistence of waste constituents or their reaction products in the unsaturated zone beneath the waste management area;
  - (3) The detectability of indicator parameters, waste constituents, and reaction products in ground water; and
  - (4) The concentrations or values and coefficients of variation of proposed monitoring parameters or constituents in the ground water background.
- (B) The owner or operator must install a ground water monitoring system at the compliance point as specified under rule 3745-54-95 of the Administrative Code. The ground water monitoring system must comply with paragraphs (A)(2), (B), and (C) of rule 3745-54-97 of the Administrative Code.
- (C) The owner or operator must conduct a ground water monitoring program for each chemical parameter and hazardous constituent specified in the permit pursuant to paragraph (A) of this rule in accordance with paragraph (G) of rule 3745-54-97 of the Administrative Code. The owner or operator must maintain a record of ground water analytical data as measured and in a form necessary for the determination of statistical significance under paragraph (H) of rule 3745-54-97 of the Administrative Code.
- (D) The permit will specify the frequencies for collecting samples and conducting statistical tests to determine whether there is statistically significant evidence of contamination for any parameter or hazardous constituent specified in the permit under paragraph (A) of this rule in accordance with paragraph (G) of rule 3745-54-97 of the Administrative Code. ~~A sequence of at least four samples from each well (background and compliance wells) must be collected at least~~

~~semi-annually during detection monitoring.~~

- (E) The owner or operator must determine the ground water flow rate and direction in the uppermost aquifer at least annually.
- (F) The owner or operator must determine whether there is statistically significant evidence of contamination for any chemical parameter ~~or~~ hazardous constituent specified in the permit pursuant to paragraph (A) of this rule at a frequency specified under paragraph (D) of this rule.
- (1) In determining whether statistically significant evidence of contamination exists, the owner or operator must use the method(s) specified in the permit under paragraph (H) of rule 3745-54-97 of the Administrative Code. These method(s) must compare data collected at the compliance point(s) to the background ground water quality data.
  - (2) The owner or operator must determine whether there is statistically significant evidence of contamination at each monitoring well at the compliance point within a reasonable period of time after completion of sampling. The director will specify in the facility permit what period of time is reasonable, after considering the complexity of the statistical test and the availability of laboratory facilities to perform the analysis of ground water samples.
- (G) If the owner or operator determines, pursuant to paragraph (F) of this rule, that there is statistically significant evidence of contamination for chemical parameters or hazardous constituents specified pursuant to paragraph (A) of this rule at any monitoring well at the compliance point, he must:
- (1) Notify the director of this finding in writing within seven days. The notification must indicate what chemical parameters or hazardous constituents have shown statistically significant evidence of contamination;
  - (2) Immediately sample the ground water in all monitoring wells and determine whether constituents in the ground water monitoring list (found in the appendix to this rule) are present, and if so, in what concentration. However, the director, on a discretionary basis, may allow sampling for a site-specific subset of constituents from the list in the appendix to this rule and other representative/related waste constituents.
  - (3) For any compounds listed in the ground water monitoring list (found in the appendix to this rule) found in the analysis pursuant to paragraph (G)(2) of this rule, the owner or operator may resample within one month or at an

alternative site-specific schedule approved by the director and repeat the analysis for those compounds detected. If the results of the second analysis confirm the initial results, then these constituents will form the basis for compliance monitoring. If the owner or operator does not resample for the compounds ~~found pursuant to~~ paragraph (G)(2) of this rule, the hazardous constituents found during this initial ground water monitoring list analysis will form the basis for compliance monitoring.

- (4) Within ninety days, submit to the director an application for a permit modification to establish a compliance monitoring program meeting the requirements of rule 3745-54-99 of the Administrative Code. The application must include the following information:
  - (a) An identification of the concentration of any constituent listed in the appendix to this rule detected in the ground water at each monitoring well at the compliance point;
  - (b) Any proposed changes to the ground water monitoring system at the facility necessary to meet the requirements of rule 3745-54-99 of the Administrative Code;
  - (c) Any proposed additions or changes to the monitoring frequency, sampling and analysis procedures or methods, or statistical methods used at the facility necessary to meet the requirements of rule 3745-54-99 of the Administrative Code;
  - (d) For each hazardous constituent detected at the compliance point, a proposed concentration limit under paragraph (A)(1) or (A)(2) of rule 3745-54-94 of the Administrative Code, or a notice of intent to seek an alternate concentration limit under paragraph (B) of rule 3745-54-94 of the Administrative Code; and
- (5) Within one hundred eighty days, submit to the director:
  - (a) All data necessary to justify an alternate concentration limit sought under paragraph (B) of rule 3745-54-94 of the Administrative Code; and
  - (b) An engineering feasibility plan for a corrective action program necessary to meet the requirement of rule 3745-54-100 of the Administrative Code, unless:
    - (i) All hazardous constituents identified under paragraph (G)(2) of this

rule are listed in ~~table 1 of the table in~~ rule 3745-54-94 of the Administrative Code and their concentrations do not exceed the respective values given in that table; or

- (ii) The owner or operator has sought an alternate concentration limit under paragraph (B) of rule 3745-54-94 of the Administrative Code for every hazardous constituent identified under paragraph (G)(2) of this rule.
- (6) If the owner or operator determines, pursuant to paragraph (F) of this rule, that there is a statistically significant difference for chemical parameters or hazardous constituents specified pursuant to paragraph (A) of this rule at any monitoring well at the compliance point, he may demonstrate that a source other than a regulated unit caused the contamination or that the detection is an artifact caused by an error in sampling, analysis, or statistical evaluation or natural variation in the ground water. The owner or operator may make a demonstration under paragraphs (G) to (G)(6)(d) of this rule in addition to, or in lieu of, submitting a permit modification application under paragraph (G)(4) of this rule; however, the owner or operator is not relieved of the requirement to submit a permit modification application within the time specified in paragraph (G)(4) of this rule unless the demonstration made under paragraphs (G) to (G)(6)(d) of this rule successfully shows that a source other than a regulated unit caused the increase, or that the increase resulted from error in sampling, analysis, or evaluation. In making a demonstration under paragraphs (G) to (G)(6)(d) of this rule, the owner or operator must:
- (a) Notify the director in writing within seven days of determining statistically significant evidence of contamination at the compliance point that he intends to make a demonstration under paragraphs (G) to (G)(6)(d) of this rule;
  - (b) Within ninety days, submit a report to the director which demonstrates that a source other than a regulated unit caused the contamination or that the contamination resulted from error in sampling, analysis, or evaluation;
  - (c) Within ninety days, submit to the director an application for a permit modification to make any appropriate changes to the detection monitoring program at the facility; and
  - (d) Continue to monitor in accordance with the detection monitoring program established under this rule.

(H) If the owner or operator determines that the detection monitoring program no longer satisfies the requirements of this rule, he must, within ninety days, submit an application for a permit modification to make any appropriate changes to the program.

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

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

Effective: 09/05/2010

R.C. 119.032 review dates: Exempt

CERTIFIED ELECTRONICALLY

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Certification

07/23/2010

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Date

Promulgated Under: 119.03  
Statutory Authority: 3734.12  
Rule Amplifies: 3734.12  
Prior Effective Dates: 08/30/1984, 12/30/1989, 06/29/1990, 09/02/1997,  
03/13/2002, 12/07/2004, 02/16/2009

3745-54-98

## AMENDED APPENDIX

1

Appendix to rule 3745-54-98 of the Administrative Code

## Ground-Water Monitoring List

Common Name <sup>1</sup>	CAS RN <sup>2</sup>	Chemical abstracts service index name <sup>3</sup>
Acenaphthene	83-32-9	Acenaphthylene, 1,2-dihydro-
Acenaphthylene	208-96-8	Acenaphthylene
Acetone	67-64-1	2-Propanone
Acetophenone	98-86-2	Ethanone, 1-phenyl-
Acetonitrile; Methyl cyanide	75-05-8	Acetonitrile
2-Acetylaminofluorene; 2-AAF	53-96-3	Acetamide, N-9H-fluoren-2-yl-
Acrolein	107-02-8	2-Propenal
Acrylonitrile	107-13-1	2-Propenenitrile
Aldrin	309-00-2	1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-(1alpha,4alpha,4abeta,5alpha,8alpha,8abeta)-
Allyl chloride	107-05-1	1-Propene, 3-chloro-
4-Aminobiphenyl	92-67-1	[1,1'-Biphenyl]-4-amine
Aniline	62-53-3	Benzenamine
Anthracene	120-12-7	Anthracene
Antimony	(Total)	Antimony
Aramite	140-57-8	Sulfurous acid, 2-chloroethyl 2-[4-(1,1-dimethylethyl)phenoxy]-1-methylethyl ester
Arsenic	(Total)	Arsenic
Barium	(Total)	Barium
Benzene	71-43-2	Benzene



Common Name <sup>1</sup>	CAS RN <sup>2</sup>	Chemical abstracts service index name <sup>3</sup>
Benzo[a]anthracene; Benzanthracene	56-55-3	Benz[a]anthracene
Benzo[b]fluoranthene	205-99-2	Benzo[e]acephenanthrylene
Benzo[k]fluoranthene	207-08-9	Benzo[k]fluoranthene
Benzo[ghi]perylene	191-24-2	Benzo[ghi]perylene
Benzo[a]pyrene	50-32-8	Benzo[a]pyrene
Benzyl alcohol	100-51-6	Benzenemethanol
Beryllium	(Total)	Beryllium
alpha-BHC	319-84-6	Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha,2alpha,3beta,4beta,5beta,6beta)-
beta-BHC	319-85-7	Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha,2beta,3alpha,4beta,5alpha,6beta)-
delta-BHC	319-86-8	Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha,2alpha,3alpha,4beta,5alpha,6beta)-
gamma-BHC; Lindane	58-89-9	Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha,2alpha,3beta,4alpha,5alpha,6beta)-
Bis(2-chloroethoxy)methane	111-91-1	Ethane, 1,1'-[methylenebis(oxy)bis [2-chloro
Bis(2-chloroethyl) ether	111-44-4	Ethane, 1,1'-oxybis[2-chloro-
Bis(2-chloro-1-methylethyl) ether; 2,2'-Dichlorodiisopropyl ether	108-60-1	Propane, 2,2'-oxybis[1-chloro-
Bis(2-ethylhexyl) phthalate	117-81-7	1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester
Bromodichloromethane	75-27-4	Methane, bromodichloro-
Bromoform; Tribromomethane	75-25-2	Methane, tribromo-
4-Bromophenyl phenyl ether	101-55-3	Benzene, 1-bromo-4-phenoxy-

Common Name <sup>1</sup>	CAS RN <sup>2</sup>	Chemical abstracts service index name <sup>3</sup>
Butyl benzyl phthalate; Benzyl butyl phthalate	85-68-7	1,2-Benzenedicarboxylic acid, butyl phenylmethyl ester
Cadmium	(Total)	Cadmium
Carbon Disulfide	75-15-0	Carbon disulfide
Carbon tetrachloride	56-23-5	Methane, tetrachloro-
Chlordane	57-74-9	4,7-Methano-1H-indene, 1,2,4,5,6,7,8,8-octachloro-2,3,3a,4,7,7a- hexahydro-
p-Chloroaniline	106-47-8	Benzenamine, 4-chloro-
Chlorobenzene	108-90-7	Benzene, chloro-
Chlorobenzilate	510-15-6	Benzenoacetic acid, 4-chloro-alpha-(4-chlorophenyl)-alpha-hydroxy-, ethyl ester
p-Chloro-m-cresol	59-50-7	Phenol, 4-chloro-3-methyl-
Chloroethane; Ethyl chloride	75-00-3	Ethane, chloro-
Chloroform	67-66-3	Methane, trichloro-
2-Chloronaphthalene	91-58-7	Naphthalene, 2-chloro-
2-Chlorophenol	91-57-8	Phenol, 2-chloro-
4-Chlorophenyl phenyl ether	7005-72-3	Benzene, 1-chloro-4-phenoxy-
Chloroprene	126-99-8	1,3-Butadiene, 2-chloro-
Chromium	(Total)	Chromium
Chrysene	218-01-9	Chrysene
Cobalt	(Total)	Cobalt
Copper	(Total)	Copper
m-Cresol	108-39-4	Phenol, 3-methyl-

Common Name <sup>1</sup>	CAS RN <sup>2</sup>	Chemical abstracts service index name <sup>3</sup>
o-Cresol	95-48-7	Phenol, 2-methyl-
p-Cresol	106-44-5	Phenol, 4-methyl-
Cyanide	57-12-5	Cyanide
2,4-D; 2,4-Dichlorophenoxyacetic acid	94-75-7	Acetic acid, (2,4-dichlorophenoxy)-
4,4'-DDD	72-54-8	Benzene, 1,1'-(2,2-dichloroethylidene) bis[4-chloro-
4,4'-DDE	72-55-9	Benzene, 1,1'-(dichloroethenylidene) bis[4-chloro-
4,4'-DDT	50-29-3	Benzene, 1,1'-(2,2,2-trichloroethylidene) bis[4-chloro-
Diallate	2303-16-4	Carbamothioic acid, bis(1-methylethyl)-, S- (2,3-dichloro-2-propenyl) ester
Dibenz[a,h]anthracene	53-70-3	Dibenz[a,h]anthracene
Dibenzofuran	132-64-9	Dibenzofuran
Dibromochloromethane; Chlorodibromomethane	124-48-1	Methane, dibromochloro-
1,2-Dibromo-3-chloropropane; DBCP	96-12-8	Propane, 1,2-dibromo-3-chloro-
1,2-Dibromoethane; Ethylene dibromide	106-93-4	Ethane, 1,2-dibromo
Di-n-butyl phthalate	84-74-2	1,2-Benzenedicarboxylic acid, dibutyl ester
o-Dichlorobenzene	95-50-1	Benzene, 1,2-dichloro-
m-Dichlorobenzene	541-73-1	Benzene, 1,3-dichloro-
p-Dichlorobenzene	106-46-7	Benzene, 1,4-dichloro-
3,3'-Dichlorobenzidine	91-94-1	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dichloro-
trans-1,4-Dichloro-2-butene	110-57-6	2-Butene, 1,4-dichloro-, (E)-
Dichlorodifluoromethane	75-71-8	Methane, dichlorodifluoro-

Common Name <sup>1</sup>	CAS RN <sup>2</sup>	Chemical abstracts service index name <sup>3</sup>
1,1-Dichloroethane	75-34-3	Ethane, 1,1-dichloro-
1,2-Dichloroethane; Ethylene dichloride	107-06-2	Ethane, 1,2-dichloro-
1,1-Dichloroethylene; Vinylidene chloride	75-35-4	Ethene, 1,1-dichloro-
trans-1,2-Dichloroethylene	156-60-5	Ethene, 1,2-dichloro-, (E)-
2,4-Dichlorophenol	120-83-2	Phenol, 2,4-dichloro-
2,6-Dichlorophenol	87-65-0	Phenol, 2,6-dichloro-
1,2-Dichloropropane	78-87-5	Propane, 1,2-dichloro-
cis-1,3-Dichloropropene	10061-01-5	1-Propene, 1,3-dichloro-, (Z)-
trans-1,3-Dichloropropene	10061-02-6	1-Propene, 1,3-dichloro-, (E)-
Dieldrin	60-57-1	2,7:3,6-Dimethanonaphth [2,3-b]oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2aalpha,3beta,6beta,6aalpha,7beta,7aalpha)-
Diethyl phthalate	84-66-2	1,2-Benzenedicarboxylic acid, diethyl ester
O,O-Diethyl O-2-pyrazinyl phosphorothioate; Thionazin	297-97-2	Phosphorothioic acid, O-O-diethyl O-pyrazinyl ester
Dimethoate	60-51-5	Phosphorodithioic acid, O,O-dimethyl S-[2-(methylamino)-2-oxoethyl] ester
p-(Dimethylamino)azobenzene	60-11-7	Benzenamine, N,N-dimethyl-4-(phenylazo)-
7,12-Dimethylbenz[a]anthracene	57-97-6	Benz[a]anthracene, 7,12-dimethyl-
3,3-Dimethylbenzidine	119-93-7	[1,1-Biphenyl]-4,4'-diamine, 3,3'-dimethyl-,
alpha, alpha-Dimethylphenethylamine	122-09-8	Benzeneethanamine, alpha, alpha-dimethyl-
2,4-Dimethylphenol	105-67-9	Phenol, 2,4-dimethyl
Dimethyl phthalate	131-11-3	1,2-Benzenedicarboxylic acid, dimethyl ester

Common Name <sup>1</sup>	CAS RN <sup>2</sup>	Chemical abstracts service index name <sup>3</sup>
m-Dinitrobenzene	99-65-0	Benzene, 1,3-dinitro-
4,6-Dinitro-o-cresol	534-52-1	Phenol, 2-methyl-4,6-dinitro-
2,4-Dinitrophenol	51-28-5	Phenol, 2,4-dinitro
2,4-Dinitrotoluene	121-14-2	Benzene, 1-methyl-2,4-dinitro-
2,6-Dinitrotoluene	606-20-2	Benzene, 2-methyl-1,3-dinitro-
Dinoseb; DNBP; 2-sec-Butyl-4,6-dinitrophenol	88-85-7	Phenol, 2-(1-methylpropyl)-4,6-dinitro
Di-n-octyl phthalate	117-84-0	1,2-Benzenedicarboxylic acid, dioctyl ester
1,4-Dioxane	123-91-1	1,4-Dioxane
Diphenylamine	122-39-4	Benzenamine, N-phenyl-
Disulfoton	298-04-4	Phosphorodithioic acid, O,O-diethyl S-[2-(ethylthio)ethyl] ester
Endosulfan I	959-98-8	6,9-Methano-2,4,3-benzodioxathiepin, 6,7,8,9,10,10-hexachloro-1,5,5a,6,9,9a-hexahydro-, 3-oxide, (3alpha,5abeta,6alpha,9alpha,9abeta)-
Endosulfan II	33213-65-9	6,9-Methano-2,4,3-benzodioxathiepin, 6,7,8,9,10,10-hexachloro-1,5,5a,6,9,9a-hexahydro-, 3-dioxide, (3alpha,5aalpha,6beta,9beta,9aalpha)-
Endosulfan sulfate	1031-07-8	6,9-Methano-2,4,3-benzodioxathiepin, 6,7,8,9,10,10-hexachloro-1,5,5a,6,9,9a-hexahydro-, 3,3-dioxide
Endrin	72-20-8	2,7:3,6-Dimethanonaphth[2,3-b]oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2abeta,3alpha,6alpha,6abeta,7beta,7aalpha)-
Endrin aldehyde	7421-93-4	1,2,4-Methenocyclopenta[cd]pentalene-5-carboxaldehyde, 2,2a,3,3,4,7-hexachlorodecahydro-, (1alpha,2beta,2abeta,4beta,4abeta,5beta,6abeta,6bbeta,7R*)-

Common Name <sup>1</sup>	CAS RN <sup>2</sup>	Chemical abstracts service index name <sup>3</sup>
Ethybenzene	100-41-4	Benzene, ethyl-
Ethyl methacrylate	97-63-2	2-Propenoic acid, 2-methyl-, ethyl ester
Ethyl methanesulfonate	62-50-0	Methanesulfonic acid, ethyl ester
Famphur	52-85-7	Phosphorothioic acid, O-[4-[(dimethylamino)sulfonyl]phenyl]-O,O-dimethyl ester
Fluoranthene	206-44-0	Fluoranthene
Fluorene	86-73-7	9H-Fluorene
Heptachlor	76-44-8	4,7-Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro
Heptachlor epoxide	1024-57-3	2,5-Methano-2H-indeno[1,2-b]oxirene, 2,3,4,5,6,7,7-heptachloro- 1a,1b,5,5a,6,6a,- hexahydro-, (1aalpha,1bbeta,2alpha,5alpha,5abeta,6beta,6aalpha)
Hexachlorobenzene	118-74-1	Benzene, hexachloro-
Hexachlorobutadiene	87-68-3	1,3-Butadiene, 1,1,2,3,4,4-hexachloro-
Hexachlorocyclopentadiene	77-47-4	1,3-Cyclopentadiene, 1,2,3,4,5,5-hexachloro-
Hexachloroethane	67-72-1	Ethane, hexachloro-
Hexachlorophene	70-30-4	Phenol, 2,2'-methylenebis[3,4,6-trichloro-
Hexachloropropene	1888-71-7	1-Propene, 1,1,2,3,3,3-hexachloro-
2-Hexanone	591-78-6	2-Hexanone
Indeno(1,2,3-cd)pyrene	193-39-5	Indeno[1,2,3-cd]pyrene
<del>Isabuty</del> Isobutyl alcohol	78-83-1	1-Propanol, 2-methyl-
Isodrin	465-73-6	1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a hexahydro-(1alpha,4alpha,4abeta,5beta,8beta,8abeta)-
Isophorone	78-59-1	2-Cyclohexen-1-one, 3,5,5-trimethyl

Common Name <sup>1</sup>	CAS RN <sup>2</sup>	Chemical abstracts service index name <sup>3</sup>
Isosafrole	120-58-1	1,3-Benzodioxole, 5-(1-propenyl)-
Kepone	143-50-0	1,3,4-Metheno-2H-cyclobuta-[cd]pentalen-2-one, 1,1a,3,3a,4,5,5a,5b,6-decachlorooctahydro-
Lead	(Total)	Lead
Mercury	(Total)	Mercury
Methacrylonitrile	126-98-7	2-Propenenitrile, 2-methyl-
Methapyrilene	91-80-5	1,2,Ethanediamine, N,N-demethyl-N'-2-pyridinyl-N'-(2-thienylmethyl)-
Methoxychlor	72-43-5	Benzene, 1,1'-(2,2,2,trichloroethylidene)bis[4-methoxy-
Methyl bromide; Bromomethane	74-83-9	Methane, bromo-
Methyl chloride; Chloromethane	74-87-3	Methane, chloro-
3-Methylcholanthrene	56-49-5	Benz[j]aceanthrylene, 1,2-dihydro-3-methyl-
Methylene bromide; Dibromomethane	74-95-3	Methane, dibromo-
Methylene chloride; Dichloromethane	75-09-2	Methane, dichloro-
Methyl ethyl ketone; MEK	78-93-3	2-Butanone
Methyl iodide; Iodomethane	74-88-4	Methane, iodo-
Methyl methacrylate	80-62-6	2-Propenoic acid, 2-methyl-, methyl ester
Methyl methanesulfonate	66-27-3	Methanesulfonic acid, methyl ester
2-Methylnaphthalene	91-57-6	Naphthalene, 2-methyl-
Methyl parathion; Parathion methyl	298-00-0	<u>Phosphorothioic acid, O,O-dimethyl O-(4-nitro-phenyl) ester</u> <u>Phosphorothioic acid, O,O-dimethyl O-(4-nitro-phenyl) ester</u>
4-Methyl-2-pentanone; Methyl isobutyl ketone	108-10-1	2-Pentanone, 4-methyl-

Common Name <sup>1</sup>	CAS RN <sup>2</sup>	Chemical abstracts service index name <sup>3</sup>
Naphthalene	91-20-3	Naphthalene
1,4-Naphthoquinone	130-15-4	1,4-Naphthalenedione
1-Naphthylamine	134-32-7	1-Naphthalenamine
2-Naphthylamine	91-59-8	2-Naphthalenamine
Nickel	(Total)	Nickel
o-Nitroaniline	88-74-4	Benzenamine, 2-nitro-
m-Nitroaniline	99-09-2	Benzenamine, 3-nitro-
p-Nitroaniline	100-01-6	Benzenamine, 4-nitro-
Nitrobenzene	98-95-3	Benzene, nitro-
o-Nitrophenol	88-75-5	Phenol, 2-nitro-
p-Nitrophenol	100-02-7	Phenol, 4-nitro-
4-Nitroquinoline 1-oxide	56-57-5	Quinoline, 4-nitro-, 1-oxide
N-Nitrosodi-n-butylamine	924-16-3	1-Butanamine, N-butyl-N-nitroso-
N-Nitrosodiethylamine	55-18-5	Ethanamine, N-ethyl-N-nitroso-
N-Nitrosodimethylamine	62-75-9	Methanamine, N-methyl-N-nitroso-
N-Nitrosodiphenylamine	86-30-6	Benzenamine, N-nitroso-N-phenyl-
N-Nitrododipropylamine; Di-n-propylnitrosamine	621-64-7	1-Propanamine, N-nitroso-N-propyl-
N-Nitrosomethylethalamine	10595-95-6	Ethanamine, N-methyl-N-nitroso-
N-Nitrosomorpholine	59-89-2	Morpholine, 4-nitroso-
N-Nitrosopiperidine	100-75-4	Piperidine, 1-nitroso-
N-Nitrosopyrrolidine	930-55-2	Pyrrolidine, 1-nitroso-



Common Name <sup>1</sup>	CAS RN <sup>2</sup>	Chemical abstracts service index name <sup>3</sup>
5-Nitro-o-toluidine	99-55-8	Benzenamine, 2-methyl-5-nitro-
Parathion	56-38-2	Phosphorothioic acid, O,O-diethyl-O-(4-nitrophenyl) ester
Polychlorinated biphenyls; PCBs	See Note 4	1,1'-Biphenyl, chloro derivatives
Polychlorinated dibenzo-p-dioxins; PCDDs	See Note 5	Dibenzo[b,e][1,4]dioxin, chloro derivatives
Polychlorinated dibenzofurans; PCDFs	See Note 6	Dibenzofuran, chloro derivatives
Pentachlorobenzene	608-93-5	Benzene, pentachloro-
Pentachloroethane	76-01-7	Ethane, pentachloro-
Pentachloronitrobenzene	82-68-8	Benzene, pentachloronitro-
Pentachlorophenol	87-86-5	Phenol, pentachloro-
Phenacetin	62-44-2	Acetamide, N-(4-ethoxyphenyl)
Phenanthrene	85-01-8	Phenanthrene
Phenol	108-95-2	Phenol
p-Phenylenediamine	106-50-3	1,4-Benzenediamine
Phorate	298-02-2	Phosphorodithioic acid, O,O-diethyl S-[(ethylthio)methyl] ester
2-Picoline	109-06-8	Pyridine, 2-methyl-
Pronamide	23950-58-5	Benzamide, 3,5-dichloro-N-(1,1-demethyl-2-propynyl)-
Propionitrile; Ethyl cyanide	107-12-0	Propanenitrile
Pyrene	129-00-0	Pyrene
Pyridine	110-86-1	Pyridine
Safrole	94-59-7	1,3-Benzodioxole, 5-(2-propenyl)-
Selenium	(Total)	Selenium
Silver	(Total)	Silver

Common Name <sup>1</sup>	CAS RN <sup>2</sup>	Chemical abstracts service index name <sup>3</sup>
Silvex; 2,4,5-TP	93-72-1	Propanoic acid, 2-(2,4,5-trichlorophenoxy)-
Styrene	100-42-5	Benzene, ethenyl-
Sulfide	18496-25-8	Sulfide
2,4,5-T; 2,4,5-Trichlorophenoxyacetic acid	93-76-5	Acetic acid, (2,4,5-trichlorophenoxy)-
2,3,7,8-TCDD; 2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	Dibenzo[b,e][1,4]dioxin, 2,3,7,8-tetrachloro-
1,2,4,5-Tetrachlorobenzene	95-94-3	Benzene, 1,2,4,5-tetrachloro-
1,1,1,2-Tetrachloroethane	630-20-6	Ethane, 1,1,1,2-tetrachloro-
1,1,2,2-Tetrachloroethane	79-34-5	Ethane, 1,1,2,2-tetrachloro-
Tetrachloroethylene; Perchloroethylene; Tetrachloroethene	127-18-4	Ethene, tetrachloro-
2,3,4,6-Tetrachlorophenol	58-90-2	Phenol, 2,3,4,6-tetrachloro-
Tetraethyl dithiopyrophosphate; Sulfotepp	3689-24-5	Thiodiphosphoric acid ([HO) <sub>2</sub> P(S)] <sub>2</sub> O), tetraethyl ester
Thallium	(Total)	Thallium
Tin	(Total)	Tin
Toluene	108-88-3	Benzene, methyl-
o-Toluidine	95-53-4	Benzenamine, 2-methyl-
Toxaphene	8001-35-2	Toxaphene
1,2,4-Trichlorobenzene	120-82-1	Benzene, 1,2,4-trichloro-
1,1,1-Trichloroethane; Methylchloroform	71-55-6	Ethane, 1,1,1-trichloro-
1,1,2-Trichloroethane	79-00-5	Ethane, 1,1,2-trichloro-
Trichloroethylene; Trichloroethene	79-01-6	Ethene, trichloro-

Common Name <sup>1</sup>	CAS RN <sup>2</sup>	Chemical abstracts service index name <sup>3</sup>
Trichlorofluoromethane	75-69-4	Methane, trichlorofluoro-
2,4,5-Trichlorophenol	95-95-4	Phenol, 2,4,5-trichloro-
2,4,6-Trichlorophenol	88-06-2	Phenol, 2,4,6-trichloro-
1,2,3-Trichloropropane	96-18-4	Propane, 1,2,3-trichloro-
O,O,O-Triethyl phosphorothioate	126-68-1	Phosphorothioic acid, O,O,O-triethyl ester
sym-Trinitrobenzene	99-35-4	Benzene, 1,3,5-trinitro-
Vanadium	(Total)	Vanadium
Vinyl acetate	108-05-4	Acetic acid, ethenyl ester
Vinyl chloride	75-01-4	Ethene, chloro-
Xylene (total)	1330-20-7	Benzene, dimethyl-
Zinc	(Total)	Zinc
Notes		
1	Common names are those widely used in government regulations, scientific publications, and commerce; synonyms exist for many chemicals.	
2	Chemical Abstracts Service registry number. Where "Total" is entered, all species in the ground water that contain this element are included.	
3	CAS index names are those used in the 9th Cumulative Index.	

Common Name <sup>1</sup>	CAS RN <sup>2</sup>	Chemical abstracts service index name <sup>3</sup>
4		Polychlorinated biphenyls (CAS RN 1336-36-3); this category contains congener chemicals, including constituents of Aroclor-1016 (CAS RN 12674-11-2), Aroclor-1221 (CAS RN 11104-28-2), Aroclor-1232 (CAS RN 11141-16-5), Aroclor-1242 (CAS RN 53469-21-9), Aroclor-1248 (CAS RN 12672-29-6), Aroclor-1254 (CAS RN 11097-69-1), and Aroclor-1260 (CAS RN 11096-82-5).
5		This category contains congener chemicals, including tetrachlorodibenzo-p-dioxins (see also 2,3,7,8-TCDD), pentachlorodibenzo-p-dioxins, and hexachlorodibenzo-p-dioxins.
6		This category contains congener chemicals, including tetrachlorodibenzofurans, pentachlorodibenzofurans, and hexachlorodibenzofurans.

[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."]

3745-54-99

**Compliance monitoring program.**

An owner or operator required to establish a compliance monitoring program under rules 3745-54-90 to 3745-54-101 Administrative Code ~~must~~, at a minimum, shall discharge the following responsibilities:

- (A) The owner or operator ~~must~~shall monitor the ground water to determine whether regulated units are in compliance with the ground water protection standard under rule 3745-54-92 of the Administrative Code. The permit ~~will~~shall specify the ground water protection standard, including:
- (1) A list of the hazardous constituents identified under rule 3745-54-93 and the appendix to rule 3745-51-11 of the Administrative Code;~~;~~
  - (2) Concentration limits under rule 3745-54-94 of the Administrative Code for each of those hazardous constituents;~~;~~
  - (3) The compliance point under rule 3745-54-95 of the Administrative Code;~~and~~
  - (4) The compliance period under rule 3745-54-96 of the Administrative Code.
- (B) The owner or operator ~~must~~shall install a ground water monitoring system at the compliance point as specified under rule 3745-54-95 of the Administrative Code. The ground water monitoring system ~~must~~shall comply with paragraphs (A)(2), (B), and (C) of rule 3745-54-97 of the Administrative Code.
- (C) The director ~~will~~shall specify the sampling procedures and statistical methods appropriate for the constituents and the facility, consistent with paragraphs (G) and (H) of rule 3745-54-97 of the Administrative Code.
- (1) The owner or operator ~~must~~shall conduct a sampling program for each chemical parameter or hazardous constituent in accordance with paragraph (G) of rule 3745-54-97 of the Administrative Code.
  - (2) The owner or operator ~~must~~shall record ground water analytical data as measured and in form necessary for the determination of statistical significance under paragraph (H) of rule 3745-54-97 of the Administrative Code for the compliance period of the facility.
- (D) The owner or operator ~~must~~shall determine whether there is statistically significant evidence of increased contamination for any chemical parameter or hazardous constituent specified in the permit, pursuant to paragraph (A) of this rule, at a frequency specified under paragraph (F) of this rule.

- (1) In determining whether statistically significant evidence of increased contamination exists, the owner or operator ~~method(s)~~ mustshall use the ~~method(s)~~ methods specified in the permit under paragraph (H) of rule 3745-54-97 of the Administrative Code. The ~~method(s)~~ must ~~methods shall~~ compare data collected at the compliance ~~point(s)~~ points to a concentration limit developed in accordance with rule 3745-54-94 of the Administrative Code.
  - (2) The owner or operator mustshall determine whether there is statistically significant evidence of increased contamination at each monitoring well at the compliance point within a reasonable time period after completion of sampling. The director willshall specify that time period in the facility permit, after considering the complexity of the statistical test and the availability of laboratory facilities to perform the analysis of ground water samples.
- (E) The owner or operator mustshall determine the ground water flow rate and direction in the uppermost aquifer at least annually.
- (F) The director willshall specify the frequencies for collecting samples and conducting statistical tests to determine statistically significant evidence of increased contamination in accordance with paragraph (G) of rule 3745-54-97 of the Administrative Code.
- (G) Annually, the owner or operator mustshall determine whether additional hazardous constituents from the appendix to rule 3745-54-98 of the Administrative Code, which could possibly be present but are not on the detection monitoring list in the permit, are actually present in the uppermost aquifer and, if so, at what concentration, pursuant to ~~procedures in~~ paragraph (F) of rule 3745-54-98 of the Administrative Code. To accomplish this, the owner or operator mustshall consult with the director to determine on a case-by-case basis: which sample collection event during the year willshall involve the sampling to determine if additional hazardous constituents are present in the uppermost aquifer ("enhanced sampling"); the number of monitoring wells at the compliance point to undergo enhanced sampling; the number of samples to be collected from each of these monitoring wells; and the specific constituents from the appendix to rule 3745-54-98 of the Administrative Code for which these samples mustshall be analyzed. If the enhanced sampling event indicates that constituents from the appendix to rule 3745-54-98 of the Administrative Code are present in the ground water that are not already identified in the permit as monitoring constituents, the owner or operator may resample within one month or at an alternative site-specific schedule approved by the director, and repeat the analysis. If the second analysis confirms the presence of new constituents, the owner or operator mustshall report the concentration of these additional constituents to the director within seven days after the completion of the second analysis and add ~~them~~ these additional constituents to the monitoring list. If the owner or operator chooses not to

resample, then ~~he must~~the owner or operator shall report the concentrations of these additional constituents to the director within seven days after completion of the initial analysis, and ~~shall add them~~these additional constituents to the monitoring list.

(H) ~~¶ Pursuant to paragraph (D) of this rule, if the owner or operator determines pursuant to paragraph (D) of this rule that any concentration limits under rule 3745-54-94 of the Administrative Code are being exceeded at any monitoring well at the point of compliance, he must~~the owner or operator shall do all of the following:

(1) Notify the director of this finding in writing within seven days. The notification ~~must~~shall indicate that concentration limits have been exceeded.

(2) Submit to the director an application for a permit modification to establish a corrective action program ~~meeting the requirements of~~that complies with rule 3745-54-100 of the Administrative Code within one hundred eighty days, or within ninety days if an engineering feasibility study has been previously submitted to the director under paragraph (G)(5) of rule 3745-54-98 of the Administrative Code. The application ~~must~~shall at a minimum include the following information:

(a) A detailed description of corrective actions that ~~will~~shall achieve compliance with the ground water protection standard specified in the permit under paragraph (A) of this rule; ~~and,~~

(b) A plan for a ground water monitoring program that ~~will~~shall demonstrate the effectiveness of the corrective action. Such a ground water monitoring program may be based on a compliance monitoring program developed to ~~meet the requirements of~~comply with this rule.

(I) ~~¶ Pursuant to paragraph (D) of this rule, if the owner or operator determines, pursuant to paragraph (D) of this rule, that the ground water concentration limits under this rule are being exceeded at any monitoring well at the point of compliance, he~~the owner or operator may demonstrate that a source other than a regulated unit caused the contamination or that the detection is an artifact caused by an error in sampling, analysis, or statistical evaluation or natural variation in the ground water. In making a demonstration under paragraphs (I) to (I)(4) of this rule, the owner or operator mustshall do all of the following:

(1) Notify the director in writing within seven days that ~~he~~the owner or operator intends to make a demonstration under paragraphs (I) to (I)(4) of this rule; ~~;~~

(2) Within ninety days, submit a report to the director which demonstrates that a source other than a regulated unit caused the standard to be exceeded or that

the apparent noncompliance with the standards resulted from error in sampling, analysis, or evaluation;

- (3) Within ninety days, submit to the director an application for a permit modification to make any appropriate changes to the compliance monitoring program at the facility; ~~and,~~
  - (4) Continue to monitor in accordance with the compliance monitoring program established under this rule.
- (J) If the owner or operator determines that the compliance monitoring program no longer ~~satisfies the requirements of~~ complies with this rule, ~~he must~~ the owner or operator, within ninety days, shall submit an application for a permit modification to make any appropriate changes to the compliance monitoring program.



Effective: 2/12/2018  
Five Year Review (FYR) Dates: 10/30/2017 and Exempt

CERTIFIED ELECTRONICALLY

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Certification

01/10/2018

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Date

Promulgated Under: 119.03  
Statutory Authority: 3734.12  
Rule Amplifies: 3734.12  
Prior Effective Dates: 08/30/1984, 12/30/1989, 06/29/1990, 02/11/1992,  
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03/17/2012

**3745-54-100 Corrective action program.**

An owner or operator required to establish a corrective action program under rules 3745-54-90 to 3745-54-101 of the Administrative Code must, at a minimum, discharge the following responsibilities:

- (A) The owner or operator must take corrective action to ensure that regulated units are in compliance with the ground water protection standard under rule 3745-54-92 of the Administrative Code. The permit will specify the ground water protection standard and will include:
- (1) A list of the hazardous constituents identified under rule 3745-54-93 of the Administrative Code;
  - (2) Concentration limits under rule 3745-54-94 of the Administrative Code for each of those hazardous constituents;
  - (3) The compliance point under rule 3745-54-95 of the Administrative Code; and
  - (4) The compliance period under rule 3745-54-96 of the Administrative Code.
- (B) The owner or operator must implement a corrective action program that prevents hazardous constituents from exceeding their respective concentration limits at the compliance point by removing the hazardous waste constituents or treating them in place. The permit will specify the specific measures that will be taken.
- (C) The owner or operator must begin corrective action within a reasonable time period after the ground water protection standard is exceeded. The permit will specify that time period. If a facility permit includes a corrective action program in addition to a compliance monitoring program, the permit will specify when the corrective action will begin and such a requirement will operate in lieu of paragraph (I)(2) of rule 3745-54-99 of the Administrative Code.
- (D) In conjunction with a corrective action program, the owner or operator must establish and implement a ground water monitoring program to demonstrate the effectiveness of the corrective action program. Such a monitoring program may be based on the requirements for a compliance monitoring program under rule 3745-54-99 of the Administrative Code and must be as effective as that program in determining compliance with the ground water protection standard under rule 3745-54-92 of the Administrative Code and in determining the success of a corrective action program under paragraph (E) of this rule, where appropriate.
- (E) In addition to the other requirements of this rule, the owner or operator must conduct a corrective action program to remove or treat in place any hazardous constituents

under rule 3745-54-93 of the Administrative Code that exceed concentration limits under rule 3745-54-94 of the Administrative Code in ground water:

- (1) Between the compliance point under rule 3745-54-95 of the Administrative Code and the downgradient property boundary; and
  - (2) Beyond the facility boundary, where necessary to protect human health and the environment, unless the owner or operator demonstrates to the satisfaction of the director that, despite the owner's or operator's best efforts, the owner or operator was unable to obtain the necessary permission to undertake such action. The owner/operator is not relieved of all responsibility to clean up a release that has migrated beyond the facility boundary where off-site access is denied. On-site measures to address such releases will be determined on a case-by-case basis.
  - (3) Corrective action measures under paragraphs (E) to (E)(4) of this rule must be initiated and completed within a reasonable period of time considering the extent of contamination.
  - (4) Corrective action measures under paragraphs (E) to (E)(4) of this rule may be terminated once the concentration of hazardous constituents under rule 3745-54-93 of the Administrative Code is reduced to levels below their respective concentration limits under rule 3745-54-94 of the Administrative Code.
- (F) The owner or operator must continue corrective action measures during the compliance period to the extent necessary to ensure that the ground water protection standard is not exceeded. If the owner or operator is conducting corrective action at the end of the compliance period, he must continue that corrective action for as long as necessary to achieve compliance with the ground water protection standard. The owner or operator may terminate corrective action measures taken beyond the period equal to the active life of the waste management area (including the closure period) if he can demonstrate, based on data from the ground water monitoring program under paragraph (D) of this rule, that the ground water protection standard of rule 3745-54-92 of the Administrative Code has not been exceeded for a period of three consecutive years.
- (G) The owner or operator must report in writing to the director on the effectiveness of the corrective action program. The owner or operator must submit these reports ~~semiannually~~ annually.
- (H) If the owner or operator determines that the corrective action program no longer satisfies the requirements of this rule, he must, within ninety days, submit an

application for a permit modification to make any appropriate changes to the program.

Effective: 09/05/2010

R.C. 119.032 review dates: 04/14/2010 and Exempt

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Certification

07/23/2010

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Date

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06/29/1990, 02/11/1992, 10/20/1998, 03/13/2002,  
12/07/2004

3745-54-101

**Corrective action for waste management units.**

- (A) The owner or operator of a facility seeking a permit for the treatment, storage, or disposal of hazardous waste must institute corrective action as necessary to protect human health and the environment for all releases of hazardous waste or constituents from any waste management unit at the facility, regardless of the time at which waste was placed in such unit.
- (B) Corrective action will be specified in the permit in accordance with this rule and with rules 3745-57-70 to 3745-57-75 of the Administrative Code. The permit will contain schedules of compliance for such corrective action (where such corrective action cannot be completed prior to the issuance of the permit) and assurances of financial responsibility for completing such corrective action.
- (C) The owner or operator must implement corrective actions beyond the facility property boundary, where necessary to protect human health and the environment, unless the owner or operator demonstrates to the satisfaction of the director that, despite the owner's or operator's best efforts, the owner or operator was unable to obtain the necessary permission to undertake such actions. The owner/operator is not relieved of all responsibility to clean up a release that has migrated beyond the facility boundary where off-site access is denied. On-site measures to address such releases will be determined on a case-by-case basis. Assurances of financial responsibility for such corrective action must be provided.
- (D) This rule does not apply to remediation waste management sites unless they are part of a facility subject to a permit for treating, storing, or disposing of hazardous wastes that are not remediation wastes.

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Certification

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