

RSFA Attachment A

Rule 3745-50-10 is amended as follows:		
Location	Change	Reason
(A)(4)	in Administrator: remove "his designee" and add "the administrator's authorized representative"	a
(A)(5)	in Ancillary equipment: remove "tank(s)" and add "tank"	a
(A)(6)	in Applicable law: -after "Recovery Act," add "42 U.S.C. 6921; the"	b, c
	-after "U.S.C. 2601" remove "et seq.," and add "; the"	c, d
	-after "U.S.C. 300f" remove "et seq.," and add a semicolon -after "U.S.C. 7401" remove "et seq."	
(A)(8)	in Authorized representative of a facility: after "superintendent" add a comma	c
(A)(9)	in Battery, 1 st sentence: -after "device" add a comma -after "cells" add a comma	c
(A)(10)	in Boiler: after "and having" add "either of"	e
(A)(10)(a)	in Boiler (a): add "The unit shall:"	f
(A)(10)(a)(i)	in Boiler (a)(i): -remove "The unit must have" and add "Have"	a, d, f
	-remove the ending " ; and" and add a period	c, g
(A)(10)(a)(ii)	in Boiler (a)(ii): -remove "The unit's" and add "Have a"	a, d, f
	-remove "section(s) must be" and add "sections that are"	a, d, f
	-[2 times] remove "section(s)" and add "section"	a
	-remove "must" and add "shall"	a, d
	-in last sentence, remove "they" and add "the units"	a
	-remove the ending " ; and" and add a period	c, g

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Rule 3745-50-10 is amended as follows:		
Location	Change	Reason
(A)(10)(a)(iii)	in Boiler (a)(iii): -remove "the unit must"	a, d, f
	-remove the ending "; and" and add a period	c, g
(A)(10)(a)(iv)	in Boiler (a)(iv): -remove "The unit must export" and add "Export"	a, d, f
	-remove the ending "; or" and add a period	c, g
(A)(10)(b)	in Boiler (b): -after "director" remove "has determined" and add a comma -after "basis" remove ", to be a boiler" and add "and" -after "Code" add ", has determined to be a boiler"	h
(A)(11) [new]	add Carbon dioxide stream	FR 01/03/2014
(A)(12)+	re-number as necessary to accommodate new definitions	--
(A)(13)	in CERCLA: -remove "et seq."	d
	-after "as amended" add "through the date specified in rule 3745-50-11 of the Administrative Code"	i
(A)(15)	in Clean Water Act: -[4 times] remove "et seq."	d
	-[2 times] after "as amended" add "through the date specified in rule 3745-50-11 of the Administrative Code"	i
(A)(20)	in Containment building: remove "the provisions of"	g
(A)(22)	in Corrosion expert: -remove "his" and add "that person's"	a
	-remove "must" and add "shall"	a, d

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Rule 3745-50-10 is amended as follows:		
Location	Change	Reason
(A)(23)	in CRT or cathode ray tube: -add quotation marks around the defined term "used, intact CRT" -add quotation marks around the defined term "used, broken CRT"	j
(A)(25) [new]	add "Reserved."	k
(A)(27)(a)	in CRT processing (a): remove the ending "; and" and add a period	c, g
(A)(27)(b)	in CRT processing (b): remove the ending "; and" and add a period	c, g
(A)(28)(c)	in Designated facility (c): remove "must" and add "is required to"	a, d
(A)(32)	in Director: remove "his designee" and add "the director's authorized representative"	a
(A)(37)	in Elementary neutralization unit: add "both" before the colon	e
(A)(37)(a)	in Elementary neutralization unit (a): -[2 times] remove "they" and add "the wastes" -after "they exhibit the" add "characteristic of" before "corrosivity" -after "corrosivity" remove "characteristic defined" and add "identified"	a
	-remove the ending "; and" and add a period	c, g
(A)(40)	in Existing hazardous waste management facility: -[2 times] remove "owner/operator" and add "owner or operator"	a
	-before the ending colon add "the owner or operator has obtained the federal, state, and local approvals or permits necessary to begin physical construction, and either of the following has occurred:"	f

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Rule 3745-50-10 is amended as follows:		
Location	Change	Reason
(A)(40)(a)-(b)(ii) [old]	in Existing hazardous waste management facility: remove paragraphs	f
(A)(40)(a) [new]	add new paragraph (re-located text)	f
(A)(40)(b) [new]	add new paragraph (re-located text)	f
(A)(42)	in Existing tank system: add “of the following has occurred” before the colon	e
(A)(42)(a)	in Existing tank system (a): remove the ending “; or” and add a period	c, g
(A)(44)	in Explosives or munitions emergency response: remove “and/or” and add “or”	a
(A)(46)(b)	in Facility (b), in the last sentence: -after “under” add “Section 3008(h) of” -after “RCRA” remove “Section 3008(h)”	d
(A)(46)(c)	in Facility (c): -after “Notwithstanding” remove “paragraph (A)(39)(b)” and add “subparagraph (b)” -after “of this” remove “rule” and add “definition”	b
(A)(48)	in Final closure: remove “the provisions in”	g
(A)(52)	at Gasification: remove all text and add “Reserved”	FR 04/08/2015 #
(A)(56)	in Hazardous waste: add quotation marks around the defined term "hazardous waste"	j
(A)(58)	in Hazardous waste management unit: in the last sentence, remove “they” and add “the containers”	a
(A)(59)	in Hazardous waste management rules: remove “set forth”	g
(A)(61)	in Incinerator: add “that either” before the colon	e
(A)(61)(a)	in Incinerator (a): remove the ending “; or” and add a period	c, g

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Rule **3745-50-10** is amended as follows:

Location	Change	Reason
(A)(61)(b)	in Incinerator (b): -add quotation marks around the defined term "infrared incinerator" -add quotation marks around the defined term "plasma arc incinerator"	j
	-after ‘ “plasma arc incinerator” ‘ add “in this rule”	a
(A)(62)	in Incompatible waste: at the end add “either” before the colon	e
(A)(62)(a)	in Incompatible waste (a): remove the ending “; or” and add a period	c, g
(A)(64)(a)	in Industrial furnace (a): remove the ending semicolon and add a period	c
(A)(64)(b)	in Industrial furnace (b): remove the ending semicolon and add a period	c
(A)(64)(c)	in Industrial furnace (c): remove the ending semicolon and add a period	c
(A)(64)(d)	in Industrial furnace (d): remove the ending semicolon and add a period	c
(A)(64)(e)	in Industrial furnace (e): remove the ending semicolon and add a period	c
(A)(64)(f)	in Industrial furnace (f): remove the ending semicolon and add a period	c
(A)(64)(g)	in Industrial furnace (g): -after “melting” add a comma -remove the ending semicolon and add a period	c
(A)(64)(h)	in Industrial furnace (h): remove the ending semicolon and add a period	c
(A)(64)(i)	in Industrial furnace (i): remove the ending semicolon and add a period	c
(A)(64)(j)	in Industrial furnace (j): remove the ending semicolon and add a period	c
(A)(64)(k)	in Industrial furnace (k): at the end remove “; and” and add a period	c, g

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Rule 3745-50-10 is amended as follows:		
Location	Change	Reason
(A)(64)(m)(i)	in Industrial furnace (m)(i): remove the ending semicolon and add a period	c
(A)(64)(m)(ii)	in Industrial furnace (m)(ii): remove the ending semicolon and add a period	c
(A)(64)(m)(iii)	in Industrial furnace (m)(iii): remove the ending semicolon and add a period	c
(A)(64)(m)(iv)	in Industrial furnace (m)(iv): remove the ending semicolon and add a period	c
(A)(64)(m)(v)	in Industrial furnace (m)(v): remove the ending “; and” and add a period	c, g
(A)(70)	in Installation inspector: remove “his” and add “that person’s”	a
(A)(77)	in Leak-detection system: remove “must” and add “shall”	a, d
(A)(88) [new]	add No free liquids	FR 07/31/2013
(A)(91)	in On-site: remove “he” and add “that person”	a
(A)(92)(a)	in Open burning (a): remove the ending comma and add a period	c
(A)(92)(b)	in Open burning (b): remove the ending “, and” and add a period	c, g
(A)(99)	in Personnel: remove “the requirements of”	g
(A)(100)	in Pesticide: add “is one of the following” before the colon	e
(A)(100)(a)	in Pesticide (a): -remove “Is a” and add “A”	a
	-after “under” add “Section 201(v) of “ before “the”	d *
	-after “(FFDCA)” remove “Section 201(w)”	
	-after “Drug” add a comma	c
	-remove “, or” and add a period	c, g

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Rule 3745-50-10 is amended as follows:		
Location	Change	Reason
(A)(100)(b)	in Pesticide (b): -remove "Is an" and add "An"	a
	-remove ", or" and add a period	c, g
(A)(100)(c)	in Pesticide (c): -remove "Is an" and add "An"	a
	-after "feed under" add "Section 201(w) of the" -after "FFDCA" remove "Section 201(x)"	d *
(A)(104)	in Publicly owned treatment works: -add quotation marks around the defined term "municipality"	j
	-in the bracketed phrase, after "defined" remove "by" and add "in" -in the last sentence, remove "they" and add "such sewers, pipes, or other conveyances"	a
(A)(108)	in Replacement unit: -remove the colon after "unit" [inside the quotes] -add a colon after ' unit' ' [outside the quotes]	c, d
(A)(108)(a)	in Replacement unit (a): add a colon after "unit"	c
(A)(108)(a)(i)	in Replacement unit (a)(i): remove the ending ", or" and add a period	c, g
(A)(110)	in Resource Conservation and Recovery Act: -after "as amended" add "through the date specified in rule 3745-50-11 of the Administrative Code"	i
	-remove "et seq" [keep the period]	d
(A)(117)	in Solid wastes: after "the same meaning as" remove "defined"	g
(A)(118) [new]	add Solvent-contaminated wipe	FR 07/31/2013

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Rule **3745-50-10** is amended as follows:

Location	Change	Reason
(A)(120)	in Staging pile: -add quotation marks around the defined term "remediation waste"	j
	-remove "must" and add "shall"	a, d
	-remove "the requirements of"	g
(A)(123)	in Sump: -add quotation marks around the defined term "tank"	j
	-after "tank" add "in this rule" -remove "troughs/trenches" and add "troughs or trenches" -remove "it" and add "such pit or reservoir"	a
	-remove "serves" and add "serve"	a, g
(A)(129)	in Thermostat: remove "the requirements of"	g
(A)(136)	in Treatability study: add "any of the following" before the colon	e
(A)(136)(a)	in Treatability study (a): remove the ending semicolon and add a period	c
(A)(136)(b)	in Treatability study (b): remove the ending semicolon and add a period	c
(A)(136)(c)	in Treatability study (c): remove the ending semicolon and add a period	c
(A)(136)(d)	in Treatability study (d): remove the ending "; or" and add a period	c, g

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Rule **3745-50-10** is amended as follows:

Location	Change	Reason
(A)(137)	in Treat or treatment: -after “or process” remove “, including neutralization,” -after “or biological” remove “character” and add “characteristics” -after “of any hazardous waste” add a semicolon and remove “so as” -after “neutralize the waste” remove the comma and add a semicolon, and remove “or so as” -after “from the waste” remove the comma and add a semicolon, and remove “or so as” -after “waste non-hazardous” remove the comma -after “less hazardous” remove the semicolon and add a comma -after “dispose of” remove the semicolon and add a comma -after “recovery,” remove “amenable for” -after “storage,” remove “amenable for” -after “treatment, or” remove “amenable for”	L
(A)(140)	in Underground source of drinking water: remove “an aquifer or its portion which” before the colon	f
(A)(140)(a)	in Underground source of drinking water (a): add “An aquifer or its portion which either:”	f
(A)(140)(a)(i)	in Underground source of drinking water (a)(i): remove the ending “; or” and add a period	c, g
(A)(140)(a)(ii)	in Underground source of drinking water (a)(ii): -after “code” remove the semicolon and add a comma -after “and” add “one of the following:”	c e
(A)(140)(a)(ii)(a)	in Underground source of drinking water (a)(ii)(a): remove the ending “; or” and add a period	c, g
(A)(140)(a)(ii)(b)	in Underground source of drinking water (a)(ii)(b): remove the ending “; and” and add a period	c, g
(A)(143)(a)	in Universal waste (a): remove the ending semicolon and add a period	c

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Rule 3745-50-10 is amended as follows:		
Location	Change	Reason
(A)(143)(b)	in Universal waste (b): remove the ending semicolon and add a period	c
(A)(143)(c)	in Universal waste (c): remove the ending semicolon and add a period	c
(A)(144)(a)	in Universal waste handler (a): after “means” add “either” before the colon	e
(A)(144)(a)(i)	in Universal waste handler (a)(i): -add quotation marks around the defined term "generator"	j
	-remove the ending “; or” and add a period	c, g
(A)(144)(b)	in Universal waste handler (b): after “mean” add “either” before the colon	e
(A)(144)(b)(i)	in Universal waste handler (b)(i): remove the ending “; or” and add a period	c, g
(A)(153)	in Waste: after "same meaning as" remove "defined"	g
(A)(154)	in Waste management unit: -after “unit at which” remove “solid waste, hazardous waste, infectious waste” and add ‘ ”solid wastes,” “hazardous waste,” “infectious wastes” ‘	j, m
	-add quotation marks around the defined term “construction and demolition debris” -add quotation marks around the defined term “industrial waste,”	j
	-after "other" remove “waste” and add “wastes”	m
	-add quotation marks around the defined term [as amended above] “other wastes”	j
	-after “Code)” remove “has” and add “have”	a
(A)(155)	in Wastewater treatment unit: add “does all of the following” before the colon	e
(A)(155)(a)	in Wastewater treatment unit (a): remove the ending “; and” and add a period	c, g

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Rule 3745-50-10 is amended as follows:		
Location	Change	Reason
(A)(155)(b)	in Wastewater treatment unit (b): -[3 times] add quotation marks around the defined term "hazardous waste"	j
	-[2 times] after "as defined" remove "by" and add "in"	a
	-remove the ending"; and" and add a period	c, g
(A)(159) [new]	add Wipe	FR 07/31/2013
(A)(160)	in Zone of engineering control: -remove "owner/operator" and add "owner or operator"	a
(B)	-remove "must" and add "shall"	a, d

- a Word choice correction.
- b Cross-reference correction.
- c Punctuation correction.
- d LSC requirement.
- e This amendment adds specificity to the rule.
- f This amendment is necessary to eliminate the occasion of a paragraph designation that contains no text.
- g Unnecessary text is removed.
- h This sentence is slightly re-written to improve its grammar and readability.

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Rule **3745-50-10** is amended as follows:

Location	Change	Reason
i	<p>This text is added to clarify that “as amended” refers to past amendments, not future/prospective amendments of the document that is being referenced. “As amended” should not be removed because the statute being referenced may have been amended after its initial promulgation (which is the standard statute notation used), and our intent is to include in that citation all the past amendments of that statute, as do the references to statute in the federal RCRA rules (to which the hazardous waste rules must be equivalent), and as does the Ohio Revised Code. Rule 3745-50-11 is the hazardous waste management program’s “Incorporated by reference” rule that establishes date-certain limitations on cross-referenced documents, and ensures that the hazardous waste rules are not referencing statute changes that may occur after the date in 3745-50-11.</p>	
j	<p>This punctuation correction (adding quotation marks around defined terms) is made in all hazardous waste rules, as they are amended, at locations of defined terms that are designated as such in the text.</p>	
k	<p>Place-holder.</p>	
L	<p>This amendment is designed to make the regulatory definition exactly the same as the statutory definition in ORC 3734.01(K).</p>	
m	<p>The singular words are removed and replaced by the plural words because in the statutory definitions referenced, the defined term is plural.</p>	
*	<p>This amendment was changed in response to a comment on the Interested Parties draft rule. The FFDCA removed a paragraph, resulting in the re-designation (re-lettering) of paragraphs in the document we cite here. The federal counterpart provision to this rule (40 CFR 260.10) has not yet been corrected for this error, but U.S. EPA is aware of it.</p>	
#	<p>This amendment was added pursuant to FR 4/08/2015, the federal rule that addresses the court vacatur of gasification and comparable fuels in 40 CFR 260.10. Since this FR is very recent, these amendments were not shown in this rule when it was available for review to Interested Parties as a draft rule.</p>	

This rule is submitted for 5-year review upon proposal. A new review date will be assigned.

3745-50-10

Definitions and computation of time.

(A) As used in the hazardous waste rules:

- (1) "Aboveground tank" means a device meeting the definition of "tank" in this rule and that is situated in such a way that the entire surface area of the tank is completely above the plane of the adjacent surrounding surface and the entire surface area of the tank (including the tank bottom) is able to be visually inspected.
- (2) "Active life of a facility" means the period from the initial receipt of hazardous waste at the facility until the director receives certification of final closure.
- (3) "Active portion" means that portion of a facility where treatment, storage, or disposal operations are being or have been conducted after April 15, 1981 and which is not a closed portion. (See also "closed portion" and "inactive portion.")
- (4) "Administrator" means the administrator of the U.S. EPA, or ~~his designee~~ the administrator's authorized representative.
- (5) "Ancillary equipment" means any device including, but not limited to, such devices as piping, fittings, flanges, valves, and pumps, that is used to distribute, meter, or control the flow of hazardous waste from its point of generation to a storage or treatment ~~tank(s)~~ tank, between hazardous waste storage and treatment tanks to a point of disposal on-site, or to a point of shipment for disposal off-site.
- (6) "Applicable law" means any applicable provisions of Chapters 3704., 3734., 3745., 6109., and 6111. of the Revised Code; the rules promulgated thereunder; orders of the director; the Resource Conservation and Recovery Act, 42 U.S.C. 6921; ~~the~~ Toxic Substances Control Act, 15 U.S.C. 2601 et seq.; ~~the~~ Safe Drinking Water Act, 42 U.S.C. 300f et seq.; ~~the~~ Clean Water Act, and the Clean Air Act, 42 U.S.C. 7401 et seq.; and the regulations of the administrator promulgated thereunder.
- (7) "Aquifer" means a geologic formation, group of formations, or part of a formation capable of yielding a significant amount of ground water to wells or springs.

- (8) "Authorized representative of a facility" means an individual responsible for the overall operation of a facility or an operational unit (i.e., part of a facility), e.g., the plant manager, superintendent, or person of equivalent responsibility.
- (9) "Battery" means a device, consisting of one or more electrically connected electrochemical cells, which is designed to receive, store, and deliver electric energy. An electrochemical cell is a system consisting of an anode, cathode, and an electrolyte, plus such connections (electrical and mechanical) as may be needed to allow the cell to deliver or receive electrical energy. The term battery also includes an intact, unbroken battery from which the electrolyte has been removed.
- (10) "Boiler" means an enclosed device using controlled flame combustion and having either of the following characteristics:
- (a) The unit shall:
- (i) ~~The unit must have~~Have physical provisions for recovering and exporting thermal energy in the form of steam, heated fluids, or heated gases; ~~and.~~
 - (ii) ~~The unit's~~Have a combustion chamber and primary energy recovery ~~section(s) must be~~sections that are of integral design. To be of integral design the combustion chamber and the primary energy recovery ~~section(s)~~section (such as waterwalls and superheaters) ~~must~~shall be physically formed into one manufactured or assembled unit. A unit in which the combustion chamber and the primary energy recovery ~~section(s)~~section are joined only by ducts or connections carrying flue gas is not integrally designed; however, secondary energy recovery equipment (such as economizers or air preheaters) need not be physically formed into the same unit as the combustion chamber and the primary energy recovery section. The following units are not precluded from being boilers solely because ~~they~~the units are not of integral design: process heaters (units that transfer energy directly to a process stream), and fluidized bed combustion units; ~~and.~~
 - (iii) While in operation, ~~the unit must~~ maintain a thermal energy recovery efficiency of at least sixty per cent, calculated in terms of the recovered energy compared with the thermal value of the fuel; ~~and.~~

- (iv) ~~The unit must export~~ Export and utilize at least seventy-five per cent of the recovered energy, calculated on an annual basis. In this calculation, no credit shall be given for recovered heat used internally in the same unit (examples of internal use are the preheating of fuel or combustion air, and the driving of induced or forced draft fans or feed-water pumps); ~~or.~~
- (b) The unit is one which the director ~~has determined,~~ on a case-by-case basis, ~~to be a boiler~~ and after considering the standards in rule 3745-50-25 of the Administrative Code, has determined to be a boiler.
- (11) "Carbon dioxide stream" means carbon dioxide that has been captured from an emissions source (e.g., power plant), plus incidental associated substances derived from the source materials and the capture process, and any substances added to the stream to enable or improve the injection process.
- (12) "Carbon regeneration unit" means any enclosed thermal treatment device used to regenerate spent activated carbon.
- (13) "CERCLA" means the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. 9601 et seq. as amended through the date specified in rule 3745-50-11 of the Administrative Code.
- (14) "Certification" means a statement of professional opinion based upon knowledge and belief.
- (15) "Clean Water Act" or "Clean Water Act of 1977" means the Federal Water Pollution Control Act Amendments of 1972, 86 Stat. 886 et seq., 33 U.S.C. 1251 et seq., as amended through the date specified in rule 3745-50-11 of the Administrative Code by the Clean Water Act of 1977, 91 Stat. 1566 et seq., 33 U.S.C. 1251 et seq., as amended through the date specified in rule 3745-50-11 of the Administrative Code.
- (16) "Closed portion" means that portion of a facility which an owner or operator has closed in accordance with the approved facility closure plan and all applicable closure requirements in the hazardous waste rules. (See also "active portion" and "inactive portion.")
- (17) "Component" means either the tank or ancillary equipment of a tank system.

- ~~(17)~~(18) "Confined aquifer" means an aquifer bounded above and below by impermeable beds or by beds of distinctly lower permeability than that of the aquifer itself; an aquifer containing confined ground water.
- ~~(18)~~(19) "Container" means any portable device in which a material is stored, transported, treated, disposed of, or otherwise handled.
- ~~(19)~~(20) "Containment building" means a hazardous waste management unit that is used to store or treat hazardous waste under ~~the provisions of~~ rules 3745-205-100 to 3745-205-102 or 3745-256-100 to 3745-256-102 of the Administrative Code.
- ~~(20)~~(21) "Contingency plan" means a document setting out an organized, planned, and coordinated course of action to be followed in case of a fire, explosion, or release of hazardous waste or hazardous waste constituents which could threaten human health or the environment.
- ~~(21)~~(22) "Corrosion expert" means a person who, by reason of ~~his~~that person's knowledge of the physical sciences and the principles of engineering and mathematics, acquired by a professional education and related practical experience, is qualified to engage in the practice of corrosion control on buried or submerged metal piping systems and metal tanks. Such a person ~~must~~shall be certified as being qualified by the "National Association of Corrosion Engineers (NACE)" or be a professional engineer who has certification or licensing that includes education and experience in corrosion control on buried or submerged metal piping systems and metal tanks.
- ~~(22)~~(23) "CRT" or "cathode ray tube" means a vacuum tube, composed primarily of glass, which is the visual or video display component of an electronic device. A "used, intact CRT" means a CRT whose vacuum has not been released. A "used, broken CRT" means glass removed from its housing or casing whose vacuum has been released. Used CRTs are "spent materials" as defined in rule 3745-51-01 of the Administrative Code.
- ~~(23)~~(24) "CRT collector" means a person who receives used, intact CRTs for recycling, repair, resale, or donation.
- (25) Reserved.
- ~~(24)~~(26) "CRT glass manufacturer" means an operation or part of an operation that uses a furnace to manufacture CRT glass.

~~(25)~~(27) "CRT processing" means conducting all of the following activities:

- (a) Receiving broken or intact CRTs;~~and,~~
- (b) Intentionally breaking intact CRTs or further breaking or separating broken CRTs;~~and,~~
- (c) Sorting or otherwise managing glass removed from CRT monitors.

~~(26)~~(28) "Designated facility" means:

- (a) A hazardous waste treatment, storage, or disposal facility which:
 - (i) Has received an Ohio hazardous waste permit or is deemed to have a permit by rule, or
 - (ii) In another state, has attained interim status or is operating under a permit or license issued in accordance with the Resource Conservation and Recovery Act, or
 - (iii) Is regulated under paragraph (C)(2) of rule 3745-51-06 or rule 3745-266-70 of the Administrative Code, and
 - (iv) Has been designated on the manifest by the generator pursuant to rule 3745-52-20 of the Administrative Code.
- (b) A generator site designated on the manifest to receive its waste as a return shipment from a facility that has rejected the waste in accordance with paragraph (F) of rule 3745-54-72 or paragraph (F) of rule 3745-65-72 of the Administrative Code.
- (c) If a waste is destined to a facility in an authorized state which has not yet obtained authorization to regulate that particular waste as hazardous, then the designated facility ~~must~~is required to be a facility allowed by the receiving state to accept such waste.

~~(27)~~(29) "Destination facility" means a facility that treats, disposes of, or recycles a particular category of universal waste, except those management activities described in paragraphs (A) and (C) of rule 3745-273-13 and paragraphs (A) and (C) of rule 3745-273-33 of the Administrative Code. A facility at which a particular category of universal waste is only accumulated, is not a destination facility for purposes of managing that category of universal waste.

~~(28)~~(30) "Dike" means an embankment or ridge of either natural or man-made materials used to prevent the movement of liquids, sludges, solids, or other materials.

~~(29)~~(31) "Dioxins and furans" or "(D/F)" means tetra-, penta-, hexa-, hepta-, and octa-chlorinated dibenzo dioxins and furans.

~~(30)~~(32) "Director" means the director of Ohio EPA, or ~~his designee~~ the director's authorized representative.

~~(31)~~(33) "Discharge" or "hazardous waste discharge" means the accidental or intentional spilling, leaking, pumping, pouring, emitting, emptying, or dumping of hazardous waste into or on any land or water.

~~(32)~~(34) "Disposal" means the discharge, deposit, injection, dumping, spilling, leaking, or placing of any hazardous waste into or on any land or water or air so that such hazardous waste or any constituent thereof may enter the environment or be emitted into the air or discharged into any waters, including ground waters, except where such activity constitutes "storage" as defined in this rule or "treatment" as defined in this rule.

~~(33)~~(35) "Disposal facility" or "hazardous waste disposal facility" means a facility or part of a facility at which hazardous waste is intentionally placed into or on any land or water or air, and at which waste will remain after closure. The term "disposal facility" does not include a corrective action management unit into which remediation wastes are placed.

~~(34)~~(36) "Drip pad" is an engineered structure consisting of a curbed, free-draining base, constructed of non-earthen materials, and designed to convey preservative kick-back or drippage from treated wood, precipitation, and surface water run-on to an associated collection system at wood preserving plants.

~~(35)~~(37) "Elementary neutralization unit" means a device which both:

(a) Is used for neutralizing wastes that are hazardous only because ~~they~~the wastes exhibit the characteristic of corrosivity ~~characteristic defined~~identified in rule 3745-51-22 of the Administrative Code, or ~~they~~the wastes are listed as a hazardous waste in rules 3745-51-30 to 3745-51-35 of the Administrative Code only for this reason; ~~and,~~

(b) Meets the definition of "tank," "tank system," "container," "transport vehicle," or "vessel" in this rule.

~~(36)~~(38) "EPA hazardous waste number" means the number assigned by U.S. EPA to each hazardous waste listed in rules 3745-51-30 to 3745-51-35 of the Administrative Code and to each characteristic identified in rules 3745-51-20 to 3745-51-24 of the Administrative Code.

~~(37)~~(39) "Equivalent method" means any testing or analytical method approved by the administrator under 40 CFR 260.20 and 40 CFR 260.21.

~~(38)~~(40) "Existing hazardous waste management facility" or "existing facility" or "in existence" means a facility which was in operation or for which construction commenced on or before the effective date of statutory or regulatory changes under Chapter 3734. of the Revised Code which make the ~~owner/operator~~owner or operator of the facility subject to hazardous waste permitting requirements. The ~~owner/operator~~owner or operator has commenced construction of the facility if the owner or operator has obtained the federal, state, and local approvals or permits necessary to begin physical construction, and either of the following has occurred:

~~(a) The owner or operator has obtained the federal state, and local approvals or permits necessary to begin physical construction; and either~~

~~(b)~~

~~(i) A continuous, on-site, physical construction program has begun; or~~

~~(ii) The owner or operator has entered into contractual obligations which cannot be cancelled or modified without substantial loss for physical construction of the facility to be completed within a reasonable time.~~

(a) A continuous, on-site, physical construction program has begun.

(b) The owner or operator has entered into contractual obligations- which cannot be cancelled or modified without substantial loss- for physical construction of the facility to be completed within a reasonable time.

~~(39)~~(41) "Existing portion" means that waste management unit into which wastes have been placed prior to final administrative disposition of the permit pursuant to the "Part B" permit requirements.

~~(40)~~(42) "Existing tank system" or "existing component" means a tank system or component that is used for the storage or treatment of hazardous waste and that is in operation, or for which installation has commenced on or prior to July 14, 1986. Installation will be considered to have commenced if the owner or operator has obtained all federal, state, and local approvals or permits necessary to begin physical construction of the site or installation of the tank system and if either of the following has occurred:

(a) A continuous on-site physical construction or installation program has begun; ~~or~~.

(b) The owner or operator has entered into contractual obligations, which cannot be cancelled or modified without substantial loss, for physical construction of the site or installation of the tank system to be completed within a reasonable time.

~~(41)~~(43) "Explosives or munitions emergency" means a situation involving the suspected or detected presence of unexploded ordnance, damaged or deteriorated explosives or munitions, an improvised explosive device (IED), other potentially explosive material or device, or other potentially harmful military chemical munitions or device, that creates an actual or potential imminent threat to human health, including safety, or the environment, including property, as determined by an explosives or munitions emergency response specialist. Such situations may require immediate and expeditious action by an explosives or munitions emergency response specialist to control, mitigate, or eliminate the threat.

~~(42)~~(44) "Explosives or munitions emergency response" means all immediate response activities by an explosives and munitions emergency response specialist to control, mitigate, or eliminate the actual or potential threat encountered during an explosives or munitions emergency. An explosives or munitions emergency response may include in-place render-safe procedures, treatment, or destruction of the explosives or munitions, ~~and/or~~ transporting those items to another location to be rendered safe, treated, or destroyed. Any reasonable delay in the completion of an explosives or munitions emergency response caused by a necessary, unforeseen, or uncontrollable circumstance will not terminate the explosives or munitions emergency. Explosives and munitions emergency responses can occur on either public or private lands and are not limited to responses at hazardous waste facilities.

~~(43)~~(45) "Explosives or munitions emergency response specialist" means an individual trained in chemical or conventional munitions or explosives handling, transportation, render-safe procedures, or destruction techniques. "Explosives or munitions emergency response specialists" include department of defense (DOD) emergency explosive ordnance disposal (EOD), technical escort unit (TEU), and DOD-certified civilian or contractor personnel; and other federal, state, or local government, or civilian personnel similarly trained in explosives or munitions emergency responses.

~~(44)~~(46) "Facility" or "hazardous waste facility" means:

- (a) All contiguous land, and structures, other appurtenances, and improvements on the land, used for treating, storing, or disposing of hazardous waste. A facility may consist of several treatment, storage, or disposal operational units (e.g., one or more landfills, surface impoundments, or combinations of them).
- (b) For the purpose of implementing corrective action under rule 3745-54-101 of the Administrative Code, all contiguous property under the control of the owner or operator seeking a permit under the hazardous waste rules. This definition also applies to facilities implementing corrective action under Section 3008(h) of RCRA ~~Section 3008(h)~~ or section 3734.20 of the Revised Code.
- (c) Notwithstanding ~~paragraph (A)(39)(b)~~ subparagraph (b) of this ~~rule definition~~, a remediation waste management site is not a facility that is subject to rule 3745-54-101 of the Administrative Code, but is subject to corrective action requirements if the site is located within such a facility.

~~(45)~~(47) "Federal agency" means any department, agency, or other instrumentality of the federal government, any independent agency or establishment of the federal government including any government corporation, and the government printing office.

~~(46)~~(48) "Final closure" means the closure of all hazardous waste management units at the facility in accordance with all applicable closure requirements in the hazardous waste rules so that hazardous waste management activities under Chapters 3745-54 to 3745-57, 3745-65 to 3745-69, 3745-205, and 3745-256 of the Administrative Code are no longer conducted at the facility unless subject to ~~the provisions in~~ rule 3745-52-34 of the Administrative Code.

- ~~(47)~~(49) "Food-chain crops" means tobacco, crops grown for human consumption, and crops grown for feed for animals whose products are consumed by humans.
- ~~(48)~~(50) "Freeboard" means the vertical distance between the top of a tank or surface impoundment dike, and the surface of the waste contained therein.
- ~~(49)~~(51) "Free liquids" means liquids which readily separate from the solid portion of a waste under ambient temperature and pressure.
- ~~(50)~~(52) "~~Gasification.~~" ~~For the purpose of complying with paragraph (A)(12)(a) of rule 3745-51-04 of the Administrative Code, gasification is a process, conducted in an enclosed device or system, designed and operated to process petroleum feedstock, including oil-bearing hazardous secondary materials through a series of highly controlled steps utilizing thermal decomposition, limited oxidation, and gas cleaning to yield a synthesis gas composed primarily of hydrogen and carbon monoxide gas~~Reserved.
- ~~(51)~~(53) "Generator" means any person, by site, whose act or process produces hazardous waste identified or listed in Chapter 3745-51 of the Administrative Code or whose act first causes a hazardous waste to become subject to the hazardous waste rules.
- ~~(52)~~(54) "Ground water" means water below the land surface in a zone of saturation.
- ~~(53)~~(55) "Hazardous constituents" means those constituents listed in the appendix to rule 3745-51-11 of the Administrative Code.
- ~~(54)~~(56) "Hazardous waste" means a "hazardous waste" as defined in rule 3745-51-03 of the Administrative Code.
- ~~(55)~~(57) "Hazardous waste constituent" means a constituent that caused the director or the administrator to list the hazardous waste in rules 3745-51-30 to 3745-51-35 of the Administrative Code, or a constituent listed in the table in rule 3745-51-24 of the Administrative Code.

~~(56)~~(58) "Hazardous waste management unit" means a contiguous area of land on or in which hazardous waste is placed, or the largest area in which there is significant likelihood of mixing hazardous waste constituents in the same area. Examples of hazardous waste management units include a surface impoundment, a waste pile, a land treatment area, a landfill cell, an incinerator, a tank and its associated piping and underlying containment system and a container storage area. A container alone does not constitute a unit; the unit includes containers and the land or pad upon which ~~they~~the containers are placed.

~~(57)~~(59) "Hazardous waste rules" means the rules ~~set forth~~ in Chapters 3745-50, 3745-51, 3745-52, 3745-53, 3745-54, 3745-55, 3745-56, 3745-57, 3745-65, 3745-66, 3745-67, 3745-68, 3745-69, 3745-205, 3745-256, 3745-266, 3745-270, 3745-273, and 3745-279 of the Administrative Code.

~~(58)~~(60) "Inactive portion" means that portion of a facility which is not operated after April 15, 1981. (See also "active portion" and "closed portion.")

~~(59)~~(61) "Incinerator" means any enclosed device that either:

- (a) Uses controlled flame combustion and neither meets the criteria for classification as a boiler, sludge dryer, or carbon regeneration unit, nor is listed as an industrial furnace;~~or,~~
- (b) Meets the definition of "infrared incinerator" or "plasma arc incinerator" in this rule.

~~(60)~~(62) "Incompatible waste" means a hazardous waste which is unsuitable for either:

- (a) Placement in a particular device or facility because it may cause corrosion or decay of containment materials (e.g., container inner liners or tank walls);~~or,~~
- (b) Commingling with another waste or material under uncontrolled conditions because the commingling may produce heat or pressure, fire or explosion, violent reaction, toxic dusts, mists, fumes, or gases, or flammable fumes or gases. (See the appendix to rule 3745-55-99 and the appendix to rule 3745-66-99 of the Administrative Code for examples.)

~~(61)~~(63) "Individual generation site" means the contiguous site at or on which one or more hazardous wastes are generated. An individual generation site, such as a large manufacturing plant, may have one or more sources of hazardous waste but is considered a single or individual generation site if the site or property is contiguous.

~~(62)~~(64) "Industrial furnace" means any of the following enclosed devices that are integral components of manufacturing processes and that use thermal treatment to accomplish recovery of materials or energy:

- (a) Cement kilns;
- (b) Lime kilns;
- (c) Aggregate kilns;
- (d) Phosphate kilns;
- (e) Coke ovens;
- (f) Blast furnaces;
- (g) Smelting, melting, and refining furnaces (including pyrometallurgical devices such as cupolas, reverberator furnaces, sintering machine, roasters, and foundry furnaces);
- (h) Titanium dioxide chloride process oxidation reactors;
- (i) Methane reforming furnaces;
- (j) Pulping liquor recovery furnaces;
- (k) Combustion devices used in the recovery of sulfur values from spent sulfuric acid; ~~and~~

- (l) Halogen acid furnaces (HAFs) for the production of acid from halogenated hazardous waste generated by chemical production facilities where the furnace is located on the site of a chemical production facility, the acid product has a halogen acid content of at least three per cent, the acid product is used in a manufacturing process, and, except for hazardous waste burned as fuel, hazardous waste fed to the furnace has a minimum halogen content of twenty per cent as-generated.
 - (m) Such other devices as the administrator may, after notice and comment, add to this list on the basis of one or more of the following factors:
 - (i) The design and use of the device primarily to accomplish recovery of material products;
 - (ii) The use of the device to burn or reduce raw materials to make a material product;
 - (iii) The use of the device to burn or reduce secondary materials as effective substitutes for raw materials in processes using raw materials as principal feedstocks;
 - (iv) The use of the device to burn or reduce secondary materials as ingredients in an industrial process to make a material product;
 - (v) The use of the device in common industrial practice to produce a material product; ~~and~~
 - (vi) Other factors as appropriate.
- ~~(63)~~(65) "Infrared incinerator" means any enclosed device that uses electric powered resistance heaters as a source of radiant heat followed by an afterburner using controlled flame combustion and which is not listed as an industrial furnace.
- ~~(64)~~(66) "Inground tank" means a device meeting the definition of "tank" in this rule, whereby a portion of a tank wall is situated to any degree within the ground, thereby preventing visual inspection of that external surface area of the tank that is in the ground.
- ~~(65)~~(67) "In operation" refers to a facility which is treating, storing, or disposing of hazardous waste.

~~(66)~~(68) "Injection well" means a well into which fluids are injected. (See also "underground injection.")

~~(67)~~(69) "Inner liner" means a continuous layer of material placed inside a tank or container which protects the construction materials of the tank or container from the contained waste or reagents used to treat the waste.

~~(68)~~(70) "Installation inspector" means a person who, by reason of ~~his~~that person's knowledge of the physical sciences and the principles of engineering, acquired by a professional education and related practical experience, is qualified to supervise the installation of tank systems.

~~(69)~~(71) "International shipment" means the transportation of hazardous waste into or out of the jurisdiction of the United States.

~~(70)~~(72) "Lamp" or "universal waste lamp" means the bulb or tube portion of an electric lighting device. A lamp is specifically designed to produce radiant energy, most often in the ultraviolet, visible, and infra-red regions of the electromagnetic spectrum. Examples of common universal waste electric lamps include, but are not limited to, fluorescent, high intensity discharge, neon, mercury vapor, high pressure sodium, and metal halide lamps. Lamps that have been used and are being discarded are "spent materials" as defined in rule 3745-51-01 of the Administrative Code.

~~(71)~~(73) "Landfill" means a disposal facility or part of a facility where hazardous waste is placed in or on land and which is not a pile, a land treatment facility, a surface impoundment, an underground injection well, a salt dome formation, a salt bed formation, an underground mine, a cave, or a corrective action management unit.

~~(72)~~(74) "Landfill cell" means a discrete volume of a hazardous waste landfill which uses a liner to provide isolation of wastes from adjacent cells or wastes. Examples of landfill cells include, but are not limited to, trenches and pits.

~~(73)~~(75) "Land treatment facility" means a facility or part of a facility at which hazardous waste is applied onto or incorporated into the soil surface; such facilities are disposal facilities if the waste will remain after closure.

~~(74)~~(76) "Leachate" means any liquid, including any suspended components in the liquid, that has percolated through or drained from hazardous waste.

- ~~(75)~~(77) "Leak-detection system" means a system capable of detecting the failure of either the primary or secondary containment structure or the presence of a release of hazardous waste or accumulated liquid in the secondary containment structure. Such a system ~~must~~shall employ operational controls (e.g., daily visual inspections for releases into the secondary containment system of aboveground tanks) or consist of an interstitial monitoring device designed to detect continuously and automatically the failure of the primary or secondary containment structure or the presence of a release of hazardous waste into the secondary containment structure.
- ~~(76)~~(78) "Liner" means a continuous layer of natural or man-made materials, beneath or on the sides of a surface impoundment, landfill, or landfill cell, which restricts the downward or lateral escape of hazardous waste, hazardous waste constituents, or leachate.
- ~~(77)~~(79) "Management" or "hazardous waste management" means the systematic control of the collection, source separation, storage, transportation, processing, treatment, recovery, and disposal of hazardous waste.
- ~~(78)~~(80) "Manifest" means the shipping document U.S. EPA form 8700-22 and, if necessary, U.S. EPA form 8700-22A, originated and signed by the generator or offeror which contains the information required by Chapter 3745-52 of the Administrative Code.
- ~~(79)~~(81) "Manifest tracking number" means the alphanumeric identification number (i.e., a unique three letter suffix preceded by nine numerical digits), which is pre-printed in item 4 of the manifest by a registered source.
- ~~(80)~~(82) "Mercury-containing equipment" means a device or part of a device (including thermostats, but excluding batteries and lamps) that contains elemental mercury integral to its function. Used mercury-containing equipment that is taken out of service is a "spent material" as defined in rule 3745-51-01 of the Administrative Code.
- ~~(81)~~(83) "Military munitions" means all ammunition products and components produced or used by or for the U.S. department of defense (DOD) or the U.S. armed services for national defense and security, including military munitions under the control of the department of defense, the U.S. coast guard, the U.S. department of energy (DOE), and national guard personnel.

- (a) The term "military munitions" includes: confined gaseous, liquid, and solid propellants, explosives, pyrotechnics, chemical and riot control agents, smokes, and incendiaries used by DOD components, including bulk explosives and chemical warfare agents, chemical munitions, rockets, guided and ballistic missiles, bombs, warheads, mortar rounds, artillery ammunition, small arms ammunition, grenades, mines, torpedoes, depth charges, cluster munitions and dispensers, demolition charges, and devices and components thereof.
- (b) The term "military munitions" does not include: wholly inert items, improvised explosive devices, and nuclear weapons, nuclear devices, and nuclear components thereof. However, the term does include non-nuclear components of nuclear devices, managed under DOE's nuclear weapons program after all required sanitization operations under the Atomic Energy Act of 1954 have been completed.

~~(82)~~(84) "Mining overburden returned to the mine site" means any material overlying an economic mineral deposit which is removed to gain access to that deposit and is then used for reclamation of a surface mine.

~~(83)~~(85) "Miscellaneous unit" means a hazardous waste management unit where hazardous waste is treated, stored, or disposed of and that is not a container, tank, surface impoundment, pile, land treatment unit, landfill, incinerator, boiler, industrial furnace, underground injection well with appropriate technical standards under Chapter 3745-34 of the Administrative Code, corrective action management unit, containment building, or unit eligible for a research, development, and demonstration permit under 40 CFR 270.65, or staging pile.

~~(84)~~(86) "Movement" means that hazardous waste transported to a facility in an individual vehicle.

~~(85)~~(87) "New tank system" or "new tank component" means a tank system or component that will be used for the storage or treatment of hazardous waste and for which installation has commenced after July 14, 1986; except, however, for purposes of paragraph (G)(2) of rule 3745-55-93 and paragraph (G)(2) of rule 3745-66-93 of the Administrative Code, a new tank system is one for which construction commences after July 14, 1986. (See also "existing tank system.")

(88) "No free liquids," as used in paragraphs (A)(26) and (B)(18) of rule 3745-51-04 of the Administrative Code, means that "solvent-contaminated wipes" as defined in this rule may not contain free liquids as determined by method 9095B ("Paint Filter Liquids Test"), included in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" U.S. EPA publication SW-846, and that there is no free liquid in the container holding the "wipes" as defined in this rule.

~~(86)~~(89) "Ohio EPA" means the Ohio environmental protection agency.

~~(87)~~(90) "On ground tank" means a device meeting the definition of "tank" in this rule and that is situated in such a way that the bottom of the tank is on the same level as the adjacent surrounding surface so that the external tank bottom cannot be visually inspected.

~~(88)~~(91) "On-site" means the same or geographically contiguous property which may be divided by public or private right-of-way, provided the entrance and exit between the properties is at a cross-roads intersection, and access is by crossing as opposed to going along the right-of-way. Non-contiguous properties owned by the same person but connected by a right-of-way which ~~hethat person~~ controls and to which the public does not have access are also considered on-site property.

~~(89)~~(92) "Open burning" means the combustion of any material without the following characteristics:

- (a) Control of combustion air to maintain adequate temperature for efficient combustion;
- (b) Containment of the combustion-reaction in an enclosed device to provide sufficient residence time and mixing for complete combustion, ~~and~~
- (c) Control of emission of the gaseous combustion products. (See also "incineration" and "thermal treatment.")

~~(90)~~(93) "Operator" means the person responsible for the overall operation of a facility.

~~(91)~~(94) "Owner" means the person who owns a facility or part of a facility.

~~(92)~~(95) "Partial closure" means the closure of a hazardous waste management unit in accordance with the applicable closure requirements of Chapters 3745-54 to 3745-57 and 3745-205 or 3745-65 to 3745-69 and 3745-256 of the Administrative Code at a facility that contains other active hazardous waste management units. For example, partial closure may include the closure of a tank (including its associated piping and underlying containment systems), landfill cell, surface impoundment, waste pile, or other hazardous waste management unit, while other units of the same facility continue to operate.

~~(93)~~(96) "Permit (as concerns hazardous waste)," "Ohio hazardous waste permit," or "hazardous waste permit" means a hazardous waste facility installation and operation permit issued under Chapter 3734. of the Revised Code and the rules adopted thereunder, or a renewal permit issued pursuant to section 3734.05 of the Revised Code.

~~(94)~~(97) "Permitted facility" means a facility that has possession of a current Ohio hazardous waste permit.

~~(95)~~(98) "Person" means an individual, trust, firm, joint stock company, federal agency, corporation (including a government corporation), partnership, association, the state of Ohio or any state of the United States, municipality, commission, political subdivision of the state, or any interstate body.

~~(96)~~(99) "Personnel" or "facility personnel" means all persons who work at, or oversee the operations of, a hazardous waste facility, and whose actions or failure to act may result in noncompliance with ~~the requirements of~~ Chapters 3745-54 to 3745-57, 3745-65 to 3745-69, 3745-205, and 3745-256 of the Administrative Code.

~~(97)~~(100) "Pesticide" means any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest, or intended for use as a plant regulator, defoliant, or desiccant, other than any article that is one of the following:

(a) ~~Is a~~An new animal drug under Section 201(v) of the Federal Food, Drug, and Cosmetic Act (FFDCA) ~~Section 201(w), or,~~

(b) ~~Is an~~An animal drug that has been determined by regulation of the secretary of health and human services not to be a new animal drug, ~~or,~~

(c) ~~Is an~~An animal feed under Section 201(w) of the FFDC Act ~~Section 201(x)~~ that bears or contains any substances described by any portion of the definition of "pesticide" in this rule.

~~(98)~~(101) "Pile" means any non-containerized accumulation of solid, nonflowing hazardous waste that is used for treatment or storage and that is not a containment building.

~~(99)~~(102) "Plasma arc incinerator" means any enclosed device using a high intensity electrical discharge or arc as a source of heat followed by an afterburner using controlled flame combustion and which is not listed as an industrial furnace.

~~(100)~~(103) "Point source" means any discernible, confined, and discrete conveyance, including, but is not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture.

~~(101)~~(104) "Publicly owned treatment works" or "POTW" means any device or system used in the treatment (including, but not limited to, recycling and reclamation of hazardous wastes) of municipal sewage or industrial wastes of a liquid nature which is owned by the state or a "municipality" [as defined ~~by~~in Section 502(4) of the Clean Water Act]. This definition includes sewers, pipes, or other conveyances only if ~~they~~such sewers, pipes, or other conveyances convey wastewater to a POTW providing treatment.

~~(102)~~(105) "Qualified ground water scientist" means a scientist or engineer who has received a baccalaureate or post-graduate degree in the natural sciences or engineering, and has sufficient training and experience in ground water hydrology and related fields as may be demonstrated by state registration, professional certifications, or completion of accredited university courses that enable that individual to make sound professional judgements regarding ground water monitoring and contaminant fate and transport.

~~(103)~~(106) "Remediation waste" means all solid and hazardous wastes, and all media (including ground water, surface water, soils, and sediments) and debris, that are managed for implementing cleanup.

~~(104)~~(107) "Remediation waste management site" means a facility where an owner or operator is or will be treating, storing, or disposing of hazardous remediation wastes. A remediation waste management site is not a facility that is subject to corrective action under rule 3745-54-101 of the Administrative Code, but is subject to corrective action requirements if the site is located in such a facility.

~~(105)~~(108) "Replacement unit:"

(a) Means a landfill, surface impoundment, or waste pile unit:

(i) From which all or substantially all of the waste is removed,~~and,~~

(ii) That is subsequently reused to treat, store, or dispose of hazardous waste.

(b) Does not apply to a unit from which waste is removed during closure, if the subsequent reuse solely involves the disposal of waste from that unit and other closing units or corrective action areas at the facility, in accordance with an approved closure plan or in accordance with a U.S. EPA or Ohio EPA approved corrective action.

~~(106)~~(109) "Representative sample" means a sample of a universe or whole (e.g., waste pile, lagoon, ground water) which can be expected to exhibit the average properties of the universe or whole.

~~(107)~~(110) "Resource Conservation and Recovery Act," or "RCRA" means the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, as amended through the date specified in rule 3745-50-11 of the Administrative Code, 42 U.S.C. 6901 ~~et seq.~~

~~(108)~~(111) "Run-off" means any rainwater, leachate, or other liquid that drains over land from any part of a facility.

~~(109)~~(112) "Run-on" means any rainwater, leachate, or other liquid that drains over land onto any part of a facility.

~~(110)~~(113) "Saturated zone" or "zone of saturation" means that part of the earth's crust in which all voids are filled with water.

- ~~(111)~~(114) "Sludge" means any solid, semisolid, or liquid waste generated from a municipal, commercial, or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility exclusive of the treated effluent from a wastewater treatment plant.
- ~~(112)~~(115) "Sludge dryer" means any enclosed thermal treatment device that is used to dehydrate sludge and that has a maximum total thermal input, excluding the heating value of the sludge itself, of two thousand five hundred British thermal units (Btu) per pound of sludge treated on a wet-weight basis.
- ~~(113)~~(116) "Small quantity generator" means a generator who generates less than one thousand kilograms of hazardous waste in a calendar month.
- ~~(114)~~(117) "Solid wastes" has the same meaning as ~~defined~~ in rule 3745-27-01 of the Administrative Code.
- (118) "Solvent-contaminated wipe" means:
- (a) A "wipe" as defined in this rule that, after use or after cleaning up a spill, has one or more of the following features:
- (i) Contains one or more of the F001 to F005 solvents listed in rule 3745-51-31 of the Administrative Code or the corresponding P-listed or U-listed solvents listed in rule 3745-51-33 of the Administrative Code.
- (ii) Exhibits a hazardous characteristic in rules 3745-51-20 to 3745-51-24 of the Administrative Code when that characteristic results from a solvent listed in Chapter 3745-51 of the Administrative Code.
- (iii) Exhibits only the hazardous waste characteristic of ignitability in rule 3745-51-21 of the Administrative Code due to the presence of one or more solvents that are not listed in Chapter 3745-51 of the Administrative Code.
- (b) Solvent-contaminated wipes that contain listed hazardous waste other than solvents, or exhibit the characteristic of toxicity, characteristic of corrosivity, or characteristic of reactivity due to contaminants other than solvents, are not eligible for the exclusions in paragraphs (A)(26) and (B)(18) of rule 3745-51-04 of the Administrative Code.

- (115)(119) "Sorbent" means a material that is used to soak up free liquids by either adsorption or absorption, or both. "Sorb" means to either adsorb or absorb, or both.
- (116)(120) "Staging pile" means an accumulation of solid, non-flowing "remediation waste" (as defined in this rule) that is not a containment building and that is used only during remedial operations for temporary storage at a facility. Staging piles ~~must~~shall be designated by the director according to ~~the requirements of rule 3745-57-74 of the Administrative Code.~~
- (117)(121) "State" means the state of Ohio.
- (118)(122) "Storage" means the holding of hazardous waste for a temporary period, at the end of which the hazardous waste is treated, disposed of, or stored elsewhere.
- (119)(123) "Sump" means any pit or reservoir that meets the definition of "tank" in this rule and those troughs/trenches ~~troughs or trenches~~ connected to ~~it~~such pit or reservoir that ~~serve~~serve to collect hazardous waste for transport to hazardous waste storage, treatment, or disposal facilities; except that as used in the landfill, surface impoundment, and waste pile rules, "sump" means any lined pit or reservoir that serves to collect liquids drained from a leachate collection and removal system or leak detection and removal system for subsequent removal from the system.
- (120)(124) "Surface impoundment" or "impoundment" means a facility or part of a facility which is a natural topographic depression, man-made excavation, or diked area formed primarily of earthen materials (although it may be lined with man-made materials), which is designed to hold an accumulation of liquid wastes or wastes containing free liquids, and which is not an injection well. Surface impoundments include, but are not limited to, holding, storage, settling, and aeration pits, ponds, and lagoons.
- (121)(125) "Tank" means a stationary device, designed to contain an accumulation of hazardous waste, which is constructed primarily of non-earthen materials (e.g., wood, concrete, steel, plastic) that provide structural support.
- (122)(126) "Tank system" means a hazardous waste storage or treatment tank and its associated ancillary equipment and containment system.

- ~~(123)~~(127) "TEQ" means toxicity equivalence, the international method of relating the toxicity of various dioxin/furan congeners to the toxicity of 2,3,7,8-tetrachlorodibenzo-p-dioxin.
- ~~(124)~~(128) "Thermal treatment" means the treatment of hazardous waste in a device which uses elevated temperatures as the primary means to change the chemical, physical, or biological character or composition of the hazardous waste. Thermal treatment processes include, but are not limited to, incineration, molten salt, pyrolysis, calcination, wet air oxidation, and microwave discharge. (See also "incinerator" and "open burning.")
- ~~(125)~~(129) "Thermostat" means a temperature control device that contains metallic mercury in an ampule attached to a bimetal sensing element, and mercury-containing ampules that have been removed from these temperature control devices in compliance with ~~the requirements of~~ paragraph (C)(2) of rule 3745-273-13 or paragraph (C)(2) of rule 3745-273-33 of the Administrative Code.
- ~~(126)~~(130) "Totally enclosed treatment facility" means a facility for the treatment of hazardous waste which is directly connected to an industrial production process and which is constructed and operated in a manner which prevents the release of any hazardous waste or any constituent thereof into the environment during treatment. An example of such facility is a pipe in which waste acid is neutralized.
- ~~(127)~~(131) "Trade secrets" means any formula, plan, pattern, process, tool, mechanism, compound, procedure, production data, or compilation of information which is not patented, which is known only to certain individuals within a commercial concern who are using it to fabricate, produce, or compound an article, trade, or service having commercial value, and which gives its user an opportunity to obtain a business advantage over competitors who do not know or use it.
- ~~(128)~~(132) "Transfer facility" means any transportation-related facility including loading docks, parking areas, storage areas and other similar areas where shipments of hazardous waste are held during the normal course of transportation.
- ~~(129)~~(133) "Transport vehicle" means a motor vehicle or rail car used for the transportation of cargo by any mode. Each cargo-carrying body (trailer, railroad freight car, etc.) is a separate transport vehicle.

~~(130)~~(134) "Transportation" means the movement of hazardous waste by air, rail, highway, or water.

~~(131)~~(135) "Transporter" means a person engaged in the off-site transportation of hazardous waste by air, rail, highway, or water.

~~(132)~~(136) "Treatability study" means a study in which a hazardous waste is subjected to a treatment process to determine any of the following:

- (a) Whether the waste is amenable to the treatment process;
- (b) What pretreatment (if any) is required;
- (c) The optimal process conditions needed to achieve the desired treatment;
- (d) The efficiency of a treatment process for a specific waste or wastes;
- (e) The characteristics and volumes of residuals from a particular treatment process.

Also included in this definition for the purpose of the exemptions in paragraphs (E) and (F) of rule 3745-51-04 of the Administrative Code, are liner compatibility, corrosion, and other material compatibility studies and toxicological and health effects studies. A "treatability study" is not a means to commercially treat or dispose of hazardous waste.

~~(133)~~(137) "Treat" or "treatment" means any method, technique, or process; ~~including neutralization,~~ designed to change the physical, chemical, or biological ~~character~~characteristics or composition of any hazardous waste; ~~so as to neutralize the waste;~~ ~~or so as to recover energy or material resources from the waste;~~ ~~or so as to render the waste non-hazardous;~~ or less hazardous; safer to transport, store, or dispose of; or amenable for recovery, ~~amenable for storage,~~ ~~amenable for further treatment,~~ or ~~amenable for disposal;~~ or to reduce the volume of the waste.

~~(134)~~(138) "Treatment zone" means a soil area of the unsaturated zone of a land treatment unit within which hazardous constituents are degraded, transformed, or immobilized.

~~(135)~~(139) "Underground injection" means the subsurface emplacement of fluids through a bored, drilled or driven well, or through a dug well, where the depth of the dug well is greater than the largest surface dimension. (See also "injection well.")

~~(136)~~(140) "Underground source of drinking water" means ~~an aquifer or its portion~~ which:

(a) An aquifer or its portion which either:

(i) Supplies any "public water system" as defined in Chapter 3745-81 of the Administrative Code; ~~or,~~

(ii) Contains a sufficient quantity of ground water to supply a "public water system" as defined in Chapter 3745-81 of the Administrative Code; and one of the following:

(a) Currently supplies drinking water for human consumption; ~~or,~~

(b) Contains fewer than ten thousand milligrams per liter total dissolved solids; ~~and,~~

(b) Is not an exempted aquifer.

~~(137)~~(141) "Underground tank" means a device meeting the definition of "tank" in this rule whose entire surface area is totally below the surface of and covered by the ground.

~~(138)~~(142) "Unfit for use tank system" means a tank system that has been determined through an integrity assessment or other inspection to be no longer capable of storing or treating hazardous waste without posing a threat of release of hazardous waste to the environment.

~~(139)~~(143) "Universal waste" means any of the following hazardous wastes that are managed under the universal waste requirements of Chapter 3745-273 of the Administrative Code:

(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.

~~(140)~~(144) "Universal waste handler":

(a) Means either:

(i) A "generator" (as defined in this rule) of universal waste;

(ii) The owner or operator of a facility, including all contiguous property, that receives universal waste from other universal waste handlers, accumulates universal waste, and sends universal waste to another universal waste handler, to a destination facility, or to a foreign destination.

(b) Does not mean either:

(i) A person who treats [except under the provisions of paragraph (A) or (C) of rule 3745-273-13 of the Administrative Code, or paragraph (A) or (C) of rule 3745-273-33 of the Administrative Code], disposes of, or recycles universal waste;

(ii) A person engaged in the off-site transportation of universal waste by air, rail, highway, or water, including a universal waste transfer facility.

~~(141)~~(145) "Universal waste transporter" means a person engaged in the off-site transportation of universal waste by air, rail, highway, or water.

~~(142)~~(146) "Unsaturated zone" or "zone of aeration" means the zone between the land surface and the water table.

~~(143)~~(147) "United States" means the fifty states, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, and the Commonwealth of Northern Mariana Islands.

(144)(148) "Uppermost aquifer" means the geologic formation nearest the natural ground surface that is an aquifer, as well as lower aquifers that are hydraulically interconnected with this aquifer within the facility's property boundary.

(145)(149) "U.S. EPA" means United States environmental protection agency.

(146)(150) "U.S. EPA identification number" means the number assigned by U.S. EPA or by Ohio EPA to each hazardous waste generator; hazardous waste transporter; hazardous waste treatment, storage, or disposal facility; large quantity universal waste handler; universal waste destination facility; used oil transporter; used oil processor; used oil marketer; and off- specification used oil burner.

(147)(151) "Used oil" means any oil that has been refined from crude oil, or any synthetic oil, that has been used and, as a result of that use, is contaminated by physical or chemical impurities.

(148)(152) "Vessel" includes every description of watercraft, used or capable of being used as a means of transportation on the water.

(149)(153) "Waste" has the same meaning as ~~defined~~ in rule 3745-51-02 of the Administrative Code.

(150)(154) "Waste management unit" means any discernible unit at which ~~solid waste, hazardous waste, infectious waste~~ "solid wastes," "hazardous waste," "infectious wastes," (as those terms are defined in Chapter 3734. of the Revised Code), "construction and demolition debris" (as defined in Chapter 3714. of the Revised Code), "industrial waste," or "other ~~wastewastes~~" (as those terms are defined in Chapter 6111. of the Revised Code) ~~has~~ have been placed at any time, irrespective of whether the unit was intended for the management of solid waste, hazardous waste, infectious waste, construction and demolition debris, industrial waste, or other waste. Such units include any area at a facility at which solid waste, hazardous waste, infectious waste, construction and demolition debris, industrial waste, or other waste has been routinely and systematically released.

(151)(155) "Wastewater treatment unit" means a device which does all of the following:

- (a) Is part of a wastewater treatment facility that is subject to regulation under either Section 402 or Section 307(b) of the Clean Water Act; ~~and~~

(b) Receives and treats or stores an influent wastewater that is a "hazardous waste" as defined in rule 3745-51-03 of the Administrative Code, or that generates and accumulates a wastewater treatment sludge that is a "hazardous waste" as defined ~~by~~in rule 3745-51-03 of the Administrative Code, or treats or stores a wastewater treatment sludge which is a "hazardous waste" as defined ~~by~~in rule 3745-51-03 of the Administrative Code; ~~and~~.

(c) Meets the definition of "tank" or "tank system" in this rule.

~~(152)~~(156) "Water (bulk shipment)" means the bulk transportation of hazardous waste which is loaded or carried on board a vessel without containers or labels.

~~(153)~~(157) "Well" means any shaft or pit dug or bored into the earth, generally of a cylindrical form, and often walled with bricks or tubing to prevent the earth from caving in.

~~(154)~~(158) "Well injection": see "underground injection."

(159) "Wipe" means a woven or non-woven shop towel, rag, pad, or swab made of wood pulp, fabric, cotton, polyester blends, or other material.

~~(155)~~(160) "Zone of engineering control" means an area under the control of the ~~owner/operator~~owner or operator that, upon detection of a hazardous waste release, can be readily cleaned up prior to the release of hazardous waste or hazardous constituents to ground water or surface water.

(B) As used in the hazardous waste rules, unless the context otherwise requires, the time within which an act is required to be performed ~~must~~shall be computed pursuant to section 1.14 of the Revised Code.

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

Effective:

Five Year Review (FYR) Dates: 07/01/2015

Certification

Date

Promulgated Under: 119.03
Statutory Authority: 3734.12
Rule Amplifies: 3734.12
Prior Effective Dates: 04/15/1981, 08/26/1981 (Emer.), 12/02/1981,
01/07/1983, 08/30/1984, 03/04/1985, 02/28/1986,
09/22/1986, 12/28/1987, 12/08/1988, 12/30/1989,
04/01/1990, 08/03/1990, 02/11/1992, 09/02/1997,
10/20/1998, 12/07/2000, 03/13/2002, 12/07/2004,
02/16/2009, 09/05/2010

RSFA Attachment A

Rule 3745-50-11 is amended as follows:		
Location	Change	Reason
intro	remove "2009" and add "2014"	a *
(A)	remove this website: http://www.access.gpo.gov/nara/cfr/cfr-retrieve.html and add this website: http://www.gpo.gov/fdsys/browse/collectionCfraction?collectionCode=CFR	b
	after "Mail Stop" remove the colon	c
	-after "Washington DC" add the closing quotation mark -remove the closing quotation mark that follows the zip code and period	d
	remove "2009" and add "2014"	a *
(A)(1)	remove the ending semicolon and add a period	c
(A)(2)	remove the ending semicolon and add a period	c
(A)(3)	remove the ending semicolon and add a period	c
(A)(4)	remove the ending semicolon and add a period	c
(A)(5)	remove the ending semicolon and add a period	c
(A)(6)	remove the ending semicolon and add a period	c
(A)(7)	remove the ending semicolon and add a period	c
(A)(8)	-remove "Part" and add "Parts" -after "51" remove the semicolon and add "and 52."	c, e
(A)(9)	remove the ending semicolon and add a period	c
(A)(10)	remove the ending semicolon and add a period	c
(A)(11)	remove "Parts 122 to" and add "Part"	e
	remove the ending semicolon and add a period	c
(A)(12)	remove the ending semicolon and add a period	c
(A)(13)	remove the ending semicolon and add a period	c
(A)(14)	remove the ending semicolon and add a period	c
(A)(15)	remove the ending semicolon and add a period	c
(A)(16)	remove "Parts 300 and" and add "Part"	e
	remove the ending semicolon and add a period	c
(A)(17)	remove the ending semicolon and add a period	c

RSFA Attachment A

Rule 3745-50-11 is amended as follows:		
Location	Change	Reason
(A)(18)	remove paragraph referencing 40 CFR 1510	f
(A)(19)	re-designate as (A)(18) to account for removed paragraph above	--
	-remove "40" and add "49" before "CFR" -remove "171 to 180" and add "100 to 185"	e
(B)	remove this website: http://www.gpoaccess.gov/uscode/index.html and add this website: http://www.gpo.gov/fdsys	b
	remove "2009" and add "2014"	a *
(B)(1)	after "as amended" remove the ending semicolon and add "through the date specified in paragraph (B) of this rule."	c, g
(B)(2)	remove "et seq" [keep the period]	h
	remove the ending semicolon	c
(B)(3)	remove the ending semicolon and add a period	c
(B)(4)	remove "et seq" [keep the period]	h
	remove the ending semicolon	c
(B)(5)	after "1980" add "(CERCLA)" before the comma	i
	remove "et seq" [keep the period]	h
	remove the ending semicolon	c
(B)(6)	-after "Drug" add a comma -remove the ending semicolon	c
	remove "et seq" [keep the period]	h
(B)(7)	remove "et seq" [keep the period]	h
	remove the ending semicolon	c
(B)(8)	remove "et seq" [keep the period]	h
	remove the ending semicolon	c
(B)(9)	remove "et seq" [keep the period]	h
	remove the ending semicolon	c

RSFA Attachment A

Rule 3745-50-11 is amended as follows:		
Location	Change	Reason
(B)(10)	-after "Protection" add a comma -after "Research" add a comma -remove the ending semicolon	c
	remove "et seq" [keep the period]	h
(B)(11)	after "Recovery Act of 1976" add "(RCRA) "	i
	remove "et seq" [keep the period]	h
	remove the ending semicolon	c
(B)(12)	remove "et seq" [keep the period]	h
	remove the ending semicolon	c
(B)(13)	remove "et seq" [keep the period]	h
	remove the ending semicolon	c
(B)(15) [new]	add "U.S. Constitution."	e
(C)(1)	remove the ending semicolon and add a period	c
(C)(2)	remove this website: http://web1.whs.osd.mil/iedhome/formsearch.htm and add this website: www.dtic.mil	b
	remove the ending colon and add a period	c
(C)(2)(a)	remove the ending semicolon and add a period	c
(C)(2)(b)	remove the ending semicolon and add a period	c
(C)(2)(c)	remove the ending semicolon and add a period	c
(C)(2)(d)	remove the ending semicolon and add a period	c
(C)(2)(e)	remove the ending semicolon and add a period	c
(C)(3)	remove the ending semicolon and add a period	c
(C)(4)	remove "federal register" [lower case] and add "Federal Register" [upper case]	J
	remove "federal register;" [lower case with semicolon] and add "Federal Register." [upper case with period]	c, J
	add 2 nd sentence: "Circular 570" is available on the treasury department's website at www.fms.treas.gov .	k

RSFA Attachment A

Rule 3745-50-11 is amended as follows:		
Location	Change	Reason
(C)(5)	remove "800/490-9180 or 513/489-8190" and add "800/490-9198"	L
	remove "They can" and add "These documents may"	m
	-after "Cincinnati, OH" add the closing quotation mark -remove the closing quotation mark after the zip code and period	d
	remove "at www.epa.gov/nepis/srch.htm" and add "via online ordering at www.epa.gov/nscep"	b
(C)(5)(a)	after "1981" remove ", available for purchase from the "National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161;" or for purchase from the "Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402," or call 202/512-1800;" and add a period	c, h
(C)(5)(b)	after "available" remove ' from "U.S. EPA, Research Triangle Park, NC 27711;" ' and add "at www.epa.gov/nscip."	b, c
(C)(5)(c)	after "Part 262" remove the semicolon and add "at www.epa.gov at the approved registered printers selection."	b, c
(C)(5)(d)	after "Part 262" remove the semicolon and add "at www.epa.gov at the approved registered printers selection."	b, c
(C)(5)(e)	remove this website [no spaces]: http://www.epa.gov/epaoswer/hazwaste/data/form8700/forms.htm and add this website [no spaces]: www.epa.gov/osw/inforesources/data/form8700/forms.htm	b
	remove the ending semicolon and add a period	c
(C)(5)(f)	remove ' "U.S. EPA OAQPS, ESED, Research Triangle Park, NC 27711;" ' and add this website: www.epa.gov/nscep	b, k
	remove the ending semicolon and add a period	c

RSFA Attachment A

Rule 3745-50-11 is amended as follows:		
Location	Change	Reason
(C)(5)(g)	-after "Park, NC" add the closing quotation mark -remove the closing quotation mark after the zip code and semicolon	d
	remove the ending semicolon and add a period	c
(C)(5)(h)	remove "U.S. EPA, Office of Solid Waste (5301W), Crystal Station Building, 2805 Jefferson Highway, Crystal City, VA 22202;" and add this website: www.epa.gov/nscep	b, k
	remove the ending semicolon and add a period	c
(C)(5)(i)	remove paragraph [duplicate of (C)(5)(h)]	h
(C)(5)(j) [old] and remaining (C)(5) subparagraphs	re-designate paragraphs as necessary to account for removed paragraph [re-designated subparagraphs are referenced below]	--
(C)(5)(i)	after "from" remove "U.S. EPA, Office of Air Quality Planning and Standards, Research Triangle Park, NC 27711;" and add " www.epa.gov/nscep ."	b, c
(C)(5)(j)	after "from" remove "U.S. EPA Technology Transfer, Cincinnati, OH 45268;" and add " www.epa.gov/nscep ."	b, c
(C)(5)(k)	remove "EPA 625/3-89/016;" and add "EPA-625/3-89/016, available from www.epa.gov/nscep ."	b, c
(C)(5)(l)	inside the closing quotation mark, remove the semicolon and add a period	c *
(C)(5)(m)	after "from" remove "U.S. EPA, Research Triangle Park, NC 27711;" and add " www.epa.gov/nscep ."	b, c
(C)(5)(n)	-remove "Revision A, " -after "and Gravimetry," add the closing quotation mark -remove "PB99-121949," and the quotation mark that follows the comma	FR 05/18/2012

RSFA Attachment A

Rule 3745-50-11 is amended as follows:		
Location	Change	Reason
(C)(5)(n), continued	remove ‘ for purchase from the “National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161;” or available for purchase from the “Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402;” or call 202/512-1800; ‘ and add “from www.epa.gov”	b, k
	remove the ending semicolon and add a colon	FR 05/18/2012
(C)(5)(n)(i) [new]	add new paragraph about document Revision A	FR 05/18/2012
(C)(5)(n)(ii) [new]	add new paragraph about document Revision B	FR 05/18/2012
(C)(5)(o)	remove ‘ “U.S. EPA ORD/EMSL, Research Triangle Park, NC 27711;” ‘ and add “www.epa.gov/nscep.”	b, c
(C)(5)(p)	remove ‘ “U.S. EPA ORD/EMSL, Research Triangle Park, NC 27711;” ‘ and add “www.epa.gov/nscep.”	b, c
(C)(5)(r) [old]	remove paragraph	h
(C)(5)(s) [old]	remove paragraph [re-designated subparagraphs are referenced below]	h
(C)(5)(q)	remove ‘ “U.S. EPA, Research Triangle Park, NC 27711;” ‘ and add “www.epa.gov.”	b, c
(C)(5)(u), [old] 1st paragraph,	remove paragraph	h
redesignated as (C)(5)(r) [new]	and add updated paragraph	b, d, k
(C)(5)(r), 2 nd paragraph	after “Springfield, VA” add a closing quotation mark (before the zip code)	c
	after “22161” remove “; or for purchase from the “Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402,” or call 202/512-1800. Third edition” but maintain the period after “edition” so that it appears after the zip code	c, k
(C)(5)(r)(i)	remove the ending semicolon and add a period	c
(C)(5)(r)(ii)	remove the ending semicolon and add a period	c
(C)(5)(r)(iii)	remove the ending semicolon and add a period	c
(C)(5)(r)(iv)	remove the ending semicolon and add a period	c

RSFA Attachment A

Rule 3745-50-11 is amended as follows:		
Location	Change	Reason
(C)(5)(r)(v)	inside the closing quotation mark, remove the semicolon and add a period	c *
(C)(5)(r)(vi)	remove "September" and add "July"	a
	inside the closing quotation mark, remove the semicolon and add a period	c *
(C)(5)(r)(vii)	inside the closing quotation mark, remove the semicolon and add a period	c *
(C)(5)(r)(viii)	inside the closing quotation mark, remove the semicolon and add a period	c *
(C)(5)(r)(ix)	inside the closing quotation mark, remove the semicolon and add a period	c *
(C)(5)(r)(x)	inside the closing quotation mark, remove the semicolon and add a period	c *
(C)(5)(r)(xi)	inside the closing quotation mark, remove the semicolon and add a period	c *
(C)(5)(r)(xii)	inside the closing quotation mark, remove the semicolon and add a period	c *
(C)(5)(r)(xiii)	inside the closing quotation mark, remove the semicolon and add a period	c *
(C)(5)(r)(xiv)	inside the closing quotation mark, remove the semicolon and add a period	c *
(C)(5)(r)(xv)	inside the closing quotation mark, remove the semicolon and add a period	c *
(C)(5)(r)(xvi)	inside the closing quotation mark, remove the semicolon and add a period	c *
(C)(5)(r)(xvii)	inside the closing quotation mark, remove the semicolon and add a period	c *
(C)(5)(r)(xviii)	inside the closing quotation mark, remove the semicolon and add a period	c *
(C)(5)(r)(xix)	inside the closing quotation mark, remove the semicolon and add a period	c *
(C)(5)(r)(xx)	inside the closing quotation mark, remove the semicolon and add a period	c *

RSFA Attachment A

Rule 3745-50-11 is amended as follows:		
Location	Change	Reason
(C)(5)(r)(xxi)	inside the closing quotation mark, remove the semicolon and add a period	c *
(C)(5)(r)(xxii)	inside the closing quotation mark, remove the semicolon and add a period	c *
(C)(5)(r)(xxiii)	inside the closing quotation mark, remove the semicolon and add a period	c *
(C)(5)(r)(xxiv)	inside the closing quotation mark, remove the semicolon and add a period	c *
(C)(5)(r)(xxv)	inside the closing quotation mark, remove the semicolon and add a period	c *
(C)(5)(r)(xxvi)	inside the closing quotation mark, remove the semicolon and add a period	c *
(C)(5)(r)(xxvii)	inside the closing quotation mark, remove the semicolon and add a period	c *
(C)(5)(s)	remove ‘ “U.S. EPA ORD/EMSL, Research Triangle Park, NC 27711;” ‘ and add “www.epa.gov/nscep.”	b, c
(C)(6)	remove the ending semicolon and add a period	c
(C)(7)	remove this website and the semicolon that follows it: http://www.osha.gov/SLTC/mercury/exposure-limits.html ; and add this website with a period after it: www.osha.gov/SLTC/mercury/standards.html .	b, c
(C)(8)(a)	-remove “annual” and add “biennial” -within the quotation marks after “Waste” add “Biennial”	N
	remove this website: http://www.epa.ohio.gov/dhwm/ann_report.aspx and add this website [no spaces]: http://www.epa.ohio.gov/Portals/32/annualreport/HWAR_Instructions.pdf [keep the existing colon after the website]	b
(C)(8)(a)(i)	remove the ending semicolon and add a period	c
(C)(8)(a)(ii)	remove the ending semicolon and add a period	c
(C)(8)(a)(iii)	remove the ending semicolon and add a period	c

RSFA Attachment A

Rule 3745-50-11 is amended as follows:		
Location	Change	Reason
(C)(8)(b)	remove this website: http://www.epa.ohio.gov/ddagw/tgmweb.aspx and add this website: http://www.epa.ohio.gov/ddagw [keep the existing colon after the website]	b
	inside the closing quotation mark, remove the semicolon and add a period	c *
(C)(9)	remove this website and the semicolon that follows it: http://www.usps.com/cpim/ftp/pubs/pub52.pdf and add this website followed by a period: http://www.usps.com .	b, c
(C)(10)	after “form” remove “1109” and add “1103”	a
	remove “by calling federal supply customer assistance at 817/987-2051” and add “at www.gsa.gov/portal/found ”	b, k
(D)(1)	remove the ending semicolon and add a period	c
(D)(2)	after “Meteorology,” add the closing quotation mark	c
	after “1978” remove the semicolon and the closing quotation mark and add a period	c
(D)(3)	after “Technology” remove the existing period and add a comma followed by a closing quotation mark	c
	after “p. 327;” remove the semicolon and the closing quotation mark and add a period	c
(D)(4)	remove the ending semicolon and add a period	c
(D)(5)	remove “EPA/600/9-89/072” and add “EPA-600/9-89/072”	c
	remove the ending semicolon and add a period	c
(D)(6)	-after “New York, NY” add the closing quotation mark -remove the closing quotation mark after the zip code and comma	d
(D)(6)(a)	remove the ending semicolon and add a period	c
(D)(6)(b)	remove the ending semicolon and add a period	c

RSFA Attachment A

Rule 3745-50-11 is amended as follows:		
Location	Change	Reason
(D)(7)	-after "Washington, DC" add the closing quotation mark -remove the closing quotation mark after the zip code	d
(D)(7)(a)	remove the ending semicolon and add a period	c
(D)(7)(b)	remove the ending semicolon and add a period	c
(D)(7)(c)	remove the ending semicolon and add a period	c
(D)(7)(d)	remove the ending semicolon and add a period	c
(D)(8)	add a beginning quotation mark before "American"	c
	remove "society for testing and materials" [lower case no quotation marks] and add ' Society for Testing and Materials' ' [upper case with the new closing quotation mark]	o, p
	remove "and/or" and add "or"	m
	-after "West Conshohocken, PA" add the closing quotation mark -remove the closing quotation mark after "-2959,"	d
(D)(8)(a)	remove "were" and add "may be"	m
	remove "as of July 1, 2003"	h
(D)(8)(a)(i)	remove "D1946-90(2000);" and add "D1946-90(2011), approved in 1990 and reapproved in 2011."	a, c
(D)(8)(a)(ii)	remove the ending semicolon and add a period	c
(D)(8)(a)(iii) [old]	remove paragraph [re-designated subparagraphs are referenced below]	h
(D)(8)(a)(iii)	in the parentheses remove "2001" and add "2011"	a
	remove the semicolon and add ", approved in 1996 and reapproved in 2011."	a, c
(D)(8)(a)(iv)	remove "E168-99(2003);" and add "E-168-06, amended in 2006."	a, c #
(D)(8)(a)(v)	remove "E169-99(2003);" and add "E169-04(2014), approved in 2004 and reapproved in 2014."	a, c

RSFA Attachment A

Rule 3745-50-11 is amended as follows:		
Location	Change	Reason
(D)(8)(a)(vii) [old]	remove paragraph	h
(D)(8)(a)(viii) [old]	remove paragraph [re-designated subparagraphs are referenced below]	h
(D)(8)(a)(vi)	remove “D2879-97(2003);” and add “D2879-10, amended in 2010.”	a, c
(D)(8)(a)(vii)	remove “D93-02a(2003), D93-02(2003), or D93-00(2003);” and add “D-93-79 or D-93-80.”	c, Q
(D)(8)(a)(viii)	remove “D3278-96e1(2003) or D3828-02(2003);” and add “D-3278-78.”	c, Q
(D)(8)(a)(ix)	-remove “D926-94(2003)” and add “D926-08(2013), approved in 2008 and reapproved in 2013,” -remove the ending semicolon and add a period	a, c
(D)(8)(a)(viii) [old]	re-designate as (D)(8)(a)(x) but no other changes [re-designated subparagraphs are referenced below]	--
(D)(8)(a)(x)(a)	remove “D6044-96(2003);” and add “D6044-96(2009), approved in 1996 and reapproved in 2009.”	a, c
(D)(8)(a)(x)(b)	-after “Auger,” remove “WK571(2/7/2003);” -leave the existing quotation mark after the removed semicolon -after the maintained closing quotation mark, add “D6907-2005(2010), approved in 2005 and reapproved in 2010.”	a, c
(D)(8)(a)(x)(c)	remove “D140-01(2003);” and add “D140/D140M-14, approved in 2014.”	a, c
(D)(8)(a)(x)(d)	remove “D346-90(1998);” and add “D346/D346M-11, approved in 2011.”	a, c
(D)(8)(a)(x)(e)	remove paragraph	h
(D)(8)(b)(i)	remove the ending semicolon and add a period	c, Q
(D)(8)(b)(ii)	remove the ending semicolon and add a period	c, Q
(D)(8)(b)(iii)(a)	remove the ending semicolon and add a period	c
(D)(8)(b)(iii)(b)	remove the ending semicolon and add “, approved in 1976.”	a, c

RSFA Attachment A

Rule 3745-50-11 is amended as follows:		
Location	Change	Reason
(D)(8)(b)(iii)(c)	remove the ending semicolon and add “, approved in 1970.”	a, c
(D)(8)(b)(iii)(d)	remove the ending semicolon and add “, approved in 1975.”	a, c
(D)(8)(b)(iii)(e)	remove paragraph	h
(D)(9)	remove “national association of corrosion engineers” [lower case, no quotation marks] and add “National Association of Corrosion Engineers” [with upper case, in quotation marks]	o, p
(D)(9)(a)	at the end, inside the existing quotation mark, remove the semicolon and add a period	c
(D)(9)(b)	remove the ending semicolon and add a period	c
(D)(10)	-after “Quincy, MA” add the closing quotation mark -remove the closing quotation mark after the zip code and colon	d
	after “NFPA 30,” within the parentheses remove “2008” and add “2012”	a
	remove the ending semicolon and add a period	c
(D)(11)(a)	remove the text and add “Reserved” before the existing period	r
(D)(12)	after “from” remove “the steel tank institute (STI) at http://www.steeltank.com/ ” and add “libraries”	k

- a This amendment updates the document dates or reference numbers so that the cross-references contained in other OAC rules are referencing current documents.
- b This amendment corrects the website.
- c Punctuation correction.
- d The ending quotation mark (used to maintain the upper case of the phrase within the quotes, per LSC requirements) is re-located to exclude the zip code, which need not be included in the upper case text.

RSFA Attachment A

Rule 3745-50-11 is amended as follows:		
Location	Change	Reason

- e Cross-reference correction.
- f Paragraph is removed because all references to it have been removed from the hazardous waste management rules.
- g This text is added to clarify that “as amended” refers to past amendments, not future/prospective amendments of the document that is being referenced. “As amended” should not be removed because the statute being referenced may have been amended after its initial promulgation (which is the standard statute notation), and our intent is to include in that citation all the past amendments of that statute, as do the references to statute in the federal RCRA rules (to which the hazardous waste rules must be equivalent), and as does the Ohio Revised Code. Rule 3745-50-11 is the hazardous waste management program’s “Incorporated by reference” rule that establishes date-certain limitations on cross-referenced documents, and ensures that the hazardous waste rules are not referencing statute changes that may occur after the date in 3745-50-11.
- h Unnecessary text is removed.
- i The acronym is used in the OAC rules, so it is added here for clarification.
- J LSC requirement.
- k Information regarding the availability of the document is added or updated.
- L The contact telephone number is corrected.
- m Word choice correction.
- n Pursuant to SB294 (Senator Schaffer, 129th General Assembly), we are changing the “annual report” to a “biennial report” and correcting other text as necessary where the federal counterpart provision indicates a “biennial report.”
- o Quotation marks are added around the phrase to maintain the upper case, per LSC requirements.

RSFA Attachment A

Rule **3745-50-11** is amended as follows:

Location	Change	Reason
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- p The lower case title is removed and replaced by the same title in the upper case to be consistent with the style/format used throughout this rule.
- Q Regarding the flash point documents: These references are from rule (Ohio's 3745-51-21, 40 CFR 261.21) and they establish the regulatory standard. They are not just a stated option regarding the testing procedure. Therefore, these older documents must be maintained in this rule (and in 3745-51-21) until/unless they are updated in 40 CFR 261.21. The newer versions of this test method are not approved for use via 3745-51-21.
- r The federal reference (40 CFR 260.11) is shown as "Reserved" as well.
- * This amendment was changed as the result of a comment on the Interested Parties (IP) draft rule.
- # This amendment is not changed from the IP draft version, but its documentation on this cover sheet is corrected.

This rule is being submitted for 5-year review upon proposal. Another review date will be assigned.

3745-50-11

Incorporated by reference.

When used in the hazardous waste rules, the following text or other materials are incorporated by reference. All references cited in this rule are those that existed and were available on July 1, ~~2009~~2014 unless a different edition or version date is specified in this rule.

(A) Code of Federal Regulations (CFR) references. These regulations can generally be found in public libraries, electronically at ~~<http://www.access.gpo.gov/nara/cfr/cfr-retrieve.html>~~ <http://www.gpo.gov/fdsys/browse/collectionCfraction?collectionCode=CFR>, or can be purchased from "U.S. Government Printing, Superintendent of Documents, Mail Stop: SSOP, Washington DC" 20402-9328." The regulations listed in this rule are those published in the July 1, ~~2009~~2014 CFR.

(1) 10 CFR Part 1~~;~~₂

(2) 10 CFR Part 20~~;~~₂

(3) 10 CFR Part 61~~;~~₂

(4) 10 CFR Part 71~~;~~₂

(5) 29 CFR Part 1910~~;~~₂

(6) 33 CFR Part 153~~;~~₂

(7) 33 CFR Parts 336 and 337~~;~~₂

(8) 40 CFR ~~Part~~Parts 51~~;~~ and 52.

(9) 40 CFR Parts 60, 61, and 63, except as otherwise specifically described in the hazardous waste rules~~;~~₂

(10) 40 CFR Part 112~~;~~₂

(11) 40 CFR ~~Parts 122 to~~Part 124~~;~~₂

(12) 40 CFR Parts 144, 146, and 148~~;~~₂

(13) 40 CFR Part 232~~;~~₂

(14) 40 CFR Parts 257 and 258;₂

(15) 40 CFR Parts 260 to 279;₂

(16) 40 CFR ~~Parts 300 and~~ Part 302;₂

(17) 40 CFR Part 761;₂

~~(18) 40 CFR Part 1510;~~

~~(19)~~(18) ~~4049~~ 4049 CFR Parts ~~171 to 180~~100 to 185.

(B) Federal statute references. These laws can generally be found in public libraries, or electronically at <http://www.gpoaccess.gov/usecode/index.html> <http://www.gpo.gov/fdsys>. The federal laws listed in this rule are those versions of the laws amended through July 1, ~~2009~~2014.

(1) The Act of August 18, 1970, 84 Stat. 825, 16 U.S.C.A. 1a-5, as amended; through the date specified in paragraph (B) of this rule.

(2) Atomic Energy Act of 1954, 42 U.S.C. 2011 ~~et seq.~~;

(3) "Chemical and Biological Warfare Program, Destruction of Existing Stockpile of Lethal Chemical Agents and Munitions, 50 U.S.C. 1521;₂"

(4) Clean Air Act, 42 U.S.C. 7401 ~~et seq.~~;

(5) Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), 42 U.S.C. 9601 ~~et seq.~~;

(6) Federal Food, Drug, and Cosmetic Act, 21 U.S.C. 301 ~~et seq.~~;

(7) Federal Insecticide, Fungicide, and Rodenticide Act, 7 U.S.C. 136 ~~et seq.~~;

(8) Federal Water Pollution Control Act, Clean Water Act of 1977, or Water Pollution Control Act Amendments of 1972, 33 U.S.C. 1251 ~~et seq.~~;

(9) Investment Company Act of 1940, 15 U.S.C. 80a-1 ~~et seq.~~;

- (10) Marine Protection, Research, and Sanctuaries Act of 1972, 33 U.S.C. 1401 ~~et seq.~~;
 - (11) Resource Conservation and Recovery Act of 1976 (RCRA) or Solid Waste Disposal Act, 42 U.S.C. 6901 ~~et seq.~~;
 - (12) Safe Drinking Water Act, 42 U.S.C. 300f ~~et seq.~~;
 - (13) Toxic Substances Control Act, 15 U.S.C. 2601 ~~et seq.~~;
 - (14) U.S.C. Title 11 (bankruptcy).
 - (15) U.S. Constitution.
- (C) Government literature. The availability of these documents is provided with each paragraph.
- (1) U.S. department of commerce documents: "Survey of Current Business," available at www.commerce.gov;
 - (2) U.S. department of defense documents, available at <http://web1.whs.osd.mil/iedhome/formsearch.htm>:www.dtic.mil.
 - (a) DD form 1348- requisition tracking form;
 - (b) DD form 1907- signature and tally record;
 - (c) DD form 626- motor vehicle inspection report;
 - (d) DD form 836- special instructions for motor vehicle drivers;
 - (e) DOD 6055.9-STD- ammunition and explosive safety standards;
 - (3) U.S. department of transportation (DOT) shipping requirements are available at <http://hazmat.dot.gov/rules.htm>;

- (4) U.S. department of the treasury document: "Circular 570" is published in the ~~federal register~~ Federal Register annually on July first; interim changes in the circular are also published in the ~~federal register~~; Federal Register. "Circular 570" is available on the treasury department's website at www.fms.treas.gov.
- (5) U.S. EPA technical documents. These documents are generally available in libraries. Documents listed in this paragraph without an address can be ordered by calling ~~800/490-9180 or 513/489-8190~~ 800/490-9198. ~~They can~~ These documents may also be obtained by writing to "U.S. EPA/NSCEP, P.O. Box 42419, Cincinnati, OH" 45242-0419." Documents listed in this paragraph with an address may also be obtained at that address. Many of these documents can also be obtained ~~at www.epa.gov/nepis/sreh.htm~~ via online ordering at www.epa.gov/nscep. Some documents listed in this paragraph may be available for purchase, not free of charge.
- (a) "APTI Course 415: Control of Gaseous Emissions," EPA publication EPA-450/2-81-005, December 1981, ~~available for purchase from the "National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161;" or for purchase from the "Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402," or call 202/512-1800;~~
- (b) "Field Evaluation of Carbon Monoxide and Hydrogen Sulfide Continuous Emission Monitors at an Oil Refinery," Ferguson, B.B., R.E. Lester, and W.J. Mitchell, August 1982, EPA-600/4-82-054, ~~available from "U.S. EPA, Research Triangle Park, NC 27711;"~~ at www.epa.gov/nscep.
- (c) U.S. EPA form 8700-22, part of the "Uniform Hazardous Waste Manifest" and its instructions, is available in the appendix to 40 CFR Part 262; at www.epa.gov at the approved registered printers selection.
- (d) U.S. EPA form 8700-22A, part of the "Uniform Hazardous Waste Manifest" and its instructions, is available in the appendix to 40 CFR Part 262; at www.epa.gov at the approved registered printers selection.
- (e) U.S. EPA form 8700-23, the "Part A" permit application form, is available at http://www.epa.gov/epaoswer/hazwaste/data/form8700/forms.htm; www.epa.gov/osw/inforesources/data/form8700/forms.htm.

- (f) "Gaseous Continuous Emissions Monitoring Systems-Performance Specification Guidelines for SO₂, NO_x, CO₂, O₂, and TRS," October 1982, EPA-450/3-82-026, available from "~~U.S. EPA OAQPS, ESED, Research Triangle Park, NC 27711;~~"www.epa.gov/nscep.
- (g) "Gasoline Vapor Emission Laboratory Evaluation-Part 2," August 1975, EMB report No. 76-GAS-6, available from "U.S. EPA OAQPS, Research Triangle Park, NC" 27711;".
- (h) "Guidance for Metals and Hydrogen Chloride Controls for Hazardous Waste Incinerators, Volume IV of the Hazardous Waste Incineration Guidance Series," August 1989, available from "~~U.S. EPA, Office of Solid Waste (5301W), Crystal Station Building, 2805 Jefferson Highway, Crystal City, VA 22202;~~"www.epa.gov/nscep.
- ~~(i) "Guidance on Metals and Hydrogen Chloride Controls for Hazardous Waste Incinerators," August 1989, available from "U.S. EPA, Office of Solid Waste (5301W), Crystal Station Building, 2805 Jefferson Highway, Crystal City, VA 22202;"~~
- ~~(j)(i) "Guideline on Air Quality Models (revised)," July 1986, EPA-450/2-78-027R, available from "U.S. EPA, Office of Air Quality Planning and Standards, Research Triangle Park, NC 27711;"~~www.epa.gov/nscep.
- ~~(k)(j) "Handbook: Continuous Air Pollution Source Monitoring Systems," Jahnke, James A. and G.J. Aldina, June 1979, EPA-625/6-79-005, available from "U.S. EPA Technology Transfer, Cincinnati, OH 45268;"~~www.epa.gov/nscep.
- ~~(l)(k) "Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-dioxins and Dibenzofurans (CDDs and CDFs)," March, 1989 update, EPA 625/3-89/016;EPA-625/3-89/016, available from www.epa.gov/nscep.~~
- ~~(m)(l) "U.S. EPA Manual for SEA (Special Environmental Area) Requirements;"~~
- ~~(n)(m) "Measurement of Volatile Organic Compounds-Guideline Series," June 1978, EPA-450/2-78-041, available from "U.S. EPA, Research Triangle Park, NC 27711;"~~www.epa.gov/nscep.

~~(e)(n)~~ "Method 1664, ~~Revision A~~, n-Hexane Extractable Material (HEM; Oil and Grease) and Silica Gel Treated n-Hexane Extractable Material (SGT-HEM; Non-polar Material) by Extraction and Gravimetry," PB99-121949," available for purchase from the "National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161;" or available for purchase from the "Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402," or call 202/512-1800; from www.epa.gov.

(i) Revision A, EPA-821-R-98-002, February 1999.

(ii) Revision B, EPA-821-R-10-001, February 2010.

~~(p)(o)~~ "Performance Test Results and Comparative Data for Designated Reference Methods for Carbon Monoxide," Michie, Raymond, M. Jr., et. al., September 1982, EPA-600/S4-83-013, available from "U.S. EPA ORD/EMSL, Research Triangle Park, NC 27711;" www.epa.gov/nscep.

~~(e)(p)~~ "Quality Assurance Handbook for Air Pollution Measurement Systems: Volume I. Principles," December 1984, EPA-600/9-76-006, available from "U.S. EPA ORD/EMSL, Research Triangle Park, NC 27711;" www.epa.gov/nscep.

~~(r)~~ "Samplers and Sampling Procedures for Hazardous Waste Streams," January 1980, EPA 600/2-80-018 available from "U.S. EPA/NSCEP, P.O. Box 42419, Cincinnati, OH 45242-0419," or call 800/490-9198 or 513/489-8190;

~~(s)~~ "Screening Procedures for Estimating the Air Quality Impact of Stationary Sources," August 1988, EPA-450/4-88-010, available from "U.S. EPA, Office of Air Quality Planning and Standards, Research Triangle Park, NC 27711;"

~~(t)(q)~~ "Screening Procedures for Estimating the Air Quality Impact of Stationary Sources, Revised," October 1992, EPA-450/R-92-019, available from "U.S. EPA, Research Triangle Park, NC 27711;" www.epa.gov.

~~(u)(r)~~ "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, U.S. EPA publication SW-846 [third edition (November 1986), as amended by "Update I" (dated July 1992), "Update II" (dated September 1994), "Update IIA" (dated August 1993), "Update IIB" (dated January 1995), "Update III" (dated December 1996), and

~~"Update IIIA" (dated April 1998)]. The third edition of U.S. EPA publication SW 846 and "Update I," "Update II," "Update IIIA," "Update IIIB," and "Update III" (document number 955-001-00000-1) are available from the "Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402," or call 202/512-1800. "Update IIIA" is available through "U.S. EPA's Methods Information Communication Exchange (MICE) Service." MICE can be contacted by phone at 703/821-4690. "Update IIIA" can also be obtained by contacting the "U.S. EPA, Office of Solid Waste (5307W), OSW Methods Team, 1200 Pennsylvania Ave., NW., Washington, DC 20460." Copies of the third edition and all of its updates are also available from the "National Technical Information Service (NTIS), 5285 Port Royal Road, Springfield, VA 22161," or call 703/605-6000 or 800/553-6847. Copies may be inspected at the "Library, U.S. EPA, 401 M St., SW., Washington, DC 20460," or at the "Office of the Federal Register, 800 North Capitol Street, NW, suite 700, Washington, DC." It is also available at <http://epa.gov/epaoswer/hazwaste/test/main.htm> through "Update IV" is available from the "National Technical Information Service, U.S. Department of Commerce, 5301 Shawnee Road, Alexandria, VA," 22312 or at <http://www.epa.gov/waste/hazard/testmethods/sw846/index.htm>.~~

The following methods as published in the test methods compendium known as "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," U.S. EPA publication SW-846, and are available for purchase from the "National Technical Information Service, 5285 Port Royal Road, Springfield, VA, 22161;" or for purchase from the "Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402," or call 202/512-1800. Third edition. A suffix of "A" in the method number indicates revision one (the method has been revised once). A suffix of "B" in the method number indicates revision two (the method has been revised twice). A suffix of "C" in the method number indicates revision three (the method has been revised three times). A suffix of "D" in the method number indicates revision four (the method has been revised four times):

- (i) Method 0010, dated September 1986 and in the basic manual;
- (ii) Method 0020, dated September 1986 and in the basic manual;
- (iii) Method 0030, dated September 1986 and in the basic manual;
- (iv) Method 1320, dated September 1986 and in the basic manual;

- (v) Method 1311, dated September 1992 and in "Update I₂."
- (vi) Method 1330A, dated ~~September~~ July 1992 and in "Update I₂."
- (vii) Method 1312 dated September 1994 and in "Update II₂."
- (viii) Method 0011, dated December 1996 and in "Update III₂."
- (ix) Method 0023A, dated December 1996 and in "Update III₂."
- (x) Method 0031, dated December 1996 and in "Update III₂."
- (xi) Method 0040, dated December 1996 and in "Update III₂."
- (xii) Method 0050, dated December 1996 and in "Update III₂."
- (xiii) Method 0051, dated December 1996 and in "Update III₂."
- (xiv) Method 0060, dated December 1996 and in "Update III₂."
- (xv) Method 0061, dated December 1996 and in "Update III₂."
- (xvi) Method 9071B, dated April 1998 and in "Update IIIA₂."
- (xvii) Method 1010A, dated November 2004 and in "Update IIIB₂."
- (xviii) Method 1020B, dated November 2004 and in "Update IIIB₂."
- (xix) Method 1110A, dated November 2004 and in "Update IIIB₂."
- (xx) Method 1310B, dated November 2004 and in "Update IIIB₂."
- (xxi) Method 9010C, dated November 2004 and in "Update IIIB₂."
- (xxii) Method 9012B, dated November 2004 and in "Update IIIB₂."
- (xxiii) Method 9040C, dated November 2004 and in "Update IIIB₂."

(xxiv) Method 9045D, dated November 2004 and in "Update IIIB;"

(xxv) Method 9060A, dated November 2004 and in "Update IIIB;"

(xxvi) Method 9070A, dated November 2004 and in "Update IIIB;"

(xxvii) Method 9095B, dated November 2004 and in "Update IIIB;"

(v)(s) "Traceability Protocol for Establishing True Concentrations of Gases Used for Calibration and Audits of Continuous Source Emission Monitors (Protocol No. 1)," June 1978, available from "U.S. EPA ORD/EMSL, Research Triangle Park, NC 27711;" www.epa.gov/nscep.

(6) U.S. natural resources conservation service information regarding soils and soil particle size is available at <http://soils.usda.gov/procedures/ssm/main.htm>;

(7) Occupational safety and health (OSHA) exposure levels to mercury are available at <http://www.osha.gov/SLTC/mercury/exposure-limits.html>; www.osha.gov/SLTC/mercury/standards.html.

(8) Ohio EPA documents.

(a) These forms are portions of the hazardous waste ~~annual~~biennial report, and are in the "Hazardous Waste Biennial Report Instructions" available at http://www.epa.ohio.gov/dhwm/ann_report.aspx http://www.epa.ohio.gov/Portals/32/annualreport/HWAR_Instructions.pdf;

(i) Ohio EPA form EPA 9027;

(ii) Ohio EPA form EPA 9028;

(iii) Ohio EPA form EPA 9029;

(b) This document is available at <http://www.epa.ohio.gov/ddagw/tgmweb.aspx> <http://www.epa.ohio.gov/ddagw>: "Technical Manual for Hydrogeologic Investigations and Ground Water Monitoring;"

(9) U.S. postal service (USPS) shipping requirements are available at <http://www.usps.com/epim/ftp/pubs/pub52.pdf>; <http://www.usps.com>.

- (10) GSA standard form ~~41091103~~- government bill of lading. Federal employees can order this form ~~by calling federal supply customer assistance at 817/987-2054~~ at www.gsa.gov/portal/found.

(D) Private publications. These publications are generally available at libraries.

- (1) "An Analysis of Variance Test for Normality (complete samples)," Shapiro, S.S. and Wilk, M.B. (1965), "Biometrika," 52, 591-611;
- (2) "Correlation of Land Use and Cover with Meteorological Anomalies," "Journal of Applied Meteorology," pp. 636-643, 1978;
- (3) "Fate of Metals in Waste Combustion Systems," Barton, R.G., W.D. Clark, and W.R. Seeker. (1990). "Combustion Science and Technology," 74, 1-6, p. 327;
- (4) "Statistical Concepts and Methods," Bhattacharyya, G.K. and R.A. Johnson (1977), John Wiley and sons, New York;
- (5) "The Partitioning of Metals in Rotary Kiln Incineration," Carroll, G.J., R.C. Thurnau, R.E. Maurnighan, L.R. Waterland, J.W. Lee, and D.J. Fournier. "Proceedings of the Third International Conference on New Frontiers for Hazardous Waste Management." NTIS document number ~~EPA/600/9-89/072~~ [EPA-600/9-89/072](http://www.epa.gov/epaosopr/600/9-89/072), p. 555 (1989);
- (6) Available from the "American National Standards Institute (ANSI), 25 West 43rd Street, New York, NY 10036," or 212/642-4900, or www.ansi.org:
 - (a) "Petroleum Refining Piping," ANSI standard B31.3;
 - (b) "Liquid Petroleum Transportation Piping System," ANSI standard B31.4;
- (7) Available for purchase from the "American Petroleum Institute (API), 1220 L Street, Northwest, Washington, DC 20005" or <http://api-ep.api.org/>:
 - (a) "Cathodic Protection of Underground Petroleum Storage Tanks and Piping Systems," API publication 1632;
 - (b) "Evaporative Loss from External Floating-Roof Tanks," API publication 2517, third edition, February 1989;

- (c) "Guide for Inspection of Refinery Equipment," 4th edition, 1981;
- (d) "Installation of Underground Petroleum Storage Systems," API publication 1615, November 1979;
- (8) ~~"American society for testing and materials~~Society for Testing and Materials" (ASTM) methods referenced in the hazardous waste rules are generally available in public libraries ~~and/or~~ are available from "ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959," at 610/832-9555, or at ASTM.org.
- (a) The following methods ~~were~~may be available for purchase at the ASTM web site ~~as of July 1, 2003~~. Some of the methods may be no longer available on the web site and may be found in libraries:
- (i) "ASTM Standard Method for Analysis of Reformed Gas by Gas Chromatography," ASTM standard ~~D1946-90(2000);~~D1946-90(2011), approved in 1990 and reapproved in 2011.
- (ii) "ASTM Standard Practice for Determining Resistance of Plastics to Bacteria," ASTM method G22-76(1996);
- ~~(iii)~~ "ASTM Standard Practice for Determining Resistance of Synthetic Polymer Materials to Fungi," ASTM method G21-96(2002);
- ~~(iv)~~(iii) "ASTM Standard Practice for Packed Column Gas Chromatography," ASTM standard E260-96~~(2001)~~2011, approved in 1996 and reapproved in 2011;
- ~~(v)~~(iv) "ASTM Standard Practices for General Techniques of Infrared Quantitative Analysis," ASTM standard ~~E168-99(2003);~~E-168-06, amended in 2006.
- ~~(vi)~~(v) "ASTM Standard Practices for General Techniques of Ultraviolet-Visible Quantitative Analysis," ASTM standard ~~E169-99(2003);~~E169-04(2104), approved in 2004 and reapproved in 2014.
- ~~(vii)~~ "ASTM Standard Test Method for Aromatics in Light Naphthas and Aviation Gasolines by Gas Chromatography," ASTM standard ~~D4420-94(1999)e1;~~

- ~~(viii)~~ "ASTM Standard Test Method for Heat of Combustion of Hydrocarbon Fuels by Bomb Calorimeter (High Precision Method)," ASTM standard ~~D4809-00(2003) or D4809-95(2003)~~;
- ~~(ix)~~(vi) "ASTM Standard Test Method for Vapor Pressure-Temperature Relationship and Initial Decomposition Temperature of Liquids by Isotenoscope," ASTM standard ~~D2879-97(2003)~~; D2879-10, amended in 2010.
- ~~(x)~~(vii) "ASTM Standard Test Methods for Flash Point by Pensky-Martens Closed Cup Tester," ASTM standard ~~D93-02a(2003), D93-02(2003), or D93-00(2003)~~; D-93-79 or D-93-80.
- ~~(xi)~~(viii) "ASTM Standard Test Methods for Flash Point of Liquids by Setaflash Closed Cup Tester," ASTM standard ~~D3278-96e1(2003) or D3828-02(2003)~~; D-3278-78.
- ~~(xii)~~(ix) "ASTM Standard Test Methods for Preparing Refuse-Derived Fuel (RDF) Samples for Analyses of Metals," ASTM standard ~~D926-94(2003)~~; D926-08(2013), approved in 2008 and reapproved in 2013, test method C-bomb, acid digestion method;
- ~~(xiii)~~(x) Representative sampling methods for:
- (a) "Standard Guide for Representative Sampling for Management of Waste and Media," ASTM standard ~~D6044-96(2003)~~; D6044-96(2009), approved in 1996 and reapproved in 2009.
 - (b) "Practice for Sampling Soils and Contaminated Media with Hand Operated Bucket Auger, ~~WK571(2/7/2003)~~;" D6907-2005(2010), approved in 2005 and reapproved in 2010.
 - (c) Extremely viscous liquid- ASTM standard ~~D140-01(2003)~~; D140/D140M-14, approved in 2014.
 - (d) Crushed or powdered material- ASTM standard ~~D346-90(1998)~~; D346/D346M-11, approved in 2011.

~~(e) Containerized liquid wastes - "COLISWA" described in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," which is incorporated by reference elsewhere in this rule; also method D5495-94(2001), D5743-97(2003), or D6063-96(2001);~~

(b) The following older approved equivalent methods are not available from the ASTM web site, but are available in libraries:

(i) "ASTM Standard Test Methods for Flash Point by Pensky-Martens Closed Cup Tester," ASTM standard D93-79 or D93-80;

(ii) "ASTM Standard Test Methods for Flash Point of Liquids by Setaflash Closed Cup Tester," ASTM standard D3278-78;

(iii) Representative sampling methods for:

(a) Soil or rock-like material- ASTM standard D420-69;

(b) Fly ash-like material- ASTM standard D2234-76, approved in 1976.

(c) Extremely viscous liquid- ASTM standard D140-70, approved in 1970.

(d) Crushed or powdered material- ASTM Standard D346-75, approved in 1975.

~~(e) Containerized liquid wastes - "COLISWA" described in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," which is incorporated by reference elsewhere in this rule; also described in "Samplers and Sampling Procedures for Hazardous Waste Streams," U.S. EPA 600/2-80-018, January 1980.~~

(9) Available from the ~~national association of corrosion engineers~~ "National Association of Corrosion Engineers" (NACE) at www.nace.org:

(a) "Recommended Practice (RP-02-85)- Control of External Corrosion on Metallic Buried, Partially Buried, or Submerged Liquid Storage Systems;"

- (b) NACE standard TM-01-69;
- (10) Available for purchase from the "National Fire Protection Association (NFPA), 1 Batterymarch Park, P.O. Box 9101, Quincy, MA 02269-9101:" "Flammable and Combustible Liquids Code" NFPA 30, (2008/2012.);
- (11) Available for purchase from the "Organisation for Economic Co-operation and Development, Environment (OECD) Directorate, 2 rue Andre Pascal, 75775 Paris Cedex 16, France," or at <http://www.OECD.org>.
- (a) ~~Test 301b - CO2 evolution (modified Sturm test)~~ Reserved.
- (b) "OECD Green List of Wastes" (revised May 1994) as found in appendix 3 to the "OECD Council Decision C(92)39/FINAL (Concerning the Control of Transfrontier Movements of Wastes Destined for Recovery Operations)."
- (c) "OECD Amber List of Wastes" (revised May 1993) as found in appendix 4 to the "OECD Council Decision C(92)39/FINAL (Concerning the Control of Transfrontier Movements of Wastes Destined for Recovery Operations)."
- (d) "OECD Red List of Wastes" (revised May 1993) as found in appendix 5 to the "OECD Council Decision C(92)39/FINAL (Concerning the Control of Transfrontier Movements of Wastes Destined for Recovery Operations)."
- (12) Available from ~~the steel tank institute (STI)~~ at ~~<http://www.steeltank.com/libraries>~~: "STI Standard for Dual-Wall Underground Steel Storage Tanks."

Effective:

Five Year Review (FYR) Dates: 07/01/2015

Certification

Date

Promulgated Under: 119.03
Statutory Authority: 3734.12
Rule Amplifies: 3734.12
Prior Effective Dates: 05/29/1985 (Emer.), 08/29/1989, 01/30/1986,
12/08/1988, 02/11/1992, 09/02/1997, 12/07/2000,
12/07/2004, 02/16/2009, 09/05/2010

RSFA Attachment A

Rule 3745-50-20 is amended as follows:		
Location	Change	Reason
(B)	remove “must” and add “shall”	a, b
	after “demonstrate” add “all of the following”	c
(B)(1)	remove the ending semicolon and add a period	d
(B)(2)	remove the ending “; and” and add a period	d, e
(B)(4)	remove “must” and add “shall”	a, b
	after “include” add “all of”	c
(B)(4)(a)	remove the ending “; and” and add a period	d, e
(B)(4)(b)	remove the ending “; and” and add a period	d, e
(B)(4)(c)	remove the ending “; and” and add a period	d, e

- a Word choice correction.
- b The change of “must” to “shall” is an LSC requirement.
- c This amendment adds specificity to the rule.
- d Punctuation correction.
- e Unnecessary text is removed.

This rule is submitted for 5-year review upon proposal. A new review date will be assigned.

3745-50-20

Petitions to amend Chapter 3745-273 of the Administrative Code to include additional hazardous wastes.

- (A) Any person seeking to add a hazardous waste or a category of hazardous waste to the universal waste rules of Chapter 3745-273 of the Administrative Code may petition for an amendment under this rule and rules 3745-273-80 to 3745-273-81 of the Administrative Code.
- (B) To be successful, the petitioner ~~must~~shall demonstrate all of the following to the satisfaction of the director that regulation under Chapter 3745-273 of the Administrative Code:
- (1) Is appropriate for the waste or category of waste;~~;~~
 - (2) Will improve management practices for the waste or category of waste;~~and~~
 - (3) Will improve implementation of the hazardous waste program.
 - (4) The petition ~~must~~shall include all of the following information:
 - (a) The petitioner's name and address;~~and~~
 - (b) A statement of the petitioner's interest in the subject of the petition;~~and~~
 - (c) A description of the subject of the petition, including suggested regulatory language;~~and~~
 - (d) A statement of the need and justification for the subject of the petition, including any supporting tests, studies, or other information.
 - (5) The petition should also address as many of the factors listed in rule 3745-273-81 of the Administrative Code as are appropriate for the waste or category of waste addressed in the petition.

- (C) The director will evaluate petitions using the factors listed in rule 3745-273-81 of the Administrative Code, and will grant or deny a petition using the factors listed in that rule. The decision will be based on the weight of evidence showing that regulation under Chapter 3745-273 of the Administrative Code is appropriate for the waste or category of waste, will improve management practices for the waste or category of waste, and will improve implementation of the hazardous waste program. If a petition for a regulatory amendment is granted, the director will propose rules pursuant to Chapter 119. of the Revised Code to address the petition.

- (D) The director may request additional information needed to evaluate the merits of the petition.

Effective:

Five Year Review (FYR) Dates: 07/01/2015

Certification

Date

Promulgated Under: 119.03
Statutory Authority: 3734.12
Rule Amplifies: 3734.12
Prior Effective Dates: 09/02/1997, 12/07/2004

RSFA Attachment A

Rule 3745-50-21 is amended as follows:		
Location	Change	Reason
(A)	remove “must” and add “shall”	a
(C)	[2 times] remove “must” and add “shall”	a
(D)	remove “must” and add “shall”	a
(D)(1)	at the end remove the semicolon and add a period	b
(D)(2)	at the end remove the semicolon and add a period	b
(D)(3)	remove the ending “; and” and add a period	b, c
(D)(4)	remove “and/or” and add “or”	a
(E)	remove “must” and add “shall”	a

- a The change of “must” to “shall” is an LSC requirement.
- b Punctuation correction.
- c Unnecessary text is removed.

This rule is being submitted for 5-year review upon proposal. Another review date will be assigned.

3745-50-21

Draft permits.

- (A) Upon receipt of a complete application, the director ~~must~~shall decide whether to prepare a draft permit or issue a notice of intent to deny the permit application for "Class 3" modifications, new facility permits, or renewal permits.
- (B) Reserved.
- (C) If the director tentatively decides to deny a "Class 3" modification application or renewal application, the director ~~must~~shall issue a notice of intent to deny. A notice of intent to deny the new facility or renewal permit application or the "Class 3" modification application is a type of draft permit which follows the same procedures as any draft permit prepared under this rule. If the director subsequently decides that the tentative decision to deny the new facility or renewal permit application or the "Class 3" modification application was incorrect, the director ~~must~~shall withdraw the notice of intent to deny and prepare a draft permit under paragraph (D) of this rule.
- (D) If the director decides to prepare a draft permit, the director ~~must~~shall prepare a draft permit that contains the following information to the extent applicable:
- (1) All conditions under rule 3745-50-58 of the Administrative Code;_;
 - (2) All compliance schedules under rule 3745-50-50 of the Administrative Code;_;
 - (3) All monitoring requirements under rule 3745-50-48 of the Administrative Code;
and_;
 - (4) Standards for treatment, storage, ~~and/or~~ disposal and other permit conditions under rule 3745-50-58 of the Administrative Code.
- (E) Draft permits ~~must~~shall be accompanied by a fact sheet (see rule 3745-50-22 of the Administrative Code).

Effective:

Five Year Review (FYR) Dates: 07/01/2015

Certification

Date

Promulgated Under: 119.03
Statutory Authority: 3734.05, 3734.12
Rule Amplifies: 3734.05, 3734.12
Prior Effective Dates: 02/15/1985 (Emer.), 05/02/1985, 07/14/1997,
03/09/2001, 12/07/2004, 09/05/2010

RSFA Attachment A

Rule 3745-50-23 is amended as follows:		
Location	Change	Reason
intro	-remove "the standards and criteria in rule" and add "rules" -after "3745-50-24" remove "of the Administrative Code" -remove "the procedures in rule"	a
	after "basis that" add "any of"	b
(A)	-add quotation marks around the defined term "accumulated speculatively" -add quotation marks around the defined term "recycled"	c
	-remove the ending semicolon and add a period within the new quotation marks	d
	remove "[as defined in paragraph (C)(8) of rule 3745-51-01 of the Administrative Code]"	e
(B)	-add quotation marks around the defined term "reclaimed" -add quotation marks around the defined term "reused"	c
	remove the ending "; and" and add a period	d
(C)	-remove "must be reclaimed" and add "require" -after "further" add "reclamation"	f
ending [Comment] [new]	add the following bracketed comment: [Comment: The terms "accumulated speculatively," "recycled," "reclaimed," and "reused" are defined in rule 3745-51-01 of the Administrative Code.]	g

- a Unnecessary language is removed.
- b This amendment adds specificity to the rule.
- c This punctuation correction (adding quotation marks around defined terms) is being made in all hazardous waste rules, as they are amended, at locations of defined terms that are typically designated as such in the text.
- d Punctuation correction. LSC requirement.
- e Text is removed at this location but relocated to the new [Comment] to improve the readability of this rule.

RSFA Attachment A

Rule **3745-50-23** is amended as follows:

Location	Change	Reason
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- f This sentence is slightly re-written to improve readability.
- g This [Comment] is added to consolidate the references to the term definitions at one location in the rule, to improve the readability of this rule.

This rule is currently exempt from 5-year review, but it is submitted for review. A new review date will be assigned.

3745-50-23

Variances from classification as a waste.

In accordance with ~~the standards and criteria in rules~~ 3745-50-24 ~~of the Administrative Code~~ and ~~the procedures in rule~~ 3745-50-26 of the Administrative Code, the director may determine on a case-by-case basis that any of the following recycled materials are not wastes:

- (A) Materials that are "accumulated speculatively" without sufficient amounts being "recycled." ~~[as defined in paragraph (C)(8) of rule 3745-51-01 of the Administrative Code];~~
- (B) Materials that are "reclaimed" and then "reused" within the original production process in which they were generated; ~~and~~
- (C) Materials that have been reclaimed but ~~must be reclaimed~~ require further reclamation before the materials are completely recovered.

[Comment: The terms "accumulated speculatively," "recycled," "reclaimed," and "reused" are defined in rule 3745-51-01 of the Administrative Code.]

Effective:

Five Year Review (FYR) Dates: 07/01/2015

Certification

Date

Promulgated Under: 119.03
Statutory Authority: 3734.12
Rule Amplifies: 3734.12
Prior Effective Dates: 01/30/1986, 02/23/1989, 12/07/2000, 12/07/2004

RSFA Attachment A

This is rule **3745-50-29** that is **to be rescinded**. It is not being replaced.

This rule is submitted for 5-year review upon proposal. Our review of this rule concluded that this rule is not necessary because it duplicates “inspection of public records” and related concepts implementing the Freedom of Information Act in Ohio Revised Code 149.43, 149.34, 149.333, and 149.351.

TO BE RESCINDED

3745-50-29 **Inspection of public records.**

- (A) All requests to inspect and/or copy public records as defined under division (A) of section 149.43 of the Revised Code obtained by Ohio EPA under Chapters 3745-50 to 3745-69, 3745-205, 3745-256, 3745-266, 3745-270, 3745-273, and 3745-279 of the Administrative Code must be directed to "Ohio EPA, Lazarus Government Center, 50 West Town Street, Suite 700, Division of Hazardous Waste Management (DHWM), P.O. Box 1049, Columbus, Ohio 43216-1049".
- (B) Within twenty working days after receipt by the DHWM of a request to inspect and/or copy such public records, Ohio EPA must respond in writing to the requestor. The response must advise the requestor as appropriate:
- (1) As to the location of the public records sought and as to a reasonable time during regular business hours of Ohio EPA at which the requested public records may be inspected; or
 - (2) That Ohio EPA does not have in its possession any public records as identified in the request; or
 - (3) That the request is not sufficiently descriptive to enable Ohio EPA to determine whether Ohio EPA has in its possession the public records sought; or
 - (4) To the extent the request seeks copies of public records, the date such copies will be available and the cost to the requestor of such copies. If the total cost of the copies requested is twenty-five dollars or more, Ohio EPA may require prepayment of the copying charge before the copies are provided to the requestor.
- (C) If a request encompasses records in the possession of Ohio EPA which are subject to a pending unresolved claim that such records constitute "trade secrets" as defined in rule 3745-50-10 of the Administrative Code and that the release of such records is thus prohibited by law, in addition to any appropriate response otherwise required by paragraph (B) of this rule, within ten working days of receipt after the request the requestor must be advised that:
- (1) Certain records encompassed by the request which are in the possession of Ohio EPA are subject to a pending claim that such records constitute "trade secrets";
 - (2) A determination whether such records constitute "trade secrets" will be made within forty-five days after the date the request to inspect public records was

received by Ohio EPA;

(3) The requestor will receive written notification of such determination; and

(4) Until such determination is made, the requested records are not subject to disclosure by Ohio EPA.

Effective:

Five Year Review (FYR) Dates: 07/01/2015

Certification

Date

Promulgated Under: 119.03
Statutory Authority: 3734.12
Rule Amplifies: 149.43, 3734.12
Prior Effective Dates: 11/17/1988 (Emer.), 02/23/1989, 12/07/2000,
12/07/2004, 09/05/2010

RSFA Attachment A

This rule is **new 3745-50-30**. It replaces the rescinded rule of the same number. Its federal counterpart provision is 40 CFR 270.12.

This new rule is necessary because the agency-wide trade secrets rule (3745-49-03) addresses the trade secrets determination concept in 40 CFR 270.12(a), but it is silent as to the concept addressed in 40 CFR 270.12(b). This new rule eliminates the duplicative language from 3745-50-30(A) that more appropriately appears in 3745-49-03, and adds language in 3745-50-30(B) to be equivalent to 40 CFR 270.12(b).

similar federal concept	former (currently effective) state location	new state location
40 CFR 270.12 (a)	3745-49-03, duplicated in 3745-50-30	3745-49-03, as referenced (but not duplicated) in new 3745-50-30 (A)
40 CFR 270.12 (b)	none	new 3745-50-30 (B)

This rule is submitted for 5-year review upon proposal. As this new rule is considered equivalent to its federal counterpart provision (40 CFR 270.12), we request its exemption from further 5-year reviews under ORC 106.3 and 106.031 (formerly 119.032).

3745-50-30

Trade secrets- confidentiality of information.

(A) Any record, report, or other information obtained under Chapter 3734. of the Revised Code or the "hazardous waste rules" as defined in rule 3745-50-10 of the Administrative Code may be claimed as confidential by the submitter pursuant to a trade secrets claim under rule 3745-49-03 of the Administrative Code or section 149.43 of the Revised Code.

(B) Claims of confidentiality for the name and address of any permit applicant or permittee will be denied.

Replaces: 3745-50-30

Effective:

Five Year Review (FYR) Dates: Exempt

Certification

Date

Promulgated Under: 119.03
Statutory Authority: 3734.12
Rule Amplifies: 3734.12
Prior Effective Dates: 04/15/1981, 05/22/1981 (Emer.), 08/26/1981 (Emer.),
12/02/1981, 12/30/1989, 03/09/2001, 12/07/2004,
09/05/2010

RSFA Attachment A

This is rule **3745-50-30** that is **to be rescinded**.

This rule duplicates much of OAC 3745-49-03, so it is being rescinded and replaced by a new rule having the same number, which eliminates that duplication.

This rule is submitted for 5-year review upon proposal, as is the replacement rule.

TO BE RESCINDED

3745-50-30

Trade secrets - request for confidentiality.

- (A) Any record, report, or other information obtained under the hazardous waste rules or Chapter 3734. of the Revised Code must not be available to the public upon a showing satisfactory to Ohio EPA that all or part of such record, report, or other information (other than discharge or emission data) would divulge methods or processes entitled to protection as trade secrets of such person, in which instance, Ohio EPA must consider such record, report, or other information or part thereof confidential and administer such record, report, or other information pursuant to this rule. ("Trade secrets" is defined in rule 3745-50-10 of the Administrative Code.)
- (B) A request for confidentiality must be submitted to Ohio EPA simultaneously with submittal of the specific record, report, or other information, and such request must be accompanied by sufficient supporting documentation. Failure to make such timely request must constitute a waiver of the right to prevent public disclosure.
- (C) A decision as to the confidentiality request must be made by Ohio EPA within forty-five days after receipt of a request filed in accordance with rule 3745-50-29 of the Administrative Code. Until such decision is made, the record, report, or other information or part thereof must be confidential. The person requesting confidentiality must be notified by mail of the decision.
- (D) Any record, report, or other information determined to be confidential may be disclosed, without such person's consent:
- (1) To officers, employees, or authorized representatives of the state or federal agency;
 - (2) In any judicial proceeding; and
 - (3) In any hearing conducted by Ohio EPA.

Effective:

Five Year Review (FYR) Dates: 07/01/2015

Certification

Date

Promulgated Under: 119.03
Statutory Authority: 3734.12
Rule Amplifies: 3734.12
Prior Effective Dates: 04/15/1981, 05/22/1981 (Emer.), 08/26/1981 (Emer.),
12/02/1981, 12/30/1989, 03/09/2001, 12/07/2004,
09/05/2010

RSFA Attachment A

Rule 3745-50-36 is amended as follows:		
Location	Change	Reason
Note: There are no changes to any fees in this rule, and no requirements are changed. These amendments are designed to improve readability.		
(A), 1 st sentence	remove "The owner or operator of a hazardous waste facility which holds a permit must pay to the director an annual permit fee on" and add "On"	a
	after "subsequent renewal permits" add ", the owner or operator of that facility shall pay to the director an annual permit fee" before the existing period	a, b
(B)	remove "must" and add "shall"	b
(C), 1 st sentence	remove "An owner or operator of" and add "For"	a
	remove "who is"	a
	after "of this rule" add a comma and remove "must not make"	a
	after "both storage and treatment" add "shall not be made" before the existing period	a, b
(C), 2 nd sentence	remove "must pay" and add "is subject to"	a
(D), 1 st sentence	remove "The holder of a hazardous waste permit must not pay that" and add "Payment shall not be made for the"	a, b
(D), 2 nd sentence	remove "must" and add "shall"	b

- a This sentence is being re-structured to make the rule consistent in voice, and to make the rule as a whole more consistent in its wording.
- b The change from "must" to "shall" is an LSC requirement.

This rule is submitted for 5-year review upon proposal. A new review date will be assigned.

3745-50-36

Annual hazardous waste permit fees.

- (A) ~~The owner or operator of a hazardous waste facility which holds a permit must pay to the director an annual permit fee on~~ On each anniversary of the date of issuance of the hazardous waste facility installation and operation permit and of any subsequent renewal permits, ~~the owner or operator of that facility shall pay to the director an annual permit fee.~~ Annual permit fees totaling forty thousand dollars or more for any one facility may be paid on a quarterly basis, with the first quarterly payment each year being due on the anniversary of the date of issuance of the hazardous waste facility installation and operation permit and of any subsequent renewal permits.
- (B) The annual permit fee ~~must~~ shall be determined for each permit holder in accordance with the following schedule:

Type of unit	Type of facility	Fee
Storage facility using:		
Containers	On-site, off-site, and satellite	\$500
Tanks	On-site, off-site, and satellite	500
Waste pile	On-site, off-site, and satellite	3,000
Surface impoundment	On-site and satellite	8,000
Surface impoundment	Off-site	10,000
Disposal facility using:		
Deep well injection	On-site and satellite	\$15,000
Deep well injection	Off-site	25,000
Landfill	On-site and satellite	25,000
Landfill	Off-site	40,000
Land application	On-site and satellite	2,500
Land application	Off-site	5,000
Surface impoundment	On-site and satellite	10,000
Surface impoundment	Off-site	20,000
Treatment facility using:		

Tanks	On-site, off-site, and satellite	\$700
Surface impoundment	On-site and satellite	8,000
Surface impoundment	Off-site	10,000
Incinerator	On-site and satellite	5,000
Incinerator	Off-site	10,000
Other forms of treatment	On-site, off-site, and satellite	1,000

- (C) ~~An owner or operator of~~ For a hazardous waste facility ~~who is~~ subject to the payment of an annual permit fee under paragraph (A) of this rule, ~~must not make~~ additional payments for multiple units of the same method of storage, treatment, or disposal, or for individual units that are used for both storage and treatment shall not be made. A facility using more than one method of storage, treatment, or disposal ~~must pay~~ is subject to the permit fee indicated by the schedule for each such method.
- (D) ~~The holder of a hazardous waste permit must not pay that~~ Payment shall not be made for the portion of an annual permit fee that would apply to a hazardous waste management unit for which a permit has been issued but for which construction has not yet commenced. Once construction has commenced, payment ~~must~~ shall be prorated on a daily basis, computed upon the number of days from the commencement of construction until the next anniversary date when the payment of the annual fee is due.

Effective:

Five Year Review (FYR) Dates: 07/01/2015

Certification

Date

Promulgated Under: 119.03
Statutory Authority: 3734.02, 3734.18
Rule Amplifies: 3734.18
Prior Effective Dates: 04/01/1986, 11/13/1987, 02/11/1992, 03/09/2001,
12/07/2004

RSFA Attachment A

Rule 3745-50-38 is amended as follows:		
Location	Change	Reason
(A)	remove “must” and add “shall”	a, b
(A)(6), 2 nd sentence	add quotation marks around the defined term “off-site facilities,” [the existing comma is inside the quotes]	c
(A)(7), 1 st sentence	within the existing quotation marks, remove “national park system plan” [lower case] and add “National Park System Plan” [upper case]	d
	after “as amended” add “through the date specified in rule 3745-50-11 of the Administrative Code” before the comma	e
(B)	remove “must” and add “shall”	a, b
(B)(1)	remove “The requirements of paragraphs” and add “Paragraphs”	f
(B)(3)	add “all of the following” before the colon	g
(B)(3)(a)	remove the ending “; and” and add a period	f, h
(B)(3)(b)	remove the ending “; and” and add a period	f, h
(D)	[2 times] remove “must” and add “shall”	a, b
	remove “the requirements in”	f

- a Word choice correction.
- b The change of “must” to “shall” is an LSC requirement.
- c This punctuation correction (adding quotation marks around defined terms) is made in all hazardous waste rules, as they are amended, at locations of defined terms that are designated as such in the text.
- d Format/title correction.

RSFA Attachment A

Rule **3745-50-38** is amended as follows:

Location	Change	Reason
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- e This text is added to clarify that “as amended” refers to past amendments, not future/prospective amendments of the document that is being referenced. “As amended” should not be removed because the statute being referenced may have been amended after its initial promulgation (which is the standard statute notation), and our intent is to include in that citation all the past amendments of that statute, as do the references to statute in the federal RCRA rules (to which the hazardous waste rules must be equivalent), and as does the Ohio Revised Code. Rule 3745-50-11 is the hazardous waste management program’s “Incorporated by reference” rule that establishes date-certain limitations on cross-referenced documents, and ensures that the hazardous waste rules are not referencing statute changes that may occur after the date in 3745-50-11.
- f Unnecessary text is removed.
- g This amendment adds specificity to the rule.
- h Punctuation correction.

This rule is submitted for 5-year review upon proposal. A new review date will be assigned.

3745-50-38

Contents of the "Siting Criteria Document".

(A) The "Siting Criteria Document" information requirements in this rule reflect the standards in division (D)(2) of section 3734.05 of the Revised Code that are applicable to modifications under division (I)(3) of section 3734.05 of the Revised Code. These information requirements are necessary in order to determine compliance with division (D)(2) of section 3734.05 of the Revised Code. The "Siting Criteria Document" ~~must~~shall include such information as may be necessary to enable the director to form a conclusion using the following criteria:

- (1) The nature and volume of the waste to be treated, stored, or disposed of at the facility;
- (2) The facility complies with the hazardous waste rules;
- (3) The facility represents the minimum adverse environmental impact, considering the state of available technology and the nature and economics of various alternatives, and other pertinent considerations;
- (4) The facility represents the minimum risk of all of the following:
 - (a) Fires or explosions from treatment, storage, or disposal methods;
 - (b) Release of hazardous waste during transportation of hazardous waste to or from the facility;
 - (c) Adverse impact on the public health and safety;
- (5) The facility complies with Chapters 3704., 3734., and 6111. of the Revised Code and all rules and standards adopted under them;
- (6) The owner of the facility, the operator of the facility, or any other person in a position with the facility from which the person may influence the installation and operation of the facility has been involved in any prior activity involving transportation, treatment, storage, or disposal of hazardous waste, that person has a history of compliance with Chapters 3704., 3734., and 6111. of the Revised Code and all rules and standards adopted under them, RCRA, the hazardous waste rules, and similar laws and rules of other states if any such prior operation was located in another state, demonstrates sufficient reliability, expertise, and competency to operate a hazardous waste facility under the applicable provisions of Chapters 3704., 3734., and 6111. of the Revised Code, the applicable rules and standards adopted under them, and terms and conditions of a hazardous waste facility installation and operation

permit, given the potential for harm to the public health and safety and the environment that could result from the irresponsible operation of the facility. For "off-site facilities," as defined in section 3734.41 of the Revised Code, the director may use the investigative reports of the attorney general prepared pursuant to section 3734.42 of the Revised Code as a basis for making a finding and determination under division (D)(2)(f) of section 3734.05 of the Revised Code; and

- (7) The facility will not be located within the boundaries of a state park established or dedicated under Chapter 1541. of the Revised Code, a state park purchase area established under section 1541.02 of the Revised Code, any unit of the national park system, or any property that lies within the boundaries of a national park or recreation area, but that has not been acquired or is not administered by the secretary of the United States department of the interior, located in the state of Ohio, or any candidate area located in this state identified for potential inclusion in the national park system in the edition of the "~~national park system plan~~National Park System Plan" submitted under paragraph (b) of Section 8 of The Act of August 18, 1970, 84 Stat. 825, 16 U.S.C.A. 1a-5, as amended through the date specified in rule 3745-50-11 of the Administrative Code, current at the time of filing of the application for the permit, unless the facility will be used exclusively for the storage of hazardous waste generated within the park or recreation area in conjunction with the operation of the park or recreation area. This paragraph does not apply to the facility of any applicant for modification of a permit unless the modification application proposes to increase the land area included in the facility or to increase the quantity of hazardous waste that will be treated, stored, or disposed of at the facility.
- (B) The "Siting Criteria Document" information requirements in this rule reflect the standards in division (D)(2) of section 3734.05 of the Revised Code that are applicable to new hazardous waste facilities. These information requirements are necessary in order to determine compliance with division (D)(2) of section 3734.05 of the Revised Code. The "Siting Criteria Document" ~~must~~shall include such information as may be necessary to enable the director to form a conclusion using the following criteria:
- (1) ~~The requirements of paragraphs~~Paragraphs (A) to (A)(7) of this rule;

- (2) The active areas within a new hazardous waste facility where acute hazardous waste as listed in paragraph (E) of rule 3745-51-33 of the Administrative Code, or organic waste that is toxic and is listed in Chapter 3745-51 of the Administrative Code, is being stored, treated, or disposed of, and where the aggregate of the storage design capacity and the disposal design capacity of all hazardous waste in those areas is greater than two hundred fifty thousand gallons, are not located or operated within any of the following:
- (a) Two thousand feet of any residence, school, hospital, jail, or prison;
 - (b) Any naturally occurring wetland; or
 - (c) Any flood hazard area if the applicant cannot show that the facility will be designed, constructed, operated, and maintained to prevent washout by a one-hundred-year flood.
- (3) The criteria in paragraph (B)(2) of this rule does not apply to the facility of any applicant who demonstrates to the director that all of the following:
- (a) The limitations specified in paragraph (B)(2) of this rule are not necessary because of the nature or volume of the waste and the manner of management applied; ~~and~~.
 - (b) The facility will impose no substantial danger to the health and safety of persons occupying the structures listed in paragraph (B)(2) of this rule; ~~and~~.
 - (c) The facility is to be located or operated in an area where the proposed hazardous waste activities will not be incompatible with existing land uses in the area.
- (C) If owners and operators of hazardous waste facilities can demonstrate that the information prescribed in the "Siting Criteria Document" cannot be provided to the extent required, the director may make allowance for submittal of alternative information on a case-by-case basis.
- (D) Information required in the "Siting Criteria Document" ~~must~~shall be submitted to the director and signed in accordance with ~~the requirements in~~ rule 3745-50-42 of the Administrative Code. Certain technical data, such as design drawings and specifications, and engineering studies ~~must~~shall be certified by a professional engineer.

[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:

Five Year Review (FYR) Dates: 07/01/2015

Certification

Date

Promulgated Under: 119.03
Statutory Authority: 3734.05, 3734.12
Rule Amplifies: 3734.05
Prior Effective Dates: 12/07/2004, 09/05/2010

RSFA Attachment A

Rule 3745-50-40 is amended as follows:		
Location	Change	Reason
(A)(1)	remove "must" and add "shall"	a
(A)(2)	add text "Application submittal."	b
(A)(2)(a)	[4 times] remove "must" and add "shall"	a
(A)(2)(b)	remove "must" and add "shall"	a
(A)(3)	remove "the requirements of"	c
(A)(4)(b)(ii)	remove "agency" and add "Ohio EPA"	d
	remove "must" and add "shall"	a
(A)(4)(b)(iii)	remove "must" and add "shall"	a
(A)(4)(b)(iv)	remove "must" and add "shall"	a
(A)(5)	-after "and operation permit," remove "he will issue" -after "the permit" remove "upon" and add "issued will include"	d, e
	after "such terms and conditions as" remove "he" and add "the director"	d
	remove "the standards of"	c
(B)(1)	-after "hazardous waste or" add "a " -remove "unit(s)" and add "unit"	d
(C)(1)	remove "unit(s)" and add "unit"	d
(C)(1)(b)	remove "must meet the requirements of" and add "shall comply with"	a, c, d
(C)(2)	4 th sentence: remove "from" and add "after"	d
(C)(3)	remove "must" and add "shall"	a
(C)(6)	remove "must" and add "shall"	a
(C)(7)(b)	[2 times] remove "must" and add "shall"	a
	remove "set forth"	c
(D)(1)	[2 times] remove "must" and add "shall"	a
(D)(2)	[2 times] remove "must" and add "shall"	a
(D)(3)	remove "must" and add "shall"	a

RSFA Attachment A

Rule 3745-50-40 is amended as follows:		
Location	Change	Reason
(D)(5)(a)	remove “; and” and add a period	c, f
(D)(5)(b)	remove “must” and add “shall”	a
(D)(5)(c)	remove “must” and add “shall”	a
(D)(5)(e)	remove “he” and add “the director”	d
(D)(6)	[3 times] remove “he” and add “the director”	d
(D)(7)	remove “must” and add “shall”	a
(E)	[2 times] remove “must” and add “shall”	a
(G)	remove “must” and add “shall”	a
	remove “from” and add “after”	d
(I)	remove “the standards of”	c
	-[2 times] remove “assessment(s) and add “assessments” -remove “and/or” and add “or”	d
(I)(1)	remove “the standards of”	c

- a The change of “must” to “shall” is an LSC requirement.
- b This amendment is made to eliminate the occasion of a paragraph designation without text.
- c Unnecessary language is removed.
- d Word choice correction.
- e This sentence is slightly re-written to make the sentence clearer.
- f Punctuation correction.

This rule is submitted for 5-year review upon proposal. A new review date will be assigned.

3745-50-40

Submittal of hazardous waste permit applications.

(A) New hazardous waste facilities.

(1) No person shall begin physical construction of a new hazardous waste facility without having submitted "Part A" and "Part B" of a permit application to the director and having received an effective Ohio hazardous waste facility installation and operation permit. An application ~~must~~shall be submitted to the director at least one hundred eighty days before physical construction is expected to commence.

(2) Application submittal.

(a) Prior to the submittal of a complete application for a hazardous waste facility installation and operation permit, the applicant ~~must~~shall hold at least one meeting in the township or municipal corporation in which the facility is proposed to be located, whichever is geographically closer to the proposed location of the facility. The meeting ~~must~~shall be open to the public and ~~must~~shall be held to inform the community of the proposed hazardous waste management activities and to solicit questions from the community concerning the activities. The applicant ~~must~~shall provide to the director evidence of the meeting and document community questions concerning the proposed activities. The pre-application notice requirements are further specified in paragraphs (A) to (A)(4)(b)(v) of rule 3745-50-39 of the Administrative Code.

(b) If the application is for a proposed hazardous waste disposal or thermal treatment facility, the applicant also ~~must~~shall give actual notice of the general design and purpose of the facility to the legislative authority of each municipal corporation, township, and county in which the facility is proposed to be located at least ninety days before the permit application is submitted to the director.

(3) Upon receipt of a complete application for a hazardous waste facility installation and operation permit, the director will consider the application and accompanying information to determine whether the application complies with ~~the requirements of~~ division (D)(2) of section 3734.05 of the Revised Code and with the hazardous waste rules. The director will also consider such other information as is relevant to the installation and operation of the facility.

(4) Upon completion of the review pursuant to paragraph (A)(3) of this rule, the director will:

- (a) Issue a draft permit or a notice of intent to deny the permit application;
and
- (b) Give public notice, in a newspaper having general circulation in the county in which the facility is located, and over a local radio station, of the following:
 - (i) The issuance of the draft permit or notice of intent to deny the permit application; and
 - (ii) An announcement of a sixty day comment period, and the name and address of an ~~agency~~Ohio EPA contact person to whom comments ~~must~~shall be sent; and
 - (iii) The date for a public meeting which ~~must~~shall be held in the county in which the facility is located, not fewer than thirty days after the public notice. At the public meeting, any person may submit written or oral comments relevant to the permit application and draft permit or notice of intent to deny the permit application; and
 - (iv) The public notice in paragraph (A)(4)(b) of this rule ~~must~~shall also contain:
 - (a) A summary of the application and the draft permit or notice of intent to deny the permit application;
 - (b) The location of the facility;
 - (c) A description of the hazardous waste activity;
 - (d) The location where a copy of the application and draft permit or notice of intent to deny the permit application are available; and

(e) The statement that any person may submit written comments relevant to the permit application and draft permit or notice of intent to deny the permit application.

- (5) Not later than one hundred eighty days after the end of the public comment period in paragraph (A)(4)(b)(ii) of this rule, the director, without prior hearing, will issue or deny the permit in accordance with Chapter 3734. of the Revised Code. If the director approves an application for a hazardous waste installation and operation permit, ~~he will issue~~ the permit ~~upon~~issuance will include such terms and conditions as ~~he~~the director finds are necessary to ensure the construction and operation of the hazardous waste facility are in accordance with ~~the standards of~~ division (D) of section 3734.05 of the Revised Code.
- (B) Permitted facilities subject to hazardous waste requirements due to additional statutory or regulatory changes.
- (1) An owner or operator holding a hazardous waste permit who is treating, storing, or disposing of hazardous waste on the effective date of statutory or regulatory changes under Chapter 3734. of the Revised Code that render the owner or operator subject to additional hazardous waste permitting requirements for newly regulated hazardous waste or a hazardous waste management unit(s) unit, shall be deemed to have a permit by rule for such newly regulated activity provided that the owner or operator complies with paragraph (H) of rule 3745-50-51 of the Administrative Code.
- (2) The permit by rule established under paragraph (B)(1) of this rule terminates upon final administrative disposition of the "Class 2" or "Class 3" modification application submitted pursuant to paragraph (H)(1)(d) of rule 3745-50-51 of the Administrative Code.
- (C) Owners or operators of facilities without a hazardous waste installation and operation permit who become subject to hazardous waste permitting requirements due to statutory or regulatory changes.
- (1) Any owner or operator of a facility without a hazardous waste installation and operation permit who becomes subject to hazardous waste permitting requirements due to statutory or regulatory changes under Chapter 3734. of the Revised Code, who previously was not required to obtain a hazardous waste facility installation and operation permit, will be deemed to have a permit by rule for the newly regulated hazardous waste or hazardous waste management ~~unit(s) unit~~ to the extent the owner or operator has:

- (a) Complied with the requirement to notify Ohio EPA or U.S. EPA of regulated waste activity; and
 - (b) Submitted a "Part A" permit application to the director no later than thirty days after the owner or operator first becomes subject to the hazardous waste permitting requirements. The "Part A" permit application ~~must meet the requirements of~~shall comply with rule 3745-50-43 of the Administrative Code.
- (2) Within ninety days after receipt of a "Part A" permit application submitted pursuant to paragraph (C)(1)(b) of this rule, the director will make a determination of whether the owner or operator has complied with paragraphs (C)(1)(a) and (C)(1)(b) of this rule. If the director finds upon examination of a "Part A" application that it fails to meet the requirements of rule 3745-50-43 of the Administrative Code, the director will notify the owner or operator in writing of the apparent deficiency or deficiencies. Such notice will specify the grounds for the director's determination that the application is deficient. The owner or operator has ~~thirty days from~~thirty days after receipt to respond to such a notification and to explain or cure the alleged deficiency or deficiencies in the "Part A" application. If, after such notification and opportunity for response, the director determines that the application remains deficient, the director will notify the owner or operator that the owner or operator has failed to qualify for permit by rule.
- (3) Within one hundred eighty days after the director's determination of compliance with paragraphs (C)(1)(a) and (C)(1)(b) of this rule, the director will give public notice that the owner or operator has qualified for permit by rule. The public notice ~~must~~shall appear in a newspaper having general circulation in the county in which the facility is located and over a local radio station. The notice will contain a summary of the permit by rule, the location of the facility, a description of the facility, and the location where a copy of the "Part A" permit application is available for inspection.
- (4) Paragraph (C)(1) of this rule does not apply to:
- (a) The owner or operator of a hazardous waste facility when the facility has been previously denied a hazardous waste facility installation and operation permit under Chapter 3734. of the Revised Code or RCRA; or
 - (b) The owner or operator of a hazardous waste facility, if the authority of the owner or operator to operate the facility under Chapter 3734. of the Revised Code or RCRA has been previously terminated.

- (5) During the duration of the permit by rule provided for under paragraph (C)(1) of this rule, the owner or operator must conduct the newly regulated activity in accordance with the "Part A" permit application and in compliance with Chapters 3745-65 to 3745-69 and 3745-256 of the Administrative Code. The owner or operator may make changes or alterations to the facility. Such changes or alterations will be considered modifications to the "Part A" permit application and must be submitted, classified, and approved or disapproved in accordance with rule 3745-50-51 of the Administrative Code in the same manner as an application for a modification to a hazardous waste facility installation and operation permit.
- (6) An owner or operator of a hazardous waste facility deemed to have a permit by rule under paragraph (C)(1) of this rule ~~must~~shall submit a "Part B" application in accordance with paragraph (A) of rule 3745-50-41 of the Administrative Code.
- (7) The permit by rule established in paragraph (C)(1) of this rule terminates:
- (a) When the permittee by rule fails to furnish a requested "Part B" hazardous waste facility installation and operation permit application in accordance with paragraph (A) of rule 3745-50-41 of the Administrative Code, or to furnish in full the information required in the "Part B" application; or
- (b) Upon final administrative disposition of the "Part B" permit application submitted in accordance with paragraph (C)(6) of this rule. "Final administrative disposition" means that the director ~~must~~shall approve or disapprove the "Part B" application in accordance with paragraphs (D)(5) and (D)(6) of this rule. In accordance with division (J) of section 3734.05 of the Revised Code, the director ~~must~~shall not disapprove the "Part B" permit application for the thermal treatment activity on the basis of the criteria ~~set forth~~ in division (D)(2)(g) or (D)(2)(h) of section 3734.05 of the Revised Code.

(D) Permit renewal.

- (1) An application to renew a hazardous waste facility installation and operation permit, or renewal permit, ~~must~~shall be submitted at least one hundred eighty days before the expiration date of the effective permit unless permission for a later submittal date has been authorized by the director upon a showing of good cause. The director ~~must~~shall not authorize applications to be submitted later than the expiration date of the existing permit.

- (2) An owner or operator of a hazardous waste facility holding a hazardous waste facility installation and operation permit, or renewal permit, ~~must~~shall submit a renewal application in accordance with paragraph (D)(1) of this rule. The renewal application ~~must~~shall include the information required by rule 3745-50-41 of the Administrative Code.
- (3) An owner or operator of a hazardous waste facility holding a hazardous waste facility installation and operation permit, or renewal permit, ~~must~~shall comply with all terms and conditions of the existing permit until final administrative disposition of the renewal permit application.
- (4) Upon receipt of a completed renewal application, the director will consider such application, inspection reports of the facility, results of performance tests, records regarding the compliance or noncompliance of the owner or operator with the terms and conditions of the permit and with the rules adopted by the director pursuant to Chapter 3734. of the Revised Code, and such other information as is relevant to the operation of the facility.
- (5) Upon completion of the review pursuant to paragraph (D)(4) of this rule, the director will:
 - (a) Issue a draft renewal permit or a notice of intent to deny the permit application;~~and~~
 - (b) Give public notice of the issuance of the draft renewal permit or notice of intent to deny the permit application in a newspaper having general circulation in the county in which the facility is located and over a local radio station. The notice ~~must~~shall contain a summary of the application and the draft renewal permit or notice of intent to deny the permit application, the location of the facility, a description of the hazardous waste activity, the location where a copy of the application and draft renewal permit or notice of intent to deny the permit application are available, and the statement that any person may submit written comments relevant to the permit application and draft renewal permit or notice of intent to deny the permit application.
 - (c) The director will schedule a public meeting in the county in which the facility is located if significant interest is shown. If a public meeting is to be held, the director will promptly give public notice, in a newspaper having general circulation in the county in which the facility is located and over a local radio station, of a date for a public meeting which ~~must~~shall be held in the county in which the facility is located, not

fewer than thirty days after the public notice of the public meeting. At the public meeting, any person may submit written or oral comments relevant to the permit application and draft renewal permit or notice of intent to deny the permit application.

- (d) Within sixty days after the public meeting or close of the public comment period, the director will issue or deny the permit.
 - (e) The director will not issue a renewal permit unless ~~he~~the director determines that during the term of the existing permit, the owner or operator of the facility has maintained a history of compliance with Chapter 3734. of the Revised Code, rules adopted thereunder, the existing permit, and orders entered to enforce such requirements that demonstrates sufficient reliability, expertise, and competency to operate the facility in compliance with Chapter 3734. of the Revised Code, rules adopted thereunder, and the renewal permit.
- (6) If the director approves an application for a renewal permit, ~~he~~the director will issue the permit upon such terms and conditions as ~~he~~the director finds are reasonable to ensure that continued operation, maintenance, closure, and post-closure care of the hazardous waste facility are conducted in accordance with Chapter 3734. of the Revised Code and the hazardous waste rules, and such additional terms and conditions ~~he~~the director determines are necessary to protect human health and the environment.
- (7) Those portions of a renewal application which contain proposed facility modifications ~~must~~shall be processed in accordance with paragraph (D) of rule 3745-50-51 of the Administrative Code.
- (E) Exposure information. A "Part B" permit application submitted by an owner or operator of a facility that stores, treats, or disposes of hazardous waste in a surface impoundment or a landfill ~~must~~shall be accompanied by information, reasonably ascertainable by the owner or operator, on the potential for the public to be exposed to hazardous wastes or hazardous constituents resulting from a release from the unit. At a minimum, such information ~~must~~shall address:
- (1) Reasonably foreseeable potential releases from both normal operations and accidents at the unit, including releases associated with transportation to or from the unit;
 - (2) The potential pathways of human exposure to hazardous wastes or hazardous constituents resulting from releases described in paragraph (E)(1) of this rule; and

- (3) The potential nature and magnitude of the human exposure resulting from such releases.
- (F) If an owner or operator fails or refuses to submit a permit application to the director as required by paragraph (A) or (D) of this rule, or fails or refuses to correct application deficiencies identified by Ohio EPA, the director will notify the applicant and:
- (1) Deny the requested permit; or
 - (2) Return the application to the applicant as incomplete; or
 - (3) Revoke the existing permit; and
 - (4) Take appropriate enforcement action.
- (G) Recordkeeping. Applicants ~~must~~shall keep records of all data used to complete a permit application and any supplemental information required by the director in accordance with rules 3745-50-43 and 3745-50-44 of the Administrative Code for a period of at least three years ~~from~~after the effective date of the permit.
- (H) The director may require a permittee or an applicant to submit information necessary to enable the director to evaluate the application or to establish permit conditions under this rule and rule 3745-50-51 of the Administrative Code.
- (I) If the director concludes, based on one or more of the factors in paragraphs (I)(1) to (I)(1)(i) of this rule that compliance with ~~the standards of~~ 40 CFR Part 63 subpart EEE alone may not be protective of human health or the environment, the director will require the additional information or ~~assessment(s)~~assessments necessary to determine whether additional controls are necessary to ensure protection of human health and the environment. This includes information necessary to evaluate the potential risk to human health ~~and/or~~ the environment resulting from both direct and indirect exposure pathways. The director may also require a permittee or applicant to provide information necessary to determine whether such an ~~assessment(s)~~assessments should be required.
- (1) The director will base the evaluation of whether compliance with ~~the standards of~~ 40 CFR Part 63 subpart EEE alone is protective of human health or the environment on factors relevant to the potential risk from a hazardous waste combustion unit, including, as appropriate, any of the following factors:

- (a) Particular site-specific considerations such as proximity to receptors (such as schools, hospitals, nursing homes, day care centers, parks, community activity centers, or other potentially sensitive receptors), unique dispersion patterns, etc.;
- (b) Identities and quantities of emissions of persistent, bioaccumulative, or toxic pollutants considering enforceable controls in place to limit those pollutants;
- (c) Identities and quantities of nondioxin products of incomplete combustion most likely to be emitted and to pose significant risk based on known toxicities;
- (d) Identities and quantities of other off-site sources of pollutants in proximity to the facility that significantly influence interpretation of a facility-specific risk assessment;
- (e) Presence of significant ecological considerations, such as the proximity of a particularly sensitive ecological area;
- (f) Volume and types of wastes, for example wastes containing highly toxic constituents;
- (g) Other on-site sources of hazardous air pollutants that significantly influence interpretation of the risk posed by the operation of the source in question;
- (h) Adequacy of any previously conducted risk assessment, given any subsequent changes in conditions likely to affect risk; and
- (i) Such other factors as may be appropriate.

(2) Reserved.

[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:

Five Year Review (FYR) Dates: 07/01/2015

Certification

Date

Promulgated Under: 119.03
Statutory Authority: 3734.02, 3734.05, 3734.12
Rule Amplifies: 3734.02, 3734.05, 3734.12
Prior Effective Dates: 04/15/1981, 08/26/1981 (Emer.), 04/28/1982,
03/04/1985, 11/17/1988 (Emer.), 02/23/1989,
12/30/1989, 03/31/1992, 07/14/1997, 12/07/2000,
03/13/2002, 12/07/2004, 02/16/2009

RSFA Attachment A

Rule 3745-50-42 is amended as follows:		
Location	Change	Reason
(A)	remove "must" and add "shall"	a, b
(A)(1)	add "either" before the colon	c
(A)(1)(a)	remove the ending ", or" and add a period	d, e
(A)(2)	remove the ending "; or" and add a period	d, e
(A)(3)	remove "includes" and add "may be either of the following" before the colon	a, c
(A)(3)(a)	remove the ending ", or" and add a period	d, e
(A)(3)(b)	after "administrator" remove "of U.S.EPA"	e
(B)	remove "must" and add "shall"	a, b
	add "all of the following" before the colon	c
(B)(1)	remove the ending semicolon and add a period	d
(B)(2)	remove the ending "; and" and add a period	d, e
(C)	remove "must" and add "shall"	a, b
(D)	add "Any person who signs a document under paragraph (A) or (B) of this rule:"	f
(D)(1)	remove "Any person signing a document under paragraph (A) or (B) of this rule must" and add "Shall"	a, b, f

- a Word choice correction.
- b The change of "must" to "shall" is an LSC requirement.
- c This amendment adds specificity to the rule.
- d Punctuation correction.
- e Unnecessary text is removed.

RSFA Attachment A

Rule **3745-50-42** is amended as follows:

Location	Change	Reason
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- f Re-located text. This text is re-located to eliminate the paragraph designation without text.

This rule is submitted for 5-year review upon proposal. A new review date will be assigned.

3745-50-42

Signatories to permit applications and reports.

(A) Applications. All permit applications ~~must~~shall be signed as follows:

(1) For a corporation: By a responsible corporate officer. For the purpose of this rule, a "responsible corporate officer" means either:

(a) A president, secretary, treasurer, or vice president of the corporation in charge of a principal business function, or any other person who performs similar policy-making or decision-making functions for the corporation~~;~~.

(b) The manager of one or more manufacturing, production, or operating facilities employing more than two hundred fifty persons or having gross annual sales or expenditures exceeding twenty-five million dollars (in second quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

(2) For a partnership or sole proprietorship: By a general partner or the proprietor, respectively~~;~~.

(3) For a municipality, state, federal, or other public agency: By either a principal executive officer or ranking elected official. For purposes of this rule, a principal executive officer of a federal agency ~~includes~~may be either of the following:

(a) The chief executive officer of the agency~~;~~.

(b) A senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., regional administrator ~~of U.S.EPA~~).

(B) Reports. All reports required by permits and other information requested by the director ~~must~~shall be signed by a person described in paragraph (A) of this rule, or by a duly authorized representative of that person. A person is a duly authorized representative only if all of the following:

(1) The authorization is made in writing by a person described in paragraph (A) of this rule~~;~~.

(2) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity,

such as the position of plant manager, operator of a well or a well field, superintendent, or position of equivalent responsibility (a duly authorized representative may thus be either a named individual or any individual occupying a named position); ~~and,~~

(3) The written authorization is submitted to the director.

(C) Changes to authorization. If an authorization under paragraph (B) of this rule is no longer accurate because a different individual or position has responsibility for the overall operation of a facility, a new authorization satisfying the requirements of paragraph (B) of this rule ~~must~~shall be submitted to the director prior to or together with any reports, information, or applications to be signed by an authorized representative.

(D) Any person who signs a document under paragraph (A) or (B) of this rule:

(1) ~~Any person signing a document under paragraph (A) or (B) of this rule~~ mustshall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

(2) Reserved.

Effective:

Five Year Review (FYR) Dates: 07/01/2015

Certification

Date

Promulgated Under: 119.03
Statutory Authority: 3734.12
Rule Amplifies: 3734.12
Prior Effective Dates: 04/15/1981, 05/22/1981 (Emer.), 08/26/1981 (Emer.),
12/02/1981, 08/30/1984, 03/04/1985, 04/01/1990,
03/09/2001, 12/07/2004, 09/05/2010

RSFA Attachment A

Rule 3745-50-44 is amended as follows:		
Location	Change	Reason
Intro	[2 times] remove "must" and add "shall"	a
	-in 4 th sentence, remove "requirements in" -in 7 th sentence, remove "set forth"	b
(A)(2)	remove "must" and add "shall"	a
	remove "must be known" and add "is required"	c
(A)(8)(a)	remove the ending semicolon and add a period	d *
(A)(8)(b)	remove the ending semicolon and add a period	d *
(A)(8)(c)	remove the ending semicolon and add a period	d *
(A)(8)(d)	remove the ending "; and" and add a period	b, d *
(A)(9)	-after "ignitable" add "wastes" -after "reactive" add "wastes"	e
(A)(11)(c)	[3 times] remove "must" and add "shall"	a
	after "Information" remove "must also" add "shall"	a, b
(A)(11)(c) [Comment]	in 1 st sentence, remove "they" and add "these maps"	c
	in 2 nd sentence: -remove "map excludes" and add "maps exclude" -in the parenthetical remove "areas" and add "an area" -remove "these areas must" and add "this area shall" -remove "they are" and add "it is"	a, c
	in last sentence remove "must" and add "shall"	a
(A)(11)(d)	remove "must" and add "shall"	a
(A)(11)(d)(iii)(b)	remove "location(s)" and add "locations"	c
(A)(11)(e)	remove "must" and add "shall"	a
(A)(12)	in last sentence remove "requirements in"	b
(A)(15)	remove "under" and add "in"	c
(A)(16)	remove "under" and add "in"	c
(A)(17)	in 1 st sentence, remove "the requirements of"	b
(A)(19)	[3 times] remove "must" and add "shall"	a
(A)(20)	remove "his" and add "the director's"	c

RSFA Attachment A

Rule 3745-50-44 is amended as follows:		
Location	Change	Reason
(A)(22)	-remove "their" and add " attendees' " -remove "under" and add "in"	c
(B)(1)	remove "under" and add "in"	c
(B)(3)	[3 times] remove "under" and add "in"	c
	add quotations marks around the defined term "point of compliance"	f
(B)(4)(a)	remove "under" and add "in"	c
(B)(5)	remove "meet the requirements of" and add "comply with"	b
(B)(6)	[2 times] remove "must" and add "shall"	a
	-remove "meets the requirements of" and add "complies with"	c
	-remove "under" and add "in"	
(B)(7), in 1 st sentence	remove "must" and add "shall"	a
	remove "meets the requirements of" and add "complies with"	c
(B)(7), in 2 nd sentence	after "operator" remove "must also" and add "shall"	a, b
	remove "meet the requirements of" and add "comply with"	c
(B)(7), in last sentence	remove "must" and add "shall"	a
(B)(7)(d)	remove "set forth" and add "provided"	c
(B)(7)(e)	remove "the requirements of"	b
(B)(8), in 1 st sentence	-[2 times] remove "under" and add "in"	c
	-remove "meets the requirements of" and add "complies with"	
	remove "must" and add "shall"	a
(B)(8), in 2 nd sentence	remove "he" and add "the owner or operator"	c

RSFA Attachment A

Rule 3745-50-44 is amended as follows:		
Location	Change	Reason
(B)(8), in 3 rd sentence	-after "reason" remove "must" -after "instead" add "shall"	a
	remove "meets the requirements of" and add "complies with"	c
(B)(8), in last sentence	remove "must" and add "shall"	a
(B)(8)(b)	remove "set forth" and add "provided"	c
(C)	add a comma after "treatment"	d
(C)(1)	add "Containers."	g
(C)(1)(c)	after "ignitable" add "wastes"	e
(C)(2)	add "Tanks."	g
	remove "must" and add "shall"	a
(C)(2)(a)	remove "under" and add "in"	c
(C)(2)(e)	remove "under" and add "in"	c
(C)(2)(f)	remove "system(s)" and add "systems"	c
(C)(2)(g)	remove "meet the requirements of" and add "comply with"	c
(C)(2)(i)	remove "under" and add "in"	c
(C)(2)(j)	-after "ignitable" add "wastes" -after "reactive" add "wastes"	d
	remove "the requirements of"	b
(C)(3)	add "Surface impoundments."	g
	add "the following additional information is required" before the colon	h
(C)(3)(b)	remove "meet the requirements of" and add "comply with"	c
(C)(3)(b)(ii)	remove "must meet the requirements of" and add "shall comply with"	a, c
(C)(3)(b)(iv)	remove "under" and add "in"	c

RSFA Attachment A

Rule 3745-50-44 is amended as follows:		
Location	Change	Reason
(C)(3)(b)(v)	[2 times] remove “under” and add “in”	c
	after “plan” remove the comma	d
(C)(3)(c)	remove “meet the requirements of” and add “comply with”	c
	remove “must” and add “shall”	a
(C)(3)(d)	-remove “under” and add “in” -remove “he” and add “the qualified professional engineer”	c
	remove “must” and add “shall”	a
(C)(3)(e)	remove “under” and add “in”	c
(C)(3)(f)	remove “under” and add “in”	c
	remove “must” and add “shall”	a
(C)(3)(g)	after “ignitable” add “wastes”	e
(C)(3)(i)	after “F026” add a comma	d
	remove “meet the requirements of” and add “comply with”	c
	remove “must” and add “shall”	a
(C)(3)(i)(i)	-remove “their” and add “the” -after “potential” add “for the wastes”	c
(C)(4)	add “Waste piles.”	g
	add “, the following additional information is required” before the colon	h
(C)(4)(b)	[2 times] remove “the requirements of”	b
	remove “met” and add “complied with”	c
(C)(4)(c)	remove “meet the requirements of” and add “comply with”	c
(C)(4)(c)(i)(a)	remove “must meet the requirements of” and add “shall comply with”	a, c
	remove “must” and add “shall”	a
(C)(4)(c)(i)(b)	remove “must meet the requirements of” and add “shall comply with”	a, c

RSFA Attachment A

Rule 3745-50-44 is amended as follows:		
Location	Change	Reason
(C)(4)(c)(i)(d)	remove “under” and add “in”	c
(C)(4)(c)(i)(e)	[2 times] remove “under” and add “in”	c
(C)(4)(d)	remove “meet the requirements of” and add “comply with”	c
	remove “must” and add “shall”	a
(C)(4)(f)	after “ignitable” add “wastes”	e
	remove “the requirements of”	b
(C)(4)(h)	remove “under” and add “in”	c
	remove “must” and add “shall”	a
(C)(4)(i)	after “F026” add a comma	d
	-remove “defined” and add “described” -remove “meet the requirements of” and add “comply with”	c
	remove “must” and add “shall”	a
(C)(4)(i)(i)	-remove “their” and add “the” -after “potential” add “for the wastes”	c
(C)(5)	add “Land treatment.”	g
	remove “must” and add “shall”	a
(C)(5)(a)	remove “under” and add “in”	c
	remove “must” and add “shall”	a
(C)(5)(b)	remove “under” and add “in”	c
	[2 times] remove “must” and add “shall”	a
(C)(5)(c)	remove “meet the requirements of” and add “comply with”	c
	remove “must” and add “shall”	a
(C)(5)(d)	remove “under” and add “in”	c
(C)(5)(e)	remove “the requirements of”	b
(C)(5)(f)	remove “under” and add “in”	c

RSFA Attachment A

Rule 3745-50-44 is amended as follows:		
Location	Change	Reason
(C)(5)(g)	after “ignitable” add “wastes”	e
	remove “the requirements of”	b
(C)(5)(i)	after “F026” add a comma	d
	remove “meet the requirements of” and add “comply with”	c
	remove “must” and add “shall”	a
(C)(5)(i)(i)	-remove “their” and add “the” -after “potential” add “for the wastes”	c
(C)(6)	add “Landfills.”	g
	remove “must” and add “shall”	a
(C)(6)(b)	remove “meet the requirements of” and add “comply with”	c
(C)(6)(b)(i)(a)	remove “must meet the requirements of” and add “shall comply with”	a, c
(C)(6)(b)(i)(b)	remove “must meet the requirements of” and add “shall comply with”	a, c
(C)(6)(b)(i)(d)	remove “under” and add “in”	c
(C)(6)(b)(i)(e)	-remove the comma after “rationale” -remove the comma after “plan”	d
	[2 times] remove “under” and add “in”	c
(C)(6)(c)	remove “meet the requirements of” and add “comply with”	c
	remove “must” and add “shall”	a
(C)(6)(d)	remove “meet the requirements of” and add “comply with”	c
(C)(6)(e)	remove “under” and add “pursuant to”	c
(C)(6)(f)	after “ignitable” add “wastes”	e
	remove “the requirements of”	b
(C)(6)(i)	remove “the requirements of”	b

RSFA Attachment A

Rule 3745-50-44 is amended as follows:		
Location	Change	Reason
(C)(6)(j)	after "F026" add a comma	d
	remove "meet the requirements of" and add "comply with"	c
	remove "must" and add "shall"	a
(C)(6)(j)(i)	-remove "their" and add "the" -after "potential" add "for the wastes"	c
(C)(7)	add "Incinerators."	g
	remove "must fulfill the requirements of" and add "shall comply with"	a, c
(C)(7)(a)	remove "under" and add "in"	c
	-after "ignitable" add "waste" -after "corrosive" add "waste,"	d, e
(C)(7)(a)(iii)	after "ignitability," add "characteristic of"	e
	remove "under" and add "in"	c
(C)(7)(c)(i)(c)	[2 times] remove "must" and add "shall"	a
	remove "their" and add "the"	c
	after "exclusion" add "of the constituents shall be"	i
(C)(7)(c)(ii)(d)	remove "type/feed" and add "type or feed"	c
(C)(7)(c)(ii)(f)	remove "system(s)" and add "system"	c
(C)(7)(c)(v)	remove "burn(s)" and add "burn"	c
(C)(7)(c)(vi)(h)	-remove "their" -after "procedures" add "for such emissions"	c
(C)(7)(d)(ii)	remove "under" and add "in"	c
(C)(7)(e)	-in 1 st sentence, remove "the requirements of" -in 2 nd sentence, remove "the provisions of"	b
(C)(8)	add "Miscellaneous units."	g
	remove "must" and add "shall"	a
(C)(8)(a)(ii)	remove "the requirements of"	b
(C)(8)(b)	remove "he" and add "the applicant"	c

RSFA Attachment A

Rule 3745-50-44 is amended as follows:		
Location	Change	Reason
(C)(9)	-in 1 st sentence, last phrase, remove “the requirements of” -in 2 nd sentence, remove “The requirements of paragraphs” and add “Paragraphs”	b
(C)(9)(a)(i)	[2 times] remove “must” and add “shall”	a
(C)(9)(a)(i)(a)	remove “provisions of”	b
(C)(9)(a)(ii)(a)	remove “must” and add “shall”	a
(C)(9)(a)(ii)(b)	remove “must” and add “shall”	a
(C)(9)(a)(ii)(b)(i)	remove “the requirements of”	b
(C)(9)(a)(ii)(b)(ii)	[2 times] remove “must” and add “shall”	a
	remove “their” and add “the”	c
	after “exclusion” add “of the constituents shall be”	i
(C)(9)(a)(ii)(b)(v)	-[3 times] at the reference to 3745-266-109 appendix I, remove “I” and add “A”	j
	-[2 times] at the reference to 3745-266-109 appendix II, remove “II” and add “B”	
(C)(9)(a)(iii)	remove “must” and add “shall”	a
(C)(9)(a)(iii)(e)	remove “the provisions of”	b
(C)(9)(a)(iv)	remove “must” and add “shall”	a
(C)(9)(a)(v)	remove “must” and add “shall”	a
(C)(9)(a)(v)(e)	remove “the provisions of”	b
(C)(9)(a)(vi)	[4 times] remove “must” and add “shall”	a
	-remove “he” and add “the director”	c
	-in the parenthetical, remove “under” and add “in”	
(C)(9)(a)(vi) [Comment]	remove “Owners/operators” and add “Owners or operators”	c
(C)(9)(b)	remove “must” and add “shall”	a
(C)(9)(b)(iii)	remove “fuel(s)” and add “fuel”	c
(C)(9)(c)	remove “under” and add “in”	c
	[2 times] remove “must” and add “shall”	a

RSFA Attachment A

Rule 3745-50-44 is amended as follows:		
Location	Change	Reason
(C)(9)(d)	remove “must” and add “shall”	a
(C)(9)(e)	within the parentheses, add quotation marks around the defined term “containers,” [the existing comma is inside the quotes]	f
	remove “must” and add “shall”	a
(C)(9)(f)	remove “their” and add “the”	c
	remove “the provisions of”	b
	remove “must” and add “shall”	a
(C)(12)	remove ‘ Special "Part B" information requirements for drip ‘ and add “Drip”	k
	remove “must” and add “shall”	a
(C)(12)(b)	remove “the requirements of”	b
(C)(12)(c)	remove “meet the requirements of” and add “comply with”	c
	remove “must” and add “shall”	a
(C)(12)(c)(i)	remove the ending semicolon and add a period	d *
(C)(12)(c)(ii)	remove the ending semicolon and add a period	d *
(C)(12)(c)(iii)	remove the ending semicolon and add a period	d *
(C)(12)(c)(iv)	remove the ending semicolon and add a period	d *
(C)(12)(c)(v)	remove the ending semicolon and add a period	d *
(C)(12)(c)(vi)	remove the ending semicolon and add a period	d *
(C)(12)(c)(vii)	remove the ending semicolon and add a period	d *
(C)(12)(c)(viii)	remove the ending semicolon and add a period	d *
(C)(12)(c)(x)	remove the ending semicolon and add a period	d *
(C)(12)(c)(xi)	remove the ending semicolon and add a period	d *
(C)(12)(c)(xii)	remove the ending semicolon and add a period	d *
(C)(12)(c)(xiv)	remove “meet the requirements of” and add “comply with”	c

RSFA Attachment A

Rule 3745-50-44 is amended as follows:		
Location	Change	Reason
(C)(12)(c)(xv)	remove “meets the requirements of” and add “complies with”	c
(C)(12)(c)(xvi)	remove “under” and add “in”	c
	remove “must” and add “shall”	a
(D)(1)(a)	remove “under” and add “in”	c
(D)(2)	remove “must” and add “shall”	a
(D)(3)	remove “owner/operator must” and add “owner or operator shall”	a, c

- a The change of “must” to “shall” is an LSC requirement.
- b Unnecessary wording is removed.
- c Word choice correction.
- d Punctuation correction.
- e Word choice correction, to complete the term. This amendment ensures that an electronic search of the hazardous waste rules for this type of waste will include this location in the search results.
- f This punctuation correction (adding quotation marks around defined terms) is made in all hazardous waste rules, as they are amended, at locations of defined terms that are designated as such in the text.
- g Introductory text is added to more clearly indicate the subject of the paragraph, to assist in navigating this large rule.
- h This amendment adds specificity to the text.
- i This sentence is slightly re-written to correct its structure (verb placement).
- j Cross-reference correction.

RSFA Attachment A

Rule 3745-50-44 is amended as follows:		
Location	Change	Reason

- k Introductory text is amended to take the same format as the introductory text in other subparagraphs of paragraph (C); redundant wording is removed.
- * This amendment is added in response to a comment by and Interested Party on the draft rule. These changes make the punctuation of these subparagraphs consistent with the rest of the subparagraphs in this location.

This rule is submitted for 5-year review upon proposal. A new review date will be assigned.

For federal/state comparison...

<u>in 40 CFR</u>		<u>in OAC</u>	
270.14 (a)-(c)	see	3745-50-44 intro-(B)	
270.14 (d)	see	3745-50-44 (D)	
270.15	see	3745-50-44 (C)(1)	
270.16	see	3745-50-44 (C)(2)	
270.17	see	3745-50-44 (C)(3)	
270.18	see	3745-50-44 (C)(4)	
270.19	see	3745-50-44 (C)(7)	
270.20	see	3745-50-44 (C)(5)	
270.21	see	3745-50-44 (C)(6)	
270.22	see	3745-50-44 (C)(9)	
270.23	see	3745-50-44 (C)(8)	
(270.24)	see	3745-50-44 (C)(10)	Reserved
(270.25)	see	3745-50-44 (C)(11)	Reserved
270.26	see	3745-50-44 (C)(12)	
(270.27)	see	3745-50-44 (C)(13)	Reserved
270.28	see	3745-50-44 (C)(14)	

end

3745-50-44

Contents of "Part B" of the permit application.

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

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

- (1) A general description of the facility.
- (2) Chemical and physical analyses of the hazardous waste and hazardous debris to be handled at the facility. At a minimum, these analyses ~~must~~shall contain all the information which ~~must be known~~is required to treat, store, or dispose of the wastes properly in accordance with Chapters 3745-54 to 3745-57 and 3745-205 of the Administrative Code.
- (3) A copy of the waste analysis plan required by paragraph (B) of rule 3745-54-13 of the Administrative Code and, if applicable, paragraph (C) of rule 3745-54-13 of the Administrative Code.
- (4) A description of the security procedures and equipment required by rule 3745-54-14 of the Administrative Code, or a justification demonstrating the reasons for requesting a waiver of this requirement.
- (5) A copy of the general inspection schedule required by paragraph (B) of rule 3745-54-15 of the Administrative Code. Include, where applicable, as part of the inspection schedule, specific requirements in paragraph (I) of rule 3745-55-93 and rules 3745-55-74, 3745-55-95, 3745-56-26, 3745-56-54, 3745-56-73, 3745-57-05, 3745-57-47, 3745-57-84, and 3745-57-92 of the Administrative Code.

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

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

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

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

(a) Prevent hazards in unloading operations (for example, ramps, special forklifts);₂

(b) Prevent run-off from hazardous waste handling areas to other areas of the facility or environment, or to prevent flooding (for example, berms, dikes, trenches);₂

(c) Prevent contamination of water supplies;₂

(d) Mitigate effects of equipment failure and power outages;~~and~~₂

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

(f) Reserved.

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

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

(11) Facility location information:

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

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

- (d) Owners and operators of facilities located in the one-hundred-year floodplain ~~must~~shall provide the following information:
 - (i) Engineering analysis to indicate the various hydrodynamic and hydrostatic forces expected to result at the site as a consequence of a one-hundred-year flood.
 - (ii) Structural or other engineering studies showing the design of operational units (e.g., tanks, incinerators) and flood protection devices (e.g., floodwalls, dikes) at the facility and how these will prevent washout.
 - (iii) If applicable, and in lieu of paragraphs (A)(11)(d)(i) and (A)(11)(d)(ii) of this rule, a detailed description of procedures to

be followed to remove hazardous waste to safety before the facility is flooded, including:

- (a) Timing of such movement relative to flood levels, including estimated time to move the waste, to show that such movement can be completed before floodwaters reach the facility.
 - (b) A description of the ~~location(s)~~locations to which the waste will be moved and demonstration that those facilities will be eligible to receive hazardous waste:
 - (i) In accordance with rules 3745-50-40 to 3745-50-235 and Chapters 3745-54 to 3745-57, 3745-65 to 3745-69, 3745-205, 3745-256, and 3745-266 of the Administrative Code; or
 - (ii) If the waste is moved to a facility in another state administrating a hazardous waste program under 40 CFR Part 271, in accordance with the rules of such state.
 - (c) The planned procedures, equipment, and personnel to be used and the means to ensure that such resources will be available in time for use.
 - (d) The potential for accidental discharges of the waste during movement.
 - (e) Facilities in operation immediately prior to October 9, 1980 which are not in compliance with paragraph (B) of rule 3745-54-18 of the Administrative Code ~~must~~shall provide a plan showing how the facility will be brought into compliance and a schedule for compliance.
- (12) An outline of both the introductory and continuing training programs by owners or operators to prepare persons to operate or maintain the hazardous waste facility in a safe manner as required to demonstrate compliance with rule 3745-54-16 of the Administrative Code. A brief description of how training will be designed to meet actual job tasks in accordance with ~~requirements in~~ paragraph (A)(3) of rule 3745-54-16 of the Administrative Code.

- (13) A copy of the closure plan and, where applicable, the post-closure plan required by rules 3745-55-12, 3745-55-18, and 3745-55-97 of the Administrative Code. Include, where applicable, as part of the plans, specific requirements in rules 3745-55-78, 3745-55-97, 3745-56-28, 3745-56-58, 3745-56-80, 3745-57-10, 3745-57-51, 3745-57-91, and 3745-57-93 of the Administrative Code.
- (14) For hazardous waste disposal units that have been closed, documentation that notices have been filed as required by rule 3745-55-19 of the Administrative Code.
- (15) The most recent closure cost estimate for the facility prepared in accordance with rule 3745-55-42 of the Administrative Code and a copy of the documentation required to demonstrate financial assurance ~~under~~in rule 3745-55-43 of the Administrative Code. For a new facility, a copy of the required documentation may be submitted sixty days prior to the initial receipt of hazardous wastes, if that is later than the submittal of the "Part B".
- (16) Where applicable, the most recent post-closure cost estimate for the facility prepared in accordance with rule 3745-55-44 of the Administrative Code plus a copy of the documentation required to demonstrate financial assurance ~~under~~in rule 3745-55-45 of the Administrative Code. For a new facility, a copy of the required documentation may be submitted sixty days prior to the initial receipt of hazardous wastes, if that is later than the submittal of the "Part B".
- (17) Where applicable, a copy of the insurance policy or other documentation which comprises compliance with ~~the requirements of~~ rule 3745-55-47 of the Administrative Code. For a new facility, documentation showing the amount of insurance meeting the specification of paragraph (A) of rule 3745-55-47 of the Administrative Code, and, if applicable, paragraph (B) of rule 3745-55-47 of the Administrative Code, that the owner or operator plans to have in effect before initial receipt of hazardous waste for treatment, storage, or disposal. A request for a variance in the amount of required coverage may be submitted as specified in paragraph (C) of rule 3745-55-47 of the Administrative Code.
- (18) Reserved.

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

- (a) Map scale and date.
- (b) One-hundred-year floodplain area.
- (c) Surface waters including intermittent streams.
- (d) Surrounding land uses (residential, commercial, agricultural, recreational).
- (e) A wind rose (i.e., prevailing wind speed and direction).
- (f) Orientation of the map (north arrow).
- (g) Legal boundaries of the hazardous waste facility site.
- (h) Access control (fences, gates).
- (i) Injection and withdrawal wells both on-site and off-site.
- (j) Buildings; treatment, storage, or disposal operations; or other structures (recreation areas, run-off control systems, access and internal roads, storm, sanitary, and process sewerage systems, loading and unloading areas, fire control facilities, etc.).
- (k) Barriers for drainage or flood control.
- (l) Location of operational units within the hazardous waste facility site, where hazardous waste is (or will be) treated, stored, or disposed (include equipment cleanup areas).

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

- (20) Applicants may be required to submit such information as may be necessary to enable the director to carry out ~~his~~the director's duties under other Ohio laws.
 - (21) For land disposal facilities, if a case-by-case extension has been approved pursuant to rule 3745-270-05 of the Administrative Code or a petition has been approved pursuant to rule 3745-270-06 of the Administrative Code, a copy of the notice of approval for the extension or petition is required.
 - (22) A summary of the pre-application meeting, along with a list of attendees and ~~their attendees'~~ addresses, and copies of any written comments or materials submitted at the meeting, as required ~~under~~in paragraph (A)(3) of rule 3745-50-39 of the Administrative Code.
- (B) Additional information requirements. The following additional information regarding protection of ground water is required from owners or operators of hazardous waste facilities containing a regulated unit except as provided in paragraph (B) of rule 3745-54-90 of the Administrative Code:
- (1) A summary of the ground water monitoring data obtained ~~under~~in rules 3745-65-90 to 3745-65-94 of the Administrative Code, where applicable.
 - (2) Identification of the uppermost aquifer and aquifers hydraulically interconnected beneath the facility property, including ground water flow direction and rate, and the basis for such identification (i.e., the information obtained from hydrogeologic investigations of the facility area).
 - (3) On the topographic map required ~~under~~in paragraph (A)(19) of this rule, a delineation of the waste management area, the property boundary, the proposed "point of compliance" as defined ~~under~~in rule 3745-54-95 of the Administrative Code, the proposed location of ground water monitoring wells as required ~~under~~in rule 3745-54-97 of the Administrative Code and, to the extent possible, the information required in paragraph (B)(2) of this rule.
 - (4) A description of any plume of contamination that has entered the ground water from a regulated unit at the time that the application is submitted that:
 - (a) Delineates the extent of the plume on the topographic map required ~~under~~in paragraph (A)(19) of this rule;

- (b) Identifies the concentration of each constituent in the appendix to rule 3745-54-98 of the Administrative Code throughout the plume or identifies the maximum concentrations of each constituent in the appendix to rule 3745-54-98 of the Administrative Code in the plume.
- (5) Detailed plans and an engineering report describing the proposed ground water monitoring program to be implemented to ~~meet the requirements of~~comply with rule 3745-54-97 of the Administrative Code.
- (6) If the presence of hazardous constituents has not been detected in the ground water at the time of permit application, the owner or operator ~~must~~shall submit sufficient information, supporting data, and analyses to establish a detection monitoring program which ~~meets the requirements of~~complies with rule 3745-54-98 of the Administrative Code. This submittal ~~must~~shall address the following items as specified ~~under~~in rule 3745-54-98 of the Administrative Code:
- (a) A proposed list of indicator parameters, waste constituents, or reaction products that can provide a reliable indication of the presence of hazardous constituents in the ground water;
- (b) A proposed ground water monitoring system;
- (c) Background values for each proposed monitoring parameter or constituent, or procedures to calculate such values; and
- (d) A description of proposed sampling, analysis and statistical comparison procedures to be utilized in evaluating ground water monitoring data.
- (7) If the presence of hazardous constituents has been detected in the ground water at the point of compliance at the time of permit application, the owner or operator ~~must~~shall submit sufficient information, supporting data, and analyses to establish a compliance monitoring program which ~~meets the requirements of~~complies with rule 3745-54-99 of the Administrative Code. Except as provided in paragraph (G)(5) of rule 3745-54-98 of the Administrative Code, the owner or operator ~~must also~~shall submit an engineering feasibility plan for a corrective action program necessary to ~~meet the requirements of~~comply with rule 3745-54-100 of the Administrative Code, unless the owner or operator obtains written authorization in advance from the director to submit a proposed permit schedule for submittal of such plan. To demonstrate compliance with rule 3745-54-99 of the Administrative Code, the owner or operator ~~must~~shall address the following items:

- (a) A description of the wastes previously handled at the facility;
 - (b) A characterization of the contaminated ground water, including concentrations of hazardous constituents;
 - (c) A list of hazardous constituents for which compliance monitoring will be undertaken in accordance with rules 3745-54-97 and 3745-54-99 of the Administrative Code;
 - (d) Proposed concentration limits for each hazardous constituent, based on the criteria ~~set forth~~ provided in paragraph (A) of rule 3745-54-94 of the Administrative Code, including a justification for establishing any alternate concentration limits;
 - (e) Detailed plans and an engineering report describing the proposed ground water monitoring system, in accordance with ~~the requirements of~~ rule 3745-54-97 of the Administrative Code; and
 - (f) A description of proposed sampling, analysis and statistical comparison procedures to be utilized in evaluating ground water monitoring data.
- (8) If hazardous constituents have been measured in the ground water which exceed the concentration limits established underin the table in rule 3745-54-94 of the Administrative Code, or if ground water monitoring conducted at the time of permit application underin rules 3745-65-90 to 3745-65-94 of the Administrative Code at the waste boundary indicates the presence of hazardous constituents from the facility in ground water over background concentrations, the owner or operator ~~must~~ shall submit sufficient information, supporting data, and analyses to establish a corrective action program which ~~meets the requirements of~~ complies with rule 3745-54-100 of the Administrative Code. However, an owner or operator is not required to submit information to establish a corrective action program if ~~he~~ the owner or operator demonstrates to the director that alternate concentration limits will protect human health and the environment after considering the criteria listed in paragraph (B) of rule 3745-54-94 of the Administrative Code. An owner or operator who is not required to establish a corrective action program for this reason ~~must~~ instead shall submit sufficient information to establish a compliance monitoring program which ~~meets the requirements of~~ complies with rule 3745-54-99 of the Administrative Code and paragraphs (B)(6) to (B)(6)(d) of this rule. To demonstrate compliance with rule 3745-54-100 of the Administrative Code, the owner or operator ~~must~~ shall address, at a minimum, the following items:

- (a) A characterization of the contaminated ground water, including concentrations of hazardous constituents;
 - (b) The concentration limit for each hazardous constituent found in the ground water as ~~set forth~~provided in rule 3745-54-94 of the Administrative Code;
 - (c) Detailed plans and an engineering report describing the corrective action to be taken; and
 - (d) A description of how the ground water monitoring program will assess the adequacy of the corrective action.
 - (e) The permit may contain a schedule for submittal of the information required in paragraphs (B)(8)(c) and (B)(8)(d) of this rule, provided the owner or operator obtains written authorization from the director prior to submittal of the complete permit application.
- (C) The following additional information is required from owners or operators of specific types of hazardous waste facilities that are used or to be used for storage, treatment, or disposal.
- (1) Containers. For facilities that store containers of hazardous waste, except as otherwise provided in rule 3745-55-70 of the Administrative Code.
 - (a) A description of the containment system to demonstrate compliance with rule 3745-55-75 of the Administrative Code. Show at least the following:
 - (i) Basic design parameters, dimensions, and materials of construction.
 - (ii) How the design promotes drainage or how containers are kept from contact with standing liquids in the containment system.
 - (iii) Capacity of the containment system relative to the number and volume of containers to be stored.
 - (iv) Provisions for preventing or managing run-on.

- (v) How accumulated liquids can be analyzed and removed to prevent overflow.
 - (b) For storage areas that store containers holding wastes that do not contain free liquids, a demonstration of compliance with paragraph (C) of rule 3745-55-75 of the Administrative Code, including:
 - (i) Test procedures and results or other documentation or information to show that the wastes do not contain free liquids; and
 - (ii) A description of how the storage area is designed or operated to drain and remove liquids or how containers are kept from contact with standing liquids.
 - (c) Sketches, drawings, or data demonstrating compliance with rule 3745-55-76 of the Administrative Code (location or buffer zone and containers holding ignitable wastes or reactive wastes) and paragraph (C) of rule 3745-55-77 of the Administrative Code (location of incompatible wastes), where applicable.
 - (d) Where incompatible wastes are stored or otherwise managed in containers, a description of the procedures used to ensure compliance with paragraphs (A) and (B) of rule 3745-55-77 of the Administrative Code and paragraphs (B) and (C) of rule 3745-54-17 of the Administrative Code.
- (2) Tanks. Except as otherwise provided in rule 3745-55-90 of the Administrative Code, owners and operators of facilities that use tanks to store or treat hazardous waste ~~must~~shall provide the following additional information:
- (a) A written assessment that is reviewed and certified by a qualified professional engineer as to the structural integrity and suitability for handling hazardous waste of each tank system, as required ~~under~~in rules 3745-55-91 and 3745-55-92 of the Administrative Code;
 - (b) Dimensions, capacity and shell thickness of each tank;
 - (c) Description of feed systems, safety cutoff, bypass systems, and pressure controls (e.g., vents);

- (d) A diagram of piping, instrumentation, and process flow for each tank system;
- (e) A description of materials and equipment used to provide external corrosion protection, as required ~~under~~in paragraph (A)(3)(b) of rule 3745-55-92 of the Administrative Code;
- (f) For new tank systems, a detailed description of how the tank ~~system(s)~~systems will be installed in compliance with paragraphs (B) to (E) of rule 3745-55-92 of the Administrative Code;
- (g) Detailed plans and description of how the secondary containment system for each tank system is or will be designed, constructed, and operated to ~~meet the requirements of~~comply with paragraphs (A) to (F) of rule 3745-55-93 of the Administrative Code;
- (h) For tank systems for which a variance from the requirements of rule 3745-55-93 of the Administrative Code is sought, as provided by paragraph (G) of rule 3745-55-93 of the Administrative Code;
 - (i) Detailed plans and engineering and hydrogeologic reports, as appropriate, describing alternate design and operating practices that will, in conjunction with location aspects, prevent the migration of any hazardous waste or hazardous constituents into the ground water or surface water during the life of the facility; or
 - (ii) A detailed assessment of the substantial present or potential hazards posed to human health or the environment should a release enter the environment.
- (i) Description of controls and practices to prevent spills and overflows, as required ~~under~~in paragraph (B) of rule 3745-55-94 of the Administrative Code; and
- (j) For tank systems in which ignitable wastes, reactive wastes, or incompatible wastes are to be stored or treated, a description of how operating procedures and tank system and facility design will achieve compliance with ~~the requirements of~~ rules 3745-55-98 and 3745-55-99 of the Administrative Code.

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

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

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

(i) The liner system. If an exemption from the requirement for a liner is sought as provided by paragraph (B) of rule 3745-56-21 of the Administrative Code, submit detailed plans and engineering and hydrogeologic reports as appropriate, describing alternate design and operating practices that will, in conjunction with location aspects, prevent the migration of any hazardous constituents into the ground water or surface water at any future time; and

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

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

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

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

- (vi) Prevention of overtopping; and
 - (vii) Structural integrity of dikes.
- (c) A description of how each surface impoundment, including the double liner system, leak detection system, cover system, and appurtenances for control of overtopping, will be inspected in order to ~~meet the requirements of~~ comply with paragraphs (A), (B), and (D) of rule 3745-56-26 of the Administrative Code. This information ~~must~~ shall be included in the inspection plan submitted under paragraph (A)(5) of this rule;
- (d) A certification by a qualified professional engineer which attests to the structural integrity of each dike, as required ~~under~~ in paragraph (C) of rule 3745-56-26 of the Administrative Code. For new units, the owner or operator ~~must~~ shall submit a statement by a qualified professional engineer that ~~he~~ the qualified professional engineer will provide such a certification upon completion of construction in accordance with the plans and specifications;
- (e) A description of the procedure to be used for removing a surface impoundment from service, as required ~~under~~ in paragraphs (B) and (C) of rule 3745-56-27 of the Administrative Code. This information should be included in the contingency plan submitted under paragraph (A)(7) of this rule;
- (f) A description of how hazardous waste residues and contaminated materials will be removed from the unit at closure, as required ~~under~~ in paragraph (A)(1) of rule 3745-56-28 of the Administrative Code. For any wastes not to be removed from the unit upon closure, the owner or operator ~~must~~ shall submit detailed plans and an engineering report describing how paragraphs (A)(2) and (B) of rule 3745-56-28 of the Administrative Code will be complied with. This information should be included in the closure plan and, where applicable, the post-closure plan submitted under paragraph (A)(13) of this rule;
- (g) If ignitable wastes or reactive wastes are to be placed in a surface impoundment, an explanation of how rule 3745-56-29 of the Administrative Code will be complied with;

- (h) If incompatible wastes, or incompatible wastes and materials, will be placed in a surface impoundment, an explanation of how rule 3745-56-30 of the Administrative Code will be complied with;
 - (i) A waste management plan for EPA hazardous waste numbers F020, F021, F022, F023, F026, and F027, describing how the surface impoundment is or will be designed, constructed, operated, and maintained to ~~meet the requirements of~~ comply with rule 3745-56-31 of the Administrative Code. This submittal ~~must~~ shall address the following items as specified in rule 3745-56-31 of the Administrative Code:
 - (i) The volume, physical, and chemical characteristics of the wastes, including ~~their~~ the potential for the wastes to migrate through soil or to volatilize or escape into the atmosphere;
 - (ii) The attenuative properties of underlying and surrounding soils or other materials;
 - (iii) The mobilizing properties of other materials co-disposed with these wastes; and
 - (iv) The effectiveness of additional treatment, design, or monitoring techniques.
 - (j) Reserved.
- (4) Waste piles. For facilities that store or treat hazardous waste in waste piles, except as otherwise provided in paragraph (A) of rule 3745-56-50 of the Administrative Code, the following additional information is required:
- (a) A list of hazardous wastes placed or to be placed in each waste pile;
 - (b) If an exemption is sought to rule 3745-56-51 and rules 3745-54-90 to 3745-54-101 of the Administrative Code as provided by paragraph (C) of rule 3745-56-50 or paragraph (B)(2) of rule 3745-54-90 of the Administrative Code, an explanation of how ~~the requirements of~~ paragraph (C) of rule 3745-56-50 of the Administrative Code will be complied with or detailed plans and an engineering report describing how ~~the requirements of~~ paragraph (B)(2) of rule 3745-54-90 of the Administrative Code will be ~~met~~ complied with.

- (c) Detailed plans and an engineering report describing how the pile is designed and is or will be constructed, operated, and maintained to ~~meet the requirements of~~comply with rules 3745-54-19, 3745-56-51, 3745-56-52, and 3745-56-53 of the Administrative Code, addressing the following items:
- (i)
- (a) The liner system (except for an existing portion of a waste pile), if the waste pile ~~must meet the requirements of~~shall comply with paragraph (A) of rule 3745-56-51 of the Administrative Code. If an exemption from the requirement for a liner is sought, as provided by paragraph (B) of rule 3745-56-51 of the Administrative Code, the owner or operator ~~must~~shall submit detailed plans, and engineering and hydrogeologic reports, as appropriate, describing alternate design and operating practices that will, in conjunction with location aspects, prevent the migration of any hazardous constituents into the ground water or surface water at any future time;
- (b) The double liner and leak (leachate) detection, collection, and removal system, if the waste pile ~~must meet the requirements of~~shall comply with paragraph (C) of rule 3745-56-51 of the Administrative Code. If an exemption from the requirements for double liners and a leak detection, collection, and removal system or alternative design is sought as provided by paragraph (D), (E), or (F) of rule 3745-56-51 of the Administrative Code, submit appropriate information;
- (c) If the leak detection system is located in a saturated zone, submit detailed plans and an engineering report explaining the leak detection system design and operation, and the location of the saturated zone in relation to the leak detection system;
- (d) The construction quality assurance plan if required ~~under~~in rule 3745-54-19 of the Administrative Code;

- (e) Proposed action leakage rate, with rationale, if required ~~under~~in rule 3745-56-52 of the Administrative Code, and response action plan, if required ~~under~~in rule 3745-56-53 of the Administrative Code;
 - (ii) Control of run-on;
 - (iii) Control of run-off;
 - (iv) Management of collection and holding units associated with run-on and run-off control systems; and
 - (v) Control of wind dispersal of particulate matter, where applicable.
- (d) A description of how each waste pile, including the double liner system, leachate collection and removal system, leak detection system, cover system, and appurtenances for control of run-on and run-off, will be inspected in order to ~~meet the requirements of~~comply with paragraphs (A), (B), and (C) of rule 3745-56-54 of the Administrative Code. This information ~~must~~shall be included in the inspection plan submitted under paragraph (A)(5) of this rule.
- (e) If treatment is carried out on or in the pile, details of the process and equipment used, and the nature and quality of the residuals;
- (f) If ignitable wastes or reactive wastes are to be placed in a waste pile, an explanation of how ~~the requirements of~~ rule 3745-56-56 of the Administrative Code will be complied with;
- (g) If incompatible wastes, or incompatible wastes and materials, will be placed in a waste pile, an explanation of how rule 3745-56-57 of the Administrative Code will be complied with;
- (h) A description of how hazardous waste residues and contaminated materials will be removed from the waste pile at closure, as required ~~under~~in paragraph (A) of rule 3745-56-58 of the Administrative Code. For any waste not to be removed from the waste pile upon closure, the owner or operator ~~must~~shall submit detailed plans and an engineering report describing how paragraphs (A) and (B) of rule 3745-57-10 of the Administrative Code will be complied with. This information should be included in the closure plan and, where applicable, the post-closure plan

submitted under paragraph (A)(13) of this rule;

- (i) A waste management plan for EPA hazardous waste numbers F020, F021, F022, F023, F026, and F027, describing how a waste pile that is not enclosed [as ~~defined~~described in paragraph (C) of rule 3745-56-50 of the Administrative Code] is or will be designed, constructed, operated, and maintained to ~~meet the requirements of~~comply with rule 3745-56-59 of the Administrative Code. This submittal ~~must~~shall address the following items as specified in rule 3745-56-59 of the Administrative Code:
 - (i) The volume, physical, and chemical characteristics of the wastes to be disposed in the waste pile, including ~~the~~the potential for the wastes to migrate through soil or to volatilize or escape into the atmosphere;
 - (ii) The attenuative properties of underlying and surrounding soils or other materials;
 - (iii) The mobilizing properties of other materials co-disposed with these wastes; and
 - (iv) The effectiveness of additional treatment, design, or monitoring techniques.
- (5) Land treatment. Except as otherwise provided in rule 3745-54-01 of the Administrative Code, owners and operators of facilities that use land treatment to treat or dispose of hazardous waste ~~must~~shall provide the following additional information:
 - (a) A description of plans to conduct a treatment demonstration as required ~~under~~in rule 3745-56-72 of the Administrative Code. The description ~~must~~shall include the following information:
 - (i) The wastes for which the demonstration will be made and the potential hazardous constituents in the wastes;
 - (ii) The data sources to be used to make the demonstration (e.g., literature, laboratory data, field data, or operating data);
 - (iii) Any specific laboratory or field test that will be conducted, including:

- (a) The type of test (e.g., column leaching, degradation);
 - (b) Materials and methods, including analytical procedures;
 - (c) Expected time for completion;
 - (d) Characteristics of the unit that will be simulated in the demonstration, including treatment zone characteristics, climatic conditions, and operating practices.
- (b) A description of a land treatment program, as required ~~under~~in rule 3745-56-71 of the Administrative Code. This information ~~must~~shall be submitted with the plans for the treatment demonstration, and updated following the treatment demonstration. The land treatment program ~~must~~shall address the following items:
 - (i) The wastes to be land treated;
 - (ii) Design measures and operating practices necessary to maximize treatment in accordance with paragraph (A) of rule 3745-56-73 of the Administrative Code, including:
 - (a) Waste application method and rate;
 - (b) Measures to control soil pH;
 - (c) Enhancement of microbial or chemical reactions;
 - (d) Control of moisture content.
 - (iii) Provisions for unsaturated zone monitoring, including:
 - (a) Sampling equipment, procedures, and frequency;
 - (b) Procedures for selecting sampling locations;
 - (c) Analytical procedures;
 - (d) Chain of custody control;

- (e) Procedures for establishing background values;
 - (f) Statistical methods for interpreting results;
 - (g) The justification for any hazardous constituents recommended for selection as principal hazardous constituents, in accordance with the criteria for such selection in paragraph (A) of rule 3745-56-78 of the Administrative Code.
- (iv) A list of hazardous waste constituents reasonably expected to be in, or derived from, the wastes to be land treated based on waste analysis performed pursuant to rule 3745-54-13 of the Administrative Code;
- (v) The proposed dimensions of the treatment zone.
- (c) A description of how the unit is or will be designed, constructed, operated, and maintained in order to ~~meet the requirements of~~ comply with rule 3745-56-73 of the Administrative Code. This submittal ~~must~~ shall address the following items:
- (i) Control of run-on;
 - (ii) Collection and control of run-off;
 - (iii) Minimization of run-off of hazardous constituents from the treatment zone;
 - (iv) Management of collection and holding facilities associated with run-on and run-off control systems;
 - (v) Periodic inspection of the unit. This information should be included in the inspection plan submitted under paragraph (A)(5) of this rule;
 - (vi) Control of wind dispersal of particulate matter, if applicable.

- (d) If food-chain crops are to be grown in or on the treatment zone of the land treatment unit, a description of how the demonstration required ~~under~~in paragraph (A) of rule 3745-56-76 of the Administrative Code will be conducted, including:
- (i) Characteristics of the food-chain crop for which the demonstration will be made;
 - (ii) Characteristics of the waste, treatment zone, and waste application method and rate to be used in the demonstration;
 - (iii) Procedures for crop growth, sample collection, sample analysis, and data evaluation;
 - (iv) Characteristics of the comparison crop including the location and conditions under which it was or will be grown.
- (e) If food-chain crops are to be grown, and cadmium is present in the land treatment waste, a description of how ~~the requirements of~~ paragraph (B) of rule 3745-56-76 of the Administrative Code will be complied with;
- (f) A description of the vegetative cover to be applied to closed portions of the facility, and a plan for maintaining such cover during the post-closure care period, as required ~~under~~in paragraphs (A)(8) and (C)(2) of rule 3745-56-80 of the Administrative Code. This information should be included in the closure plan and, where applicable, the post-closure care plan submitted under paragraph (A)(13) of this rule;
- (g) If ignitable wastes or reactive wastes will be placed in or on the treatment zone, an explanation of how ~~the requirements of~~ rule 3745-56-81 of the Administrative Code will be complied with;
- (h) If incompatible wastes, or incompatible wastes and materials, will be placed in or on the same treatment zone, an explanation of how rule 3745-56-82 of the Administrative Code will be complied with;
- (i) A waste management plan for EPA hazardous waste numbers F020, F021, F022, F023, F026, and F027, describing how a land treatment facility is or will be designed, constructed, operated and maintained to ~~meet the requirements of~~comply with rule 3745-56-83 of the Administrative Code. This submittal ~~must~~shall address the following items as specified

in rule 3745-56-83 of the Administrative Code:

- (i) The volume, physical, and chemical characteristics of the wastes, including ~~their~~the potential for the wastes to migrate through soil or to volatilize or escape into the atmosphere;
 - (ii) The attenuative properties of underlying and surrounding soils or other materials;
 - (iii) The mobilizing properties of other materials co-disposed with these wastes; and
 - (iv) The effectiveness of additional treatment, design, or monitoring techniques.
- (6) Landfills. Except as otherwise provided in rule 3745-54-01 of the Administrative Code, owners and operators of facilities that dispose of hazardous waste in landfills ~~must~~shall provide the following additional information:
- (a) A list of the hazardous wastes placed or to be placed in each landfill or landfill cell;
 - (b) Detailed plans and an engineering report describing how the landfill is designed and is or will be constructed, operated, and maintained to ~~meet the requirements of~~comply with rules 3745-54-19, 3745-57-03, 3745-57-04, and 3745-57-05 of the Administrative Code, addressing the following items:
 - (i)
 - (a) The liner system (except for an existing portion of a landfill), if the landfill ~~must meet the requirements of~~shall comply with paragraph (A) of rule 3745-57-03 of the Administrative Code. If an exemption from the requirement for a liner is sought as provided by paragraph (B) of rule 3745-57-03 of the Administrative Code, submit detailed plans, and engineering and hydrogeologic reports, as appropriate, describing alternate designs and operating practices that will, in conjunction with location aspects, prevent the migration of any hazardous constituent into the ground water or surface water at any future time;

- (b) The double liner and leak (leachate) detection, collection, and removal system, if the landfill ~~must meet the requirements of~~shall comply with paragraph (C) of rule 3745-57-03 of the Administrative Code. If an exemption from the requirements for double liners and a leak detection, collection, and removal system or alternative design is sought as provided by paragraph (D), (E), or (F) of rule 3745-57-03 of the Administrative Code, submit appropriate information;
- (c) If the leak detection system is located in a saturated zone, submit detailed plans and an engineering report explaining the leak detection system design and operation, and the location of the saturated zone in relation to the leak detection system;
- (d) The construction quality assurance plan if required ~~under~~in rule 3745-54-19 of the Administrative Code;
- (e) Proposed action leakage rate, with rationale, if required ~~under~~in rule 3745-57-04 of the Administrative Code, and response action plan; if required ~~under~~in rule 3745-57-05 of the Administrative Code;
- (ii) Control of run-on;
- (iii) Control of run-off;
- (iv) Management of collection and holding facilities associated with run-on and run-off control systems; and
- (v) Control of wind dispersal of particulate matter, where applicable.
- (c) A description of how each landfill, including the double liner system, leachate collection and removal system, leak detection system, cover system, and appurtenances for control of run-on and run-off, will be inspected in order to ~~meet the requirements of~~comply with paragraphs (A), (B), and (C) of rule 3745-57-05 of the Administrative Code. This information ~~must~~shall be included in the inspection plan submitted under paragraph (A)(5) of this rule;

- (d) A description of how each landfill, including the liner and cover systems, will be inspected in order to ~~meet the requirements of~~ comply with paragraphs (A) and (B) of rule 3745-57-05 of the Administrative Code. This information should be included in the inspection plan submitted under paragraph (A)(5) of this rule;
- (e) Detailed plans and an engineering report describing the final cover which will be applied to each landfill or landfill cell at closure in accordance with paragraph (A) of rule 3745-57-10 of the Administrative Code, and a description of how each landfill will be maintained and monitored after closure in accordance with paragraph (B) of rule 3745-57-10 of the Administrative Code. This information should be included in the closure and post-closure plans submitted ~~under~~ pursuant to paragraph (A)(13) of this rule;
- (f) If ignitable wastes or reactive wastes will be landfilled, an explanation of how ~~the requirements of~~ rule 3745-57-12 of the Administrative Code will be complied with;
- (g) If incompatible wastes, or incompatible wastes and materials, will be landfilled, an explanation of how rule 3745-57-13 of the Administrative Code will be complied with;
- (h) Reserved;
- (i) If containers of hazardous waste are to be landfilled, an explanation of how ~~the requirements of~~ rule 3745-57-15 or 3745-57-16 of the Administrative Code, as applicable, will be complied with;
- (j) A waste management plan for EPA hazardous waste numbers F020, F021, F022, F023, F026, and F027, describing how a landfill is or will be designed, constructed, operated, and maintained to ~~meet the requirements of~~ comply with rule 3745-57-17 of the Administrative Code. This submittal ~~must~~ shall address the following items as specified in rule 3745-57-17 of the Administrative Code:
 - (i) The volume, physical, and chemical characteristics of the wastes, including ~~their~~ the potential for the wastes to migrate through soil or to volatilize or escape into the atmosphere;
 - (ii) The attenuative properties of underlying and surrounding soils or other materials;

- (iii) The mobilizing properties of other materials co-disposed with these wastes; and
 - (iv) The effectiveness of additional treatment, design, or monitoring techniques.
- (7) Incinerators. Except as rule 3745-57-40 of the Administrative Code and paragraph (C)(7)(e) of this rule provide otherwise, owners and operators of facilities that incinerate hazardous waste ~~must fulfill the requirements of~~ shall comply with paragraph (C)(7)(a), (C)(7)(b), or (C)(7)(c) of this rule.
- (a) When seeking exemption ~~under~~ in paragraph (B) or (C) of rule 3745-57-40 of the Administrative Code (ignitable waste, corrosive waste, or reactive waste only):
 - (i) Documentation that the waste is listed as a hazardous waste in rules 3745-51-30 to 3745-51-35 of the Administrative Code solely because it is ignitable (hazard code I), corrosive (hazard code C), or both; or
 - (ii) Documentation that the waste is listed as a hazardous waste in rules 3745-51-30 to 3745-51-35 of the Administrative Code solely because it is reactive (hazard code R) for characteristics other than those listed in paragraphs (A)(4) and (A)(5) of rule 3745-51-23 of the Administrative Code, and will not be burned when other hazardous wastes are present in the combustion zone; or
 - (iii) Documentation that the waste is a hazardous waste solely because it possesses the characteristic of ignitability, characteristic of corrosivity, or both, as determined by the tests for characteristics of hazardous wastes under ~~rules in~~ rules in 3745-51-20 to 3745-51-24 of the Administrative Code; or
 - (iv) Documentation that the waste is a hazardous waste solely because it possesses the reactivity characteristics listed in paragraph (A)(1), (A)(2), (A)(3), (A)(6), (A)(7), or (A)(8) of rule 3745-51-23 of the Administrative Code, and that it will not be burned when other hazardous wastes are present in the combustion zone; or

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

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

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

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

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

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

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

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

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

(a) Manufacturer's name and model number of incinerator.

(b) Type of incinerator.

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

- (d) The director will approve a permit application without a trial burn if the director finds that:
- (i) The wastes are sufficiently similar; and
 - (ii) The incinerator units are sufficiently similar, and the data from other trial burns are adequate to specify (~~under~~in rule 3745-57-45 of the Administrative Code) operating conditions that will ensure that the performance standards in rule 3745-57-43 of the Administrative Code will be met by the incinerator.
- (e) When an owner or operator of a hazardous waste incineration unit becomes subject to hazardous waste permit requirements after February 16, 2009, or when an owner or operator of an existing hazardous waste incineration unit demonstrates compliance with the air emission standards and limitations in 40 CFR Part 63 subpart EEE [i.e., by conducting a comprehensive performance test and submitting a notification of compliance under 40 CFR 63.1207(j) and 40 CFR 63.1210(d) documenting compliance with all applicable requirements of 40 CFR Part 63 subpart EEE], ~~the requirements of paragraphs (C)(7) to (C)(7)(e) of this rule do not apply, except those provisions the director determines are necessary to ensure compliance with paragraphs (A) and (C) of rule 3745-57-45 of the Administrative Code if the owner or operator elects to comply with paragraph (A)(1)(a) of rule 3745-50-235 of the Administrative Code to minimize emissions of toxic compounds from startup, shutdown, and malfunction events. Nevertheless, the director may apply the provisions of paragraphs (C)(7) to (C)(7)(e) of this rule, on a case-by-case basis, for purposes of information collection in accordance with paragraphs (A)(5), (D)(6), (H), and (I) to (I)(2) of rule 3745-50-40 of the Administrative Code and paragraphs (D)(3)(b) and (D)(4)(a)(v) of rule 3745-50-51 of the Administrative Code.~~
- (8) Miscellaneous units. Except as otherwise provided in rule 3745-57-90 of the Administrative Code, owners and operators of facilities that treat, store, or dispose of hazardous waste in miscellaneous units ~~must~~shall provide the following additional information:
- (a) A detailed description of the unit being used or proposed for use, including the following:

- (i) Physical characteristics, materials of construction, and dimensions of the unit;
 - (ii) Detailed plans and engineering reports describing how the unit will be located, designed, constructed, operated, maintained, monitored, inspected, and closed to comply with ~~the requirements of~~ rules 3745-57-91 and 3745-57-92 of the Administrative Code; and
 - (iii) For disposal units, a detailed description of the plans to comply with the post-closure requirements of rule 3745-57-93 of the Administrative Code.
- (b) Detailed hydrologic, geologic, and meteorologic assessments and land-use maps for the region surrounding the site that address and ensure compliance of the unit with each factor in the environmental performance standards of rule 3745-57-91 of the Administrative Code. If the applicant can demonstrate that ~~he~~the applicant does not violate the environmental performance standards of rule 3745-57-91 of the Administrative Code and the director agrees with such demonstration, preliminary hydrologic, geologic, and meteorologic assessments will suffice.
- (c) Information on the potential pathways of exposure of humans or environmental receptors to hazardous waste or hazardous constituents and on the potential magnitude and nature of such exposures.
- (d) For any treatment unit, a report on a demonstration of the effectiveness of the treatment based on laboratory or field data.
- (e) Any additional information determined by the director to be necessary for evaluation of compliance of the unit with the environmental performance standards of rule 3745-57-91 of the Administrative Code.
- (9) Boilers and industrial furnaces burning hazardous waste. When an owner or operator of a cement kiln, lightweight aggregate kiln, solid fuel boiler, liquid fuel boiler, or hydrochloric acid production furnace becomes subject to hazardous waste permit requirements after February 16, 2009, or when an owner or operator of an existing cement kiln, lightweight aggregate kiln, solid fuel boiler, liquid fuel boiler, or hydrochloric acid production furnace demonstrates compliance with the air emission standards and limitations in 40 CFR Part 63 subpart EEE [i.e., by conducting a comprehensive

performance test and submitting a notification of compliance under 40 CFR 63.1207(j) and 40 CFR 63.1210(d) documenting compliance with all applicable requirements of 40 CFR Part 63 subpart EEE], ~~the requirements of paragraphs (C)(9) to (C)(9)(f) of this rule do not apply. The requirements of paragraphs~~ Paragraphs (C)(9) to (C)(9)(f) of this rule do apply, however, if the director determines that certain provisions are necessary to ensure compliance with paragraphs (E)(1) and (E)(2)(c) of rule 3745-266-102 of the Administrative Code if the owner or operator elects to comply with paragraph (A)(1)(a) of rule 3745-50-235 of the Administrative Code to minimize emissions of toxic compounds from startup, shutdown, and malfunction events; or if the facility is an area source and the owner or operator elects to comply with the rules 3745-266-105, 3745-266-106, and 3745-266-107 of the Administrative Code standards and associated requirements for particulate matter, hydrogen chloride and chlorine gas, and non-mercury metals; or if the director determines certain provisions apply, on a case-by-case basis, for purposes of information collection in accordance with paragraphs (A)(5), (D)(6), (H), and (I) to (I)(2) of rule 3745-50-40 of the Administrative Code and paragraphs (D)(3)(b) and (D)(4)(a)(v) of rule 3745-50-51 of the Administrative Code.

(a) Trial burns.

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

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

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

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

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

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

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

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

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

- (iv) Results of emissions dispersion modeling for emissions identified in paragraph (C)(9)(a)(ii)(b)(ii) of this rule using modeling procedures prescribed by paragraph (H) of rule 3745-266-106 of the Administrative Code. The director will review the emission modeling conducted by the applicant to determine conformance with these procedures. The director will either approve the modeling or determine that alternate or supplementary modeling is appropriate.
 - (v) Documentation that the maximum annual average ground level concentration of each constituent identified in paragraph (C)(9)(a)(ii)(b)(ii) of this rule quantified in conformance with paragraph (C)(9)(a)(ii)(b)(iv) of this rule does not exceed the allowable ambient level established in appendix ~~IA~~ to rule 3745-266-109 of the Administrative Code or in appendix ~~HB~~ to rule 3745-266-109 of the Administrative Code. The acceptable ambient concentration for emitted constituents for which a specific reference air concentration has not been established in appendix ~~IA~~ to rule 3745-266-109 of the Administrative Code or risk-specific dose has not been established in appendix ~~HB~~ to rule 3745-266-109 of the Administrative Code is 0.1 micrograms per cubic meter, as noted in the footnote to appendix ~~IA~~ to rule 3745-266-109 of the Administrative Code.
- (iii) Waiver of trial burn for metals. When seeking to be permitted under the "Tier I" (or "Adjusted Tier I") metals feed rate screening limits provided by paragraphs (B) and (E) of rule 3745-266-106 of the Administrative Code that control metals emissions without requiring a trial burn, the owner or operator ~~must~~shall submit:
- (a) Documentation of the feed rate of hazardous waste, other fuels, and industrial furnace feed stocks;
 - (b) Documentation of the concentration of each metal controlled by paragraph (B) or (E) of rule 3745-266-106 of the Administrative Code in the hazardous waste, other fuels, and industrial furnace feedstocks, and calculations of the

total feed rate of each metal;

- (c) Documentation of how the applicant will ensure that the "Tier I" feed rate screening limits provided by paragraph (B) or (E) of rule 3745-266-106 of the Administrative Code will not be exceeded during the averaging period provided by that paragraph;
 - (d) Documentation to support the determination of the terrain-adjusted effective stack height, good engineering practice stack height, terrain type, and land use as provided by paragraphs (B)(3) to (B)(5) of rule 3745-266-106 of the Administrative Code;
 - (e) Documentation of compliance with ~~the provisions of~~ paragraph (B)(6) of rule 3745-266-106 of the Administrative Code, if applicable, for facilities with multiple stacks;
 - (f) Documentation that the facility does not fail the criteria provided by paragraph (B)(7) of rule 3745-266-106 of the Administrative Code for eligibility to comply with the screening limits; and
 - (g) Proposed sampling and metals analysis plan for the hazardous waste, other fuels, and industrial furnace feed stocks.
- (iv) Waiver of trial burn for particulate matter. When seeking to be permitted under the low risk waste provisions of paragraph (B) of rule 3745-266-109 of the Administrative Code which waives the particulate standard (and trial burn to demonstrate conformance with the particulate standard), applicants ~~must~~shall submit documentation supporting conformance with paragraphs (C)(9)(a)(ii)(b) and (C)(9)(a)(iii) to (C)(9)(a)(iii)(g) of this rule.
- (v) Waiver of trial burn for hydrogen chloride and chlorine gas. When seeking to be permitted under the "Tier I" (or "Adjusted Tier I") feed rate screening limits for total chloride and chlorine provided by paragraphs (B)(1) and (E) of rule 3745-266-107 of the Administrative Code that control emissions of hydrogen chloride and chlorine gas without requiring a trial burn, the owner or operator ~~must~~shall submit:

- (a) Documentation of the feed rate of hazardous waste, other fuels, and industrial furnace feed stocks;
 - (b) Documentation of the levels of total chloride and chlorine in the hazardous waste, other fuels, and industrial furnace feedstocks, and calculations of the total feed rate of total chloride and chlorine;
 - (c) Documentation of how the applicant will ensure that the "Tier I" (or "Adjusted Tier I") feed rate screening limits provided by paragraph (B)(1) or (E) of rule 3745-266-107 of the Administrative Code will not be exceeded during the averaging period provided by that paragraph;
 - (d) Documentation to support the determination of the terrain-adjusted effective stack height, good engineering practice stack height, terrain type, and land use as provided by paragraph (B)(3) of rule 3745-266-107 of the Administrative Code;
 - (e) Documentation of compliance with ~~the provisions of~~ paragraph (B)(4) of rule 3745-266-107 of the Administrative Code, if applicable, for facilities with multiple stacks;
 - (f) Documentation that the facility does not fail the criteria provided by paragraph (B)(3) of rule 3745-266-107 of the Administrative Code for eligibility to comply with the screening limits; and
 - (g) Proposed sampling and analysis plan for total chloride and chlorine for the hazardous waste, other fuels, and industrial furnace feedstocks.
- (vi) Data in lieu of trial burn. The owner or operator may seek an exemption from the trial burn requirements to demonstrate conformance with rules 3745-266-104 to 3745-266-107 and 3745-50-66 of the Administrative Code by providing the information required by rule 3745-50-66 of the Administrative Code from previous compliance testing of the device in conformance with rule 3745-266-103 of the Administrative Code, 40 CFR 266.103 as incorporated by reference in rule 3745-50-11

of the Administrative Code, or from compliance testing or trial or operational burns of similar boilers or industrial furnaces burning similar hazardous wastes under similar conditions. If data from a similar device is used to support a trial burn waiver, the design and operating information required by rule 3745-50-66 of the Administrative Code ~~must~~shall be provided for both the similar device and the device to which the data is to be applied, and a comparison of the design and operating information ~~must~~shall be provided. The director ~~must~~shall approve a permit application without a trial burn if ~~he~~the director finds that the hazardous wastes are sufficiently similar, the devices are sufficiently similar, the operating conditions are sufficiently similar, and the data from other compliance tests, trial burns, or operational burns are adequate to specify (~~under~~in rule 3745-266-102 of the Administrative Code) operating conditions that will ensure conformance with paragraph (C) of rule 3745-266-102 of the Administrative Code. In addition, all of the following information ~~must~~shall be submitted:

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

(a) For a waiver from any trial burn:

- (i) A description and analysis of the hazardous waste to be burned compared with the hazardous waste for which data from compliance testing, or operational or trial burns are provided to support the contention that a trial burn is not needed;
- (ii) The design and operating conditions of the boiler or industrial furnace to be used, compared with that for which comparative burn data are available; and
- (iii) Such supplemental information as the director finds necessary to achieve the purposes of paragraphs (C)(9)(a)(vi) to (C)(9)(a)(vi)(b) of this rule.

- (b) For a waiver of the DRE trial burn, the basis for selection of POHCs used in the other trial or operational burns which demonstrate compliance with the DRE performance standard in paragraph (A) of rule 3745-266-104 of the Administrative Code. This analysis should specify the constituents in the appendix to rule 3745-51-11 of the Administrative Code, that the applicant has identified in the hazardous waste for which a permit is sought, and any differences from the POHCs in the hazardous waste for which burn data are provided.
- (b) Alternative hydrocarbon limit for industrial furnaces with organic matter in raw materials. Owners and operators of industrial furnaces requesting an alternative hydrocarbon limit under paragraph (F) of rule 3745-266-104 of the Administrative Code ~~must~~shall submit the following information at a minimum:
- (i) Documentation that the furnace is designed and operated to minimize hydrocarbon emissions from fuels and raw materials;
 - (ii) Documentation of the proposed baseline flue gas hydrocarbons (and carbon monoxide) concentration, including data on hydrocarbons (and carbon monoxide) levels during tests when the facility produced normal products under normal operating conditions from normal raw materials while burning normal fuels and when not burning hazardous waste;
 - (iii) Test burn protocol to confirm the baseline hydrocarbon (and carbon monoxide) level including information on the type and flow rate of all feedstreams, point of introduction of all feedstreams, total organic carbon content (or other appropriate measure of organic content) of all nonfuel feedstreams, and operating conditions that affect combustion of ~~fuel(s)~~fuels and destruction of hydrocarbon emissions from nonfuel sources;
 - (iv) Trial burn plan to:
 - (a) Demonstrate that flue gas hydrocarbon (and carbon monoxide) concentrations when burning hazardous waste do not exceed the baseline hydrocarbon (and carbon monoxide) level; and

- (11) Reserved.
- (12) ~~Special "Part B" information requirements for drip~~Drip pads. Except as otherwise provided by rule 3745-54-01 of the Administrative Code, owners and operators of hazardous waste treatment, storage, or disposal facilities that collect, store, or treat hazardous waste on drip pads ~~must~~shall provide the following additional information:
- (a) A list of hazardous wastes placed or to be placed on each drip pad.
 - (b) If an exemption is sought to rules 3745-54-90 to 3745-54-101 of the Administrative Code, as provided by rule 3745-54-90 of the Administrative Code, detailed plans and an engineering report describing how ~~the requirements of~~ paragraph (B)(2) of rule 3745-54-90 of the Administrative Code will be met.
 - (c) Detailed plans and an engineering report describing how the drip pad is or will be designed, constructed, operated, and maintained to ~~meet the requirements of~~comply with rule 3745-57-83 of the Administrative Code, including the as-built drawings and specifications. This submittal ~~must~~shall address the following items as specified in rule 3745-57-81 of the Administrative Code:
 - (i) The design characteristics of the drip pad_;
 - (ii) The liner system_;
 - (iii) The leakage detection system, including the leak detection system and how it is designed to detect the failure of the drip pad or the presence of any releases of hazardous waste or accumulated liquid at the earliest practicable time_;
 - (iv) Practices designed to maintain drip pads_;
 - (v) The associated collection system_;
 - (vi) Control of run-on to the drip pad_;
 - (vii) Control of run-off from the drip pad_;

- (viii) The interval at which drippage and other materials will be removed from the associated collection system and a statement demonstrating that the interval will be sufficient to prevent overflow onto the drip pad;
- (ix) Procedures for cleaning the drip pad at least once every seven days to ensure the removal of any accumulated residues of waste or other materials, including but not limited to rinsing, washing with detergents or other appropriate solvents, or steam cleaning, and provisions for documenting the date, time, and cleaning procedure used each time the pad is cleaned.
- (x) Operating practices and procedures that will be followed to ensure that tracking of hazardous waste or waste constituents off the drip pad due to activities by personnel or equipment is minimized;
- (xi) Procedures for ensuring that, after removal from the treatment vessel, treated wood from pressure and non-pressure processes is held on the drip pad until drippage has ceased, including recordkeeping practices;
- (xii) Provisions for ensuring that collection and holding units associated with the run-on and run-off control systems are emptied or otherwise managed as soon as possible after storms to maintain design capacity of the system;
- (xiii) If treatment is carried out on the drip pad, details of the process equipment used, and the nature and quality of the residuals.
- (xiv) A description of how each drip pad, including appurtenances for control of run-on and run-off, will be inspected in order to ~~meet the requirements of~~ comply with rule 3745-57-83 of the Administrative Code. This information should be included in the inspection plan submitted under paragraph (A)(5) of this rule.
- (xv) A certification, in accordance with paragraph (D) of rule 3745-50-42 of the Administrative Code, signed by a qualified professional engineer, stating that the drip pad design ~~meets the requirements of~~ complies with paragraphs (A) to (F) of rule 3745-57-83 of the Administrative Code.

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

(13) Reserved.

(14) Post-closure permits. For post-closure permits, the owner or operator is required to submit only the information specified in paragraphs (A)(1), (A)(4) to (A)(6), (A)(11) to (A)(11)(e), (A)(13), (A)(14), (A)(16), (A)(19) to (A)(19)(1)[Comment], (B) to (B)(8)(e), and (D) to (D)(3) of this rule, unless the director determines that additional information from paragraphs (A) to (B)(8)(e), (C)(2) to (C)(2)(j), (C)(3) to (C)(3)(j), (C)(4) to (C)(4)(i)(iv), (C)(5) to (C)(5)(i)(iv), or (C)(6) to (C)(6)(j)(iv) of this rule is necessary. The owner or operator is required to submit the same information when an alternative authority is used in lieu of a post-closure permit as provided in paragraph (G) of rule 3745-50-45 of the Administrative Code.

(D) Information requirements for waste management units.

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

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

(b) Designation of type of unit.

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

(d) When the unit was operated.

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

- (2) The owner or operator of any facility containing one or more waste management units ~~must~~shall submit all available information pertaining to any release of hazardous wastes or hazardous constituents from such unit or units.
- (3) The ~~owner/operator must~~owner or operator shall conduct and provide results of sampling and analysis of ground water, land surface, and subsurface strata, surface water, or air, which may include the installation of wells, where the director ascertains it is necessary to complete a RCRA facility assessment (RFA) that will determine if a more complete investigation is necessary.

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

Effective:

Five Year Review (FYR) Dates: 07/01/2015

Certification

Date

Promulgated Under: 119.03
Statutory Authority: 3734.12
Rule Amplifies: 3734.12
Prior Effective Dates: 08/26/1981 (Emer.), 12/02/1981, 01/07/1983,
03/04/1985, 05/29/1985 (Emer.), 08/29/1985,
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08/03/1990, 02/11/1992, 04/15/1993, 09/02/1997,
10/20/1998, 12/07/2000, 03/13/2002, 12/07/2004,
02/16/2009, 09/05/2010

RSFA Attachment A

Rule 3745-50-45 is amended as follows:		
Location	Change	Reason
(A)	[3 times] remove “must” and add “shall”	a, b
	in 5 th sentence, remove “they demonstrate” and add “the owner or operator demonstrates”	a
(B)	in last sentence, remove “the requirements set forth in”	c
(C)(1)	remove “and/or” and add “or”	a
(C)(2)	remove “their” and add “ the farmers’ “	a
(C)(4)	add quotation marks around the defined term “totally enclosed treatment facilities”	d
(C)(5)	-add quotation marks around the defined term “elementary neutralization units” -add quotation marks around the defined term “wastewater treatment units”	d
(C)(7)	add quotation marks around the defined term “container”	d
	-remove the parentheses before “as defined” and after “Code” -after the removed closing parenthesis, add a comma after “Code”	e
(C)(8)	-add quotation marks around the defined term “Universal waste handlers” -add quotation marks around the defined term “universal waste transporters”	d
	remove the parentheses before “as defined” and after “Code”	e
(C)(8)(a)	remove the ending semicolon and add a period	e
(C)(8)(b)	remove the ending semicolon and add a period	e
(C)(8)(c)	remove the ending “; and” and add a period	c, e
(D)(1)(a)	remove the ending semicolon and add a period	e
(D)(1)(b)	remove the ending semicolon and add a period	e
(D)(1)(d)	add quotation marks around the defined term “explosive or munitions emergency response specialist”	e

RSFA Attachment A

Rule 3745-50-45 is amended as follows:		
Location	Change	Reason
(D)(3)	remove “must” and add “shall”	a, b
(E)	-remove “Owners/operators” and add “Owners or operators” -remove “they demonstrate” and add “the owner or operator demonstrates”	a
	remove “standards contained in”	c
	remove “must” and add “shall”	a, b
(E)(1)	-remove “owner/operator have” and add “owner or operator has” -remove “owner/operator” and add “owner or operator”	a
(E)(2)	-remove “owner/operator have” and add “owner or operator has” -remove “owner/operator” and add “owner or operator”	a
	[2 times] remove “must” and add “shall”	a, b
(F)(1)	-[2 times] remove “owner/operator” and add “owner or operator” -remove “from” and add “after” -remove “his” and add “the director’s”	a
(F)(2)	remove “owner/operator” and add “owner or operator”	a
(F)(3)	-remove “owner/operator” and add “owner or operator” -remove “their” and add “the”	a
(F)(4)	-remove “owner/operator” and add “owner or operator” -remove “of” and add “after”	a

- a Word choice correction.
- b The change of “must” to “shall” is an LSC requirement.
- c Unnecessary language is removed.

RSFA Attachment A

Rule **3745-50-45** is amended as follows:

Location	Change	Reason
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- d This punctuation correction (adding quotation marks around defined terms) is made in all hazardous waste rules, as they are amended, at locations of defined terms that are designated as such in the text.

- e Punctuation correction.

This rule is submitted for 5-year review upon proposal. A new review date will be assigned.

3745-50-45

Special inclusions and exclusions for hazardous waste permits.

- (A) Scope of hazardous waste permit requirements. Chapter 3734. of the Revised Code requires a permit for the "treatment," "storage," or "disposal" of any hazardous waste as identified or listed in Chapter 3745-51 of the Administrative Code. The terms "treatment," "storage," "disposal," and "hazardous waste" are defined in rule 3745-50-10 of the Administrative Code. Owners and operators of hazardous waste management units ~~must~~shall have permits during the active life (including the closure period) of the unit. Owners or operators of surface impoundments, landfills, land treatment units, and waste pile units that received wastes after July 26, 1982, or that certified closure (according to rule 3745-66-15 of the Administrative Code) after January 26, 1983, ~~must~~shall have post-closure permits, unless ~~they demonstrate~~the owner or operator demonstrates closure by removal or decontamination as provided under paragraphs (E) and (F) of this rule or obtain an enforceable document in lieu of a post-closure permit, as provided under paragraph (G) of this rule. If a post-closure permit is required, the permit ~~must~~shall address applicable ground water monitoring, unsaturated zone monitoring, corrective action, and post-closure care requirements under Chapters 3745-54 to 3745-57 and 3745-205 of the Administrative Code. The denial of a permit for the active life of a hazardous waste management facility or unit does not affect the requirement to obtain a post-closure permit under this rule.
- (B) Specific inclusions. Owners and operators of certain facilities require hazardous waste permits as well as permits under other environmental programs for certain aspects of the facility's operation. Hazardous waste permits are required for the treatment, storage, or disposal of hazardous waste at facilities requiring an Ohio national pollutant discharge elimination system permit or an Ohio underground injection control permit. The owner and operator of a publicly owned treatment work receiving hazardous waste will be deemed to have a hazardous waste permit for that waste if the POTW is in compliance with ~~the requirements set forth in~~ rule 3745-50-46 of the Administrative Code.
- (C) Specific exclusions. The following persons are among those who are not required to obtain a hazardous waste permit:
- (1) Generators who accumulate ~~and/or~~ conduct treatment of hazardous waste that is generated on-site as provided for in rule 3745-52-34 of the Administrative Code.
 - (2) Farmers who dispose of hazardous waste pesticides from ~~their~~the farmers' own use as provided for in rule 3745-52-70 of the Administrative Code.
 - (3) Persons who own or operate facilities solely for the treatment, storage, or disposal of hazardous waste excluded from regulation under rule 3745-51-04 of the Administrative Code.

- (4) Owners or operators of "totally enclosed treatment facilities" as defined in rule 3745-50-10 of the Administrative Code.
 - (5) Owners and operators of "elementary neutralization units" or "wastewater treatment units" as defined in rule 3745-50-10 of the Administrative Code.
 - (6) Transporters storing manifested shipments of hazardous waste in containers meeting the requirements of rule 3745-52-30 of the Administrative Code at a transfer facility for a period of ten days or less.
 - (7) Persons adding sorbent material to waste in a "container" (as defined in rule 3745-50-10 of the Administrative Code), and persons adding waste to sorbent material in a container, provided that these actions occur at the time waste is first placed in the container, and paragraph (B) of rule 3745-54-17 and rules 3745-55-71 and 3745-55-72 of the Administrative Code are complied with.
 - (8) "Universal waste handlers" and "universal waste transporters" (as defined in rule 3745-50-10 of the Administrative Code) managing the wastes listed in paragraphs (C)(8)(a) to (C)(8)(c) of this rule. These handlers are subject to regulation under Chapter 3745-273 of the Administrative Code when managing the following 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; ~~and~~
 - (d) Lamps as described in rule 3745-273-05 of the Administrative Code.
- (D) Further exclusions.
- (1) A person is not required to obtain a hazardous waste permit for treatment or containment activities taken during immediate response to any of the following situations:
 - (a) A discharge of a hazardous waste;
 - (b) An imminent and substantial threat of a discharge of hazardous waste;

- (c) A discharge of a material which, when discharged, becomes a hazardous waste.
 - (d) 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 "explosive or munitions emergency response specialist" as defined in rule 3745-50-10 of the Administrative Code.
- (2) Any person who continues or initiates hazardous waste treatment or containment activities after the immediate response is over is subject to all applicable requirements of rules 3745-50-40 to 3745-50-235 of the Administrative Code for those activities.
 - (3) In the case of emergency responses involving military munitions, the responding explosives or munitions emergency response specialist's organizational unit ~~must~~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 its disposition.
- (E) Closure by removal. ~~Owners/operators~~Owners or operators of surface impoundments, land treatment units, or waste piles closing by removal or decontamination under ~~standards contained in~~ Chapters 3745-65 to 3745-69 and 3745-256 of the Administrative Code ~~must~~shall obtain a post-closure permit unless ~~they demonstrate~~the owner or operator demonstrates to the director that the closure met the standards for closure by removal or decontamination in rule 3745-56-28, paragraph (E) of rule 3745-56-80, or rule 3745-56-58 of the Administrative Code. The demonstration may be made in the following ways:
- (1) If the ~~owner/operator have~~owner or operator has submitted a "Part B" application for a post-closure permit, the ~~owner/operator~~owner or operator may request a determination, based on information contained in the application, that the closure by removal standards in Chapter 3745-56 of the Administrative Code were met and that no post-closure permit is required.

- (2) If the ~~owner/operator have~~ owner or operator has not submitted a "Part B" application for a post-closure permit, the ~~owner/operator~~ owner or operator may petition the director for a determination that a post-closure permit is not required because the closure met the applicable closure standards in Chapter 3745-56 of the Administrative Code. The petition ~~must~~ shall include data demonstrating that closure by removal or decontamination standards were met, or it ~~must~~ shall demonstrate that the unit closed under state requirements that met or exceeded the applicable closure by removal standards in Chapter 3745-56 of the Administrative Code.
- (3) The director will approve or deny the request or petition in accordance with paragraph (F) of this rule.

(F) Procedures for closure equivalency determination.

- (1) If a facility ~~owner/operator~~ owner or operator submits an equivalency demonstration under paragraph (E) of this rule, the director will provide the public, through a newspaper notice, the opportunity to submit written comments, within thirty days ~~from~~ after the date of the notice, on the information submitted by the ~~owner/operator~~ owner or operator. The director will also, in response to a request or at ~~his~~ the director's own discretion, hold a public hearing whenever such a hearing might clarify one or more issues concerning the equivalency demonstration. The director will give public notice of the hearing at least thirty days before it occurs. Public notice of the hearing may be given at the same time as notice of the opportunity for the public to submit written comments, and the two notices may be combined.
- (2) The director will make a determination, within ninety days after the close of the public comment period specified in paragraph (F)(1) of this rule, as to whether the closure under Chapters 3745-65 to 3745-69 and 3745-256 of the Administrative Code met the requirements for closure by removal or decontamination under Chapters 3745-54 to 3745-57 and 3745-205 of the Administrative Code. If the director finds that the closure did not meet the applicable standards under Chapters 3745-54 to 3745-57 and 3745-205 of the Administrative Code, the director will provide the ~~owner/operator~~ owner or operator with a written statement of the reasons why the closure failed to meet the standards under Chapters 3745-54 to 3745-57 and 3745-205 of the Administrative Code.
- (3) Within thirty days after receipt of the director's determination pursuant to paragraph (F)(2) of this rule, the ~~owner/operator~~ owner or operator may submit additional information in support of ~~the~~ the equivalency demonstration.

- (4) If additional information is submitted by the ~~owner/operator~~owner or operator pursuant to paragraph (F)(3) of this rule, the director will review the additional information submitted and, within sixty days ~~of~~after receipt of the additional information, will make a final determination as to whether the closure under Chapters 3745-65 to 3745-69 and 3745-256 of the Administrative Code met the requirements for closure by removal or decontamination under Chapters 3745-54 to 3745-57 and 3745-205 of the Administrative Code.
- (5) If the director determines that the facility did not close in accordance with the closure by removal standards in Chapters 3745-54 to 3745-57 and 3745-205 of the Administrative Code, the facility is subject to post-closure permitting requirements.
- (G) Enforceable documents for post-closure care. At the discretion of the director, an owner or operator may obtain, in lieu of a post-closure permit, an enforceable document imposing the requirements of rule 3745-66-21 of the Administrative Code. "Enforceable document" means an order, a plan, or other document issued by Ohio EPA including, but not limited to, a corrective action order issued by Ohio EPA under sections 3734.13, 3734.20, and 6111.03 of the Revised Code, or a closure or post-closure plan.

Effective:

Five Year Review (FYR) Dates: 07/01/2015

Certification

Date

Promulgated Under: 119.03
Statutory Authority: 3734.02, 3734.12
Rule Amplifies: 3734.02, 3734.12
Prior Effective Dates: 05/22/1981 (Emer.), 08/26/1981 (Emer.), 12/02/1981,
01/07/1983, 03/04/1985, 11/17/1988 (Emer.),
02/23/1989, 12/30/1989, 09/02/1997, 10/20/1998,
12/07/2000, 03/13/2002, 12/07/2004, 02/16/2009,
09/05/2010

RSFA Attachment A

Rule 3745-50-50 is amended as follows:		
Location	Change	Reason
(A)(2)	remove "set forth" and add "provide"	a
(A)(3)	-after "Reporting" add a period -after "Reporting." remove "the" [lower case] and add "The" [upper case] to begin the sentence	b
	after "in writing" remove the comma	c
	remove "its" and add "the permittee's"	a
(B), 2 nd sentence	after "A" add "permit applicant or" before "permittee"	b
	in the parenthetical: -after "for treatment and storage" add "hazardous waste management" -after "for disposal" add "hazardous waste management"	b
(B)(1)	remove the ending period and add ", either:"	a, c
(B)(1)(a)	remove "revised or"	b
	at the end remove "; or" and add a period	a, c
(B)(2)	-after "permit" remove "whose" and add "the" -after "term" add "of which"	d
(B)(3)(a)	remove the ending semicolon and add a period	c
(B)(3)(b)	remove the ending semicolon and add a period	c
(B)(3)(c)	at the end remove "; and" and add a period	c, e
(B)(3)(d)	after "this rule" add a comma	c
	remove "it" and add "the permittee"	a
	after "regulated activities, and" add "shall " before "follow"	f
(B)(4)	after "The" add "applicant's or" before "permittee's"	b

a Word choice correction.

RSFA Attachment A

Rule **3745-50-50** is amended as follows:

Location	Change	Reason
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- b This amendment makes the phrase completely equivalent to its federal counterpart phrase in 40 CFR 270.33.
- c Punctuation correction.
- d This sentence is slightly re-written to remove “whose” when referring to an inanimate permit.
- e Unnecessary text is removed.
- f This sentence is slightly re-written to correct the grammar.

3745-50-50

Schedules of compliance.

- (A) The permit may, when appropriate, specify a schedule of compliance leading to compliance with Chapter 3734. of the Revised Code and rules adopted thereunder.
- (1) Time for compliance. Any schedule of compliance under this rule shall require compliance as soon as possible.
 - (2) Interim dates. Except as provided in paragraph (B)(1)(b) of this rule, if a permit establishes a schedule of compliance which exceeds one year from the date of permit issuance, the schedule shall ~~set forth~~provide interim requirements and the dates for their achievement.
 - (a) The time between interim dates shall not exceed one year.
 - (b) If the time necessary for completion of any interim requirement is more than one year and is not readily divisible into stages for completion, the permit shall specify interim dates for the submittal of reports of progress toward completion of the interim requirements and indicate a projected completion date.
 - (3) Reporting. ~~the~~The permit shall be written to require that no later than fourteen days following each interim date and the final date of compliance, the permittee shall notify the director in writing, ~~of its~~the permittee's compliance or noncompliance with the interim or final requirements.
- (B) Alternate schedules of compliance. A permit applicant or permittee may cease conducting regulated activities (by receiving a terminal volume of hazardous waste and, for treatment and storage hazardous waste management facilities, closing pursuant to applicable requirements, and, for disposal hazardous waste management facilities, closing and conducting post-closure care pursuant to applicable requirements) rather than continue to operate and meet permit requirements as follows:
- (1) If the permittee decides to cease conducting regulated activities at a given time within the term of a permit which has already been issued, either:
 - (a) The permit may be ~~revised or~~ modified to contain a new or additional schedule leading to timely cessation of activities; ~~or~~.
 - (b) The permittee shall cease conducting permitted activities before noncompliance with any interim or final compliance schedule requirement already specified in the permit.

- (2) If the decision to cease conducting regulated activities is made before issuance of a permit ~~whose~~the term of which will include the termination date, the permit shall contain a schedule leading to termination which will ensure timely compliance with applicable requirements.
- (3) If the permittee is undecided whether to cease conducting regulated activities, the permit may be issued or modified to contain two schedules as follows:
- (a) Both schedules shall contain an identical interim deadline requiring a final decision on whether to cease conducting regulated activities no later than a date which ensures sufficient time to comply with applicable requirements in a timely manner if the decision is to continue conducting regulated activities;.
 - (b) One schedule shall lead to timely compliance with applicable requirements;.
 - (c) The second schedule shall lead to cessation of regulated activities by a date which will ensure timely compliance with applicable requirements; ~~and~~.
 - (d) Each permit containing two schedules shall include a requirement that after the permittee has made a final decision under paragraph (B)(3)(a) of this rule, ~~the~~ the permittee shall follow the schedule leading to compliance if the decision is to continue conducting regulated activities, and shall follow the schedule leading to termination if the decision is to cease conducting regulated activities.
- (4) The applicant's or permittee's decision to cease conducting regulated activities shall be evidenced by a firm public commitment satisfactory to the director, such as resolution of the board of directors of a corporation.

Effective:

Five Year Review (FYR) Dates: Exempt

Certification

Date

Promulgated Under: 119.03
Statutory Authority: 3734.12
Rule Amplifies: 3734.12
Prior Effective Dates: 03/04/1985, 12/07/2000

3745-50-51

1

Appendix to rule 3745-50-51 of the Administrative Code

	Modification	Classi- fication
A.	General permit provisions subject to the director's jurisdiction under paragraph (D)(5) of this rule. The provisions in section A. of this appendix will fall under the director's jurisdiction under paragraph (D)(5) of this rule unless the activities described are implemented pursuant to permit by rule as described in paragraph (H)(3) of this rule.	
1.	Authority to conduct treatment, storage, or disposal at a site, location, or tract of land that has not been authorized for that category of treatment, storage, or disposal activity by the facility's permit.	3**
2.	Modification or addition of a "hazardous waste management unit," as defined in rule 3745-50-10 of the Administrative Code, that results in an increase in a facility's storage capacity of more than 25% over the capacity authorized by the facility's permit. ^A	3**
3.	Modification or addition of a "hazardous waste management unit," as defined in rule 3745-50-10 of the Administrative Code, that results in an increase in a facility's treatment rate of more than 25% over the rate authorized by the facility's permit. ^A	3**
4.	Modification or addition of a "hazardous waste management unit," as defined in rule 3745-50-10 of the Administrative Code, that results in an increase in a facility's disposal capacity over the capacity authorized by the facility's permit. ^B	3**
5.	Authority to add any of the following categories of regulated activities not previously authorized at a facility by the facility's permit: storage at a facility not previously authorized to store, treatment at a facility not previously authorized to treat, or disposal at a facility not previously authorized to dispose of hazardous waste.	3**
6.	Authority to add a category of hazardous waste management unit not previously authorized at the facility by the facility's permit, except as provided in section E.3. of this appendix.	3**

Modification	Classification
<p>7. Authority to treat, store, or dispose of waste types listed or characterized as reactive <u>wastes</u> or explosive, <u>wastes</u> in rules 3745-51-20 to 3745-51-24 or 3745-51-30 to 3745-51-35 of the Administrative Code, or any acute hazardous waste listed in paragraph (E) of rule 3745-51-33 of the Administrative Code at a facility not previously authorized to treat, store, or dispose of those types of wastes by the facility's permit, unless the requested authority is limited to wastes that no longer exhibit characteristics meeting<u>that meet</u> the criteria for listing or characterization as reactive <u>wastes</u> or explosive wastes, or for listing as acute hazardous waste, but still are required to carry those waste codes because of the requirements established in rule 3745-51-03 of the Administrative Code (e.g., the "mixture," "contained-in," or "derived-from" provisions).</p>	3**
<p>B. General permit provisions.</p> <p>1. Administrative and informational changes</p> <p>2. Correction of typographical errors.</p> <p>3. Equipment replacement or upgrading with functionally equivalent components (e.g., pipes, valves, pumps, conveyors, controls).</p> <p>4. Changes in the frequency of or procedures for monitoring, reporting, sampling, or maintenance activities by the permittee:</p> <p>a. To provide for more frequent monitoring, reporting, sampling, or maintenance.</p> <p>b. Other changes.</p> <p>5. Schedule of compliance:</p> <p>a. Changes in interim compliance dates, with prior approval of the director.</p> <p>b. Extension of final compliance date.</p> <p>6. Changes in expiration date of permit to allow earlier permit termination, with prior approval of the director.</p> <p>7. Changes in ownership:</p> <p>a. Changes in the owner or operator of a facility that is not an "off-site facility" as defined in section 3734.41 of the Revised Code.</p>	<p>1</p> <p>1</p> <p>1</p> <p>1</p> <p>1</p> <p>2</p> <p>1 *</p> <p>3</p> <p>1 *</p> <p>1 *</p>

Modification	Classification
<ul style="list-style-type: none"> b. Changes in the owner or operator of a facility that is an “off-site facility” as defined in section 3734.41 of the Revised Code, provided the procedures of paragraphs (C)(2) to (C)(2)(b) of rule 3745-50-52 of the Administrative Code are followed. 	3
<ul style="list-style-type: none"> 8. Changes to remove permit conditions that are no longer applicable (i.e., because the standards upon which they <u>the permit conditions</u> are based are no longer applicable to the facility). 	1 *
<p>C. General Facility Standards.</p> <ul style="list-style-type: none"> 1. Changes to waste sampling or analysis methods: <ul style="list-style-type: none"> a. To conform with agency guidance or regulations. 1 b. To incorporate changes associated with F039 (multi-source leachate) sampling or analysis methods. 1 c. To incorporate changes associated with underlying hazardous constituents in ignitable <u>wastes</u> or corrosive wastes. 1 * d. Other changes. 2 2. Changes to analytical quality assurance/control <u>assurance or quality control</u> plan: <ul style="list-style-type: none"> a. To conform with agency guidance or regulations. 1 b. Other changes. 2 3. Changes in procedures for maintaining the operating record. 1 4. Changes in frequency or content of inspection schedules. 2 5. Changes in the training plan: <ul style="list-style-type: none"> a. That affect the type or decrease the amount of training given to employees. 2 b. Other changes. 1 6. Contingency plan: <ul style="list-style-type: none"> a. Changes in emergency procedures (i.e., spill or release response procedures). 2 b. Replacement with functionally equivalent equipment, upgrade, or relocate emergency equipment listed. 1 c. Removal of equipment from emergency equipment list. 2 	

Modification	Classification
<p>d. Changes in name, address, or phone<u>telephone</u> number of coordinators or other persons or agencies identified in the plan.</p> <p>7. Reserved.</p> <p>8. Financial assurance.</p> <p>a. Changes to financial assurance mechanisms due to annual inflationary adjustments.</p> <p>b. Change in the type of mechanism used to comply with financial assurance requirements.</p> <p>Comment: When a permit modification (such as introduction of a new unit) requires a change in facility plans or other general facility standards, that change must<u>shall</u> be reviewed under the same procedures as the permit modification. Only those aspects of the hazardous waste management units, facility plans, or facility standards that are proposed to change or must<u>shall</u> change to give effect to the requested modification must<u>shall</u> be reviewed as part of Ohio EPA's evaluation of a modification application.</p>	<p>1</p> <p>1</p> <p>1 *</p>
<p>D. Ground water Protection.</p> <p>1. Changes to wells:</p> <p>a. Changes in the number, location, depth, or design of upgradient or downgradient wells of permitted ground water monitoring system.</p> <p>b. Replacement of an existing well that has been damaged or rendered inoperable, without change to location, design, or depth of the well.</p> <p>2. Changes in ground water sampling or analysis procedures or monitoring schedule, with prior approval of the director.</p> <p>3. Changes in statistical procedure for determining whether a statistically significant change in ground water quality between upgradient and downgradient wells has occurred, with prior approval of the director.</p> <p>4. Changes in point of compliance.</p> <p>5. Changes in indicator parameters, hazardous constituents, or concentration limits (including ACLs<u>alternate concentration limits</u>):</p> <p>a. As specified in the ground water protection standard.</p> <p>b. As specified in the detection monitoring program.</p>	<p>2</p> <p>1</p> <p>1 *</p> <p>1 *</p> <p>2</p> <p>3</p> <p>2</p>

Modification		Classification
6.	Changes to a detection monitoring program as required by paragraph (H) of rule 3745-54-98 of the Administrative Code, unless otherwise specified in this appendix.	2
7.	Compliance monitoring program:	
a.	Addition of compliance monitoring program as required by paragraph (G)(4) of rule 3745-54-98 and rule 3745-54-99 of the Administrative Code.	3
b.	Changes to a compliance monitoring program as required by paragraph (J) of rule 3745-54-99 of the Administrative Code, unless otherwise specified in this appendix.	2
8.	Corrective action program:	
a.	Addition of a corrective action program as required by paragraph (H)(2) of rule 3745-54-99 and by rule 3745-54-100 of the Administrative Code.	3
b.	Changes to a corrective action program as required by paragraph (H) of rule 3745-54-100 of the Administrative Code, unless otherwise specified in this appendix.	2
E.	Closure.	
1.	Changes to the closure plan:	
a.	Changes in estimate of maximum extent of operations or maximum inventory of waste on-site at any time during the active life of the facility, with prior approval of the director.	1 *
b.	Changes in the closure schedule for any unit, changes in the final closure schedule for the facility, or extension of the closure period, with prior approval of the director.	1 *
c.	Changes in the expected year of final closure, where the permit conditions are not changed, with prior approval of the director.	1 *
d.	Changes in procedures for decontamination of facility equipment or structures, with prior approval of the director.	1 *
e.	Changes in approved closure plan resulting from unexpected events occurring <u>that occur</u> during partial or final closure, unless otherwise specified in this appendix.	2

Modification		Classification
f.	Extension of the closure period to allow a landfill, surface impoundment, or land treatment unit to receive non-hazardous wastes after final receipt of hazardous wastes under paragraphs (D) and (E) of rule 3745-55-13 of the Administrative Code.	2
2.	Creation of a new landfill unit as part of closure.	
a.	Creation of a new landfill unit as part of closure if the facility DOES NOT already have a landfill unit on its approved permit.	3**
b.	Creation of a new landfill unit as part of closure if the facility DOES already have a landfill unit on its approved permit, provided the additional landfill unit does not increase the facility's disposal capacity, and does not increase the facility's storage or treatment capacity by more than 25% in the aggregate.	3
c.	Creation of a new landfill unit as part of closure if the facility DOES already have a landfill unit on its approved permit, if the additional landfill unit increases the facility's disposal capacity, or increases the facility's storage or treatment capacity by more than 25% in the aggregate.	3**
3.	Addition of the following new units to be used temporarily for closure activities:	
a.	Surface impoundments.	3
b.	Incinerators.	3
c.	Waste piles that do not comply with paragraph (C) of rule 3745-56-50 of the Administrative Code.	3
d.	Waste piles that comply with paragraph (C) of rule 3745-56-50 of the Administrative Code.	2
e.	Tanks or containers (other than specified below).	2
f.	Tanks used for neutralization, dewatering, phase separation, or component separation, with prior approval of the director.	1 *
g.	Staging piles.	2
F.	Post-Closure.	
1.	Changes in name, address, or phone <u>telephone</u> number of contact in post-closure plan.	1
2.	Extension of post-closure care period.	2

Modification		Classi- fication
3.	Reduction in the post-closure care period.	3
4.	Changes to the expected year of final closure, where other permit conditions are not changed.	1
5.	Changes in post-closure plan necessitated by events occurring that <u>occur</u> during the active life of the facility, including partial and final closure.	2
G.	Containers.	
1.	Modification or addition of container units:	
a.	Resulting in greater than 25% increase in the facility's container storage capacity. ^A	3
b.	Resulting in up to 25% increase in the facility's container storage capacity. ^A	2
2.	a. Modification of a container unit without increasing the capacity of the unit.	2
b.	Addition of a roof to a container unit without alteration of the containment system.	1
3.	Storage of different wastes in containers, except as provided in section A.7. and section G.4. of this appendix:	
a.	That require additional or different management practices from those authorized in the permit.	3
b.	That do not require additional or different management practices from those authorized in the permit.	2
	Comment: See paragraph (H) of this rule for modification procedures to be used for the management of newly listed or identified wastes.	
4.	Storage or treatment of different wastes in containers:	
a.	That require addition of units or change in treatment process or management standards, provided that the wastes are restricted from land disposal and are to be treated to meet some or all of the applicable treatment standards in Chapter 3745-270 of the Administrative Code. This modification is not applicable to dioxin-containing wastes (F020, F021, F022, F023, F026, F027, and F028).	1 *

Modification	Classification
<p>b. That do not require the addition of units or change in treatment process or management standards, and provided that the units have previously received wastes of the same type (e.g., incinerator scrubber water). This modification is not applicable to dioxin-containing wastes (F020, F021, F022, F023, F026, F027, and F028).</p>	1
<p>H. Tanks.</p> <p>1. a. Modification or addition of tank units resulting in greater than 25% increase in the facility's tank treatment rate or storage capacity. ^A</p> <p>b. Modification or addition of tank units resulting in up to 25% increase in the facility's tank treatment rate or storage capacity, except as provided in H.1.d of this appendix. ^A</p> <p>c. Addition of a new tank that will operate for more than ninety days using any of the following physical or chemical treatment methods: neutralization, dewatering, phase separation, or component separation.</p> <p>d. Addition of a new tank that will operate for up to ninety days using any of the following physical or chemical treatment methods: neutralization, dewatering, phase separation, or component separation.</p> <p>2. Modification of a tank unit or secondary containment system without increasing the capacity of the unit.</p> <p>3. Replacement of a tank with a tank that meets the same design standards and has a capacity within +/- 10% of the replaced tank provided:</p> <ul style="list-style-type: none"> - The capacity difference is no more than 1500 gallons, - The facility's permitted tank capacity is not increased, and - The replacement tank meets the same conditions in the permit. <p>4. Modification of a tank management practice.</p> <p>5. Management of different wastes in tanks except as provided in section A.7. of this appendix:</p> <p>a. That require additional or different management practices, tank design, different fire protection specifications, or significantly different tank treatment process from that authorized in the permit, except as provided in section H.5.c. of this appendix.</p>	<p>3</p> <p>2</p> <p>2</p> <p>1 *</p> <p>2</p> <p>1</p> <p>2</p> <p>3</p>

Modification	Classification
<p>b. That do not require additional or different management practices, tank design, different fire protection specifications, or significantly different tank treatment process than authorized in the permit, except as provided in section H.5.d. of this appendix.</p> <p>c. That require addition of units or change in treatment process or management standards, provided that the units are restricted from land disposal and are to be treated to meet some or all of the applicable treatment standards in Chapter 3745-270 of the Administrative Code. This modification is not applicable to dioxin-containing wastes (F020, F021, F022, F023, F026, F027, and F028).</p> <p>d. That do not require the addition of units or a change in the treatment process or management standards, and provided that the units have previously received wastes of the same type (e.g., incinerator scrubber water). This modification is not applicable to dioxin-containing wastes (F020, F021, F022, F023, F026, F027, and F028).</p> <p>Comment: See paragraph (H) of this rule for modification procedures to be used for the management of newly listed or identified wastes.</p>	<p>2</p> <p>1 *</p> <p>1</p>
<p>I. Surface Impoundments.</p> <p>1. Modification or addition of surface impoundment units that result in increasing the facility's surface impoundment storage or treatment capacity. ^A</p> <p>2. Replacement of a surface impoundment unit.</p> <p>3. Modification of a surface impoundment unit without increasing the facility's surface impoundment storage or treatment rate and without modifying the unit's liner, leak detection system, or leachate collection system.</p> <p>4. Modification of a surface impoundment management practice.</p> <p>5. Treatment, storage, or disposal of different wastes in surface impoundments except as provided in section A.7. of this appendix:</p> <p>a. That require additional or different management practices or different design of the liner or leak detection system than authorized in the permit.</p> <p>b. That do not require additional or different management practices or different design of the liner or leak detection system than authorized in the permit.</p>	<p>3</p> <p>3</p> <p>2</p> <p>2</p> <p>3</p> <p>2</p>

Modification	Classification
<p>c. That are wastes restricted from land disposal that meet the applicable treatment standards in Chapter 3745-270 of the Administrative Code, and provided that the unit meets the minimum technology requirements stated in 40 CFR 268.5(h)(2). This modification is not applicable to dioxin-containing wastes (F020, F021, F022, F023, F026, F027, and F028).</p> <p>d. That are residues from wastewater treatment or incineration, provided that disposal occurs in a unit that meets the minimum technological requirements stated in 40 CFR 268.5(h)(2), and provided further that the surface impoundment has previously received wastes of the same type (for example, incinerator scrubber water). This modification is not applicable to dioxin-containing wastes (F020, F021, F022, F023, F026, F027, and F028).</p> <p>6. Reserved.</p> <p>7. Reserved.</p> <p>Comment: See paragraph (H) of this rule for modification procedures to be used for the management of newly listed or identified wastes.</p>	<p>1</p> <p>1</p>
<p>J. Enclosed Waste Piles. For all waste piles except those complying in <u>compliance</u> with paragraph (C) of rule 3745-56-50 of the Administrative Code, modifications are treated the same as for a landfill. The following modifications are applicable only to waste piles complying in <u>compliance</u> with paragraph (C) of rule 3745-56-50 of the Administrative Code.</p> <p>1. Modification or addition of waste pile units:</p> <p>a. Resulting in up to 25% increase in the facility's waste pile storage capacity. ^A</p> <p>b. Resulting in greater than 25% increase in the facility's waste pile storage capacity. ^A</p> <p>c. Resulting in up to 25% increase in the facility's waste pile treatment rate. ^A</p> <p>d. Resulting in greater than 25% increase in the facility's waste pile treatment rate. ^A</p> <p>2. Modification of waste pile unit without increasing the capacity of the unit.</p>	<p>2</p> <p>3</p> <p>2</p> <p>3</p> <p>2</p>

Modification	Classification
3. Replacement of a waste pile unit with another waste pile unit of the same design and capacity and meeting <u>that meets</u> all waste pile conditions in the permit.	1
4. Modification of a waste pile management practice.	2
5. Storage or treatment of different wastes in waste piles except as provided in section A.7. of this appendix:	
a. That require additional or different management practices or different design of the unit.	3
b. That do not require additional or different management practices or different design of the unit.	2
6. Conversion of an enclosed waste pile to a containment building unit. Comment: See paragraph (H) of this rule for modification procedures to be used for the management of newly listed or identified wastes.	2
K. Landfills and Unenclosed Waste Piles.	
1. Modification or addition of landfill units that result in increasing the facility's disposal capacity over the capacity authorized in the permit. ^B	3**
2. Replacement of a landfill.	3
3. Addition or modification of a liner, leachate collection system, leachate detection system, run-off control, or final cover system.	3
4. Modification of a landfill unit without changing a liner, leachate collection system, leachate detection system, run-off control, or final cover system.	2
5. Modification of a landfill management practice.	2
6. Landfill different wastes, except as provided in section A.7. of this appendix:	
a. That require additional or different management practices, different design of the liner, leachate collection system, or leachate detection system.	3
b. That do not require additional or different management practices, different design of the liner, leachate collection system, or leachate detection system.	2

Modification	Classification
<p>c. That are wastes restricted from land disposal that meet the applicable treatment standards in Chapter 3745-270 of the Administrative Code, and provided that the landfill unit meets the minimum technological requirements stated in 40 CFR 268.5(h)(2). This modification is not applicable to dioxin-containing wastes (F020, F021, F022, F023, F026, F027, and F028).</p> <p>d. That are residues from wastewater treatment or incineration, provided that disposal occurs in a landfill unit that meets the minimum technological requirements stated in 40 CFR 268.5(h)(2), and provided further that the landfill has previously received wastes of the same type (for example, incinerator ash). This modification is not applicable to dioxin-containing wastes (F020, F021, F022, F023, F026, F027, and F028).</p> <p>7. Reserved.</p> <p>8. Reserved.</p> <p>Comment: See paragraph (H) of this rule for modification procedures to be used for the management of newly listed or identified wastes.</p>	<p>1</p> <p>1</p>
<p>L. Land Treatment.</p> <p>1. Lateral expansion of or other modification of a land treatment unit to increase areal extent, except as provided in sections A.1. and A.3. of this appendix.</p> <p>2. Modification of run-on control system.</p> <p>3. Modification of run-off control system.</p> <p>4. Other modifications of land treatment unit component specifications or standards required in permit.</p> <p>5. Management of different wastes in land treatment units, except as provided in section A.7. of this appendix:</p> <p>a. That require a change in permit operating conditions or unit design specifications.</p> <p>b. That do not require a change in permit operating conditions or unit design specifications.</p> <p>Comment: See paragraph (H) of this rule for modification procedures to be used for the management of newly listed or identified wastes.</p>	<p>3</p> <p>2</p> <p>3</p> <p>2</p> <p>3</p> <p>2</p>

Modification		Classi- fication
6.	Modification of a land treatment unit management practice, except as provided in section A.3. of this appendix, to:	
a.	Increase rate or change method of waste application.	3
b.	Decrease rate of waste application.	1
7.	Modification of a land treatment unit management practice to change measures of pH or moisture content, or to enhance microbial or chemical reactions.	2
8.	Modification of a land treatment unit management practice to grow food chain crops, to add to or replace existing permitted crops with different food chain crops, or to alter operating plans for distribution of animal feeds resulting from such crops.	3
9.	Modification of operating practice due to detection of releases from the land treatment unit pursuant to paragraph (G)(2) of rule 3745-56-78 of the Administrative Code.	3
10.	Changes in the unsaturated zone monitoring system, resulting in a change to the location, depth, number of sampling points, or replace unsaturated zone monitoring devices or components of devices with devices or components that have specifications different from permit requirements.	3
11.	Changes in the unsaturated zone monitoring system that do not result in a change to the location, depth, number of sampling points, or that replace unsaturated zone monitoring devices or components of devices with devices or components having that have specifications different from permit requirements.	2
12.	Changes in background values for hazardous constituents in soil and soil-pore liquid.	2
13.	Changes in sampling, analysis, or statistical procedure.	2
14.	Changes in land treatment demonstration program prior to or during the demonstration.	2
15.	Changes in any condition specified in the permit for a land treatment unit to reflect results of the land treatment demonstration, provided performance standards are met, and the director's prior approval has been received.	1 *

Modification		Classification
16.	Changes to allow a second land treatment demonstration to be conducted when the results of the first demonstration have not shown the conditions under which the wastes can be treated completely, provided the conditions for the second demonstration are substantially the same as the conditions for the first demonstration and have received the prior approval of the director.	1 *
17.	Changes to allow a second land treatment demonstration to be conducted when the results of the first demonstration have not shown the conditions under which the wastes can be treated completely, where the conditions for the second demonstration are not substantially the same as the conditions for the first demonstration.	3
18.	Changes in vegetative cover requirements for closure.	2
M.-	Incinerators, boilers, and industrial furnaces.	
1.	Changes to increase by more than 25% any of the following limits authorized in the permit: A thermal feed rate limit, a feedstream feed rate limit, a chlorine/chloride <u>chlorine or chloride</u> feed rate limit, a metal feed rate limit, or an ash feed rate limit. The director will require a new trial burn to substantiate compliance with the regulatory performance standards unless this demonstration can be made through other means.	3
2.	Changes to increase by up to 25% any of the following limits authorized in the permit: A thermal feed rate limit, a feedstream feed limit, a chlorine/chloride <u>chlorine or chloride</u> feed rate limit, a metal feed rate limit, or an ash feed rate limit. The director will require a new trial burn to substantiate compliance with the regulatory performance standards unless this demonstration can be made through other means. ^A	2
3.	Modification of an incinerator, boiler, or an industrial furnace unit by changing the internal size or geometry of the primary or secondary combustion units, by adding a primary or secondary combustion unit, by substantially changing the design of any component used to remove <u>HCl/Cl₂ hydrochloric acid or chlorine gas</u> , metals, or particulate from the combustion gases, or by changing other features of the incinerator, boiler, or industrial furnace that could affect its capability to meet the regulatory performance standards. The director will require a new trial burn to substantiate compliance with the regulatory performance standards unless this demonstration can be made through other means.	3

Modification	Classification
<p>4. Modification of an incinerator, boiler, or an industrial furnace unit in a manner that would not likely affect the capability of the unit to meet the regulatory performance standards but which would change the operating conditions or monitoring requirements specified in the permit. The director may require a new trial burn to demonstrate compliance with the regulatory performance standards.</p>	2
<p>5. Operating requirements.</p>	
<p>a. Modification of the limits specified in the permit for minimum combustion gas temperature, minimum combustion gas residence time, oxygen concentration in the secondary combustion chamber, flue gas carbon monoxide and hydrocarbon concentration, maximum temperature at the inlet to the particulate matter emission control system, or operating parameters for the air pollution control system. The director will require a new trial burn to substantiate compliance with the regulatory performance standards unless this demonstration can be made through other means.</p>	3
<p>b. Modification of any stack gas emission limits specified in the permit, or modification of any conditions in the permit concerning regarding emergency shutdown or automatic waste feed cutoff procedures or controls.</p>	3
<p>c. Modification of any other operating condition or any inspection or recordkeeping requirement specified in the permit.</p>	2
<p>6. Incineration of different wastes, except as provided in section A.7. of this appendix:</p>	
<p>a. If the waste contains a <u>principal organic hazardous constituent</u> (POHC) that is more difficult to burn than authorized by the permit or if burning of the waste requires compliance with different regulatory performance standards than specified in the permit. The director will require a new trial burn to substantiate compliance with the regulatory performance standards unless this demonstration can be made through other means.</p>	3
<p>b. If the waste does not contain a POHC that is more difficult to burn than authorized by the permit and if burning of the waste does not require compliance with different regulatory performance standards than specified in the permit.</p>	2
<p>Comment: See paragraph (H) of this rule for modification procedures to be used for the management of newly listed or identified wastes.</p>	

Modification		Classification
7.	Shakedown and trial burn:	
a.	Modification of the trial burn plan or any of the permit conditions applicable during the shakedown period for determining operational readiness after construction, the trial burn period, or the period immediately following the trial burn.	2
b.	Authorization of up to an additional 720 hours of waste burning during the shakedown period for determining operational readiness after construction, with the prior approval of the director.	1 *
c.	Changes in the operating requirements set in the permit for conducting a trial burn, provided the change is minor and has received prior approval of the director.	1 *
d.	Changes in the ranges of the operating requirements set in the permit to reflect the results of the trial burn, provided the change is minor and has received prior approval of the director.	1 *
8.	Substitution of an alternative type of nonhazardous waste fuel that is not specified in the permit.	1
9.	Technology changes needed to meet standards under 40 CFR Part 63 subpart EEE (national emission standards for hazardous air pollutants from hazardous waste combustors), provided the procedures of paragraph (L) of this rule are followed.	1 *
10.	Changes in hazardous waste permits needed to support transition to 40 CFR Part 63 subpart EEE (national emission standards for hazardous air pollutants from hazardous waste combustors), provided the procedures of paragraph (M) of this rule are followed.	1 *
N.	Containment buildings.	
1.	Modification or addition of containment building units:	
a.	Resulting in greater than 25% increase in the facility's containment building storage or treatment capacity.	3
b.	Resulting in up to 25% increase in the facility's containment building storage or treatment capacity.	2
2.	Modification of a containment building unit or secondary containment system without increasing the capacity of the unit.	2
3.	Replacement of a containment building with a containment building that meets the same design standards provided:	

Modification	Classification
a. The unit capacity is not increased.	1
b. The replacement containment building meets the same conditions in the permit.	1
4. Modification of a containment building management practice.	2
5. Storage or treatment of different wastes in containment buildings:	
a. That require additional or different management practices.	3
b. That do not require additional or different management practices.	2
O. Corrective action.	
1. Approval of a corrective action management unit pursuant to rule 3745-57-72 of the Administrative Code.	3
2. Approval of a temporary unit or time extension for a temporary unit pursuant to rule 3745-57-73 of the Administrative Code.	2
3. Approval of a staging pile or staging pile operating term extension pursuant to rule 3745-57-74 of the Administrative Code.	2
P. Burden reduction.	
1. Reserved.	
2. Development of one contingency plan based on the “National Response Team’s Integrated Contingency Plan Guidance” (“One Plan”) pursuant to paragraph (B) of rule 3745-54-52 of the Administrative Code.	1
3. Changes to recordkeeping and reporting requirements pursuant to paragraph (I) of rule 3745-54-56, paragraph (G) of rule 3745-54-100, paragraph (E)(5) of rule 3745-55-13, paragraph (F) of rule 3745-55-96, and paragraph (A)(2) of rule 3745-57-43 of the Administrative Code.	1
4. Changes to inspection frequency for tank systems pursuant to paragraph (B) of rule 3745-55-95 of the Administrative Code.	1
5. Changes to detection and compliance monitoring program pursuant to paragraphs (D), (G)(2), and (G)(3) of rule 3745-54-98 and paragraphs (F) and (G) of rule 3745-54-99 of the Administrative Code.	1

Modification	Classi- fication
<p>Notes:</p> <p>* “Class 1” modifications requiring<u>that require the</u> director's prior approval.</p> <p>** “Class 3” modifications under the director's jurisdiction under paragraph (D)(5) of this rule.</p> <p>A During a five year period, a facility's storage capacity or treatment rate must<u>shall</u> not be modified to increase by more than 25% in the aggregate without the director's approval in accordance with paragraph (D)(5) of this rule.</p> <p>B The authorized disposal capacity for a facility must<u>shall</u> be calculated from the approved design plans for the disposal units at that facility.</p>	

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

RSFA Attachment A

Rule 3745-50-51 is amended as follows:		
Location	Change	Reason
Text Amendments		
(A)(1)	remove the ending semicolon and add a period	a
(A)(2)	remove the ending semicolon and add a period	a
(A)(3)	remove the ending semicolon and add a period	a
(B)	[2 times] remove "must" and add "shall"	b
	remove "the requirements of"	c
	add "does all of the following" before the colon	d
(B)(1)	remove the ending semicolon and add a period	a
(B)(2)	remove the ending semicolon and add a period	a
(B)(3)	remove the ending "; and" and add a period	a, c
(D)	[4 times] remove "must" and add "shall"	b
	remove "the requirements of"	c
(D)(1)(a)(i)	[4 times] remove "must" and add "shall"	b
	remove "they" and add "the changes"	d, e
(D)(1)(a)(ii)	[3 times] remove "must" and add "shall"	b
(D)(1)(a)(iii)	[2 times] remove "must" and add "shall"	b
	remove "explaining" and add "and explain"	e, f
(D)(1)(b)	-remove "needing" and add "that require" -remove "receiving" and add "receipt of"	e, f
	remove "must" and add "shall"	b
(D)(1)(c)	remove "must" and add "shall"	b
(D)(2)(a)	[2 times] remove "must" and add "shall"	b
(D)(2)(b)	[5 times] remove "must" and add "shall"	b
(D)(2)(b)(i)	-remove "agency" and add "Ohio EPA" -after "contact" add "person"	e
	remove "must" and add "shall"	b
(D)(2)(b)(iv)	remove "agency" and add "Ohio EPA"	e

RSFA Attachment A

Rule 3745-50-51 is amended as follows:		
Location	Change	Reason
(D)(2)(b)(vi)	after "permit" add "that is"	e, f
	remove "agency" and add "Ohio EPA"	e
(D)(2)(c)	remove "must" and add "shall"	b
(D)(2)(d)	[2 times] remove "must" and add "shall"	b
(D)(2)(e)	[3 times] remove "must" and add "shall"	b
	-remove "agency" and add "Ohio EPA" -after "contact" add "person"	e
(D)(2)(f)(i)	remove "must" and add "shall"	b
(D)(2)(f)(i)(c)	remove "must" and add "shall"	b
(D)(2)(f)(i)(e)	remove "he" and add "the director"	e
(D)(2)(f)(ii)	remove "must" and add "shall"	b
(D)(2)(f)(ii)(c)	remove "must" and add "shall"	b
(D)(2)(f)(iii)	[4 times] remove "must" and add "shall"	b
(D)(2)(f)(iv)(a)	remove "must" and add "shall"	b
(D)(2)(f)(v)	[2 times] remove "must" and add "shall"	b
(D)(2)(f)(v) [Comment]	remove "set forth" and add "provided"	e
(D)(2)(f)(vi)	[3 times] remove "must" and add "shall"	b
	[3 times] remove "relating to" and add "regarding"	e, f
(D)(2)(f)(vii)	-remove "he must" and add "the director shall" -remove "he" and add "the director"	b, g
(D)(3)(a)	1 st sentence: remove "must" and add "shall"	b
	-2 nd sentence: remove "set forth" and add "provide"	e
	-3 rd sentence: remove "set forth" and add "provided"	
(D)(3)(a)(i)	remove "must" and add "shall"	b
(D)(3)(a)(ii)	remove "must" and add "shall"	b
(D)(3)(b)(ii)	[2 times] remove "must" and add "shall"	b

RSFA Attachment A

Rule 3745-50-51 is amended as follows:		
Location	Change	Reason
(D)(3)(b)(v)	-[2 times] after “reactive” add “wastes” -after “explosive” add “wastes”	h
	-remove “meeting” and add “that meet” -after “criteria for listing or” add “for”	e, f
(D)(3)(c)	remove “must” and add “shall”	b
(D)(3)(d)	[5 times] remove “must” and add “shall”	b
(D)(3)(d)(i)	-remove “agency” and add “Ohio EPA” -after “contact” add “person”	e
	remove “must” and add “shall”	b
(D)(3)(d)(iv)	remove “agency” and add “Ohio EPA”	e
(D)(3)(d)(vi)	after “permit” add “that is”	e, f
	remove “agency” and add “Ohio EPA”	e
(D)(3)(e)	remove “must” and add “shall”	b
(D)(3)(f)	[2 times] remove “must” and add “shall”	b
(D)(3)(g)	[3 times] remove “must” and add “shall”	b
	-remove “agency” and add “Ohio EPA” -after “contact” add “person”	e
(D)(4)(a)	remove “must” and add “shall”	b
(D)(4)(a)(ii)	remove “submitting” and add “who submitted”	e, f
(D)(4)(a)(iii)	[4 times] remove “must” and add “shall”	b
	-remove “agency” and add “Ohio EPA” -after “contact” add “person”	e
(D)(4)(a)(iv)	[2 times] remove “must” and add “shall”	b
(D)(4)(a)(v)	-after “modification,” remove “the director must issue” -after “the modified permit” add “shall be issued” -[2 times] remove “he” and add “the director”	b, g
(D)(4)(b)	[4 times] remove “must” and add “shall”	b
	-remove “receiving” and add “receipt of” -[3 times] remove “relating to” and add “regarding”	e

RSFA Attachment A

Rule 3745-50-51 is amended as follows:		
Location	Change	Reason
(D)(5)(a)	remove “must” and add “shall”	b
(E)(1)(a)	remove “must” and add “shall”	b
(E)(1)(b)	remove “receiving” and add “receipt of”	e, f
	remove “found”	c
(E)(2)	[3 times] remove “must” and add “shall”	b
	remove “receiving” and add “receipt of”	e, f
	remove “found”	c
(E)(3)	remove “must” and add “shall”	b
	remove “as set forth”	c
(F)(1)	-after “in accordance with” remove “this” -after “paragraph” add “(F) of this rule” before the comma	d
	remove “must” and add “shall”	b
(F)(2)	add text: “Request for temporary authorization.”	i
(F)(2)(b)	remove “must” and add “shall”	b
(F)(2)(c)	[2 times] remove “must” and add “shall”	b
(F)(3)	[2 times] remove “must” and add “shall”	b
(F)(4)(b)	remove “involving” and add “of”	e
(G)(1)	1 st sentence: remove “must” and add “shall”	b
	2 nd sentence: -after “director” remove “must” -after “also” add “shall”	b, f
(H)(1)	-remove “unit(s) and add “units” -remove “unit” and add “units	e
(H)(1)(a)	-remove “listing” and add “that lists” -remove “Identifying” and add “identifies” -remove “regulating” and add “that regulates”	e, f
(H)(1)(e)	-remove “identifying or listing” and add “that lists or identifies” -remove “regulating” and add “that regulates”	e, f

RSFA Attachment A

Rule 3745-50-51 is amended as follows:		
Location	Change	Reason
(H)(2)	[3 times] remove “must” and add “shall”	b
	in last sentence, remove “set forth”	c
(I)	remove “barring” and add “that bar”	e, f
	add “all of the following” before the colon	d
(I)(1)	remove the ending semicolon and add a period	a
(I)(2)	remove “restricting” and add “that restricts”	e, f
	remove the ending “; and” and add a period	a, c
(J)	add “doing all of the following” before the colon	d
(J)(1)	remove the ending “; and” and add a period	a, c
(J)(2)	remove “must” and add “shall”	b
	remove the ending “; and” and add a period	a, c
(J)(3)	remove “must” and add “shall”	b
	remove the ending “; and” and add a period	a, c
(J)(4)	[2 times] remove “he” and add “the director”	g
	[3 times] remove “relating to” and add “regarding”	e, f
	[3 times] remove “must” and add “shall”	b
(K)	[2 times] remove “must” and add “shall”	b
(L)(1)	remove “must” and add “shall”	b
(L)(2)	remove “must” and add “shall”	b
(L)(3)	remove “receiving” and add “the director receives”	e, f
(M)(1)	remove “must” and add “shall”	b
	add “do all of the following” before the colon	d
(M)(1)(a)	remove the ending semicolon and add a period	a
(M)(1)(b)	remove the ending “; and” and add a period	a, c
(M)(1)(d)	remove “in” and add “at”	e

RSFA Attachment A

Rule 3745-50-51 is amended as follows:		
Location	Change	Reason
(M)(2)	remove “must” and add “shall”	b
	add “do all of the following” before the colon	d
(M)(2)(a)	remove the ending “; and” and add a period	a, c
Appendix Amendments		
at A.7.	[2 times] after “reactive” add “wastes”	h
	after “explosive” remove the comma and add “wastes”	a ,h
	remove “meeting” and add “that meet”	e, f
at B.8.	remove “they” and add “the permit conditions”	e
at C.1.c.	after “ignitable” add “wastes”	h
at C.2.	remove “assurance/control” and add “assurance or quality control”	a, e
at C.6.d.	remove “phone” and add “telephone”	e
at [Comment] following C.8.b.	[3 times] remove “must” and add “shall”	b
at D.5.	remove “ACLs” and add “alternate concentration limits”	e *
at E.1.e	remove “occurring” and add “that occur”	e, f
at F.1.	remove “phone” and add “telephone”	e
at F.5.	remove “occurring” and add “that occur”	e, f
at J.	[2 times] remove “complying” and add “in compliance”	e, f
at J.3.	remove “meeting” and add “that meets”	e, f
at L.11.	remove “having” and add “that have”	e, f
at M.	after “M.” remove the extra period	j
at M.1.	remove “chlorine/chloride” and add “chlorine or chloride”	a
at M.2.	remove “chlorine/chloride” and add “chlorine or chloride”	a
at M.3.	remove “HCl/CL ₂ ” and add “hydrochloric acid or chlorine gas”	a, k
at M.5.b	remove “concerning” and add “regarding”	e

RSFA Attachment A

Rule 3745-50-51 is amended as follows:		
Location	Change	Reason
at M.6.a.	-after “contains a” add “principal organic hazardous constituent” -add parentheses around the existing acronym	a, L
at * in Notes	remove “requiring” and add “that require the”	e, f
at Note A	remove “must” and add “shall”	b
at Note B	remove “must” and add “shall”	b

- a Punctuation correction.
- b The change of “must” to “shall” is an LSC requirement.
- c Unnecessary wording is removed.
- d This amendment adds specificity to the text.
- e Word choice correction.
- f This text is slightly re-written to correct the sentence structure and/or grammar (verb form).
- g This text is slightly re-written to remove “he” at this location.
- h Word choice correction, to complete the term. This amendment ensures that an electronic search of the hazardous waste rules for this type of waste will include this location in the search results.
- i This amendment is designed to eliminate the occasion of a paragraph designation that contains no text.
- j Typo correction.
- k The chemical symbols are removed and text is added.
- L Text is added to define the existing acronym, and punctuation is added around the acronym at its first use (LSC requirements).

RSFA Attachment A

Rule **3745-50-51** is amended as follows:

Location	Change	Reason
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- * This amendment is made in response to a comment on the Interested Parties draft rule.

This rule is submitted for 5-year review upon proposal. A new review date will be assigned.

The appendix to this rule appears in a different font from most other rules at the request of LSC.

3745-50-51

Permit modifications.

(A) As used in this rule, "modification" means a change or alteration to a hazardous waste facility or its operations that is inconsistent with or not authorized by its existing permit or authorization to operate. "Modification application" means a request for a modification submitted in accordance with division (I) of section 3734.05 of the Revised Code. A hazardous waste facility permit may be modified at the request of the director or upon the written request of the permittee only if any of the following applies:

- (1) The permittee desires to accomplish alterations, additions, or deletions to the permitted facility or to undertake alterations, additions, deletions, or activities that are inconsistent with or not authorized by the existing permit;
- (2) New information or data justify permit conditions in addition to or different from those in the existing permit;
- (3) The standards, criteria, or rules upon which the existing permit is based have been changed by new, amended, or rescinded standards, criteria, or rules, or by judicial decision after the existing permit was issued, and the change justifies permit conditions in addition to or different from those in the existing permit;
- (4) The permittee proposes to transfer the permit to another person.

(B) Owners or operators of facilities operating pursuant to paragraph (C)(1) of rule 3745-50-40 of the Administrative Code who submit modifications ~~must~~shall comply with ~~the requirements of~~ this rule and, in lieu of the modification application submittal requirements of paragraph (D)(1)(b), (D)(2)(a), or (D)(3)(c) of this rule, ~~must~~shall submit a revised "Part A" permit application that does all of the following:

- (1) Describes the exact changes to be made to the facility;
- (2) Identifies the modification as either a "Class 1," "Class 2," or "Class 3" modification;
- (3) Explains why the modification is needed; ~~and~~.

- (4) Provides the applicable information required by rules 3745-50-43 and 3745-50-62 of the Administrative Code.
- (C) When a permit is modified, only the conditions subject to modification may be reviewed as part of the modification procedure.
- (D) Modifications mustshall be classified by the director as "Class 1," "Class 2," or "Class 3" modifications. Modification requests classified as "Class 3" modifications mustshall be further classified by the director as "Class 3" modifications that are to be approved or disapproved by the director in accordance with either paragraph (D)(4) or (D)(5) of this rule. To determine whether a "Class 3" modification request mustshall be approved or disapproved in accordance with ~~the requirements of~~ paragraph (D)(5) of this rule, the director mustshall use the criteria in paragraph (D)(3)(b) of this rule.
- (1) "Class 1" modifications.
- (a) Except as provided in paragraph (D)(1)(b) of this rule, the permittee may implement "Class 1" modifications listed in the appendix to this rule, or modifications classified as "Class 1" modifications by the director pursuant to paragraph (E) of this rule, under the following conditions:
- (i) The permittee mustshall notify the director of the modification by certified mail or other means that establish proof of delivery within seven days after the change is implemented. This notice mustshall specify the changes made to permit conditions or supporting documents referenced by the permit and mustshall explain why ~~they~~the changes are necessary. Along with the notice, the permittee mustshall provide the applicable information required by rules 3745-50-43, 3745-50-44, and 3745-50-62 of the Administrative Code.
- (ii) The permittee mustshall send a notice of the "Class 1" modification to all persons on the agency mailing list maintained by the director, the board of county commissioners of the county, the board of township trustees of the township, and the city manager or mayor of the municipal corporation in which the hazardous waste facility is located. This notification mustshall be made within ninety days after the change is implemented. For "Class 1" modifications that require prior director approval, the notification mustshall be made within ninety days after the director approves the modification application.

- (iii) Any person may request the director to review, and the director may, for cause, reject any "Class 1" modification. The director ~~must~~shall inform the permittee by certified mail that a "Class 1" modification has been rejected, ~~explaining and explain~~ the reasons for the rejection. If a "Class 1" modification has been rejected, the permittee ~~must~~shall comply with the original permit conditions.
 - (b) "Class 1" modifications identified in the appendix to this rule by an asterisk may be made only with the prior written approval of the director. The director's prior written approval is also required for those modifications classified by the director as "Class 1" modifications ~~needing that require~~ prior written approval pursuant to paragraph (E) of this rule. The director ~~must~~shall approve or disapprove an application for a "Class 1" modification that requires the director's approval within sixty days after ~~receiving receipt of~~ the modification application. The approval or disapproval by the director of a "Class 1" modification is not a final action that is appealable under Chapter 3745. of the Revised Code.
 - (c) For a "Class 1" modification, the permittee may elect to follow the procedures in paragraph (D)(2) of this rule for "Class 2" modifications instead of the procedures in paragraph (D)(1) of this rule. The permittee ~~must~~shall inform the director of this decision in the notice required in paragraph (D)(1)(a)(i) of this rule.
- (2) "Class 2" modifications.
- (a) "Class 2" modification applications ~~must~~shall be approved or disapproved by the director. For "Class 2" modifications listed in the appendix to this rule, or modifications classified as "Class 2" modifications by the director pursuant to paragraph (E) of this rule, the permittee ~~must~~shall submit a modification application to the director that:
 - (i) Describes the exact change to be made to the facility that would require the permit to be modified and the proposed changes to the permit conditions and supporting documents referenced by the permit;
 - (ii) Identifies the modification as a "Class 2" modification;
 - (iii) Explains why the modification is needed; and

- (iv) Provides the applicable information required by rules 3745-50-43, 3745-50-44, and 3745-50-62 of the Administrative Code.
- (b) The permittee ~~must~~shall send a notice of the modification application to all persons on the agency mailing list maintained by the director, the board of county commissioners of the county, the board of township trustees of the township, and the city manager or mayor of the municipal corporation in which the hazardous waste facility is located, and ~~must~~shall publish this notice in a major local newspaper of general circulation. This notice ~~must~~shall be mailed and published within seven days before or after the date of submittal of the modification application to the director, and the permittee ~~must~~shall provide to the director evidence of the mailing and publication. The notice ~~must~~shall include:
- (i) Announcement of a sixty day comment period, in accordance with paragraph (D)(2)(e) of this rule, and the name and address of an ~~agency~~Ohio EPA contact person to whom comments ~~must~~shall be sent;
 - (ii) Announcement of the date, time, and place for a public meeting held in accordance with paragraph (D)(2)(d) of this rule;
 - (iii) Name and telephone number of the permittee's contact person;
 - (iv) Name and telephone number of an ~~agency~~Ohio EPA contact person;
 - (v) Location where a copy of the modification application and any supporting documents can be viewed and copied; and
 - (vi) The following statement: "The permittee's compliance history during the life of the permit that is being modified is available from the ~~agency~~Ohio EPA contact person."
- (c) The permittee ~~must~~shall place a copy of the permit modification application and supporting documents in a location accessible to the public in the vicinity of the facility.

- (d) The permittee ~~must~~shall hold a public meeting no earlier than fifteen days after the publication of the notice required by paragraph (D)(2)(b) of this rule and no later than fifteen days before the close of the sixty day comment period. The meeting ~~must~~shall be held, to the extent practicable, in the vicinity of the facility.
- (e) The public ~~must~~shall be provided sixty days to comment on the modification application. The comment period ~~must~~shall begin on the date the permittee publishes the notice in the local newspaper. Comments ~~must~~shall be submitted to the ~~agency~~Ohio EPA contact person identified in the public notice.
- (f)
 - (i) No later than ninety days after receipt of the modification application, the director ~~must~~shall:
 - (a) Approve the modification application, with or without changes, and modify the permit accordingly; or
 - (b) Disapprove the application; or
 - (c) Determine that the modification application ~~must~~shall follow the procedures in paragraph (D)(3) of this rule for "Class 3" modifications for either of the following reasons:
 - (i) There is significant public concern about the proposed modification; or
 - (ii) The complex nature of the change justifies the more extensive procedures for "Class 3" modifications; or
 - (d) Approve the application, with or without changes, as a temporary authorization for a term of up to one hundred eighty days; or
 - (e) Notify the permittee that ~~he~~the director will decide on the application within the next thirty days.

- (ii) If the director notifies the permittee of a thirty day extension for a decision, the director ~~must~~shall take one of the following actions no later than one hundred twenty days after receipt of the modification application:
- (a) Approve the modification application, with or without changes, and modify the permit accordingly; or
 - (b) Disapprove the application; or
 - (c) Determine that the modification application ~~must~~shall follow the procedures in paragraph (D)(3) of this rule for "Class 3" modifications for either of the following reasons:
 - (i) There is significant public concern about the proposed modification; or
 - (ii) The complex nature of the change justifies the more extensive procedures for "Class 3" modifications; or
 - (d) Approve the application, with or without changes, as a temporary authorization for a term of up to one hundred eighty days.
- (iii) If the director fails to take one of the actions specified in paragraph (D)(2)(f)(i) or (D)(2)(f)(ii) of this rule by the one hundred twentieth day after receipt of the modification application, the permittee ~~must~~shall be automatically authorized to conduct the activities described in the modification application for up to one hundred eighty days, without formal agency action. The authorized activities ~~must~~shall be conducted as described in the permit modification application and ~~must~~shall be conducted in compliance with all applicable standards of Chapters 3745-65 to 3745-69 and 3745-256 of the Administrative Code. If the director approves, with or without changes, or disapproves the modification application during the term of the temporary or automatic authorization provided for in paragraph (D)(2)(f)(i)(d), (D)(2)(f)(ii)(d), or (D)(2)(f)(iii) of this rule, such action ~~must~~shall replace the temporary or automatic authorization.
- (iv)

- (a) In the case of an automatic authorization under paragraph (D)(2)(f)(iii) of this rule, or a temporary authorization under paragraph (D)(2)(f)(i)(d) or (D)(2)(f)(ii)(d) of this rule, if the director has not approved or disapproved the modification application within two hundred fifty days after receipt of the modification application, the permittee ~~must~~shall, within seven days after that time, send a notice to all persons on the agency mailing list and make a reasonable effort to notify other persons who submitted written comments on the modification application, that:
- (i) The permittee has been authorized temporarily to conduct the activities described in the modification application; and
 - (ii) Unless the director approves or disapproves the application by the end of the authorization period, the permittee will be automatically authorized to conduct such activities for the life of the permit.
- (b) If the permittee fails to send a notice to all persons on the agency mailing list by the date specified in paragraph (D)(2)(f)(iv)(a) of this rule, the effective date of the final automatic authorization will be deferred until fifty days after the permittee sends a notice to all persons on the agency mailing list.
- (v) If the director does not approve or disapprove a modification application before the end of the automatic or temporary authorization period or reclassify the "Class 2" modification application as a "Class 3" modification, the permittee is authorized to conduct the activities described in the modification application for the life of the permit unless modified later under this rule. The activities authorized under paragraph (D)(2) of this rule ~~must~~shall be conducted as described in the modification application and ~~must~~shall be conducted in compliance with all applicable standards of Chapters 3745-65 to 3745-69 and 3745-256 of the Administrative Code.

[Comment: The director is required to approve or disapprove an application for a "Class 2" modification within three hundred days after its receipt. The three hundred day time period includes the automatic or temporary authorization periods ~~set forth~~provided in paragraphs (D)(2)(f)(i)(d), (D)(2)(f)(ii)(d), (D)(2)(f)(iii), and (F)(4) of this rule. As described in paragraph (D)(2)(f)(v) of this rule, the permittee will be automatically authorized to conduct the activity described in the "Class 2" modification application if the director does not approve or disapprove the application within three hundred days.]

- (vi) In deciding to approve or disapprove a modification application, or to issue a temporary authorization, or to reclassify a "Class 2" modification as a "Class 3" modification, the director ~~must~~shall consider all comments received during the public comment period ~~relating to~~regarding the modification application, written materials submitted at the public meeting ~~relating to~~regarding the application, and any other documents ~~relating to~~regarding the director's decision, and ~~must~~shall respond in writing to all significant comments. The approval or disapproval by the director of a "Class 2" modification is a final action that is appealable under Chapter 3745. of the Revised Code. The administrative record for appeal of a "Class 2" modification ~~must~~shall include the comments, materials, and documents described in this paragraph.
- (vii) If the director approves the application for the "Class 2" modification, ~~he must~~the director shall issue the modified permit upon such terms and conditions as ~~he~~the director finds are reasonable to ensure that the operation, maintenance, closure, and post-closure care of the hazardous waste facility are conducted in accordance with Chapter 3734. of the Revised Code, the hazardous waste rules, and such additional terms and conditions as ~~he~~the director determines are necessary to protect human health and the environment.
- (g) The director may disapprove or change the terms of a "Class 2" modification application, under paragraph (D)(2)(f)(i), (D)(2)(f)(ii), or (D)(2)(f)(iii) of this rule, for any of the following reasons:
 - (i) The modification application is incomplete;

- (ii) The requested modification does not comply with the applicable requirements of Chapters 3745-54 to 3745-57 and 3745-205 of the Administrative Code or other applicable requirements in the hazardous waste rules; or
 - (iii) The conditions of the requested modification are inadequate to protect human health and the environment.
 - (h) The permittee may perform any construction associated with a "Class 2" modification application beginning sixty days after the submittal of the application to the director unless the director establishes a later date for commencing construction and notifies the permittee in writing prior to the sixtieth day after the submittal of the application.
- (3) "Class 3" modifications.
- (a) "Class 3" modification applications ~~must~~shall be approved or disapproved by the director. Paragraphs (D)(3)(c) to (D)(3)(g) of this rule ~~set forth~~provide the procedures governing all "Class 3" modification applications. In addition to the procedures ~~set forth~~provided in paragraphs (D)(3)(c) to (D)(3)(g) of this rule, "Class 3" modifications are subject to the following additional procedures:
 - (i) Requests for "Class 3" modifications that do not meet the criteria of paragraph (D)(3)(b) of this rule ~~must~~shall be approved or disapproved in accordance with paragraph (D)(4) of this rule.
 - (ii) Requests for "Class 3" modifications that do meet the criteria of paragraph (D)(3)(b) of this rule ~~must~~shall be approved or disapproved in accordance with paragraph (D)(5) of this rule.
 - (b) The director will use the procedures in paragraph (D)(5) of this rule for any of the following categories of "Class 3" modifications:
 - (i) Authority to conduct treatment, storage, or disposal at a site, location, or tract of land that has not been authorized for the proposed category of treatment, storage, or disposal activity by the facility's permit;

- (ii) Modification or addition of a "hazardous waste management unit," as defined in rule 3745-50-10 of the Administrative Code, that results in an increase in a facility's storage capacity of more than twenty-five per cent over the capacity authorized by the facility's permit, an increase in a facility's treatment rate of more than twenty-five per cent over the rate authorized by the permit, or an increase in a facility's disposal capacity over the capacity authorized by the permit. The authorized disposal capacity for a facility ~~must~~shall be calculated from the approved design plans for the disposal units at that facility. During a five year period, a facility's storage capacity or treatment rate ~~must~~shall not be modified to increase by more than twenty-five per cent in the aggregate without the director's approval pursuant to paragraph (D)(5) of this rule;
 - (iii) Authority to add any of the following categories of regulated activities not previously authorized at a facility by the facility's permit: storage at a facility not previously authorized to store hazardous waste, treatment at a facility not previously authorized to treat hazardous waste, or disposal at a facility not previously authorized to dispose of hazardous waste;
 - (iv) Authority to add a category of hazardous waste management unit not previously authorized at the facility by the facility's permit; and
 - (v) Authority to treat, store, or dispose of waste types listed or characterized as reactive wastes or explosive wastes in rules 3745-51-20 to 3745-51-24 or 3745-51-30 to 3745-51-35 of the Administrative Code, or any acute hazardous waste listed in paragraph (E) of rule 3745-51-33 of the Administrative Code at a facility not previously authorized to treat, store, or dispose of those types of wastes by the facility's permit, unless the requested authority is limited to wastes that no longer exhibit characteristics ~~meeting that~~ meet the criteria for listing or for characterization as reactive wastes or explosive wastes, or for listing as acute hazardous waste, but still are required to carry those waste codes because of the requirements established in rule 3745-51-03 of the Administrative Code (e.g., the "mixture," "contained in," or "derived-from" provisions).
- (c) The permittee ~~must~~shall submit a modification application to the director that:

- (i) Describes the exact changes to be made to the facility that would require the permit to be modified and the proposed changes to the permit conditions and supporting documents referenced by the permit;
 - (ii) Identifies the modification as a "Class 3" modification;
 - (iii) Explains why the modification is needed; and
 - (iv) Provides the applicable information required by rules 3745-50-43, 3745-50-44, and 3745-50-62 of the Administrative Code.
- (d) The permittee ~~must~~shall send a notice of the modification application to all persons on the agency mailing list maintained by the director, the board of county commissioners of the county, the board of township trustees of the township, and the city manager or mayor of the municipal corporation in which a hazardous waste facility is located, and ~~must~~shall publish this notice in a major local newspaper of general circulation. This notice ~~must~~shall be mailed and published within seven days before or after the date of submittal of the modification application to the director, and the permittee ~~must~~shall provide to the director evidence of the mailing and publication. The notice ~~must~~shall include:
- (i) Announcement of a sixty day comment period, and the name and address of an ~~agency~~Ohio EPA contact person to whom comments ~~must~~shall be sent;
 - (ii) Announcement of the date, time, and place for a public meeting on the modification application, to be held in accordance with paragraph (D)(3)(f) of this rule;
 - (iii) Name and telephone number of the permittee's contact person;
 - (iv) Name and telephone number of an ~~agency~~Ohio EPA contact person;
 - (v) Location where a copy of the modification application and any supporting documents can be viewed and copied; and

- (vi) The following statement: "The permittee's compliance history during the life of the permit that is being modified is available from the ~~agency~~Ohio EPA contact person."
 - (e) The permittee ~~must~~shall place a copy of the permit modification application and supporting documents in a location accessible to the public in the vicinity of the facility.
 - (f) The permittee ~~must~~shall hold a public meeting no earlier than fifteen days after the publication of the notice required by paragraph (D)(3)(d) of this rule and no later than fifteen days before the close of the sixty day comment period. The meeting ~~must~~shall be held, to the extent practicable, in the vicinity of the facility.
 - (g) The public ~~must~~shall be provided at least sixty days to comment on the modification application. The comment period ~~must~~shall begin on the date the permittee publishes the notice in the local newspaper. Comments ~~must~~shall be submitted to the ~~agency~~Ohio EPA contact person identified in the notice.
- (4) "Class 3" modifications that do not meet the criteria of paragraph (D)(3)(b) of this rule.
- (a) After the conclusion of the sixty day comment period described in paragraph (D)(3)(g) of this rule and the completion of the review of the "Class 3" modification application, the director ~~must~~shall:
 - (i) Issue a draft modified permit or a notice of intent to deny the modification application; and
 - (ii) Respond in writing to all written comments that pertain to the subject matter of the permit modification application received during the sixty day comment period provided in paragraph (D)(3)(g) of this rule, place a copy of the response at the location where a copy of the application and the draft modified permit or notice of intent to deny the modification application are available for inspection, and mail a copy of the response to each of the persons ~~submitting~~who submitted written comments during that comment period; and

- (iii) Give public notice of the issuance of the draft modified permit or notice of intent to deny the modification application in a newspaper having general circulation in the county in which the facility is located and over a local radio station. The notice ~~must~~shall contain a summary of the modification application and the draft modified permit or notice of intent to deny the modification application, the location of the facility, a description of the proposed modification, the location where a copy of the application and the draft modified permit or notice of intent to deny the modification application are available for inspection, and the statement that any person may submit written comments relevant to the permit modification request and draft modified permit or notice of intent to deny the modification application, or may request a public meeting thereon within forty-five days after the public notice. The public ~~must~~shall be provided at least forty-five days to comment on the modification application. The comment period ~~must~~shall begin on the date the notice is published in the newspaper. Comments ~~must~~shall be submitted to the ~~agency~~Ohio EPA contact person identified in the notice; and
- (iv) If significant interest is shown in a public meeting, the director ~~must~~shall promptly fix and give public notice in a newspaper having general circulation in the county in which the facility is located and over a local radio station, of a date for a public meeting which ~~must~~shall be held in the county in which the facility is located, not fewer than thirty days after public notice of the public meeting. At the public meeting, any person may submit written or oral comments relevant to the modification application and draft modified permit or notice of intent to deny the modification application; and
- (v) If the director approves the application for the "Class 3" modification, ~~the director must issue~~ the modified permit shall be issued upon such terms and conditions as ~~he~~the director finds are reasonable to ensure that the operation, maintenance, closure, and post-closure care of the hazardous waste facility are conducted in accordance with Chapter 3734. of the Revised Code, the hazardous waste rules, and such additional terms and conditions as ~~he~~the director determines are necessary to protect human health and the environment.

- (b) The director ~~must~~shall approve or disapprove an application for a "Class 3" modification within three hundred sixty-five days after ~~receiving~~receipt of the modification application. In deciding to approve or disapprove such a "Class 3" modification application, the director ~~must~~shall consider all comments received during the public comment periods required in paragraphs (D)(3)(g) and (D)(4)(a) of this rule ~~relating to~~regarding the modification application, written materials submitted at the public meetings ~~relating to~~regarding the application, and any other documents ~~relating to~~regarding the director's decision, and ~~must~~shall respond in writing to all significant comments. The approval or disapproval by the director of a "Class 3" modification application is a final action that is appealable under Chapter 3745. of the Revised Code. The administrative record for appeal of a "Class 3" modification ~~must~~shall include the comments, materials, and documents described in this paragraph.
- (5) "Class 3" modifications that do meet the criteria of paragraph (D)(3)(b) of this rule.
- (a) After the conclusion of the sixty day comment period described in paragraph (D)(3)(g) of this rule, the director ~~must~~shall consider the "Class 3" modification application to determine whether the application meets the requirements of paragraph (A) of rule 3745-50-38 of the Administrative Code.
- (b) Upon completion of the review pursuant to paragraph (D)(5)(a) of this rule, the director will approve or disapprove the "Class 3" modification application in accordance with the procedures in paragraph (D)(4) of this rule.
- (E) Other modifications.
- (1) In the case of modifications not explicitly listed in the appendix to this rule, the permittee may:
- (a) Request a determination by the director that the proposed modification be reviewed and processed in accordance with the "Class 1" or "Class 2" modification procedures identified in this rule. To make such a request, the permittee ~~must~~shall submit a modification classification request which contains the information necessary to support the request. A modification classification request is not a modification application; or

- (b) Submit a "Class 1" or "Class 2" modification application to the director. No later than thirty days after ~~receiving~~receipt of the modification application, the director will evaluate the classification of this modification using the criteria ~~found~~ in paragraph (E)(2) of this rule and will notify the permittee of Ohio EPA's determination on the proper classification of the modification; or
 - (c) Submit a "Class 3" modification application to the director.
- (2) The director ~~must~~shall make the classification determination described in paragraph (E)(1)(a) of this rule not later than thirty days after ~~receiving~~receipt of the request and ~~must~~shall notify the permittee of the classification. In making a classification determination, the director ~~must~~shall consider the similarity of the modification to other modifications ~~found~~ in the appendix to this rule and all of the following criteria:
- (a) "Class 1" modifications apply to minor changes to the facility or its operations. These changes do not necessitate substantial alteration of the permit conditions and do not reduce the capacity of the facility to protect human health or the environment. In the case of "Class 1" modifications, the director's prior approval may be required.
 - (b) "Class 2" modifications apply to changes that are necessary to enable a permittee to respond, in a timely manner, to:
 - (i) Common variations in the types and quantities of the wastes managed under the facility permit;
 - (ii) Technological advancements; or
 - (iii) Changes necessary to comply with new regulations, where these changes can be implemented without substantially changing design specifications or management practices in the permit.
 - (c) "Class 3" modifications apply to changes that substantially alter the facility or its operations.
- (3) After the director has notified the permittee of the classification determination pursuant to paragraph (E)(2) of this rule, the permittee ~~must~~shall initiate the appropriate modification procedures ~~as set forth~~ in paragraph (D)(1), (D)(2), or (D)(3) of this rule.

(F) Temporary authorizations.

(1) Upon request of the permittee, the director may, without prior public notice and comment, grant the permittee a temporary authorization, in accordance with ~~this~~ paragraph (F) of this rule, to conduct the activity described in a temporary authorization request. A temporary authorization ~~must~~shall have a term of not more than one hundred eighty days.

(2) Request for temporary authorization.

(a) The permittee may request a temporary authorization for:

(i) Any "Class 2" modification that meets the criteria in paragraph (F)(3)(b) of this rule; and

(ii) Any "Class 3" modification that meets the criteria in paragraph (F)(3)(b)(i) or (F)(3)(b)(ii) of this rule, or that meets the criteria in paragraphs (F)(3)(b)(iii) to (F)(3)(b)(v) of this rule and provides improved management or treatment of a hazardous waste already included in the facility permit.

(b) The temporary authorization request ~~must~~shall include:

(i) A description of the activities to be conducted under the temporary authorization;

(ii) An explanation of why the temporary authorization is necessary; and

(iii) Sufficient information to ensure compliance with the applicable requirements of Chapters 3745-54 to 3745-57, and 3745-205 of the Administrative Code.

(c) The permittee ~~must~~shall send a notice about the temporary authorization request to all persons on the agency mailing list maintained by the director, the board of county commissioners of the county, the board of township trustees of the township, and the city manager or mayor of the municipal corporation in which a hazardous waste facility is located. This notification ~~must~~shall be made within seven days after submittal of the authorization request.

- (3) The director ~~must~~shall grant or deny the temporary authorization request as quickly as practical. In deciding to grant a temporary authorization, the director ~~must~~shall find that:
- (a) The authorized activities will be conducted in compliance with the standards of Chapters 3745-54 to 3745-57, 3745-205, and 3745-266 of the Administrative Code.
 - (b) The temporary authorization is necessary to achieve one of the following objectives before action is likely to be taken on a modification request:
 - (i) To facilitate timely implementation of closure or corrective action activities;
 - (ii) To allow treatment or storage in tanks or containers, or in containment buildings, of land disposal restricted wastes in accordance with Chapter 3745-270 of the Administrative Code;
 - (iii) To prevent disruption of ongoing waste management activities;
 - (iv) To enable the permittee to respond to sudden changes in the types or quantities of the wastes managed under the facility permit; or
 - (v) To facilitate other changes to protect human health and the environment.
- (4) A temporary authorization may be reissued for one additional term of up to one hundred eighty days provided that the permittee has requested a "Class 2" or "Class 3" modification for the activity authorized by the temporary authorization, and:
- (a) The reissued temporary authorization constitutes the director's decision on a "Class 2" modification in accordance with paragraph (D)(2)(f)(i) or (D)(2)(f)(ii) of this rule, or
 - (b) The director determines that the reissued temporary authorization ~~involving~~of a "Class 3" modification request is warranted to allow the authorized activities to continue while the modification procedures of paragraph (D)(3) of this rule are conducted.

(G) Public notice and appeals of permit modification decisions.

- (1) The director ~~must~~shall send a notice to all persons on the agency mailing list, the board of county commissioners of the county, the board of township trustees of the township, and the city manager or mayor of the municipal corporation in which a hazardous waste facility is located, within ten days after any decision under this rule to approve or disapprove a "Class 2" or "Class 3" modification application. The director ~~must~~ also shall send a notice to such persons within ten days after an automatic or temporary authorization for a "Class 2" modification goes into effect under paragraph (D)(2)(f)(iii), (D)(2)(f)(v), (F)(3), or (F)(4) of this rule, or a temporary authorization for a "Class 3" modification goes into effect under paragraph (F)(3) or (F)(4) of this rule.
- (2) An automatic authorization that takes effect under paragraph (D)(2)(f)(iii) or (D)(2)(f)(v) of this rule may be appealed pursuant to Chapter 3745. of the Revised Code.

(H) Permit by rule for newly regulated wastes or hazardous waste management units.

- (1) The permittee who is treating, storing, or disposing of hazardous waste on the effective date of statutory or regulatory changes under Chapter 3734. of the Revised Code that render the permittee subject to additional hazardous waste permitting requirements for newly regulated hazardous waste or hazardous waste management ~~unit(s)~~units will be deemed to have a permit by rule for such newly regulated waste or ~~unit~~units if:
 - (a) The unit was in existence as a hazardous waste facility with respect to the newly listed or characterized waste or newly regulated waste management unit on the effective date of the Ohio statutory or regulatory change ~~listing that lists~~ or ~~identifying~~identifies the waste, or ~~regulating that regulates~~ the unit;
 - (b) The permittee submits a "Class 1" modification application no later than thirty days after the date on which the waste or unit becomes subject to the new requirements;
 - (c) The permittee is in compliance with the applicable standards of Chapters 3745-65 to 3745-69 and 3745-256, of the Administrative Code;

- (d) The permittee also submits a complete "Class 2" or "Class 3" modification application no later than one hundred eighty days after the director requests the modification application or upon a later date if the permittee demonstrates to the director good cause for the late submittal; and
- (e) In the case of land disposal units, the permittee certifies that each such unit is in compliance with all applicable requirements of Chapters 3745-65 to 3745-69 and 3745-256 of the Administrative Code for ground water monitoring and financial responsibility on the date three hundred sixty-five days after the effective date of the Ohio statutory or regulatory change ~~identifying or listing~~that lists or identifies the waste as hazardous, or ~~regulating~~that regulates the unit as a hazardous waste management unit. If the owner or operator fails to certify compliance with all these requirements, the permittee will not have authority to operate under paragraph (H) of this rule.
- (2) The director ~~must~~shall approve or disapprove the "Class 2" or "Class 3" modification application submitted pursuant to paragraph (H)(1)(d) of this rule in accordance with paragraphs (D)(2)(f)(vii) and (D)(2)(g) of this rule or with paragraphs (D)(4)(a) and (D)(4)(b) of this rule. If a "Class 3" modification application submitted pursuant to paragraph (H)(1)(d) of this rule is from a permit by rule facility conducting thermal treatment of hazardous waste in a boiler or industrial furnace, the director ~~must~~shall approve or disapprove the application in accordance with paragraph (D)(5) of this rule and division (D)(2) of section 3734.05 of the Revised Code, except that the director ~~must~~shall not disapprove an application for the thermal treatment on the basis of the criteria ~~set forth~~ in division (D)(2)(g) or (D)(2)(h) of section 3734.05 of the Revised Code.
- (3) New wastes or units added to a facility's permit under paragraph (H) of this rule do not constitute expansions for the purpose of the twenty-five per cent capacity expansion limit for "Class 2" or "Class 3" modifications.
- (I) Hazardous waste military munitions treatment and disposal. The permittee is authorized to continue to accept waste military munitions notwithstanding any permit conditions ~~barring~~that bar the permittee from accepting off-site wastes, if all of the following:
- (1) The facility was in existence as a hazardous waste facility, and the facility was already permitted to handle the waste military munitions, on the date when the waste military munitions became subject to hazardous waste regulatory requirements;

- (2) On or before the date when the waste military munitions become subject to hazardous waste regulatory requirements, the permittee submits a "Class 1" modification request to remove or amend the permit provision ~~restricting that~~ restricts the receipt of off-site waste military munitions; ~~and.~~
 - (3) The permittee submits a complete "Class 2" modification request within one hundred eighty days after the date when the waste military munitions became subject to hazardous waste regulatory requirements.
- (J) The director may initiate a permit modification of a hazardous waste facility installation and operation permit by doing all of the following:
- (1) Issuing a draft modified permit; ~~and.~~
 - (2) Giving public notice of the issuance of the draft permit modification, at a minimum, in a newspaper having general circulation in the county in which the facility is located and over a local radio station. The notice ~~must~~ shall contain, at a minimum, a summary of the draft permit modification, the location of the facility, a description of the facility, the location where copies of the draft modified permit are available for inspection, and the statement that any person may submit written comments relevant to the draft permit modification or may request a public meeting thereon within forty-five days after the issuance of the public notice; ~~and.~~
 - (3) If significant interest is shown in a public meeting, promptly fixing and giving public notice, at a minimum, in a newspaper having general circulation in the county in which the facility is located and over a local radio station, of a date for a public meeting which ~~must~~ shall be held in the county in which the facility is located, not fewer than thirty days after public notice of the public meeting. At the public meeting, any person may submit written or oral comments relevant to the proposed modified permit; ~~and.~~
 - (4) Within sixty days after the public meeting or close of the public comment period, by issuing the modified permit upon such terms and conditions as ~~he~~ the director finds are reasonable to ensure that the operation, maintenance, closure, and post-closure care of the hazardous waste facility are conducted in accordance with Chapter 3734. of the Revised Code, the hazardous waste rules, and such additional terms and conditions as ~~he~~ the director determines are necessary to protect human health and the environment. In approving such a modification, the director ~~must~~ shall consider all comments received during the public comment period required in paragraph (J)(2) of this rule ~~relating~~ regarding the modification, written materials submitted at the public

meeting ~~relating to~~regarding the modification, and any other documents ~~relating to~~regarding the director's decision, and ~~must~~shall respond in writing to all significant comments. The approval by the director of the modification is a final action that is appealable under Chapter 3745. of the Revised Code. The administrative record for appeal of the modification ~~must~~shall include the comments, materials, and documents described in this paragraph.

- (K) Permit modification list. The director ~~must~~shall maintain a list of all approved permit modifications and ~~must~~shall publish a notice once a year in a newspaper having general circulation throughout the state of Ohio that an updated list is available for review.
- (L) Combustion facility changes to meet 40 CFR Part 63 maximum achievable control technology (MACT) standards. The following procedures apply to hazardous waste combustion facility permit modifications requested under the appendix to this rule.
- (1) Facility owners or operators ~~must~~shall be in compliance with the "Notification of Intent to Comply (NIC)" requirements of 40 CFR 63.1210 that were in effect prior to October 11, 2000, (see 40 CFR 63.1200 to 40 CFR 63.1499 revised as of July 1, 2000) in order to request a permit modification under this rule for the purpose of technology changes needed to meet the standards under 40 CFR 63.1203, 40 CFR 63.1204, and 40 CFR 63.1205.
 - (2) Facility owners or operators ~~must~~shall comply with the NIC requirements of 40 CFR 63.1210(b) and 40 CFR 63.1212(a) before a permit modification may be requested under this rule for the purpose of technology changes needed to meet the standards in 40 CFR 63.1215, 40 CFR 63.1216, 40 CFR 63.1217, 40 CFR 63.1218, 40 CFR 63.1219, 40 CFR 63.1220, and 40 CFR 63.1221.
 - (3) If the director does not approve or deny the request within ninety days after ~~receiving~~the director receives it, the request will be deemed approved. The director may, at his discretion, extend this ninety day deadline one time for up to thirty days by notifying the facility owner or operator.
- (M) Waiver of hazardous waste permit conditions in support of transition to the 40 CFR Part 63 MACT standards.
- (1) The owner or operator may request to have specific hazardous waste operating and emission limits waived by submitting a "Class 1" permit modification request under the appendix to this rule. The owner or operator ~~must~~shall do all of the following:

- (a) Identify the specific hazardous waste permit operating and emission limits which is the subject of the waiver request;~~;~~
 - (b) Provide an explanation of why the changes are necessary in order to minimize or eliminate conflicts between the hazardous waste permit and MACT compliance;~~and~~.
 - (c) Discuss how the revised provisions will be sufficiently protective.
 - (d) The director will approve or deny the request within thirty days after receipt of the request. The director may, ~~in~~ at his discretion, extend this thirty day deadline one time for up to thirty days by notifying the facility owner or operator.
- (2) To request this modification in conjunction with MACT performance testing where permit limits may only be waived during actual test events and pretesting, as described in 40 CFR 63.1207(h)(2)(i) and 40 CFR 63.1207(h)(2)(ii), for an aggregate time not to exceed seven hundred twenty hours of operation (renewable at the discretion of the director) the owner or operator ~~must~~ shall do all of the following:
- (a) Submit the modification request to the director at the same time the test plans are submitted to the director;~~and~~.
 - (b) The director may elect to approve or deny the request contingent upon approval of the test plans.

(N) Reserved.

[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:

Five Year Review (FYR) Dates: 07/01/2015

Certification

Date

Promulgated Under: 119.03
Statutory Authority: 3734.05, 3734.12
Rule Amplifies: 3734.05, 3734.12
Prior Effective Dates: 02/15/1985 (Emer.), 05/02/1985, 02/23/1989,
12/30/1989, 04/01/1990, 06/15/1992, 07/14/1997,
10/20/1998, 12/07/2000, 07/27/2001, 03/13/2002,
12/07/2004, 02/16/2009, 09/05/2010, 03/17/2012

RSFA Attachment A

Rule 3745-50-52 is amended as follows:		
Location	Change	Reason
(C)	add text "A change in the owner or operator of a facility:"	a
(C)(1)	remove "A change in the owner or operator of a facility that" and add "That"	a
	remove "must" and add "shall"	b
(C)(2)	remove "A change in the owner or operator of a facility that" and add "That"	a
	remove "must" and add "shall"	b
(C)(2)(a)(i)	remove "must" and add "shall"	b
	add "both of the following" before the colon	c
(C)(2)(a)(i)(a)	remove the ending ", and" and add a period	d, e
(C)(2)(a)(i)(b)	add "all of the following" before the colon	c
(C)(2)(a)(i)(b)(i)	remove the ending ", and" and add a period	d, e
(C)(2)(a)(i)(b)(ii)	remove the ending ", and" and add a period	d, e
(D)	after "The" add "current owner or operator and the prospective" before "new owner"	f
	[4 times] remove "must" and add "shall"	b
	remove "his" and add "the former owner's or operator's"	g *

- a This amendment is designed to re-locate text to eliminate the occurrence of a paragraph designation that contains no text.
- b The change of "must" to "shall" is an LSC requirement.
- c This amendment adds specificity to the text.
- d Punctuation correction.
- e Unnecessary text is removed.

RSFA Attachment A

Rule **3745-50-52** is amended as follows:

Location	Change	Reason
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- f Language is added to clarify the intent of the requirement.
- g Word choice correction.
- * This amendment was changed in response to a comment on the Interested Parties draft rule.

This rule is submitted for 5-year review upon proposal. A new review date will be assigned.

3745-50-52

Transfer of permits.

(A) As used in this rule, "owner" means a person who owns a majority or controlling interest in the facility, "operator" means a person who is responsible for the overall operation of a facility, and off-site facility has the same meaning as in section 3734.41 of the Revised Code.

(B) A hazardous waste facility installation and operation permit may be transferred by the permittee to a new owner or operator only if the permit has been modified, under paragraphs (C) to (C)(2)(b) of this rule, to identify the new permittee and incorporate such other requirements as may be necessary under applicable law.

(C) A change in the owner or operator of a facility:

(1) ~~A change in the owner or operator of a facility that~~ That is not an off-site facility ~~must~~ shall be processed as a "Class 1" modification requiring prior written approval of the director in accordance with rule 3745-50-51 of the Administrative Code.

(2) ~~A change in the owner or operator of a facility that~~ That is an off-site facility ~~must~~ shall be processed as a "Class 3" modification in accordance with rule 3745-50-51 of the Administrative Code.

(a) Given the potential for harm to the public health and safety and the environment that could result from irresponsible operation of an off-site facility, for transfer of a permit to a new owner or operator of an off-site facility:

(i) The director ~~must~~ shall determine whether both of the following:

(a) The new owner or operator has been engaged in any prior activity involving the transportation, treatment, storage, or disposal of hazardous waste, ~~and~~.

(b) The new owner or operator has a history of compliance with all of the following:

(i) Chapters 3734., 3704., and 6111. of the Revised Code and all rules and standards adopted thereunder, ~~and~~.

(ii) The Resource Conservation and Recovery Act (RCRA), and all regulations adopted thereunder, ~~and~~.

(iii) Similar laws and rules of another state if the new owner or operator owns or operates a facility in that state.

(ii) If the director determines that the new owner or operator demonstrates sufficient reliability, expertise, and competency to operate a hazardous waste facility in compliance with Chapters 3734., 3704., and 6111. of the Revised Code, all rules and standards adopted thereunder, and terms and conditions of a hazardous waste facility installation and operation permit, then the permit may be transferred to the new owner or operator, provided that all applicable provisions of rule 3745-50-51 of the Administrative Code have been satisfied.

[Comment: If applicable, the owner or operator also may have to comply with section 3734.42 of the Revised Code.]

(b) Reserved.

(D) The current owner or operator and the prospective new owner or operator ~~must~~shall submit a permit modification application to the director no later than ninety days prior to the scheduled change in owner or operator. A written agreement containing a specific date for transfer of permit responsibility between the current and new permittees ~~must~~shall also be submitted to the director. When a change in the owner or operator of a facility occurs, the former owner or operator ~~must~~shall comply with the applicable requirements of rules 3745-55-40 to 3745-55-51 of the Administrative Code until the new owner or operator has demonstrated compliance with those rules. The new owner or operator ~~must~~shall demonstrate compliance with rules 3745-55-40 to 3745-55-51 of the Administrative Code within one hundred eighty days after the date of the change in the owner or operator of the facility. Upon demonstration of compliance with rules 3745-55-40 to 3745-55-51 of the Administrative Code to the director by the new owner or operator, the director will notify the former owner or operator that ~~his~~the former owner's or operator's compliance with rules 3745-55-40 to 3745-55-51 of the Administrative Code is no longer required, as of the date of demonstration of compliance.

Effective:

Five Year Review (FYR) Dates: 07/01/2015

Certification

Date

Promulgated Under: 119.03
Statutory Authority: 3734.05 (I), (J), (K), 3734.12
Rule Amplifies: 3734.05, 3734.12
Prior Effective Dates: 03/04/1985, 07/14/1997, 03/13/2002, 05/13/2007,
03/17/2012

RSFA Attachment A

Rule 3745-50-57 is amended as follows:		
Location	Change	Reason
(A)	after "safety" add a comma	a
	add "to either of the following" before the colon	b
(A)(1)	remove "To a" and add "A"	c
	remove the ending "; or" and add a period	a, d
(A)(2)	remove "To a" and add "A"	c
(B)	add "shall provide all of the following" before the colon	b
(B)(1)	remove "it must" and add "the emergency permit shall"	e, f
	remove the ending semicolon and add a period	a
(B)(2)	remove "Must" and add "Shall"	e
	remove the ending semicolon and add a period	a
(B)(3)	remove "Must" and add "Shall"	e
	-remove "their" and add "the" -after "disposal" remove the semicolon and add "of the hazardous wastes."	a, f
(B)(4)	remove the ending semicolon and add a period	a
(B)(5)	-remove "its" and add "the" -after "duration" add "of the emergency permit"	f
	remove the ending "; and" and add a period	a, d
(B)(6)	remove "Must" and add "Shall"	e
	remove "including" and add "that includes all of the following" before the colon	b, f
(B)(6)(a)	remove the ending semicolon and add a period	a
(B)(6)(b)	remove the ending semicolon and add a period	a
(B)(6)(c)	remove the ending semicolon and add a period	a
(B)(6)(d)	remove "it;" and add "the action."	a, f
(B)(6)(e)	remove the ending "; and" and add a period	a, d
(B)(7)	remove "Must" and add "Shall"	e

RSFA Attachment A

Rule **3745-50-57** is amended as follows:

Location	Change	Reason
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- a Punctuation correction.
- b This amendment adds specificity to the provision.
- c Sentence structure correction.
- d Unnecessary text is removed.
- e The change of “must” to “shall” is an LSC requirement.
- f Word choice correction.

This rule is submitted for 5-year review upon proposal. A new review date will be assigned.

3745-50-57

Emergency permits.

(A) In the event the director finds an imminent and substantial danger to public health, safety, or the environment, the director may issue a temporary emergency permit to either of the following:

- (1) ~~To a~~A non-permitted facility to allow treatment, storage, or disposal of a hazardous waste; ~~or,~~
- (2) ~~To a~~A permitted facility to allow treatment, storage, or disposal of a hazardous waste not covered by an effective permit.

(B) This emergency permit shall provide all of the following:

- (1) May be oral or written. If oral, ~~it must~~the emergency permit shall be followed in five days by a written emergency permit;~~,~~
- (2) ~~Must~~Shall not exceed ninety days in duration and is not renewable;~~,~~
- (3) ~~Must~~Shall clearly specify the hazardous wastes to be received, and the manner and location of ~~their~~the treatment, storage, or disposal; of the hazardous wastes.
- (4) May be revoked by the director at any time without process if the director determines that revocation is appropriate to protect public health, safety, or the environment;~~,~~
- (5) May be modified by the director during ~~its~~the duration of the emergency permit if the director determines that such modification is necessary to protect public health, safety, or the environment; ~~and,~~
- (6) ~~Must~~Shall be accompanied by a public notice ~~including~~that includes all of the following:
 - (a) Name and telephone number of a contact person at Ohio EPA;~~,~~
 - (b) Name and location of the permitted facility;~~,~~
 - (c) A brief description of the wastes involved;~~,~~
 - (d) A brief description of the action authorized and reasons for authorizing ~~it;~~the action.

(e) Duration of the emergency permit; ~~and,~~

- (7) ~~Must~~Shall incorporate, to the extent possible and not inconsistent with the emergency situation, all applicable requirements of rules 3745-50-40 to 3745-50-235 and Chapters 3745-54 to 3745-57, 3745-205, and 3745-266 of the Administrative Code.

Effective:

Five Year Review (FYR) Dates: 07/01/2015

Certification

Date

Promulgated Under: 119.03
Statutory Authority: 3734.02
Rule Amplifies: 3734.02
Prior Effective Dates: 04/15/1981, 03/04/1985, 10/20/1998, 12/07/2000,
03/13/2002, 12/07/2004, 02/16/2009

RSFA Attachment A

Rule 3745-50-62 is amended as follows:		
Location	Change	Reason
intro, 1 st sentence	remove “the requirements of”	a
	remove “do” and add “does”	b
(A)	remove “must” and add “shall”	c
(A)(1)	remove “must” and add “shall”	c
	remove “the performance standards of”	a
(A)(2)	remove “must” and add “shall”	c
	remove “meet the performance standards of” and add “comply with”	a, d
(B)	remove “the performance standards of”	a
	remove “must” and add “shall”	c
(B)(1)	remove “must” and add “shall”	c
(B)(2)	remove “must” and add “shall”	c
	after “include” add “all of”	e
(B)(2)(a)(iii)	[2 times] remove “must” and add “shall”	c
(B)(2)(b)(iv)	remove “type/feed” and add “type or feed”	d
(B)(2)(b)(vi)	remove “system(s)” and add “systems”	d
(B)(2)(d)	remove “date(s)” and add “dates”	d
(B)(4)	remove “must” and add “shall”	c
	-remove “their” and add “the” -after “waste feed” add “of the constituents identified in the waste analysis” [the new text is before the existing comma]	d
(B)(5)	add “all of the following” before the colon	e
(B)(5)(a)	remove “the incinerator performance standard required by”	a
	remove “met;” and add “complied with.”	d, f
(B)(5)(b)	remove the ending semicolon and add a period	f
(B)(5)(c)	remove the ending “; and” and add a period	a, f

RSFA Attachment A

Rule 3745-50-62 is amended as follows:		
Location	Change	Reason
(B)(6)	remove “must” and add “shall”	c
	[2 times] remove “set forth” and add “provided”	d
(B)(6)(a)	remove “must” and add “shall”	c
(B)(6)(b)	remove “must” and add “shall”	c
	add “all of the following” before the colon	e
(B)(6)(b)(i)	remove the ending semicolon and add a period	f
(B)(6)(b)(ii)	remove the ending semicolon and add a period	f
(B)(6)(b)(iii)	remove the ending “; and” and add a period	a, f
(B)(7)	remove “must” and add “shall”	c
	after “make” add “all of”	e
(B)(7)(j)	remove “the performance standards in”	a
	remove “meet that performance standard” and add “comply with rule 3745-57-43 of the Administrative Code”	a, d, e
(B)(8)	[3 times] remove “must” and add “shall”	c
	remove “of” and add “after”	d
(B)(9)	remove “must” and add “shall”	c
(B)(10)	remove “must” and add “shall”	c
(B)(11)	remove “must” and add “shall”	c
(C)	remove “meet the requirements of” and add “comply with”	d
(C)(1)	remove “must” and add “shall”	c
	remove “the performance standards of”	a
(C)(2)	remove “meet the performance standards of” and add “comply with”	a, d

RSFA Attachment A

Rule 3745-50-62 is amended as follows:		
Location	Change	Reason
(D)	remove “the performance standards of”	a
	[7 times] remove “must” and add “shall”	c
	-remove “his” and add “the director’s” -remove “agency” and add “Ohio EPA”	d

- a Unnecessary language is removed.
- b Grammar correction.
- c The change from “must” to “shall” is an LSC requirement.
- d Word choice correction.
- e This amendment adds specificity to the provision.
- f Punctuation correction.

This rule is submitted for 5-year review upon proposal. A new review date will be assigned.

3745-50-62

Trial burn.

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

- (A) For the purposes of determining operational readiness following completion of physical construction, the permit for a new hazardous waste incinerator ~~must~~shall contain conditions including but not limited to allowable waste feeds and operating conditions. These permit conditions will be effective for the minimum time required to bring the incinerator to a point of operational readiness to conduct a trial burn, not to exceed seven hundred twenty hours operating time for treatment of hazardous waste. This operational period may be extended once, for up to seven hundred twenty additional hours, at the request of the applicant when good cause is shown. The permit may be modified to reflect the extension according to rule 3745-50-51 of the Administrative Code.
- (1) Applicants ~~must~~shall submit a statement, with "Part B" of the permit application, which suggests the conditions necessary to operate in compliance with ~~the performance standards of~~ rule 3745-57-43 of the Administrative Code during this period. This statement should include, at a minimum, restrictions on waste constituents, waste feed rates, and the operating parameters identified in rule 3745-57-45 of the Administrative Code.
 - (2) The director will review this statement and any other relevant information submitted with "Part B" of the permit application. The permit ~~must~~shall specify requirements for this period sufficient to ~~meet the performance standards of~~comply with rule 3745-57-43 of the Administrative Code.

(B) For the purposes of determining feasibility of compliance with ~~the performance standards of~~ rule 3745-57-43 of the Administrative Code and of determining adequate operating conditions under rule 3745-57-45 of the Administrative Code, the permit for a new hazardous waste incinerator ~~must~~shall contain conditions to be effective during the trial burn.

(1) Applicants ~~must~~shall propose a trial burn plan, prepared under paragraph (B)(2) of this rule with "Part B" of the permit application.

(2) The trial burn plan ~~must~~shall include all of the following information:

(a) An analysis of each waste or mixture of wastes to be burned which includes:

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

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

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

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

(b) A detailed engineering description of the incinerator for which the permit is sought, including:

(i) Manufacturer's name and model number of incinerator (if available).

(ii) Type of incinerator.

- (iii) Linear dimensions of the incinerator unit including the cross-sectional area of combustion chamber.
 - (iv) Description of the auxiliary fuel system (~~type/feed~~type or feed).
 - (v) Capacity of prime mover.
 - (vi) Description of automatic waste feed cutoff ~~system(s)~~systems.
 - (vii) Stack gas monitoring and pollution cutoff equipment.
 - (viii) Nozzle and burner design.
 - (ix) Construction materials.
 - (x) Location and description of temperature, pressure, and flow indicating and control devices.
- (c) A detailed description of sampling and monitoring procedures, including sampling and monitoring locations in the system, the equipment to be used, sampling and monitoring frequency, and planned analytical procedures for sample analysis.
- (d) A detailed test schedule for each waste for which the trial burn is planned including ~~date(s)~~dates, duration, quantity of waste to be burned, and other factors relevant to the decision under paragraph (B)(5) of this rule.
- (e) A detailed test protocol, including for each waste identified, the ranges of temperature, waste feed rate, combustion gas velocity, use of auxiliary fuel, and any other relevant parameters that will be varied to affect the destruction and removal efficiency of the incinerator.
- (f) A description of, and planned operating conditions for, any emission control equipment which will be used.
- (g) Procedures for rapidly stopping waste feed, shutting down the incinerator, and controlling emissions in the event of an equipment malfunction.

- (h) Such other information as the director reasonably finds necessary to make a preliminary determination whether to approve the trial burn plan in light of the purposes of paragraphs (B) to (B)(11) of this rule and the criteria in paragraph (B)(5) of this rule.
- (3) The director, in reviewing the trial burn plan, will evaluate the sufficiency of the information provided and may require the applicant to supplement this information, if necessary, to achieve the purposes of paragraphs (B) to (B)(11) of this rule.
- (4) Based on the waste analysis data in the trial burn plan, the permit will specify as trial principal organic hazardous constituents (POHCs), those constituents for which destruction and removal efficiencies ~~must~~shall be calculated during the trial burn. These trial POHCs will be specified in the permit based upon an estimate of the difficulty of incineration of the constituents identified in the waste analysis, ~~their~~the concentration or mass in the waste feed of the constituents identified in the waste analysis, and, for wastes listed in rules 3745-51-30 to 3745-51-35 of the Administrative Code, the hazardous waste organic constituent or constituents identified in the appendix to rule 3745-51-30 of the Administrative Code as the basis of listing.
- (5) The trial burn plan will be approved if it is found that all of the following:
- (a) The trial burn is likely to determine whether ~~the incinerator performance standard required by~~ rule 3745-57-43 of the Administrative Code can be ~~met~~complied with.
- (b) The trial burn itself will not present an imminent hazard to human health or the environment~~;~~.
- (c) The trial burn will help to determine operating requirements to be specified under rule 3745-57-45 of the Administrative Code~~; and~~.
- (d) The information sought in paragraphs (B)(5)(a) and (B)(5)(b) of this rule cannot reasonably be developed through other means.
- (6) The director ~~must~~shall send a notice to all persons on the facility mailing list as ~~set forth~~provided in 40 CFR 124.10 (c)(1)(ix), and to the appropriate units of state and local government as ~~set forth~~provided in 40 CFR 124.10 (c)(1)(x), announcing the scheduled commencement and completion dates for the trial burn. The applicant may not commence the trial burn until after the director has issued such notice.

- (a) This notice ~~must~~shall be mailed within a reasonable time period before the scheduled trial burn. An additional notice is not required if the trial burn is delayed due to circumstances beyond the control of the facility or Ohio EPA.
- (b) This notice ~~must~~shall contain all of the following:
 - (i) The name and telephone number of the applicant's contact person~~;~~;
 - (ii) The name and telephone number of the Ohio EPA contact office~~;~~;
 - (iii) The location where the approved trial burn plan and any supporting documents can be reviewed and copied~~;~~;~~and~~.
 - (iv) An expected time period for commencement and completion of the trial burn.
- (7) During each approved trial burn (or as soon after the burn as is practicable), the applicant ~~must~~shall make all of the following determinations:
 - (a) A quantitative analysis of the trial POHCs in the waste feed to the incinerator.
 - (b) A quantitative analysis of the exhaust gas for the concentration and mass emissions of the trial POHCs, oxygen and hydrogen chloride.
 - (c) A quantitative analysis of the scrubber water (if any), ash residues, and other residues, for the purpose of estimating the fate of the trial POHCs.
 - (d) A computation of destruction and removal efficiency (DRE), in accordance with the DRE formula specified in paragraph (A) of rule 3745-57-43 of the Administrative Code.
 - (e) If the hydrogen chloride emission rate exceeds 1.8 kilograms of hydrogen chloride per hour (four pounds per hour), a computation of hydrogen chloride removal efficiency in accordance with paragraph (B) of rule 3745-57-43 of the Administrative Code.
 - (f) A computation of particulate emissions, in accordance with paragraph (C) of rule 3745-57-43 of the Administrative Code.

- (g) An identification of sources of fugitive emissions and their means of control.
 - (h) A measurement of average, maximum, and minimum temperatures and combustion gas velocity.
 - (i) A continuous measurement of carbon monoxide in the exhaust gas.
 - (j) Such other information as the director may specify as necessary to ensure that the trial burn will determine compliance with ~~the performance standards in~~ rule 3745-57-43 of the Administrative Code and to establish the operating conditions required by rule 3745-57-45 of the Administrative Code as necessary to ~~meet that performance standard~~ comply with rule 3745-57-43 of the Administrative Code.
- (8) The applicant ~~must~~shall submit to the director a certification that the trial burn has been carried out in accordance with the approved trial burn plan, and ~~must~~shall submit the results of all the determinations required in paragraph (B)(7) of this rule. These submittals ~~must~~shall be made within ninety days ~~of~~after completion of the trial burn, or later if approved.
- (9) All data collection during any trial burn ~~must~~shall be submitted to the director following the completion of the trial burn.
- (10) All submittals required by paragraphs (B) to (B)(11) of this rule ~~must~~shall be certified on behalf of the applicant by the signature of a person authorized to sign a permit application or a report under rule 3745-50-42 of the Administrative Code.
- (11) Based on the results of the trial burn, the operating requirements ~~must~~shall be set in the final permit according to rule 3745-57-45 of the Administrative Code.
- (C) For the purposes of allowing operation of a new hazardous waste incinerator following completion of the trial burn and prior to final modification of the permit conditions to reflect the trial burn results, the permit may contain conditions, including but not limited to allowable wastefeeds and operating conditions sufficient to ~~meet the requirements of~~ comply with rule 3745-57-45 of the Administrative Code, in the permit to a new hazardous waste incinerator. These permit conditions will be effective for the minimum time required to complete sample analysis, data computation and submittal of the trial burn results by the applicant, and modification of the facility permit.

- (1) Applicants ~~must~~shall submit a statement with "Part B" of the permit application, which identifies the conditions necessary to operate in compliance with ~~the performance standards of~~ rule 3745-57-43 of the Administrative Code during this period. This statement should include, at a minimum, restrictions on waste constituents, waste feed rates, and the operating parameters in rule 3745-57-45 of the Administrative Code.
 - (2) The director will review this statement and any other relevant information submitted with "Part B" of the permit application and recommend those requirements for this period most likely to ~~meet the performance standards of~~comply with rule 3745-57-43 of the Administrative Code based on engineering judgment.
- (D) For the purposes of determining feasibility of compliance with ~~the performance standards of~~ rule 3745-57-43 of the Administrative Code and of determining adequate operating conditions under rule 3745-57-45 of the Administrative Code, the applicant for a permit for an existing hazardous waste incinerator ~~must~~shall prepare and submit a trial burn plan and perform a trial burn in accordance with paragraph (C)(7)(b) of rule 3745-50-44 of the Administrative Code and paragraphs (B)(2) to (B)(5) and (B)(7) to (B)(10) of this rule or, instead, submit other information as specified in paragraph (C)(7)(c) of rule 3745-50-44 of the Administrative Code. The director ~~must~~shall announce ~~his~~the director's intention to approve the trial burn plan in accordance with the timing and distribution requirements of paragraph (B)(6) of this rule. The contents of the notice ~~must~~shall include: the name and telephone number of a contact person at the facility; the name and telephone number of a contact office at Ohio EPA; the location where the trial burn plan and any supporting documents can be reviewed and copied; and a schedule of the activities that are required prior to permit issuance, including the anticipated time schedule for ~~agency~~Ohio EPA approval of the plan and the time period during which the trial burn would be conducted. Applicants submitting information under paragraph (C)(7)(a) of rule 3745-50-44 are exempt from compliance with rules 3745-57-43 and 3745-57-45 of the Administrative Code, and therefore, are exempt from the requirement to conduct a trial burn. Applicants who submit trial burn plans and receive approval before submittal of a permit application ~~must~~shall complete the trial burn and submit the results, specified in paragraph (B)(7) of this rule, with "Part B" of the permit application. If completion of this process conflicts with the date set for submittal of the "Part B" application, the applicant ~~must~~shall contact the director to establish a later date for submittal of the "Part B" application or the trial burn results. Trial burn results ~~must~~shall be submitted prior to issuance of the permit. When the applicant submits a trial burn plan with "Part B" of the permit application, the director will specify a time period prior to permit issuance in which the trial burn ~~must~~shall be conducted and the results submitted.

[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:

Five Year Review (FYR) Dates: 07/01/2015

Certification

Date

Promulgated Under: 119.03
Statutory Authority: 3734.12
Rule Amplifies: 3734.12
Prior Effective Dates: 08/26/1983 (Emer.), 11/29/1983, 03/04/1985,
07/01/1985 (Emer.), 08/29/1985, 04/01/1990,
02/11/1992, 02/14/1995, 09/02/1997, 03/13/2002,
12/07/2004, 02/16/2009, 09/05/2010

RSFA Attachment A

Rule 3745-50-66 is amended as follows:		
Location	Change	Reason
before intro	remove the punctuation in the rule's 1 st line	**
intro	in 1 st sentence, remove "the effective date of this amendment" and add "February 16, 2009"	a, b
	at end of 1 st sentence -after "subpart EEE]," remove "the requirements of"	c
	-after "this rule" remove "do" and add "does"	d
	at beginning of 2 nd sentence -remove "The requirements of this" and add "This"	c, e
	-after "rule" remove "do" and add "does"	a
	-after "3745-266-102 of the Administrative Code if" remove "you elect" and add "the owner or operator elects" -after "malfunction events; or if" remove "you are" and add "the facility is"	f
	after "area source and" remove "elect" and add "the owner or operator elects"	d
(B)	remove "must" and add "shall"	g
(B)(1)	remove "must" and add "shall"	g
(B)(1)(a)	remove "must" and add "shall"	g
(B)(2)	[2 times] remove "must" and add "shall"	g
(B)(3)(b)	remove "must" and add "shall"	g
(B)(4)	[2 times] remove "must" and add "shall"	g
(C)	[2 times] remove "must" and add "shall"	g
(C)(1)	add "both" before the colon	b
(C)(1)(a)	remove "chlorine/chloride" and add "chlorine or chloride"	e *
	remove the ending semicolon and add a period	h
(C)(1)(b)	remove the ending semicolon and add a period	h
(C)(2)	add "all of the following" before the colon	b
(C)(2)(a)	[2 times] remove "must" and add "shall"	g
(C)(3)	add "all of the following" before the colon	b
(C)(3)(a)	remove the ending semicolon and add a period	h

RSFA Attachment A

Rule 3745-50-66 is amended as follows:		
Location	Change	Reason
(C)(3)(b)	remove the ending semicolon and add a period	h
(C)(3)(c)	remove the ending semicolon and add a period	h
(C)(3)(d)	remove the ending semicolon and add a period	h
(C)(3)(e)	remove the ending semicolon and add a period	h
(C)(3)(f)	remove “system(s);” and add “systems.”	e, h
(C)(3)(g)	remove the ending “; and” and add a period	c, h
(C)(5)	remove “date(s)” and add “dates”	e
(D)(1)	remove “must” and add “shall”	g
(D)(2)	remove “must” and add “shall”	g
	remove “he” and add “the director”	e
	add “all of the following” before the colon	b
(D)(2)(a)	remove the ending semicolon and add a period	h
(D)(2)(b)	remove the ending semicolon and add a period	h
(D)(2)(c)	remove the ending “; and” and add a period	c, h
(D)(3)	remove “must” and add “shall”	g
	[2 times] remove “set forth” and add “provided”	e
(D)(3)(a)	remove “must” and add “shall”	g
	remove “the permitting agency” and add “Ohio EPA”	e
(D)(3)(b)	remove “must” and add “shall”	g
	add “all of the following” before the colon	b
(D)(3)(b)(i)	remove the ending semicolon and add a period	h
(D)(3)(b)(ii)	remove “permitting agency” and add “Ohio EPA”	e
	remove the ending semicolon and add a period	h
(D)(3)(b)(iii)	remove the ending “; and” and add a period	c, h
(D)(4)	[3 times] remove “must” and add “shall”	g
	after “days” remove “of” and add “after”	e
(D)(5)	remove “must” and add “shall”	g
(D)(6)	remove “must” and add “shall”	g

RSFA Attachment A

Rule 3745-50-66 is amended as follows:		
Location	Change	Reason
(E)	remove “must” and add “shall”	g
	-remove “his” and add “the director’s” -remove “constituent(s)” and add “constituents”	e
(F)	remove “must” and add “shall”	g
	after “make” add “all of”	b
(F)(1)	remove “chlorine/chloride” and add “chlorine or chloride”	e *
	remove the ending semicolon and add a period	h
(F)(2)	add “, all of the following are required” before the colon	b
(F)(2)(a)	remove the ending semicolon and add a period	h
(F)(2)(b)	remove the ending “; and” and add a period	c, h
(F)(2)(c)	remove the ending semicolon and add a period	h
(F)(3)	remove the ending semicolon and add a period	h
(F)(4)	remove “chloride/chlorine” and add “chloride or chlorine”	e, h *
	remove the ending semicolon and add a period	h
(F)(5)	remove “chloride/chlorine” and add “chloride or chlorine”	e, h *
	remove “chlorine/chloride;” and add “chlorine or chloride.”	e, h
(F)(6)	remove the ending semicolon and add a period	h
(F)(7)	remove the ending “; and” and add a period	c, h
(G), in 2 nd sentence	-after “Code” remove “must” -after “either” add “shall”	d, g
	-remove “the requirements of”	c
	-after “this rule or” add “shall”	d
(G), in 3 rd sentence	remove “must” and add “shall”	g
	remove “his” and add “the director’s”	e
(G), in 4 th sentence	after the 2 nd “and telephone number of” remove “a” and add “the Ohio EPA”	e
	after “contact office” remove “at the permitting agency” before the existing semicolon	c
	after “anticipated time schedule for” remove “agency” and add “Ohio EPA”	e

RSFA Attachment A

Rule 3745-50-66 is amended as follows:		
Location	Change	Reason
(G), in 5 th -7 th sentences	[3 times] remove “must” and add “shall”	d
ending [Comment]	remove the indented comment and add the same comment not indented	i

- a Text correction.
- b This amendment adds specificity to the provision.
- c Unnecessary text is removed.
- d Grammar correction.
- e Word choice correction.
- f Text is amended to remove “you” and add a subject that is more consistent with the text in the rest of the rule.
- g The change from “must” to “shall” is an LSC requirement.
- h Punctuation correction.
- i This amendment corrects the format/structure of the rule at this location. Punctuation correction. The closing bracket is properly located in the new comment.
- * This amendment is made, or changed, in response to a comment on the Interested Parties draft rule.
- ** This amendment is made because the Electronic Rule Filing software contains this errant punctuation (not in the currently effective rule), as discovered during proposal preparation.

This rule is submitted for 5-year review upon proposal. A new review date will be assigned.

3745-50-66

Permits for boilers and industrial furnaces burning hazardous waste.

7

When an owner or operator of a cement kiln, lightweight aggregate kiln, solid fuel boiler, liquid fuel boiler, or hydrochloric acid production furnace becomes subject to hazardous waste permit requirements after ~~the effective date of this amendment~~ February 16, 2009 or when an owner or operator of an existing cement kiln, lightweight aggregate kiln, solid fuel boiler, liquid fuel boiler, or hydrochloric acid production furnace demonstrates compliance with the air emission standards and limitations in 40 CFR Part 63 subpart EEE [i.e., by conducting a comprehensive performance test and submitting a notification of compliance under 40 CFR 63.1207(j) and 40 CFR 63.1210(d) documenting compliance with all applicable requirements of 40 CFR Part 63 subpart EEE], ~~the requirements of this rule do~~ does not apply. ~~The requirements of this~~ This rule do does apply, however, if the director determines that certain provisions are necessary to ensure compliance with paragraphs (E)(1) and (E)(2)(c) of rule 3745-266-102 of the Administrative Code if ~~you elect~~ the owner or operator elects to comply with paragraph (A)(1)(a) of rule 3745-50-235 of the Administrative Code to minimize emissions of toxic compounds from startup, shutdown, and malfunction events; or if ~~you are~~ the facility is an area source and ~~elect~~ the owner or operator elects to comply with the rules 3745-266-105, 3745-266-106, and 3745-266-107 of the Administrative Code standards and associated requirements for particulate matter, hydrogen chloride and chlorine gas, and non-mercury metals; or if the director determines that certain provisions apply, on a case-by-case basis, for purposes of information collection in accordance with paragraphs (A)(5), (D)(6), (H), and (I) to (I)(2) of rule 3745-50-40 of the Administrative Code and paragraphs (D)(3)(b) and (D)(4)(a)(v) of rule 3745-50-51 of the Administrative Code.

(A) General. Owners and operators of new boilers and industrial furnaces (those not operating under the standards of rule 3745-266-103 of the Administrative Code) are subject to paragraphs (B) to (F) of this rule. Boilers and industrial furnaces operating under the standards of rule 3745-266-103 of the Administrative Code are subject to paragraph (G) of this rule.

(B) Permit operating periods for new boilers and industrial furnaces. A permit for a new boiler or industrial furnace ~~must~~ shall specify appropriate conditions for the following operating periods:

(1) Pretrial burn period. For the period beginning with initial introduction of hazardous waste and ending with initiation of the trial burn, and only for the minimum time required to bring the boiler or industrial furnace to a point of operational readiness to conduct a trial burn, not to exceed seven hundred twenty hours operating time when burning hazardous waste, the director ~~must~~ shall establish in the pretrial burn period of the permit conditions, including but not limited to, allowable hazardous waste feed rates and operating conditions. The director may extend the duration of this operational

period once, for up to seven hundred twenty additional hours, at the request of the applicant when good cause is shown. The permit may be modified to reflect the extension according to rule 3745-50-51 of the Administrative Code.

- (a) Applicants ~~must~~shall submit a statement, with "Part B" of the permit application, that suggests the conditions necessary to operate in compliance with the standards of rules 3745-266-104 to 3745-266-107 of the Administrative Code during this period. This statement should include, at a minimum, restrictions on the applicable operating requirements identified in paragraph (E) of rule 3745-266-102 of the Administrative Code.
 - (b) Ohio EPA will review this statement and any other relevant information submitted with "Part B" of the permit application and specify requirements for this period sufficient to meet the performance standards of rules 3745-266-104 to 3745-266-107 of the Administrative Code based on its engineering judgment.
- (2) Trial burn period. For the duration of the trial burn, the director ~~must~~shall establish conditions in the permit for the purposes of determining feasibility of compliance with the performance standards of rules 3745-266-104 to 3745-266-107 of the Administrative Code and determining adequate operating conditions under paragraph (E) of rule 3745-266-102 of the Administrative Code. Applicants ~~must~~shall propose a trial burn plan, prepared under paragraph (C) of this rule, to be submitted with "Part B" of the permit application.
- (3) Post-trial burn period.
- (a) For the period immediately following completion of the trial burn, and only for the minimum period sufficient to allow sample analysis, data computation, and submittal of the trial burn results by the applicant, and review of the trial burn results and modification of the facility permit by the director to reflect the trial burn results, Ohio EPA will establish the operating requirements most likely to ensure compliance with the performance standards of rules 3745-266-104 to 3745-266-107 of the Administrative Code based on its engineering judgment.

- (b) Applicants ~~must~~shall submit a statement, with "Part B" of the application, that identifies the conditions necessary to operate during this period in compliance with the performance standards of rules 3745-266-104 to 3745-266-107 of the Administrative Code. This statement should include, at a minimum, restrictions on the operating requirements provided by paragraph (E) of rule 3745-266-102 of the Administrative Code.
- (c) Ohio EPA will review this statement and any other relevant information submitted with "Part B" of the permit application and specify requirements for this period sufficient to meet the performance standards of rules 3745-266-104 to 3745-266-107 of the Administrative Code based on its engineering judgment.
- (4) Final permit period. For the final period of operation, the director will develop operating requirements in conformance with paragraph (E) of rule 3745-266-102 of the Administrative Code that reflect conditions in the trial burn plan and are likely to ensure compliance with the performance standards of rules 3745-266-104 to 3745-266-107 of the Administrative Code. Based on the trial burn results, the director ~~must~~shall make any necessary modifications to the operating requirements to ensure compliance with the performance standards. The permit modification ~~must~~shall proceed according to rule 3745-50-51 of the Administrative Code.
- (C) Requirements for trial burn plans. The trial burn plan ~~must~~shall include the following information. The director, in reviewing the trial burn plan, ~~must~~shall evaluate the sufficiency of the information provided and may require the applicant to supplement this information, if necessary, to achieve the purposes of paragraphs (C) to (C)(9) of this rule:
- (1) An analysis of each feed stream, including hazardous waste, other fuels, and industrial furnace feed stocks, as fired, that includes both:
- (a) Heating value, levels of antimony, arsenic, barium, beryllium, cadmium, chromium, lead, mercury, silver, thallium, total ~~chlorine/chloride~~chlorine or chloride, and ash₂.
- (b) Viscosity or description of the physical form of the feed stream₂.
- (2) An analysis of each hazardous waste, as fired, including all of the following:

- (a) An identification of any hazardous organic constituents listed in the appendix to rule 3745-51-11 of the Administrative Code that are present in the feed stream, except that the applicant need not analyze for constituents listed in the appendix to rule 3745-51-11 of the Administrative Code that would reasonably not be expected to be found in the hazardous waste. The constituents excluded from analysis ~~must~~shall be identified and the basis for this exclusion explained. The waste analysis ~~must~~shall rely on appropriate analytical techniques.
 - (b) An approximate quantification of the hazardous constituents identified in the hazardous waste, within the precision produced by appropriate analytical methods.
 - (c) A description of blending procedures, if applicable, prior to firing the hazardous waste, including a detailed analysis of the hazardous waste prior to blending, an analysis of the material with which the hazardous waste is blended, and blending ratios.
- (3) A detailed engineering description of the boiler or industrial furnace, including all of the following:
- (a) Manufacturer's name and model number of the boiler or industrial furnace~~;~~;
 - (b) Type of boiler or industrial furnace~~;~~;
 - (c) Maximum design capacity in appropriate units~~;~~;
 - (d) Description of the feed system for the hazardous waste, and, as appropriate, other fuels and industrial furnace feedstocks~~;~~;
 - (e) Capacity of hazardous waste feed system~~;~~;
 - (f) Description of automatic hazardous waste feed cutoff ~~system(s);~~systems.
 - (g) Description of any air pollution control system~~; and~~;
 - (h) Description of stack gas monitoring and any pollution control monitoring systems.

- (4) A detailed description of sampling and monitoring procedures including sampling and monitoring locations in the system, the equipment to be used, sampling and monitoring frequency, and planned analytical procedures for sample analysis.
 - (5) A detailed test schedule for each hazardous waste for which the trial burn is planned, including ~~date(s)~~ dates, duration, quantity of hazardous waste to be burned, and other factors relevant to the director's decision under paragraph (B)(2) of this rule.
 - (6) A detailed test protocol, including, for each hazardous waste identified, the ranges of hazardous waste feed rate, and, as appropriate, the feed rates of other fuels and industrial furnace feedstocks, and any other relevant parameters that may affect the ability of the boiler or industrial furnace to meet the performance standards in rules 3745-266-104 to 3745-266-107 of the Administrative Code.
 - (7) A description of, and planned operating conditions for, any emission control equipment that will be used.
 - (8) Procedures for rapidly stopping the hazardous waste feed and controlling emissions in the event of an equipment malfunction.
 - (9) Such other information as the director reasonably finds necessary to determine whether to approve the trial burn plan in light of the purposes of paragraphs (C) to (C)(9) of this rule and the criteria in paragraph (B)(2) of this rule.
- (D) Trial burn procedures.
- (1) A trial burn ~~must~~ shall be conducted to demonstrate conformance with the standards of rules 3745-266-104 to 3745-266-107 of the Administrative Code under an approved trial burn plan.
 - (2) The director ~~must~~ shall approve a trial burn plan if ~~he~~ the director finds that all of the following:
 - (a) The trial burn is likely to determine whether the boiler or industrial furnace can meet the performance standards of rules 3745-266-104 to 3745-266-107 of the Administrative Code;

- (b) The trial burn itself will not present an imminent hazard to human health and the environment; ~~and~~.
 - (c) The trial burn will help the director to determine operating requirements to be specified under paragraph (E) of rule 3745-266-102 of the Administrative Code; ~~and~~.
 - (d) The information sought in the trial burn cannot reasonably be developed through other means.
- (3) The director ~~must~~shall send a notice to all persons on the facility mailing list as ~~set forth~~provided in 40 CFR 124.10(c)(1)(ix), and to the appropriate units of state and local government as ~~set forth~~provided in 40 CFR 124.10(c)(1)(x), announcing the scheduled commencement and completion dates for the trial burn. The applicant may not commence the trial burn until after the director has issued such notice.
- (a) This notice ~~must~~shall be mailed within a reasonable time period before the trial burn. An additional notice is not required if the trial burn is delayed due to circumstances beyond the control of the facility or ~~the permitting agency~~Ohio EPA.
 - (b) This notice ~~must~~shall contain all of the following:
 - (i) The name and telephone number of applicant's contact person; ~~and~~.
 - (ii) The name and telephone number of the ~~permitting agency~~Ohio EPA contact office; ~~and~~.
 - (iii) The location where the approved trial burn plan and any supporting documents can be reviewed and copied; ~~and~~.
 - (iv) An expected time period for commencement and completion of the trial burn.
- (4) The applicant ~~must~~shall submit to the director a certification that the trial burn has been carried out in accordance with the approved trial burn plan, and ~~must~~shall submit the results of all the determinations required in paragraph (C) of this rule. This submittal ~~must~~shall be made within ninety days ~~of~~after completion of the trial burn, or later if approved by the director.

- (5) All data collected during any trial burn ~~must~~shall be submitted to the director following completion of the trial burn.
- (6) All submittals required by paragraphs (D) to (D)(6) of this rule ~~must~~shall be certified on behalf of the applicant by the signature of a person authorized to sign a permit application or a report under rule 3745-50-42 of the Administrative Code.
- (E) Special procedures for destruction and removal efficiency (DRE) trial burns. When a DRE trial burn is required under paragraph (A) of rule 3745-266-104 of the Administrative Code, the director will specify (based on the hazardous waste analysis data and other information in the trial burn plan) as trial principal organic hazardous constituents (POHCs) those compounds for which destruction and removal efficiencies ~~must~~shall be calculated during the trial burn. These trial POHCs will be specified by the director based on information including ~~his~~the director's estimate of the difficulty of destroying the constituents identified in the hazardous waste analysis, their concentrations or mass in the hazardous waste feed, and, for hazardous waste containing or derived from wastes listed in rules 3745-51-30 to 3745-51-35 of the Administrative Code, the hazardous waste organic ~~constituent(s)~~constituents identified in the appendix to rule 3745-51-30 of the Administrative Code as the basis for listing.
- (F) Determinations based on trial burn. During each approved trial burn (or as soon after the burn as is practicable), the applicant ~~must~~shall make all of the following determinations:
- (1) A quantitative analysis of the levels of antimony, arsenic, barium, beryllium, cadmium, chromium, lead, mercury, thallium, silver, and ~~chlorine/chloride~~chlorine or chloride, in the feed streams (hazardous waste, other fuels, and industrial furnace feedstocks);~~;~~
 - (2) When a DRE trial burn is required under paragraph (A) of rule 3745-266-104 of the Administrative Code, all of the following are required:
 - (a) A quantitative analysis of the trial POHCs in the hazardous waste feed;~~;~~
 - (b) A quantitative analysis of the stack gas for the concentration and mass emissions of the trial POHCs;~~and~~.
 - (c) A computation of DRE, in accordance with the DRE formula specified in paragraph (A) of rule 3745-266-104 of the Administrative Code;~~;~~

- (3) When a trial burn for chlorinated dioxins and furans is required under paragraph (E) of rule 3745-266-104 of the Administrative Code, a quantitative analysis of the stack gas for the concentration and mass emission rate of the 2,3,7,8-chlorinated tetra- to octa- congeners of chlorinated dibenzo-p-dioxins and furans, and a computation showing conformance with the emission standard;
 - (4) When a trial burn for particulate matter, metals, or hydrogen ~~chloride/chlorine~~chloride or chlorine is required under rule 3745-266-105, or paragraph (C) or (D) of rule 3745-266-106, or paragraph (B)(2) or (C) of rule 3745-266-107 of the Administrative Code, a quantitative analysis of the stack gas for the concentrations and mass emissions of particulate matter, metals, or hydrogen chloride and chlorine, and computations showing conformance with the applicable emission performance standards in Chapter 3745-266 of the Administrative Code;
 - (5) When a trial burn for DRE, metals, or hydrogen ~~chloride/chlorine~~chloride or chlorine is required under paragraph (A) of rule 3745-266-104, paragraph (C) or (D) of rule 3745-266-106, or paragraph (B)(2) or (C) of rule 3745-266-107 of the Administrative Code, a quantitative analysis of the scrubber water (if any), ash residues, other residues, and products for the purpose of estimating the fate of the trial POHCs, metals, and ~~chlorine/chloride~~chlorine or chloride.
 - (6) An identification of sources of fugitive emissions and their means of control;
 - (7) A continuous measurement of carbon monoxide, oxygen, and where required, hydrocarbons, in the stack gas; ~~and~~.
 - (8) Such other information as the director may specify as necessary to ensure that the trial burn will determine compliance with the performance standards in rules 3745-266-104 to 3745-266-107 of the Administrative Code and to establish the operating conditions required by paragraph (E) of rule 3745-266-102 of the Administrative Code as necessary to meet those performance standards.
- (G) Permit by rule boilers and industrial furnaces. For the purpose of determining feasibility of compliance with the performance standards of rules 3745-266-104 to 3745-266-107 of the Administrative Code and of determining adequate operating conditions under rule 3745-266-103 of the Administrative Code, applicants owning or operating existing boilers or industrial furnaces operated under rule 3745-266-103 of the Administrative Code ~~must~~ either shall prepare and submit a trial burn plan and perform a trial burn in accordance with ~~the requirements of this~~

rule or shall submit other information as specified in paragraphs (C)(9)(a)(vi) to (C)(9)(a)(vi)(b) of rule 3745-50-44 of the Administrative Code. The director ~~must~~shall announce ~~his~~the director's intention to approve of the trial burn plan in accordance with the timing and distribution requirements of paragraph (D)(3) of this rule. The contents of the notice ~~must~~shall include: the name and telephone number of a contact person at the facility; the name and telephone number of ~~at the~~ the Ohio EPA contact office ~~at the permitting agency~~; the location where the trial burn plan and any supporting documents can be reviewed and copied; and a schedule of the activities that are required prior to permit issuance, including the anticipated time schedule for ~~agency~~Ohio EPA approval of the plan and the time periods during which the trial burn would be conducted. Applicants who submit a trial burn plan and receive approval before submittal of the "Part B" permit application ~~must~~shall complete the trial burn and submit the results specified in paragraph (F) of this rule with the "Part B" permit application. If completion of this process conflicts with the date set for submittal of the "Part B" application, the applicant ~~must~~shall contact the director to establish a later date for submittal of the "Part B" application or the trial burn results. If the applicant submits a trial burn plan with "Part B" of the permit application, the trial burn ~~must~~shall be conducted and the results submitted within a time period prior to permit issuance to be specified by the director.

~~[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:

Five Year Review (FYR) Dates: 07/01/2015

Certification

Date

Promulgated Under: 119.03
Statutory Authority: 3734.12
Rule Amplifies: 3734.12
Prior Effective Dates: 12/07/2004, 02/16/2009

RSFA Attachment A

Rule 3745-50-235 is amended as follows:		
Location	Change	Reason
title	after "liquid fuel boilers" add a comma	a
(A)(1)(b)(ii)(a)	[3 times] remove "You must" and add "The owner or operator shall"	b, c
	2 nd sentence: remove "of" and add "after"	d
(A)(1)(b)(ii)(b)(i)	remove the ending semicolon and add a period	a
(A)(1)(b)(ii)(b)(iii)	re-designate as (A)(1)(c) [no text changes]	e
(A)(1)(b)(ii)(b)(iii)(A)	re-designate as (A)(1)(c)(i)	e
(A)(1)(c)(i) [as re-designated]	remove "must" and add "shall"	c
(A)(1)(b)(ii)(b)(iii)(B)	re-designate as (A)(1)(c)(ii) [no text changes]	e
(A)(2)	remove "the standards of"	f
(A)(2)(a)	remove ' "RCRA option A". ' and add ' Resource Conservation and Recovery Act (RCRA) option "A." '	a, g
(A)(2)(a)(i)(b)	at the end after "plan" remove the period	a
(A)(2)(b)	-remove the quotation mark before "RCRA" -add a quotation mark before "B" -remove the quotation mark that is between "B" and the period -add a quotation mark after the period	a
(A)(2)(b)(i)(a)	after "conditions," add "provisions"	h
(A)(2)(b)(ii)(a)	[3 times] remove "You must" and add "The owner or operator shall"	b, c
	2 nd sentence: remove "of" and add "after"	d
(A)(2)(c)	-remove the quotation marks -add "Clean Air Act" -add parentheses around the existing acronym "CAA"	a, g
(A)(2)(c)(i)	remove "must" and add "shall"	c
(B)(1)	near the end, remove "the standards of"	f

RSFA Attachment A

Rule 3745-50-235 is amended as follows:		
Location	Change	Reason
(B)(1)(a)	remove the quotation marks around "RCRA"	a
(B)(1)(b)	remove the quotation marks around "CAA"	a
(C)	after "New units." remove "Hazardous" and add "Owners or operators of hazardous"	i
	remove "effective date of this rule must" and add "February 16, 2009 shall"	c, i
(C)(1)	remove "the requirements specified in"	f
	remove the ending "; or" and add a period	a, f

- a Punctuation correction.
- b This amendment is designed to remove the term "you" from the rule.
- c The change of "must" to "shall" is an LSC requirement.
- d Word choice correction.
- e This amendment corrects the format/structure of the rule at this location.
- f Unnecessary text is removed.
- g LSC requirement. Acronyms must be defined at their first use.
- h Grammar/sentence structure correction.
- i This amendment adds specificity to the provision.

This rule is submitted for 5-year review upon proposal. A new review date will be assigned.

3745-50-235

Options for incinerators, cement kilns, lightweight aggregate kilns, solid fuel boilers, liquid fuel boilers, and hydrochloric acid production furnaces to minimize emissions from startup, shutdown, and malfunction events.

(A) Facilities with existing permits

- (1) Modifications to permit conditions after documenting compliance with maximum achievable control technology (MACT). The owner or operator of a hazardous waste permitted incinerator, cement kiln, lightweight aggregate kiln, solid fuel boiler, liquid fuel boiler, or hydrochloric acid production furnace may request that the director address permit conditions that minimize emissions from startup, shutdown, and malfunction events under any of the following options when requesting removal of permit conditions that are no longer applicable according to paragraph (B) of rule 3745-57-40 of the Administrative Code and paragraph (B) of rule 3745-266-100 of the Administrative Code:

- (a) Retain relevant permit conditions. Under this option, the director will:

- (i) Retain permit conditions that address releases during startup, shutdown, and malfunction events, including releases from emergency safety vents, as these events are defined in the facility's startup, shutdown, and malfunction plan required under 40 CFR 63.1206(c)(2); and
- (ii) Limit applicability of those permit conditions only to when the facility is operating under its startup, shutdown, and malfunction plan.

- (b) Revise relevant permit conditions.

- (i) Under this option, the director will:

- (a) Identify a subset of relevant existing permit requirements, or develop alternative permit requirements, that ensure emissions of toxic compounds are minimized from startup, shutdown, and malfunction events, including releases from emergency safety vents, based on review of information including the source's startup, shutdown, and malfunction plan, design, and operating history.

- (b) Retain or add these permit requirements to the permit to apply

only when the facility is operating under its startup, shutdown, and malfunction plan.

(ii) Changes that may significantly increase emissions.

(a) ~~You must~~The owner or operator shall notify the director in writing of changes to the startup, shutdown, and malfunction plan or changes to the design of the source that may significantly increase emissions of toxic compounds from startup, shutdown, or malfunction events, including releases from emergency safety vents. ~~You must~~The owner or operator shall notify the director of such changes within five days ~~of~~after making such changes. ~~You must~~The owner or operator shall identify in the notification recommended revisions to permit conditions necessary as a result of the changes to ensure that emissions of toxic compounds are minimized during these events.

(b) The director may revise permit conditions as a result of these changes to ensure that emissions of toxic compounds are minimized during startup, shutdown, or malfunction events, including releases from emergency safety vents either:

(i) Upon permit renewal, or, if warranted;

(ii) By modifying the permit under rule 3745-50-51 of the Administrative Code.

~~(iii)~~(c) Remove permit conditions. Under this option:

~~(A)~~(i) The owner or operator ~~must~~shall document that the startup, shutdown, and malfunction plan required under 40 CFR 63.1206(c)(2) has been approved by the director under 40 CFR 63.1206(c)(2)(ii)(B); and

~~(B)~~(ii) The director will remove permit conditions that are no longer applicable according to paragraph (B) of rule 3745-57-40 of the Administrative Code and paragraph (B) of rule 3745-266-100 of the Administrative Code.

(2) Addressing permit conditions upon permit modification or renewal. The owner

or operator of an incinerator, cement kiln, lightweight aggregate kiln, solid fuel boiler, liquid fuel boiler, or hydrochloric acid production furnace that has conducted a comprehensive performance test and submitted to the director a "Notification of Compliance" documenting compliance with ~~the standards of~~ 40 CFR Part 63 subpart EEE, may request in the application to modify or renew the permit for the combustion unit that the director control emissions from startup, shutdown, and malfunction events under any of the following options:

(a) ~~"RCRA option A"~~ Resource Conservation and Recovery Act (RCRA) option "A."

(i) Under this option, the director will:

(a) Include, in the permit, conditions that ensure compliance with paragraphs (A) and (C) of rule 3745-57-45 of the Administrative Code or paragraphs (E)(1) and (E)(1)(c) of rule 3745-266-102 of the Administrative Code to minimize emissions of toxic compounds from startup, shutdown, and malfunction events, including releases from emergency safety vents; and

(b) Specify that these permit requirements apply only when the facility is operating under its startup, shutdown, and malfunction plan; or

(ii) Reserved.

(b) "RCRA option "B"."

(i) Under this option, the director will:

(a) Include, in the permit conditions, provisions that ensure emissions of toxic compounds are minimized from startup, shutdown, and malfunction events, including releases from emergency safety vents, based on review of information including the source's startup, shutdown, and malfunction plan, design, and operating history; and

- (b) Specify that these permit requirements apply only when the facility is operating under its startup, shutdown, and malfunction plan.
- (ii) Changes that may significantly increase emissions.
- (a) ~~You must~~The owner or operator shall notify the director in writing of changes to the startup, shutdown, and malfunction plan or changes to the design of the source that may significantly increase emissions of toxic compounds from startup, shutdown, or malfunction events, including releases from emergency safety vents. ~~You must~~The owner or operator shall notify the director of such changes within five days ~~or after~~ making such changes. ~~You must~~The owner or operator shall identify in the notification recommended revisions to permit conditions necessary as a result of the changes to ensure that emissions of toxic compounds are minimized during these events.
- (b) The director may revise permit conditions as a result of these changes to ensure that emissions of toxic compounds are minimized during startup, shutdown, or malfunction events, including releases from emergency safety vents either:
- (i) Upon permit renewal, or, if warranted;
- (ii) By modifying the permit under rule 3745-50-51 of the Administrative Code; or
- (c) "Clean Air Act (CAA)" option. Under this option:
- (i) The owner or operator ~~must~~shall document that the startup, shutdown, and malfunction plan required under 40 CFR 63.1206(c)(2) has been approved by the director under 40 CFR 63.1206(c)(2)(ii)(B); and
- (ii) The director will omit from the permit conditions that are not applicable under paragraph (B) of rule 3745-57-40 of the Administrative Code and paragraph (B) of rule 3745-266-100 of the Administrative Code.

(B) Facilities subject to interim standards.

- (1) Interim standards operations. In compliance with rule 3745-68-40 and paragraph (B) of rule 3745-266-100 of the Administrative Code, the owner or operator of an incinerator, cement kiln, lightweight aggregate kiln, solid fuel boiler, liquid fuel boiler, or hydrochloric acid production furnace that is operating under the interim standards requirements of Chapters 3745-65 to 3745-69 and 3745-256 or 3745-266 of the Administrative Code, may control emissions of toxic compounds during startup, shutdown, and malfunction events under either of the following options after conducting a comprehensive performance test and submitting to the director a "Notification of Compliance" documenting compliance with ~~the standards of~~ 40 CFR Part 63 subpart EEE.
 - (a) "RCRA" option. Under this option, the owner or operator continues to comply with the interim standards emission standards and operating requirements of Chapters 3745-65 to 3745-69 and 3745-256 or 3745-266 of the Administrative Code relevant to control of emissions from startup, shutdown, and malfunction events. Those standards and requirements apply only during startup, shutdown, and malfunction events; or
 - (b) "CAA" option. Under this option, the owner or operator is exempt from the interim standards of Chapters 3745-65 to 3745-69 and 3745-256 or 3745-266 of the Administrative Code relevant to control of emissions of toxic compounds during startup, shutdown, and malfunction events upon submittal of written notification and documentation to the director that the startup, shutdown, and malfunction plan required under 40 CFR 63.1206(c)(2) has been approved by the director under 40 CFR 63.1206(c)(2)(ii)(B).
- (2) Operations under a subsequent hazardous waste permit. When an owner or operator of an incinerator, cement kiln, lightweight aggregate kiln, solid fuel boiler, liquid fuel boiler, or hydrochloric acid production furnace that is operating under the interim standards of Chapters 3745-65 to 3745-69 and 3745-256 or 3745-266 of the Administrative Code submits a hazardous waste permit application, the owner or operator may request that the director control emissions from startup, shutdown, and malfunction events under any of the options provided by paragraph (A)(2)(a), (A)(2)(b), or (A)(2)(c) of this rule.

(C) New units. ~~Hazardous~~ Owners and operators of hazardous waste incinerator, cement kiln, lightweight aggregate kiln, solid fuel boiler, liquid fuel boiler, or hydrochloric acid production furnace units that become subject to hazardous waste permit requirements after ~~the effective date of this rule must~~ February 16, 2009 shall control emissions of toxic compounds during startup, shutdown, and malfunction events under either of the following options:

- (1) Comply with ~~the requirements specified in~~ 40 CFR 63.1206(c)(2); ~~or~~.
- (2) Request to include in the hazardous waste permit, conditions that ensure emissions of toxic compounds are minimized from startup, shutdown, and malfunction events, including releases from emergency safety vents, based on review of information including the source's startup, shutdown, and malfunction plan and design. The director will specify that these permit conditions apply only when the facility is operating under its startup, shutdown, and malfunction plan.

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

Effective:

Five Year Review (FYR) Dates: 07/01/2015

Certification

Date

Promulgated Under: 119.03
Statutory Authority: 3734.12
Rule Amplifies: 3734.12
Prior Effective Dates: 02/16/2009

RSFA Attachment A

Rule 3745-51-04 is amended as follows:		
Location	Change	Reason
(A)(1)	remove the ending “; and” and add a period	a, b
(A)(1)(a)	after “publicly owned treatment works” add “(POTW)”	c *
(A)(2)	remove the quotation marks around “Clean Water Act”	a, d *
	after “as amended” add “through the date specified in rule 3745-50-11 of the Administrative Code”	e
(A)(4)	after “as amended” add “through the date specified in rule 3745-50-11 of the Administrative Code” before the comma	e
	remove “et seq” [keep the period]	b
(A)(6)	remove “defined” and add “described”	f
(A)(7)	remove “defined” and add “described”	f
(A)(8)	add “that all of the following” before the colon	g
(A)(8)(a)	remove the ending semicolon and add a period	a
(A)(8)(b)	remove the ending semicolon and add a period	a
(A)(8)(c)	remove the ending “; and” and add a period	a, b
(A)(9)	add “Wood preserving:”	h
(A)(9)(a)	remove “their” and add “the”	f
	remove the ending “; and” and add a period	a, b
(A)(9)(c)(i)	remove “their” and add “the”	f
	remove the ending semicolon and add a period	a
(A)(9)(c)(ii)	remove the ending semicolon and add a period	a
(A)(9)(c)(iii)	remove “and/or” and add “or”	a, f
	remove the ending semicolon and add a period	a
(A)(9)(c)(iv)	remove “and/or” and add “or”	f
	remove the ending “; and” and add a period	a, b
(A)(9)(v)	in the 3 rd paragraph, remove “must” and add “shall”	i
(A)(12)	add “Oil-bearing secondary materials and recovered oil:”	h

RSFA Attachment A

Rule 3745-51-04 is amended as follows:		
Location	Change	Reason
(A)(12)(a)	remove “byproducts” [not hyphenated] and add “by-products” [hyphenated]	j
	in the bracketed phrase remove: “gasification” (as defined in rule 3745-50-10 of the Administrative Code),	FR 04/08/2015 #
(A)(14)	add “both” before the colon	g
(A)(14)(a)	remove the ending “; and” and add a period	a, b
(A)(16)	[amendment superseded- see below]	FR 12/19/2008
	[amendment superseded- see below] #	FR 06/15/2010
	remove existing text and add “Reserved”	FR 04/08/2015 #
(A)(17)	add “all of the following” before the colon	g
(A)(17)(a)	remove the ending semicolon and add a period	a
(A)(17)(b)	remove the ending semicolon and add a period	a
(A)(17)(c)	remove “meeting” and add “that meet”	k
	after “meet” add “all of”	g
(A)(17)(c)(i)	remove “must” and add “shall”	i
	remove the ending semicolon and add a period	a
(A)(17)(c)(ii)	[3 times] remove “must” and add “shall”	i
	remove the ending semicolon and add a period	a
(A)(17)(c)(iii)	remove “must” and add “shall”	i
(A)(17)(c)(iv)	remove “owner/operator must” and add “owner or operator shall”	a, f, i
(A)(17)(c)(v)	remove “must” and add “shall”	i
(A)(17)(d)	[2 times] remove “must” and add “shall”	i
(A)(17)(d)(i)	remove “must” and add “shall”	i
(A)(17)(d)(ii)	remove “must” and add “shall”	i
	after “meet” add “all of”	g
(A)(17)(d)(ii)(a)	remove the ending semicolon and add a period	a
(A)(17)(d)(ii)(b)	remove the ending semicolon and add a period	a

RSFA Attachment A

Rule 3745-51-04 is amended as follows:		
Location	Change	Reason
(A)(17)(d)(ii)(c)	remove “run-on/run-off” and add “run-on and run-off”	a, f
	remove the ending semicolon and add a period	a
(A)(17)(d)(ii)(d)	remove the ending “; and” and add a period	a, b
(A)(17)(d)(iii)	remove “must” and add “shall”	i
(A)(17)(e)	add “all of” before “the following”	g
(A)(17)(e)(i)	remove the ending semicolon and add a period	a
(A)(17)(e)(ii)	remove the ending “; and” and add a period	a, b
(A)(17)(e)(iv)	remove “must” and add “shall”	i
(A)(17)(f)	remove “must” and add “shall”	i
(A)(18)	add “that both” before the colon	g
(A)(18)(a)	in the parenthetical, remove “described” and add “identified”	f
	remove “and/or” and add “or”	a, f
	after the new “or” add “the characteristic of” before “toxicity”	g
	remove the ending “; and” and add a period	a, b
(A)(18)(b)	remove “byproducts” [not hyphenated] and add “by-products” [hyphenated]	j
(A)(20)	add “all of” before “the following”	g
	remove “specified”	b
(A)(20)(a)	remove “must” and add “shall”	i
(A)(20)(b)	remove “must” and add “shall”	i
(A)(20)(b)(i)	after “address” add a comma	a
(A)(20)(b)(ii)	[7 times] remove “must” and add “shall”	i
	add “accomplish all of the following” before the colon	g
(A)(20)(b)(ii)(a)	remove the ending “; and” and add a period	a, b
(A)(20)(b)(ii)(b)	remove the ending “; and” and add a period	a, b

RSFA Attachment A

Rule 3745-51-04 is amended as follows:		
Location	Change	Reason
(A)(20)(b)(iv)	remove “handlers’s” and add “handler’s”	a, L
	remove “must” and add “shall”	i
	add “all of” before “the following”	g
(A)(20)(b)(iv)(a)	remove the ending semicolon and add a period	a
(A)(20)(b)(iv)(b)	remove the ending “; and” and add a period	a, b
(A)(20)(c)	remove “must” and add “shall”	i
	add “do all of the following” before the colon	g
(A)(20)(c)(iii)	remove “must” and add “shall”	i
(A)(20)(c)(iv)	remove “process(es)” and add “processes”	f
(A)(20)(d)	remove “the provisions in”	b
(A)(21)	add “all of the following” before the colon	g
(A)(21)(a)(ii)	remove “must” and add “shall”	i
(A)(21)(b)	-after “Testing” remove “must” -after “also” add “shall”	i, k
	remove “product(s)” and add “products”	f
(A)(21)(c)	remove “the requirements of”	b
	remove “must” and add “shall”	i
	add “all of the following” before the colon	g
(A)(21)(c)(i)	remove the ending semicolon and add a period	a
(A)(21)(c)(ii)	remove “person(s)” and add “persons”	f
	remove the ending semicolon and add a period	a
(A)(21)(c)(iii)	remove the ending semicolon and add a period	a
(A)(21)(c)(iv)	remove the ending semicolon and add a period	a
(A)(21)(c)(v)	remove the ending “; and” and add a period	a, b
(A)(22)(b)	remove “meet the requirements of” and add “comply with”	b, f
(A)(22)(c)	remove “meet the requirements of” and add “comply with”	b, f

RSFA Attachment A

Rule 3745-51-04 is amended as follows:		
Location	Change	Reason
(A)(22)(d)	remove “meets the requirements of” and add “complies with”	b, f
(A)(26)- (A)(26)(f)	add new paragraphs	FR 07/31/2013
(B)(1)	remove “Chapters 3745-50 to 3745-69, 3745-205, 3745-256, 3745-266, 3745-270, 3745-273, and 3745-279 of the Administrative Code” and add “the hazardous waste rules”	m
(B)(7)(a)(xiii)	remove “and/or” and add “or”	a, f
(B)(7)(a)(xiv)	[3 times] remove “and/or” and add “or”	a, f
	remove “chlorination)/leaching” and add “chlorination) and leaching”	a, f
(B)(7)(b)(xii)	remove “dust/sludge” and add “dust or sludge”	a, f
(B)(7)(b)(xiv)	remove “roasting/leaching” and add “roasting or leaching”	a, f
(B)(7)(b)(xvii)	remove “dust/sludge” and add “dust or sludge”	a, f
(B)(11)(b)	remove “box” [lower case] and add “Box” [upper case]	L
	-after “OH” add the closing quotation mark [which maintains the upper case] -at the end, remove the closing quotation mark	a
(B)(15)(a)	add text: “The wastes disposed would meet one or more of the listing descriptions for the following:”	h
(B)(15)(a)(i)	remove “The wastes disposed would meet one or more of the listing descriptions for”	h
(B)(15)(a)(ii)	remove “The wastes disposed would meet one or more of the listing descriptions for”	h
(B)(15)(a)(iii)	remove “The wastes disposed would meet one or more of the listing descriptions for”	h
(B)(15)(b)	add text “The wastes described in the following:”	h
(B)(15)(b)(i)	remove “The wastes described in paragraph” and add “Paragraph”	h

RSFA Attachment A

Rule 3745-51-04 is amended as follows:		
Location	Change	Reason
(B)(15)(b)(ii)	remove "The wastes described in paragraph" and add "Paragraph"	h
(B)(15)(b)(iii)	remove "The wastes described in paragraph" and add "Paragraph"	h
(B)(16) [new]	add paragraph as "Reserved."	N
(B)(17) [new]	add paragraph as "Reserved."	N
(B)(18)- (B)(18)(f)(iii)	add new paragraphs	FR 07/31/2013
(C)	-after "not subject to regulation under" add "Chapters 3745-52 to 3745-256 or 3745-270, or" -after "3745-50-235" remove "and Chapters 3745-52, 3745-53, 3745-54 to 3745-57, 3745-65 to 3745-69, 3745-205, 3745-256, and 3745-270"	O
	after "Code" add a comma	a
(D)(1)	remove "any requirements of"	b
	after "Chapters 3745-51" remove ", 3745-52, 3745-53, 3745-54 to 3745-57, 3745-65 to 3745-69, 3745-205, 3745-256, 3745-266, or" and add "to" before "3745-270"	m
(D)(2)	remove "must" and add "shall"	i
(D)(2)(a)	remove "Comply with"	b, k
(D)(2)(b)	remove "Comply with"	b, k
	add "Both of"	g
(E)(1)	remove "any requirement of"	b
(E)(2)(c)	remove "must" and add "shall"	i
(E)(2)(c)(ii)	remove "must" and add "shall"	i
(E)(2)(e)(iii)(a)	remove the ending colon and add a semicolon	a
(E)(2)(f)	remove "annual" and add "biennial" before "report"	p
	after "report" add "(as required by rule 3745-52-41 of the Administrative Code)" before the period	p, r
(E)(3)(a)	remove "time/quantity" and add "time or quantity"	a, f

RSFA Attachment A

Rule 3745-51-04 is amended as follows:		
Location	Change	Reason
(E)(3)(c)	[2 times] remove “must” and add “shall”	i
(E)(3)(c)(iv)	remove “must” and add “shall”	i
(F)	remove “any requirement of”	b
	-after the removed “any requirement of” add “Chapters 3745-51 to 3745-270 or” -after “3745-50-235” remove “, Chapters 3745-51, 3745-52, 3745-53, 3745-54 to 3745-57, 3745-65 to 3745-69, 3745-205, 3745-256, 3745-266, or 3745-270”	m
(F)(7)	remove “must” and add “shall”	i
(F)(9)(c)	remove “their” and add “the”	f
(F)(10)	-after “are subject to” add “Chapters 3745-51 to 3745-270 and” -after “3745-50-235” remove “and Chapters 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”	m
(G)	remove “the requirements of”	b
(G)(1)	remove the ending semicolon and add a period	a
(G)(2)	add “one of the following” before the colon	g
	-[2 times] remove “section” [lower case] and add “Section” [with upper case] -remove “federal water pollution control act” [lower case] and add “Federal Water Pollution Control Act” [with upper case] -remove “marine protection, research, and sanctuaries act” [lower case] and add “Marine Protection, Research, and Sanctuaries Act” [with upper case]	d *
(G)(2)(a)	-remove “section” [lower case] and add “Section” [with upper case] -remove “federal water pollution control act” [lower case] and add “Federal Water Pollution Control Act” [with upper case]	d *
	remove the ending semicolon and add a period	a

RSFA Attachment A

Rule 3745-51-04 is amended as follows:		
Location	Change	Reason
(G)(2)(b)	-remove “section” [lower case] and add “Section” [with upper case] -remove “marine protection, research, and sanctuaries act” [lower case] and add “Marine Protection, Research, and Sanctuaries Act” [with upper case]	d *
	remove the ending “; or” and add a period	a, b
(H)	add new paragraph	FR 01/03/2014 s

- a Punctuation correction.
- b Unnecessary text is removed.
- c This amendment defines the acronym that is used later in the rule.
- d LSC requirement. This text remains in the upper case without quotation marks.
- e This text is added to clarify that “as amended” refers to past amendments, not future/prospective amendments of the document that is being referenced. “As amended” should not be removed because the statute being referenced may have been amended after its initial promulgation (which is the standard statute notation), and our intent is to include in that citation all the past amendments of that statute, as do the references to statute in the federal RCRA rules (to which the hazardous waste rules must be equivalent), and as does the Ohio Revised Code. Rule 3745-50-11 is the hazardous waste management program’s “Incorporated by reference” rule that establishes date-certain limitations on cross-referenced documents, and ensures that the hazardous waste rules are not referencing statute changes that may occur after the date in 3745-50-11.
- f Word choice correction.
- g This amendment adds specificity to the provision.

RSFA Attachment A

Rule 3745-51-04 is amended as follows:		
Location	Change	Reason

- h This amendment is designed to eliminate the occurrence of a paragraph designation that contains no text. Some text is re-located.
- i The change of “must” to “shall” is an LSC requirement.
- j Punctuation/word choice correction. This term as defined in this rule contains the hyphen, and is used in the hyphenated form throughout the hazardous waste rules.
- k Grammar/sentence structure correction.
- L Typo correction.
- m The cross-reference language is simplified without changing the requirements.
- N Placeholder, so the state rule is numbered the same as its federal counterpart provision (40 CFR 261.4) to avoid confusion for readers who use both federal and state rules. [Federal (b)(16) is reserved, and federal (b)(17) contains text that is now expired.]
- O This amendment re-locates the cross-references to clarify the requirement.
- p Pursuant to SB294 (Senator Schaffer, 129th General Assembly), we are changing the “annual report” to a “biennial report” and correcting other text as necessary where the federal counterpart provision indicates a “biennial report.” This amendment improves the equivalence of the state rule to its federal counterpart (see 40 CFR 261.4).
- Q [Reserved]
- r This amendment identifies the rule that requires generators to submit a biennial report.
- s The federal requirements are maintained in this paragraph because Ohio statute does not include authority for Class VI wells. These are managed by U.S. EPA in Ohio.

RSFA Attachment A

Rule **3745-51-04** is amended as follows:

Location	Change	Reason
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- * This amendment is made in response to a comment on the Interested Parties draft rule.
- # This amendment was added pursuant to FR 4/08/2015, the federal rule that addresses the court vacatur of gasification and comparable fuels in 40 CFR 261.4. Since this FR is very recent, these amendments were not shown in this rule when it was available for review to Interested Parties as a draft rule. These amendments make this state rule equivalent to its federal counterpart provision, 40 CFR 261.4, through FR 4/08/2015.

This rule is submitted for 5-year review upon proposal. A new review date will be assigned.

3745-51-04 **Exclusions.**

(A) Materials which are not wastes. The following materials are not wastes for the purpose of Chapter 3745-51 of the Administrative Code:

(1) Domestic sewage;~~and:~~

(a) Any mixture of domestic sewage and other wastes that passes through a sewer system to a publicly owned treatment works (POTW) for treatment.

(b) As used in Chapter 3745-51 of the Administrative Code, "domestic sewage" means untreated sanitary wastes that pass through a sewer system.

(2) Industrial wastewater discharges that are point source discharges subject to regulation under Section 402 of the "Clean Water Act," as amended through the date specified in rule 3745-50-11 of the Administrative Code.

[Comment: This exclusion applies only to the actual point source discharge. It does not exclude industrial wastewaters while they are being collected, stored, or treated before discharge, nor does it exclude sludges that are generated by industrial wastewater treatment.]

(3) Irrigation return flows.

(4) "Source material," "special nuclear material," or "by-product material" as defined by the Atomic Energy Act of 1954, as amended through the date specified in rule 3745-50-11 of the Administrative Code, 42 U.S.C. 2011 ~~et seq.~~

(5) Materials subjected to in-situ mining techniques which are not removed from the ground as part of the extraction process.

(6) Pulping liquors (i.e., black liquor) that are reclaimed in a pulping liquor recovery furnace and then reused in the pulping process, unless it is "accumulated speculatively" as ~~defined~~ described in paragraph (C)(8) of rule 3745-51-01 of the Administrative Code.

- (7) Spent sulfuric acid used to produce virgin sulfuric acid, unless it is "accumulated speculatively" as ~~defined~~described in paragraph (C)(8) of rule 3745-51-01 of the Administrative Code.
- (8) Secondary materials that are reclaimed and returned to the original process or processes in which they were generated where they are reused in the production process provided that all of the following:
- (a) Only tank storage is involved, and the entire process through completion of reclamation is closed by being entirely connected with pipes or other comparable enclosed means of conveyance;
 - (b) Reclamation does not involve controlled flame combustion (such as occurs in boilers, industrial furnaces, or incinerators);
 - (c) The secondary materials are never accumulated in such tanks for over twelve months without being reclaimed; ~~and~~.
 - (d) The reclaimed material is not used to produce a fuel, or used to produce products that are used in a manner constituting disposal.
- (9) Wood preserving.
- (a) Spent wood preserving solutions that have been reclaimed and are reused for ~~their~~the original intended purpose; ~~and~~.
 - (b) Wastewaters from the wood preserving process that have been reclaimed and are reused to treat wood.
 - (c) Prior to reuse, the wood preserving wastewaters and spent wood preserving solutions described in paragraphs (A)(9)(a) and (A)(9)(b) of this rule, so long as they meet all of the following conditions:
 - (i) The wood preserving wastewaters and spent wood preserving solutions are reused on-site at water borne plants in the production process for ~~their~~the original intended purpose;
 - (ii) Prior to reuse, the wastewaters and spent wood preserving solutions are managed to prevent release to either land or ground water or both;

- (iii) Any unit used to manage wastewaters ~~and/or~~ spent wood preserving solutions prior to reuse can be visually or otherwise determined to prevent such releases;
- (iv) Any drip pad used to manage the wastewaters ~~and/or~~ spent wood preserving solutions prior to reuse complies with the standards in rules 3745-69-40 to 3745-69-45 of the Administrative Code, regardless of whether the plant generates a total of less than one hundred kilograms of hazardous waste per month; ~~and~~;
- (v) Prior to operating pursuant to this exclusion, the plant owner or operator prepares one-time notification stating that the plant intends to claim the exclusion, giving the date on which the plant intends to begin operating under the exclusion, and containing the following language:

"I have read rule 3745-51-04 of the Administrative Code establishing an exclusion for wood preserving wastewaters and spent wood preserving solutions and understand it requires me to comply at all times with the conditions set out in the rule."

The plant ~~must~~shall maintain a copy of that document in its on-site records until closure of the facility. The exclusion applies so long as the plant meets all of the conditions. If the plant goes out of compliance with any condition, it may apply to the director for reinstatement. The director may reinstate the exclusion upon finding that the plant has returned to compliance with all conditions, and that the violations are not likely to recur.

- (10) EPA hazardous waste numbers K060, K087, K141, K142, K143, K144, K145, K147, and K148, and any wastes from the coke by-products processes that are hazardous only because they exhibit the toxicity characteristic specified in rule 3745-51-24 of the Administrative Code when, subsequent to generation, these materials are recycled to coke ovens, to the tar recovery process as a feedstock to produce coal tar, or mixed with coal tar prior to the tar's sale or refining. This exclusion is conditioned on there being no land disposal of the wastes from the point they are generated to the point they are recycled to coke ovens or tar recovery or refining processes, or mixed with coal tar.
- (11) Nonwastewater splash condenser dross residue from the treatment of K061 in high temperature metals recovery units, provided it is shipped in drums (if shipped) and not land disposed before recovery.

(12) Oil-bearing secondary materials and recovered oil.

- (a) Oil-bearing hazardous secondary materials (i.e., sludges, ~~by-products~~by-products, or spent materials) that are generated at a petroleum refinery (SIC code 2911) and are inserted into the petroleum refining process [SIC code 2911 - including, but not limited to, distillation, catalytic cracking, fractionation, "~~gasification~~" (as defined in ~~rule 3745-50-10 of the Administrative Code~~), or thermal cracking units (i.e., cokers)] unless the material is placed on the land, or accumulated speculatively before being so recycled. Materials inserted into thermal cracking units are excluded under this paragraph, provided that the coke product also does not exhibit a characteristic of hazardous waste. Oil-bearing hazardous secondary materials may be inserted into the same petroleum refinery where they are generated, or sent directly to another petroleum refinery, and still be excluded under this provision. Except as provided in paragraph (A)(12)(b) of this rule, oil-bearing hazardous secondary materials generated elsewhere in the petroleum industry (i.e., from sources other than petroleum refineries) are not excluded under this rule. Residuals generated from processing or recycling materials excluded under this paragraph, where such materials as generated would have otherwise met a listing under rules 3745-51-30 to 3745-51-35 of the Administrative Code, are designated as F037 listed wastes when disposed of or intended for disposal.
- (b) Recovered oil that is recycled in the same manner and with the same conditions as described in paragraph (A)(12)(a) of this rule. Recovered oil is oil that has been reclaimed from secondary materials (including wastewater) generated from normal petroleum industry practices, including refining, exploration and production, bulk storage, and transportation incident thereto (SIC codes 1311, 1321, 1381, 1382, 1389, 2911, 4612, 4613, 4922, 4923, 4789, 5171, and 5172). Recovered oil does not include oil-bearing hazardous wastes listed in rules 3745-51-30 to 3745-51-35 of the Administrative Code; however, oil recovered from such wastes may be considered recovered oil. Recovered oil does not include "used oil" as defined in rule 3745-279-01 of the Administrative Code.

(13) Excluded scrap metal (processed scrap metal, unprocessed home scrap metal, and unprocessed prompt scrap metal) being recycled.

(14) Shredded circuit boards being recycled provided that they are both:

- (a) Stored in containers sufficient to prevent a release to the environment prior to recovery; ~~and.~~
 - (b) Free of mercury switches, mercury relays, nickel-cadmium batteries, and lithium batteries.
- (15) Condensates derived from the overhead gases from kraft mill steam strippers that are used to comply with 40 CFR 63.446(e). The exemption applies only to combustion at the mill generating the condensates.
- (16) ~~Comparable fuels or comparable syngas fuels (i.e., comparable/syngas fuels) that meet the requirements of rule 3745-51-38 of the Administrative Code~~Reserved.
- (17) "Spent materials" (as defined in rule 3745-51-01 of the Administrative Code) (other than hazardous wastes listed in rules 3745-51-30 to 3745-51-35 of the Administrative Code) generated within the primary mineral processing industry from which minerals, acids, cyanide, water, or other values are recovered by mineral processing or by beneficiation, provided that all of the following:
- (a) The spent material is legitimately recycled to recover minerals, acids, cyanide, water or other values;.
 - (b) The spent material is not accumulated speculatively;.
 - (c) Except as provided in paragraph (A)(17)(d) of this rule, the spent material is stored in tanks, containers, or buildings ~~meeting~~that meet all of the following minimum integrity standards:
 - (i) A building ~~must~~shall be an engineered structure with a floor, walls, and a roof, all of which are made of non-earthen materials providing structural support (except smelter buildings may have partially earthen floors provided the secondary material is stored on the non-earthen portion), and have a roof suitable for diverting rainwater away from the foundation;.
 - (ii) A tank ~~must~~shall be free standing, ~~must~~shall not be a "surface impoundment" (as defined in rule 3745-50-10 of the Administrative Code), and ~~must~~shall be manufactured of a material suitable for containment of its contents;.

- (iii) A container ~~must~~shall be free standing and be manufactured of a material suitable for containment of its contents.
 - (iv) If tanks or containers contain any particulate which may be subject to wind dispersal, the ~~owner/operator must~~owner or operator shall operate these units in a manner which controls fugitive dust.
 - (v) Tanks, containers, and buildings ~~must~~shall be designed, constructed, and operated to prevent significant releases to the environment of these materials.
- (d) The director may make a site-specific determination, after public review and comment, that only solid mineral processing spent material may be placed on pads, rather than in tanks, containers, or buildings. Solid mineral processing spent materials do not contain any free liquid. The director ~~must~~shall affirm that pads are designed, constructed and operated to prevent significant releases of the spent material into the environment. Pads ~~must~~shall provide the same degree of containment afforded by the non-RCRA tanks, containers, and buildings eligible for exclusion.
- (i) The director also ~~must~~shall consider if storage on pads poses the potential for significant releases via ground water, surface water, and air exposure pathways. Factors to be considered for assessing the ground water, surface water, air exposure pathways are: the volume and physical and chemical properties of the spent material, including its potential for migration off the pad; the potential for human or environmental exposure to hazardous constituents migrating from the pad via each exposure pathway; and the possibility and extent of harm to human and environmental receptors via each exposure pathway.
 - (ii) Pads ~~must~~shall meet all of the following minimum standards:
 - (a) Be designed of non-earthen material that is compatible with the chemical nature of the mineral processing spent material_;
 - (b) Be capable of withstanding physical stresses associated with placement and removal_;
 - (c) Have ~~run-on/run-off~~run-on and run-off controls_;

- (b) The oil generated by the organic chemical manufacturing facility is not placed on the land, or accumulated speculatively before being recycled into the petroleum refining process. An "associated organic chemical manufacturing facility" is a facility where the primary SIC code is 2869, but where operations may also include SIC codes 2821, 2822, and 2865; and is physically co-located with a petroleum refinery; and where the petroleum refinery to which the oil being recycled is returned also provides hydrocarbon feedstocks to the organic chemical manufacturing facility. "Petrochemical recovered oil" is oil that has been reclaimed from secondary materials (i.e., sludges, ~~by-products~~~~by-products~~, or spent materials, including wastewater) from normal organic chemical manufacturing operations, as well as oil recovered from organic chemical manufacturing processes.
- (19) Spent caustic solutions from petroleum refining liquid treating processes used as a feedstock to produce cresylic or naphthenic acid unless the material is placed on the land, or "accumulated speculatively" as defined in paragraph (C)(8) of rule 3745-51-01 of the Administrative Code.
- (20) Hazardous secondary materials used to make zinc fertilizers, provided that all of the following conditions ~~specified~~ are satisfied:
- (a) Hazardous secondary materials used to make zinc micronutrient fertilizers ~~must~~shall not be "accumulated speculatively," as defined in paragraph (C)(8) of rule 3745-51-01 of the Administrative Code.
- (b) Generators and intermediate handlers of zinc-bearing hazardous secondary materials that are to be incorporated into zinc fertilizers ~~must~~shall:
- (i) Submit a one-time notice to the director, which contains the name, address, and U.S. EPA identification number of the generator or intermediate handler facility, provides a brief description of the secondary material that will be subject to the exclusion, and identifies when the manufacturer intends to begin managing excluded, zinc-bearing hazardous secondary materials under the conditions specified in paragraphs (A)(20) to (A)(20)(e) of this rule.

- (ii) Store the excluded secondary material in tanks, containers, or buildings that are constructed and maintained in a way that prevents releases of the secondary materials into the environment. At a minimum, any building used for this purpose ~~must~~shall be an engineered structure made of non-earthen materials that provide structural support, and ~~must~~shall have a floor, walls and a roof that prevent wind dispersal and contact with rainwater. Tanks used for this purpose ~~must~~shall be structurally sound and, if outdoors, ~~must~~shall have roofs or covers that prevent contact with wind and rain. Containers used for this purpose ~~must~~shall be kept closed except when it is necessary to add or remove material, and ~~must~~shall be in sound condition. Containers that are stored outdoors ~~must~~shall be managed within storage areas that accomplish all of the following:
- (a) Have containment structures or systems sufficiently impervious to contain leaks, spills and accumulated precipitation;~~and.~~
- (b) Provide for effective drainage and removal of leaks, spills and accumulated precipitation;~~and.~~
- (c) Prevent run-on into the containment system.
- (iii) With each off-site shipment of excluded hazardous secondary materials, provide written notice to the receiving facility that the material is subject to the conditions of paragraphs (A)(20) to (A)(20)(e) of this rule.
- (iv) Maintain at the generator's or intermediate ~~handlers'~~handler's facility for no less than three years records of all shipments of excluded hazardous secondary materials. For each shipment these records ~~must~~shall at a minimum contain all of the following information:
- (a) Name of the transporter and date of the shipment;~~.~~
- (b) Name and address of the facility that received the excluded material, and documentation confirming receipt of the shipment;~~and.~~

- (c) Type and quantity of excluded secondary material in each shipment.
- (c) Manufacturers of zinc fertilizers or zinc fertilizer ingredients made from excluded hazardous secondary materials ~~must~~shall do all of the following:
- (i) Store excluded hazardous secondary materials in accordance with the storage requirements for generators and intermediate handlers, as specified in paragraph (A)(20)(b)(ii) of this rule.
 - (ii) Submit a one-time notification to the director that, at a minimum, specifies the name, address and U.S. EPA identification number of the manufacturing facility, and identifies when the manufacturer intends to begin managing excluded, zinc-bearing hazardous secondary materials under the conditions specified in paragraphs (A)(20) to (A)(20)(e) of this rule.
 - (iii) Maintain for a minimum of three years records of all shipments of excluded hazardous secondary materials received by the manufacturer, which ~~must~~shall at a minimum identify for each shipment the name and address of the generating facility, name of transporter and date the materials were received, the quantity received, and a brief description of the industrial process that generated the material.
 - (iv) Submit to the director an annual report that identifies the total quantities of all excluded hazardous secondary materials that were used to manufacture zinc fertilizers or zinc fertilizer ingredients in the previous year, the name and address of each generating facility, and the industrial ~~process(es)~~processes from which they were generated.
- (d) Nothing in this rule preempts, overrides, or otherwise negates ~~the provision in~~ rule 3745-52-11 of the Administrative Code, which requires any person who generates a waste to determine if that waste is a hazardous waste.

(e) Permitted storage units that have been used to store only zinc-bearing hazardous wastes prior to the submittal of the one-time notice described in paragraph (A)(20)(b)(i) of this rule, and that afterward will be used only to store hazardous secondary materials excluded under paragraphs (A)(20) to (A)(20)(e) of this rule, are not subject to the closure requirements of Chapters 3745-54 to 3745-57, 3745-65 to 3745-69, 3745-205, or 3745-256 of the Administrative Code.

(21) Zinc fertilizers made from hazardous wastes, or hazardous secondary materials that are excluded under paragraphs (A)(20) to (A)(20)(e) of this rule, provided that all of the following:

(a) The fertilizers meet the following contaminant limits:

(i) For metal contaminants:

Constituent	Maximum Allowable Total Concentration in Fertilizer, Per Unit (1%) of Zinc (ppm)
Arsenic	0.3
Cadmium	1.4
Chromium	0.6
Lead	2.8
Mercury	0.3

(ii) For dioxin contaminants the fertilizer ~~must~~shall contain no more than eight parts per trillion of dioxin, measured as toxic equivalent (TEQ).

(b) The manufacturer performs sampling and analysis of the fertilizer product to determine compliance with the contaminant limits for metals no less than every six months, and for dioxins no less than every twelve months. Testing ~~must~~ also shall be performed whenever changes occur to manufacturing processes or ingredients that could significantly affect the amounts of contaminants in the fertilizer product. The manufacturer may use any reliable analytical method to demonstrate that no constituent of concern is present in the product at concentrations above the applicable limits. It is the responsibility of the manufacturer to ensure that the sampling and analysis are unbiased, precise, and

representative of the ~~product(s)~~products introduced into commerce.

(c) The manufacturer maintains for no less than three years records of all sampling and analyses performed for purposes of determining compliance with ~~the requirements of~~ paragraph (A)(21)(b) of this rule. Such records ~~must~~shall at a minimum include all of the following:

(i) The dates and times product samples were taken, and the dates the samples were analyzed;

(ii) The names and qualifications of the ~~person(s)~~persons taking the samples;

(iii) A description of the methods and equipment used to take the samples;

(iv) The name and address of the laboratory facility at which analyses of the samples were performed;

(v) A description of the analytical methods used, including any cleanup and sample preparation methods; ~~and~~

(vi) All laboratory analytical results used to determine compliance with the contaminant limits specified in paragraphs (A)(21) to (A)(21)(c)(iv) of this rule.

(22) Used cathode ray tubes (CRTs).

(a) Used, intact "CRTs" as defined in rule 3745-50-10 of the Administrative Code are not wastes within the United States unless they are disposed, or unless they are "accumulated speculatively" as defined in paragraph (C)(8) of rule 3745-51-01 of the Administrative Code by CRT collectors or glass processors.

(b) Used, intact "CRTs" as defined in rule 3745-50-10 of the Administrative Code are not wastes when exported for recycling provided that they ~~meet the requirements of~~comply with rule 3745-51-40 of the Administrative Code.

- (c) Used, broken "CRTs" as defined in rule 3745-50-10 of the Administrative Code are not wastes provided that they ~~meet the requirements of~~comply with rule 3745-51-39 of the Administrative Code.
- (d) Glass removed from CRTs is not a waste provided that it ~~meets the requirements of~~complies with paragraph (C) of rule 3745-51-39 of the Administrative Code.
- (23) Reserved.
- (24) Reserved.
- (25) Reserved.
- (26) "Solvent-contaminated wipes," as defined in rule 3745-50-10 of the Administrative Code, that are sent for cleaning and reuse are not wastes from the point of generation, provided that all of the following:
 - (a) The solvent-contaminated wipes, when accumulated, stored, and transported, are contained in non-leaking, closed containers that are labeled "Excluded Solvent-Contaminated Wipes." The containers shall be able to contain free liquids, should free liquids occur. During accumulation, a container is considered closed when there is complete contact between the fitted lid and the rim, except when it is necessary to add or remove solvent-contaminated wipes. When the container is full, or when the solvent-contaminated wipes are no longer being accumulated, or when the container is being transported, the container shall be sealed with all lids properly and securely affixed to the container and all openings tightly bound or closed sufficiently to prevent leaks and emissions.
 - (b) The solvent-contaminated wipes may be accumulated by the generator for up to one hundred eighty days from the start date of accumulation for each container prior to being sent for cleaning.
 - (c) At the point of being sent for cleaning on-site or at the point of being transported off-site for cleaning, the solvent-contaminated wipes shall contain "no free liquids" as defined in rule 3745-50-10 of the Administrative Code.

(d) Free liquids removed from the solvent-contaminated wipes or from the container holding the "wipes," as defined in rule 3745-50-10 of the Administrative Code, shall be managed according to the applicable rules in Chapters 3745-50 to 3745-273 of the Administrative Code.

(e) Generators shall maintain at the site all of the following documentation.

(i) Name and address of the laundry or dry cleaner that is receiving the solvent-contaminated wipes.

(ii) Documentation that the one hundred eighty-day accumulation time limit in paragraph (A)(26)(b) of this rule is being met.

(iii) Description of the process the generator is using to ensure the solvent-contaminated wipes contain no free liquids at the point of being laundered or dry cleaned on-site or at the point of being transported off-site for laundering or dry cleaning.

(f) The solvent-contaminated wipes are sent to a laundry or dry cleaner whose discharge, if any, is regulated under Section 301 and Section 402 or Section 307 of the Clean Water Act.

(B) Wastes which are not hazardous wastes. The following wastes are not hazardous wastes:

(1) Household waste, including household waste that has been collected, transported, stored, treated, disposed, recovered (e.g., refuse-derived fuel) or reused. As used in Chapter 3745-51 of the Administrative Code, "household waste" means any waste material (including garbage, trash and sanitary wastes in septic tanks) derived from households (including single and multiple residences, hotels and motels, bunkhouses, ranger stations, crew quarters, campgrounds, picnic grounds, and day-use recreation areas). A resource recovery facility managing municipal waste shall not be deemed to be treating, storing, disposing of, or otherwise managing hazardous wastes for the purposes of regulation under ~~Chapters 3745-50 to 3745-69, 3745-205, 3745-256, 3745-266, 3745-270, 3745-273, and 3745-279 of the Administrative Code~~ the hazardous waste rules, if such facility:

(a) Receives and burns only:

(i) Household waste (from single and multiple dwellings, hotels, motels, and other residential sources); and

- (ii) Waste from commercial or industrial sources that does not contain hazardous waste; and
 - (b) Such facility does not accept hazardous wastes and the owner or operator of such facility has established contractual requirements or other appropriate notification or inspection procedures to assure that hazardous wastes are not received at or burned in such facility.
- (2) Wastes generated by any of the following and which are returned to the soils as fertilizers:
- (a) The growing and harvesting of agricultural crops.
 - (b) The raising of animals, including animal manures.
- (3) Mining overburden returned to the mine site.
- (4) Fly ash waste, bottom ash waste, slag waste, and flue gas emission control waste, generated primarily from the combustion of coal or other fossil fuels, except as provided by rule 3745-266-112 of the Administrative Code for facilities that burn or process hazardous waste.
- (5) Drilling fluids, produced waters, and other wastes associated with the exploration, development, or production of crude oil, natural gas or geothermal energy.
- (6)
- (a) Wastes which fail the test for the toxicity characteristic because chromium is present or are listed as a hazardous waste in rules 3745-51-30 to 3745-51-35 of the Administrative Code due to the presence of chromium, which do not fail the test for the toxicity characteristic for any other constituent or are not listed due to the presence of any other constituent, and which do not fail the test for any other characteristic, if it is shown by a waste generator or by waste generators that:
 - (i) The chromium in the waste is exclusively (or nearly exclusively) trivalent chromium; and

- (ii) The waste is generated from an industrial process which uses trivalent chromium exclusively (or nearly exclusively) and the process does not generate hexavalent chromium; and
 - (iii) The waste is typically and frequently managed in non-oxidizing environments.
- (b) Specific wastes which meet the standards in paragraphs (B)(6)(a)(i), (B)(6)(a)(ii), and (B)(6)(a)(iii) of this rule (so long as they do not fail the test for the toxicity characteristic for any other constituent, and do not exhibit any other characteristic) are:
- (i) Chrome (blue) trimmings generated by the following subcategories of the leather tanning and finishing industry: hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue; and shearling.
 - (ii) Chrome (blue) shavings generated by the following subcategories of the leather tanning and finishing industry: hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue; and shearling.
 - (iii) Buffing dust generated by the following subcategories of the leather tanning and finishing industry: hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue.
 - (iv) Sewer screenings generated by the following subcategories of the leather tanning and finishing industry: hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue; and shearling.
 - (v) Wastewater treatment sludges generated by the following subcategories of the leather tanning and finishing industry: hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue; and shearling.
 - (vi) Wastewater treatment sludges generated by the following subcategories of the leather tanning and finishing industry: hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; and through-the-blue.

- (vii) Waste scrap leather from the leather tanning industry, the shoe manufacturing industry, and other leather product manufacturing industries.
 - (viii) Wastewater treatment sludges from the production of titanium dioxide pigment using chromium-bearing ores by the chloride process.
- (7) Waste from the extraction, beneficiation, and processing of ores and minerals (including coal, phosphate rock, and overburden from the mining of uranium ore), except as provided by rule 3745-266-112 of the Administrative Code for facilities that burn or process hazardous waste.
- (a) For the purposes of paragraphs (B)(7) to (B)(7)(c)(ii) of this rule, beneficiation of ores and minerals is restricted to the following activities:
- (i) Crushing;
 - (ii) Grinding;
 - (iii) Washing;
 - (iv) Dissolution;
 - (v) Crystallization;
 - (vi) Filtration;
 - (vii) Sorting;
 - (viii) Sizing;
 - (ix) Drying;
 - (x) Sintering;
 - (xi) Pelletizing;

- (xii) Briquetting;
 - (xiii) Calcining to remove water ~~and/or~~ carbon dioxide;
 - (xiv) Roasting, autoclaving, ~~and/or~~ chlorination in preparation for leaching [except where the roasting (~~and/or~~ autoclaving ~~and/or~~ chlorination)/~~leaching~~chlorination) and leaching sequence produces a final or intermediate product that does not undergo further beneficiation or processing];
 - (xv) Gravity concentration;
 - (xvi) Magnetic separation;
 - (xvii) Electrostatic separation;
 - (xviii) Flotation;
 - (xix) Ion exchange;
 - (xx) Solvent extraction;
 - (xxi) Electrowinning;
 - (xxii) Precipitation;
 - (xxiii) Amalgamation; and
 - (xxiv) Heap, dump, vat, tank, and in situ leaching.
- (b) For the purposes of paragraphs (B)(7) to (B)(7)(c)(ii) of this rule, waste from the processing of ores and minerals includes only the following wastes as generated:
- (i) Slag from primary copper processing;
 - (ii) Slag from primary lead processing;
 - (iii) Red and brown muds from bauxite refining;

- (iv) Phosphogypsum from phosphoric acid production;
- (v) Slag from elemental phosphorus production;
- (vi) Gasifier ash from coal gasification;
- (vii) Process wastewater from coal gasification;
- (viii) Calcium sulfate wastewater treatment plant sludge from primary copper processing;
- (ix) Slag tailings from primary copper processing;
- (x) Fluorogypsum from hydrofluoric acid production;
- (xi) Process wastewater from hydrofluoric acid production;
- (xii) Air pollution control ~~dust/sludge~~dust or sludge from iron blast furnaces;
- (xiii) Iron blast furnace slag;
- (xiv) Treated residue from ~~roasting/leaching~~roasting or leaching of chrome ore;
- (xv) Process wastewater from primary magnesium processing by the anhydrous process;
- (xvi) Process wastewater from phosphoric acid production;
- (xvii) Basic oxygen furnace and open hearth furnace air pollution control ~~dust/sludge~~dust or sludge from carbon steel production;
- (xviii) Basic oxygen furnace and open hearth furnace slag from carbon steel production;
- (xix) Chloride process waste solids from titanium tetrachloride production; and

- (xx) Slag from primary zinc processing.
- (c) A residue derived from co-processing mineral processing secondary materials with normal beneficiation raw materials or with normal mineral processing raw materials remains excluded under paragraphs (B) to (B)(15)(e) of this rule if the owner or operator:
- (i) Processes at least fifty per cent by weight normal beneficiation raw materials or normal mineral processing raw materials; and
 - (ii) Legitimately reclaims the secondary mineral processing materials.
- (8) Cement kiln dust waste, except as provided by rule 3745-266-112 of the Administrative Code for facilities that burn or process hazardous waste.
- (9) Waste which consists of discarded arsenical-treated wood or wood products which fails the test for the toxicity characteristic for EPA hazardous waste numbers D004 to D017 and which is not a hazardous waste for any other reason if the waste is generated by persons who utilize the arsenical-treated wood and wood products for these materials' intended end use.
- (10) Petroleum-contaminated media and debris that fail the test for the toxicity characteristic of rule 3745-51-24 of the Administrative Code (EPA hazardous waste numbers D018 to D043 only) and are subject to the corrective action regulations under Chapter 1301:7-9 of the Administrative Code.
- (11) Injected ground water that is hazardous only because it exhibits the toxicity characteristic (EPA hazardous waste numbers D018 to D043 only) in rule 3745-51-24 of the Administrative Code that is reinjected through an underground injection well pursuant to free phase hydrocarbon recovery operations undertaken at petroleum refineries, petroleum marketing terminals, petroleum bulk plants, petroleum pipelines, and petroleum transportation spill sites until January 25, 1993. This extension applies to recovery operations in existence, or for which contracts have been issued, on or before March 25, 1991. For ground water returned through infiltration galleries from such operations at petroleum refineries, marketing terminals, and bulk plants, this extension applies until October 2, 1991. New operations involving injection wells (beginning after March 25, 1991) will qualify for this compliance date extension (until January 25, 1993) only if:

- (a) Operations are performed pursuant to a written state agreement or order that includes a provision to assess the ground water and the need for further remediation once the free phase recovery is completed; and
 - (b) A copy of the written agreement or order has been submitted to "Ohio EPA, Division of Materials and Waste Management, P.O. ~~Box~~Box 1049, Columbus, OH" 43216-1049."
- (12) Used chlorofluorocarbon refrigerants from totally enclosed heat transfer equipment, including mobile air conditioning systems, mobile refrigeration, and commercial and industrial air conditioning and refrigeration systems that use chlorofluorocarbons as the heat transfer fluid in a refrigeration cycle, provided the refrigerant is reclaimed for further use.
- (13) Non-terne plated used oil filters that are not mixed with waste listed in rules 3745-51-30 to 3745-51-35 of the Administrative Code if these oil filters have been gravity hot-drained using one of the following methods:
- (a) Puncturing the filter anti-drain back valve or the filter dome end and hot-draining;
 - (b) Hot-draining and crushing;
 - (c) Dismantling and hot-draining; or
 - (d) Any other equivalent hot-draining method which will remove used oil.
- (14) Used oil re-refining distillation bottoms that are used as feedstock to manufacture asphalt products.
- (15) Leachate or gas condensate collected from landfills where certain wastes have been disposed, provided that:
- (a) The wastes disposed would meet one or more of the listing descriptions for the following:
 - (i) ~~The wastes disposed would meet one or more of the listing descriptions for~~ EPA hazardous waste numbers K169, K170, K171, and K172 if these wastes had been generated after February 8, 1999;

- ~~(ii) The wastes disposed would meet one or more of the listing descriptions for EPA hazardous waste numbers K174, K175, K176, K177, and K178, if these wastes had been generated after May 20, 2002;~~
 - ~~(iii) The wastes disposed would meet one or more of the listing descriptions for EPA hazardous waste number K181 if these wastes had been generated after August 23, 2005;~~
 - (b) The wastes described in the following:
 - (i) ~~The wastes described in paragraph~~Paragraph (B)(15)(a)(i) of this rule were disposed prior to February 8, 1999;
 - (ii) ~~The wastes described in paragraph~~Paragraph (B)(15)(a)(ii) of this rule were disposed prior to May 20, 2002;
 - (iii) ~~The wastes described in paragraph~~Paragraph (B)(15)(a)(iii) of this rule were disposed prior to August 23, 2005;
 - (c) The leachate or gas condensate do not exhibit any characteristic of hazardous waste nor are derived from any other listed hazardous waste;
 - (d) Discharge of the leachate or gas condensate, including leachate or gas condensate transferred from the landfill to a POTW by truck, rail, or dedicated pipe, is subject to regulation under Section 307(b) or Section 402 of the Clean Water Act.
 - (e) As of February 13, 2001, leachate or gas condensate derived from K169 to K172 is no longer exempt if it is stored or managed in a surface impoundment prior to discharge. After February 26, 2007, leachate or gas condensate derived from K181 will no longer be exempt if it is stored or managed in a surface impoundment prior to discharge. After November 21, 2003, leachate or gas condensate derived from K176, K177, and K178 will no longer be exempt if it is stored or managed in a surface impoundment prior to discharge. There is one exception: If the surface impoundment is used to temporarily store leachate or gas condensate in response to an emergency situation (e.g., shutdown of wastewater treatment system), provided the impoundment has a double liner, and provided the leachate or gas condensate is removed from the impoundment and continues to be managed in compliance with the conditions of this paragraph after the emergency ends.

(16) Reserved.

(17) Reserved.

(18) "Solvent-contaminated wipes," except for "wipes" (both terms are defined in rule 3745-50-10 of the Administrative Code) that are hazardous waste due to the presence of trichloroethylene, that are sent for disposal are not hazardous wastes from the point of generation provided that all of the following:

(a) The solvent-contaminated wipes, when accumulated, stored, and transported, are contained in non-leaking, closed containers that are labeled "Excluded Solvent-Contaminated Wipes." The containers shall be able to contain free liquids, should free liquids occur. During accumulation, a container is considered closed when there is complete contact between the fitted lid and the rim, except when it is necessary to add or remove solvent-contaminated wipes. When the container is full, or when the solvent-contaminated wipes are no longer being accumulated, or when the container is being transported, the container shall be sealed with all lids properly and securely affixed to the container and all openings tightly bound or closed sufficiently to prevent leaks and emissions.

(b) The solvent-contaminated wipes may be accumulated by the generator for up to one hundred eighty days from the start date of accumulation for each container prior to being sent for disposal.

(c) At the point of being transported for disposal, the solvent-contaminated wipes shall contain "no free liquids" as defined in rule 3745-50-10 of the Administrative Code.

(d) Free liquids removed from the solvent-contaminated wipes or from the container holding the wipes shall be managed according to the applicable rules in Chapters 3745-50 to 3745-273 of the Administrative Code.

(e) Generators shall maintain at the site all of the following documentation:

(i) Name and address of the landfill or combustor that is receiving the solvent-contaminated wipes.

(ii) Documentation that the one hundred eighty-day accumulation time limit in paragraph (B)(18)(b) of this rule is being met.

(iii) Description of the process the generator is using to ensure solvent-contaminated wipes contain no free liquids at the point of being transported for disposal.

(f) The solvent-contaminated wipes are sent directly according to any of the following:

(i) For disposal to a sanitary landfill regulated under Chapter 3745-27 of the Administrative code and that complies with rule 3745-27-08 of the Administrative code and is permitted, licensed, or otherwise authorized by Ohio, or is permitted, licensed, or otherwise authorized by another state that that allows the disposal of contaminated wipes in such landfill.

(ii) For disposal to a permitted hazardous waste landfill unit regulated under Chapters 3745-54 to 3745-57 and 3745-205 of the Administrative Code, including rule 3745-57-03 of the Administrative Code, or is an authorized hazardous waste landfill in another authorized state.

(iii) To a municipal waste combustor or other combustion facility regulated under Section 129 of the Clean Air Act or to a hazardous waste combustor, boiler, or industrial furnace regulated under Chapters 3745-54 to 3745-57 and 3745-205, or Chapters 3745-65 to 3745-69 and 3745-256, or rules 3745-266-100 to 3745-266-112 of the Administrative Code.

(C) Hazardous wastes which are exempted from certain rules. A hazardous waste which is generated in a product or raw material storage tank, a product or raw material transport vehicle or vessel, a product or raw material pipeline, or in a manufacturing process unit or an associated non-waste-treatment-manufacturing unit, is not subject to regulation under Chapters 3745-52 to 3745-256 or 3745-270 or rules 3745-50-40 to 3745-50-235 and Chapters 3745-52, 3745-53, 3745-54 to 3745-57, 3745-65 to 3745-69, 3745-205, 3745-256, and 3745-270 of the Administrative Code, or to the requirement to notify Ohio EPA or U.S. EPA of regulated waste activity, until it exits the unit in which it was generated, unless the unit is a surface impoundment, or unless the hazardous waste remains in the unit more than ninety days after the unit ceases to be operated for manufacturing, or for storage or transportation of product or raw materials.

(D) Samples.

(1) Except as provided in paragraph (D)(2) of this rule, a sample of waste or a sample of water, soil, or air, which is collected for the sole purpose of testing to determine its characteristics or composition, is not subject to ~~any requirements of Chapters 3745-51, 3745-52, 3745-53, 3745-54 to 3745-57, 3745-65 to 3745-69, 3745-205, 3745-256, 3745-266, or to~~ 3745-270 or rules 3745-50-40 to 3745-50-235 of the Administrative Code or to the requirement

to notify Ohio EPA or U.S. EPA of regulated waste activity, when:

- (a) The sample is being transported to a laboratory for the purpose of testing;
or
 - (b) The sample is being transported back to the sample collector after testing;
or
 - (c) The sample is being stored by the sample collector before transport to a laboratory for testing; or
 - (d) The sample is being stored in a laboratory before testing; or
 - (e) The sample is being stored in a laboratory after testing but before it is returned to the sample collector; or
 - (f) The sample is being stored temporarily in the laboratory after testing for a specific purpose (for example, until conclusion of a court case or enforcement action where further testing of the sample may be necessary).
- (2) In order to qualify for the exemption in paragraphs (D)(1)(a) and (D)(1)(b) of this rule, a sample collector shipping samples to a laboratory and a laboratory returning samples to a sample collector ~~must~~shall:
- (a) ~~Comply with~~ U.S. department of transportation (DOT), U.S. postal service (USPS), or any other applicable shipping requirements; or
 - (b) ~~Comply with~~Both of the following requirements if the sample collector determines that DOT, USPS, or other shipping requirements do not apply to the shipment of the sample.
 - (i) Assure that the following information accompanies the sample:
 - (a) The sample collector's name, mailing address, and telephone number;
 - (b) The laboratory's name, mailing address, and telephone number;
 - (c) The quantity of the sample;

- (b) The mass of each sample shipment does not exceed ten thousand kilograms; the ten thousand kilograms quantity may be all media contaminated with non-acute hazardous waste, or may include two thousand five hundred kilograms of media contaminated with acute hazardous waste, one thousand kilograms of hazardous waste, and one kilogram of acute hazardous waste; and
- (c) The sample ~~must~~shall be packaged so that it will not leak, spill, or vaporize from its packaging during shipment and the requirements of paragraph (E)(2)(c)(i) or (E)(2)(c)(ii) of this rule are met.
 - (i) The transportation of each sample shipment complies with DOT, USPS, or any other applicable shipping requirements: or
 - (ii) If the DOT, USPS, or other shipping requirements do not apply to the shipment of the sample, the following information ~~must~~shall accompany the sample:
 - (a) The name, mailing address, and telephone number of the originator of the sample;
 - (b) The name, address, and telephone number of the facility that will perform the treatability study;
 - (c) The quantity of the sample;
 - (d) The date of shipment; and
 - (e) A description of the sample, including its EPA hazardous waste number.
- (d) The sample is shipped to a laboratory or testing facility which is exempt under paragraph (F) of this rule or has an appropriate RCRA permit or interim status or, in Ohio, is operating under an Ohio hazardous waste permit or permit by rule.
- (e) The generator or sample collector maintains the following records for a period ending three years after completion of the treatability study:
 - (i) Copies of the shipping documents;

- (ii) A copy of the contract with the facility conducting the treatability study;
 - (iii) Documentation showing:
 - (a) The amount of waste shipped under this exemption;
 - (b) The name, address, and U.S. EPA identification number of the laboratory or testing facility that received the waste;
 - (c) The date the shipment was made; and
 - (d) Whether or not unused samples and residues were returned to the generator.
 - (f) The generator reports the information required under paragraph (E)(2)(e)(iii) of this rule in its ~~annual~~ biennial report (as required by rule 3745-52-41 of the Administrative Code).
- (3) The director may grant requests, on a case-by-case basis, for up to an additional two years for treatability studies involving bioremediation. The director may grant requests on a case-by-case basis for quantity limits in excess of those specified in paragraphs (E)(2)(a) and (E)(2)(b) and (F)(4) of this rule, for up to an additional five thousand kilograms of media contaminated with non-acute hazardous waste, five hundred kilograms of non-acute hazardous waste, two thousand five hundred kilograms of media contaminated with acute hazardous waste, and one kilogram of acute hazardous waste:
- (a) In response to requests for authorization to ship, store, and conduct treatability studies on additional quantities in advance of commencing treatability studies. Factors to be considered in reviewing such requests include the nature of the technology, the type of process (e.g., batch versus continuous), size of the unit undergoing testing (particularly in relation to scale-up considerations), the ~~time/quantity~~ time or quantity of material required to reach steady state operating conditions, or test design considerations such as mass balance calculations.
 - (b) In response to requests for authorization to ship, store, and conduct treatability studies on additional quantities after initiation or completion of initial treatability studies, when:

- (i) There has been an equipment or mechanical failure during the conduct of a treatability study;
 - (ii) There is a need to verify the results of a previously conducted treatability study;
 - (iii) There is a need to study and analyze alternative techniques within a previously evaluated treatment process; or
 - (iv) There is a need to do further evaluation of an ongoing treatability study to determine final specifications for treatment.
- (c) The additional quantities and timeframes allowed in paragraphs (E)(3)(a) and (E)(3)(b) of this rule are subject to all the provisions in paragraphs (E)(1) and (E)(2)(c) to (E)(2)(f) of this rule. The generator or sample collector ~~must~~shall apply to the director in writing and ~~must~~shall provide in writing the following information:
- (i) The reason why the generator or sample collector requires additional time or quantity of sample for treatability study evaluation, and the additional time or quantity needed;
 - (ii) Documentation accounting for all samples of hazardous waste from the waste stream which have been sent for or undergone treatability studies including the date each previous sample from the waste stream was shipped, the quantity of each previous shipment, the laboratory or testing facility to which it was shipped, what treatability study processes were conducted on each sample shipped, and the available results of each treatability study;
 - (iii) A description of the technical modifications or change in specifications which will be evaluated and the expected results;
 - (iv) If such further study is being required due to equipment or mechanical failure, the applicant ~~must~~shall include information regarding the reason for the failure or breakdown and also include what procedures or equipment improvements have been made to protect against further breakdowns; and
 - (v) Such other information that the director considers necessary.

(F) Samples undergoing treatability studies at laboratories and testing facilities. Samples undergoing treatability studies and the laboratory or testing facility conducting such treatability studies (to the extent such facilities are not otherwise subject to hazardous waste requirements) are not subject to ~~any requirement of Chapters 3745-51 to 3745-270 or rules 3745-50-40 to 3745-50-235, Chapters 3745-51, 3745-52, 3745-53, 3745-54 to 3745-57, 3745-65 to 3745-69, 3745-205, 3745-256, 3745-266, or 3745-270~~ of the Administrative Code or to requirement to notify Ohio EPA or U.S. EPA of regulated waste activity, provided that the conditions of paragraphs (F)(1) to (F)(11) of this rule are met. A mobile treatment unit (MTU) may qualify as a testing facility subject to paragraphs (F)(1) to (F)(11) of this rule. Where a group of MTUs are located at the same site, the limitations specified in paragraphs (F)(1) to (F)(11) of this rule apply to the entire group of MTUs collectively as if the group were one MTU.

- (1) No less than forty-five days before conducting treatability studies, the facility notifies the director in writing that it intends to conduct treatability studies under paragraphs (F) to (F)(11) of this rule.
- (2) The laboratory or testing facility conducting the treatability study has a U.S. EPA identification number.
- (3) No more than a total of ten thousand kilograms of "as received" media contaminated with non-acute hazardous waste, two thousand five hundred kilograms of media contaminated with acute hazardous waste, or two hundred fifty kilograms of other "as received" hazardous waste is subject to initiation of treatment in all treatability studies in any single day. "As received" waste refers to the waste as received in the shipment from the generator or sample collector.
- (4) The quantity of "as received" hazardous waste stored at the facility for the purpose of evaluation in treatability studies does not exceed ten thousand kilograms, the total of which can include ten thousand kilograms of media contaminated with non-acute hazardous waste, two thousand five hundred kilograms of media contaminated with acute hazardous waste, one thousand kilograms of non-acute hazardous wastes other than contaminated media, and one kilogram of acute hazardous waste. This quantity limitation does not include treatment materials (including nonhazardous waste) added to "as received" hazardous waste.

- (5) No more than ninety days have elapsed since the treatability study for the sample was completed, or no more than one year (two years for treatability studies involving bioremediation) have elapsed since the generator or sample collector shipped the sample to the laboratory or testing facility, whichever date first occurs. Up to five hundred kilograms of treated material from a particular waste stream from treatability studies may be archived for future evaluation up to five years from the date of initial receipt. Quantities of materials archived are counted against the total storage limit for the facility.
- (6) The treatability study does not involve the placement of hazardous waste on the land or open burning of hazardous waste.
- (7) The facility maintains records for three years following completion of each study that show compliance with the treatment rate limits and the storage time and quantity limits. The following specific information ~~must~~shall be included for each treatability study conducted:
 - (a) The name, address, and U.S. EPA identification number of the generator or sample collector of each waste sample;
 - (b) The date the shipment was received;
 - (c) The quantity of waste accepted;
 - (d) The quantity of "as received" waste in storage each day;
 - (e) The date the treatment study was initiated and the amount of "as received" waste introduced to treatment each day;
 - (f) The date the treatability study was concluded; and
 - (g) The date any unused sample or residues generated from the treatability study were returned to the generator or sample collector or, if sent to a designated facility, the name of the facility and the U.S. EPA identification number.
- (8) The facility keeps, on-site, a copy of the treatability study contract and all shipping papers associated with the transport of treatability study samples to and from the facility for a period ending three years from the completion date of each treatability study.

- (9) The facility prepares and submits a report to the director by March fifteenth of each year includes the following information for the previous calendar year:
- (a) The name, address, and U.S. EPA identification number of the facility conducting the treatability studies;
 - (b) The types (by process) of treatability studies conducted;
 - (c) The names and addresses of persons for whom studies have been conducted (including ~~their~~the U.S. EPA identification numbers);
 - (d) The total quantity of waste in storage each day;
 - (e) The quantity and types of waste subjected to treatability studies;
 - (f) When each treatability study was conducted; and
 - (g) The final disposition of residues and unused sample from each treatability study.
- (10) The facility determines whether any unused sample or residues generated by the treatability study are hazardous waste under rule 3745-51-03 of the Administrative Code and, if so, are subject to Chapters 3745-51 to 3745-270 and rules 3745-50-40 to 3745-50-235 ~~and Chapters 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, unless the residues and unused samples are returned to the sample originator under the exemption in paragraph (E) of this rule.
- (11) The facility notifies the director by letter when the facility is no longer planning to conduct any treatability studies at the site.
- (G) Dredged material that is not a hazardous waste. Dredged material that is subject to ~~the requirements of a permit that has been issued under section~~Section 404 of the federal water pollution control actFederal Water Pollution Control Act (33 U.S.C. 1344) or ~~section~~Section 103 of the marine protection, research, and sanctuaries actMarine Protection, Research, and Sanctuaries Act of 1972 (33 U.S.C. 1413) is not a hazardous waste. For paragraphs (G) to (G)(2)(c) of this rule, the following definitions apply:

- (1) The term "dredged material" has the same meaning as in 40 CFR 232.2;
- (2) The term "permit" means one of the following:
 - (a) A permit issued by the U.S. army corps of engineers (corps) or an approved state under ~~section~~Section 404 of the ~~federal water pollution control act~~Federal Water Pollution Control Act (33 U.S.C. 1344);
 - (b) A permit issued by the corps under ~~section~~Section 103 of the ~~marine protection, research, and sanctuaries act~~Marine Protection, Research, and Sanctuaries Act of 1972 (33 U.S.C. 1413); ~~or~~.
 - (c) In the case of corps civil works projects, the administrative equivalent of the permits referred to in paragraphs (G)(2)(a) and (G)(2)(b) of this rule, as provided for in corps regulations (for example, see 33 CFR 336.1, 336.2, and 337.6).

(H) Carbon dioxide stream injected for geologic sequestration. Carbon dioxide streams that are captured and transported for purposes of injection into an underground injection well subject to the requirements for "Class VI" underground injection control wells, including the requirements in 40 CFR Part 144 and 40 CFR Part 146 of the underground injection control program of the Safe Drinking Water Act, are not a hazardous waste, provided the conditions in 40 CFR 261.4(h) are met.

[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:

Five Year Review (FYR) Dates: 07/01/2015

Certification

Date

Promulgated Under: 119.03
Statutory Authority: 3734.12
Rule Amplifies: 3734.12
Prior Effective Dates: 04/15/1981, 05/22/1981 (Emer.), 08/26/1981 (Emer.),
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07/27/2001, 03/13/2002, 12/07/2004, 02/16/2009,
09/05/2010, 03/17/2012

RSFA Attachment A

Rule 3745-51-05 is amended as follows:		
Location	Change	Reason
(B)	remove "the requirements of"	a
(C)	remove "must" and add "shall"	b
(C)(4)	remove "the requirements of"	a
(C)(7)	after "characteristics" add "identified"	c
	remove "defined"	a
(E)	remove "set forth" and add "those"	a, c
(F)	remove "set forth"	a
	remove "must" and add "shall"	b
(F)(2)	remove "set forth"	a
(F)(3)(e)	remove "the requirements in"	a
(F)(3)(f)	remove "the provisions of"	a
(G)	remove "must" and add "shall"	b
	remove "requirements"	a
(G)(2)	remove "the requirements of"	a
(G)(3)(e)	remove "the requirements in"	a
(G)(3)(f)	remove "the provisions of"	a

- a Unnecessary wording is removed.
- b The change of "must" to "shall" is an LSC requirement.
- c Word choice correction.

This rule is submitted for 5-year review upon proposal. A new review date will be assigned.

3745-51-05 **Special requirements for hazardous waste generated by conditionally exempt small quantity generators.**

- (A) A generator is a conditionally exempt small quantity generator in a calendar month if he generates no more than one hundred kilograms of hazardous waste in that month.
- (B) Except for those wastes identified in paragraphs (E), (F), (G), and (J) of this rule, a conditionally exempt small quantity generator's hazardous wastes are not subject to regulation under Chapters 3745-52, 3745-53, 3745-54 to 3745-57, 3745-65 to 3745-69, 3745-205, 3745-256, 3745-266, or 3745-270 or rules 3745-50-40 to 3745-50-235 of the Administrative Code or the requirement to notify Ohio EPA or U.S. EPA of regulated waste activity, provided the generator complies with ~~the requirements~~ of paragraphs (F), (G), and (J) of this rule.
- (C) When making the quantity determinations of Chapters 3745-51 and 3745-52 of the Administrative Code, the generator ~~must~~shall include all hazardous waste that it generates, except hazardous waste that:
- (1) Is exempt from regulation under paragraphs (C) to (F) of rule 3745-51-04, paragraph (A)(3) of rule 3745-51-06, paragraph (A)(1) of rule 3745-51-07, or rule 3745-51-08 of the Administrative Code; or
 - (2) Is managed immediately upon generation only in "on-site elementary neutralization units," "wastewater treatment units," or "totally enclosed treatment facilities" as defined in rule 3745-50-10 of the Administrative Code; or
 - (3) Is recycled, without prior storage or accumulation, only in an on-site process subject to paragraph (C)(2) of rule 3745-51-06 of the Administrative Code; or
 - (4) Is used oil managed under ~~the requirements~~ of paragraph (A)(4) of rule 3745-51-06 and Chapter 3745-279 of the Administrative Code; or
 - (5) Is spent lead-acid batteries managed under rule 3745-266-80 of the Administrative Code; or
 - (6) Is universal waste managed under rule 3745-51-09 and Chapter 3745-273 of the Administrative Code;
 - (7) Is a hazardous waste that is an unused commercial chemical product (listed in rules 3745-51-30 to 3745-51-35 of the Administrative Code or exhibiting one or more characteristics identified in rules 3745-51-20 to 3745-51-24 of the

Administrative Code) that is generated solely as a result of a laboratory clean-out conducted at an eligible academic entity pursuant to rule 3745-52-213 of the Administrative Code. For purposes of this paragraph, the term "eligible academic entity" has the meaning as ~~defined~~ in rule 3745-52-200 of the Administrative Code.

(D) In determining the quantity of hazardous waste generated, a generator need not include:

- (1) Hazardous waste when it is removed from on-site storage; or,
- (2) Hazardous waste produced by on-site treatment (including reclamation) of his hazardous waste, in accordance with paragraphs (F)(3) and (G)(3) of this rule, so long as the hazardous waste that is treated was counted once; or
- (3) Spent materials that are generated, reclaimed, and subsequently reused on-site, so long as such spent materials have been counted once.

(E) If a generator generates acute hazardous waste in a calendar month in quantities greater than ~~set forth~~those in paragraphs (E)(1) and (E)(2) of this rule, all quantities of that acute hazardous waste are subject to full regulation under Chapters 3745-52, 3745-53, 3745-54 to 3745-57, 3745-65 to 3745-69, 3745-205, 3745-256, 3745-266, and 3745-270 and rules 3745-50-40 to 3745-50-235 of the Administrative Code, and the requirement to notify Ohio EPA or U.S. EPA of regulated waste activity:

- (1) A total of one kilogram of acute hazardous wastes listed in rule 3745-51-31 or paragraph (E) of rule 3745-51-33 of the Administrative Code;
- (2) A total of one hundred kilograms of any residue or contaminated soil, waste, or other debris resulting from the clean-up of a spill, into or on any land or water, of any acute hazardous wastes listed in rule 3745-51-31 or paragraph (E) of rule 3745-51-33 of the Administrative Code.

[Comment: "Full regulation" means those rules applicable to generators of one thousand kilograms or greater of hazardous waste in a calendar month.]

(F) In order for acute hazardous wastes generated by a generator of acute hazardous wastes in quantities equal to or less than those ~~set forth~~ in paragraph (E)(1) or (E)(2) of this rule to be excluded from full regulation under this rule, the generator ~~must~~shall comply with the following requirements:

- (1) Rule 3745-52-11 of the Administrative Code;
- (2) The generator may accumulate acute hazardous waste on-site. If he accumulates at any time acute hazardous wastes in quantities greater than those ~~set forth~~ in paragraph (E)(1) or (E)(2) of this rule, all of those accumulated wastes are subject to regulation under Chapters 3745-52, 3745-53, 3745-54 to 3745-57, 3745-65 to 3745-69, 3745-205, 3745-256, 3745-266, and 3745-270, and rules 3745-50-40 to 3745-50-235 of the Administrative Code, and the requirement to notify Ohio EPA or U.S. EPA of regulated waste activity. The time period of paragraph (A) of rule 3745-52-34 of the Administrative Code for accumulation of wastes on-site begins when the accumulated wastes exceed the applicable exclusion limit in paragraph (E)(1) or (E)(2) of this rule; and
- (3) A conditionally exempt small quantity generator may either treat or dispose of his acute hazardous waste in an on-site facility or ensure delivery to an off-site storage, treatment, or disposal facility, either of which, if located in the U.S., is:
 - (a) Permitted under rules 3745-50-40 to 3745-50-235 of the Administrative Code; or
 - (b) Operating under a permit by rule as described in paragraph (C) of rule 3745-50-40 of the Administrative Code; or
 - (c) Authorized to manage hazardous waste by a state with a hazardous waste management program approved under 40 CFR Part 271; or
 - (d) Permitted, licensed, or registered by a state other than Ohio to manage municipal solid waste and, if managed in a municipal solid waste landfill, is subject to 40 CFR Part 258 and applicable state law; or
 - (e) Permitted, licensed, or registered by a state other than Ohio to manage non-municipal non-hazardous waste and, if managed in a non-municipal non-hazardous waste disposal unit, is subject to ~~the requirements in~~ 40 CFR 257.5 to 40 CFR 257.30 and applicable state law; or

- (f) A facility which is operating under ~~the provisions of~~ paragraph (C)(2) of rule 3745-51-06 of the Administrative Code; or
 - (g) For universal waste managed under Chapter 3745-273 of the Administrative Code, a universal waste handler or destination facility subject to Chapter 3745-273 of the Administrative Code.
- (G) In order for hazardous waste generated by a conditionally exempt small quantity generator in quantities of one hundred kilograms or less of hazardous waste during a calendar month to be excluded from full regulation under this rule, the generator ~~must~~shall comply with the following ~~requirements~~:
- (1) Rule 3745-52-11 of the Administrative Code;
 - (2) The conditionally exempt small quantity generator may accumulate hazardous waste on-site. If he accumulates at any time one thousand kilograms or greater of his hazardous wastes, all of those accumulated wastes are subject to regulation under the special provisions of Chapter 3745-52 of the Administrative Code applicable to generators of greater than one hundred kilograms and less than one thousand kilograms of hazardous waste in a calendar month, as well as ~~the requirements of~~ Chapters 3745-53, 3745-54 to 3745-57, 3745-65 to 3745-69, 3745-205, 3745-256, 3745-266, and 3745-270 and rules 3745-50-40 to 3745-50-235 of the Administrative Code, and the requirement to notify Ohio EPA or U.S. EPA of regulated waste activity. The time period of paragraph (D) of rule 3745-52-34 of the Administrative Code for accumulation of wastes on-site begins for a conditionally exempt small quantity generator when the accumulated wastes equal or exceed one thousand kilograms;
 - (3) A conditionally exempt small quantity generator may either treat or dispose of his hazardous waste in an on-site facility, or ensure delivery to an off-site storage, treatment, or disposal facility, either of which, if located in the U.S., is:
 - (a) Permitted under rules 3745-50-40 to 3745-50-235 of the Administrative Code; or
 - (b) Operating under a permit by rule as described in paragraph (C) of rule 3745-50-40 of the Administrative Code; or
 - (c) Authorized to manage hazardous waste by a state with a hazardous waste management program approved under 40 CFR Part 271; or

- (d) Permitted, licensed, or registered by a state other than Ohio to manage municipal solid waste and, if managed in a municipal solid waste landfill, is subject to 40 CFR Part 258 and applicable state law; or
 - (e) Permitted, licensed, or registered by a state other than Ohio to manage non-municipal non-hazardous waste and, if managed in a non-municipal non-hazardous waste disposal unit, is subject to ~~the requirements in~~ 40 CFR 257.5 to 40 CFR 257.30 and applicable state law; or
 - (f) A facility which is operating under ~~the provisions of~~ paragraph (C)(2) of rule 3745-51-06 of the Administrative Code; or
 - (g) For universal waste managed under Chapter 3745-273 of the Administrative Code, a universal waste handler or destination facility subject to Chapter 3745-273 of the Administrative Code.
- (H) Hazardous waste subject to the reduced requirements of this rule may be mixed with non-hazardous waste and remain subject to these reduced requirements even though the resultant mixture exceeds the quantity limitations identified in this rule, unless the mixture meets any of the characteristics of hazardous waste identified in rules 3745-51-20 to 3745-51-24 of the Administrative Code.
- (I) If any person mixes a waste with a hazardous waste that exceeds a quantity exclusion level of this rule, the mixture is subject to full regulation.
- (J) If a conditionally exempt small quantity generator's wastes are mixed with used oil, the mixture is subject to Chapter 3745-279 of the Administrative Code. Any material produced from such a mixture by processing, blending, or other treatment is also so regulated.

[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:

Five Year Review (FYR) Dates: 07/01/2015

Certification

Date

Promulgated Under: 119.03
Statutory Authority: 3734.12
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10/20/1998, 12/07/2000, 07/27/2001, 03/13/2002,
12/07/2004, 02/16/2009, 09/05/2010, 03/17/2012

RSFA Attachment A

Rule 3745-51-06 is amended as follows:		
Location	Change	Reason
(A)	add text: "Recyclable materials."	a
(A)(2)(a)	remove the ending semicolon and add a period	b
(A)(2)(b)	remove the ending semicolon and add a period	b
(A)(2)(c)	remove the ending "; and" and add a period	b, c
(A)(3)(a)(i)	remove "must" and add "shall"	d
	remove the ending semicolon and add a period	b
(A)(3)(a)(ii)	remove "he" and add "the transporter"	e
	[2 times] remove "must" and add "shall"	d
(A)(3)(b)	remove the ending semicolon and add a period	b
(A)(3)(c)	remove the ending semicolon and add a period	b
(A)(3)(d)	add text: "Oil and fuel produced from oil-bearing hazardous wastes."	a
(A)(3)(d)(i)	remove the ending semicolon and add a period	b
(A)(3)(d)(ii)	remove the ending semicolon and add a period	b
(C)	add text: "Recyclable materials that are stored before being recycled, recycled without storage, or entered into a recycling process within seventy-two hours."	a
(C)(1)	remove "they" and add "the materials"	e
	remove "must" and add "shall"	d
(C)(2)	add "all of" before "the following"	f
(C)(2)(a)	remove the ending "; and" and add a period	b, c
(C)(3)	add text: "Limited storage prior to recycling."	a
(C)(3)(a)	after "as provided in" remove "paragraphs (A)(2)(a), (A)(2)(b), and (A)(2)(c)" and add "paragraph (A)(2)"	g
	add "all of" before "the following requirements"	f
(C)(3)(a)(i)	[2 times] remove "must" and add "shall"	d
	remove the ending semicolon and add a period	b
(C)(3)(a)(ii)	remove the ending semicolon and add a period	b

RSFA Attachment A

Rule 3745-51-06 is amended as follows:		
Location	Change	Reason
(C)(3)(a)(iii)	remove the ending semicolon and add a period	b
(C)(3)(a)(iv)	remove “3745-256-102” and add “3745-256-101”	g
	remove the ending semicolon and add a period	b
(C)(3)(a)(v)	remove the ending semicolon and add a period	b
(C)(3)(a)(vi)	remove the ending semicolon and add a period	b
(C)(3)(a)(vii)	remove the ending semicolon and add a period	b
(C)(3)(a)(viii)	-after “ignitable” add “wastes” -after “reactive” add “wastes”	h
	remove the ending semicolon and add a period	b
(C)(3)(a)(ix)	remove the ending semicolon and add a period	b
(C)(3)(a)(x)	remove the ending semicolon and add a period	b
(C)(3)(a)(xi)	remove the ending semicolon and add a period	b
(C)(3)(a)(xii)	remove the ending semicolon and add a period	b
(C)(3)(a)(xiii)(a)	remove the ending semicolon and add a period	b
(C)(3)(a)(xiii)(b)	remove the ending semicolon and add a period	b
(C)(3)(a)(xiii)(c)	remove the ending “; and” and add a period	b, c
(C)(3)(a)(xiii)(d)	remove the ending semicolon and add a period	b
(C)(3)(a)(xiv)	remove the ending semicolon and add a period	b
(C)(3)(a)(xv)	remove “annual” and add “biennial”	i
	remove the ending semicolon and add a period	b
(C)(3)(a)(xvi)	remove the ending semicolon and add a period	b
(C)(3)(a)(xvii)	remove the ending semicolon and add a period	b
(C)(3)(a)(xviii)	remove the ending semicolon and add a period	b
(C)(3)(a)(xix)- (C)(3)(a)(xix)(c)	remove existing paragraphs	j
(C)(3)(a)(xix)	add new paragraph	j
(C)(3)(a)(xx)	[2 times] remove “must” and add “shall”	d
	add “all of the following” before the colon	f

RSFA Attachment A

Rule 3745-51-06 is amended as follows:		
Location	Change	Reason
(C)(3)(a)(xx)(a)	remove the ending semicolon and add a period	b
(C)(3)(a)(xx)(b)	remove the ending semicolon and add a period	b
(C)(3)(a)(xx)(c)	remove the ending semicolon and add a period	b
(C)(3)(a)(xx)(d)	remove the ending semicolon and add a period	b
(C)(3)(a)(xx)(e)	remove “material(s)” and add “materials”	e
	remove the ending “; and” and add a period	b, c
(C)(3)(b)	after “as provided in” remove “paragraphs (A)(2)(a), (A)(2)(b), and (A)(2)(c)” and add “paragraph (A)(2)”	g

- a This amendment is designed to eliminate the occurrence of a paragraph designation that contains no text.
- b Punctuation correction.
- c Unnecessary text is removed.
- d The change of “must” to “shall” is an LSC requirement.
- e Word choice correction.
- f This amendment adds specificity to the provision.
- g Cross-reference correction.
- h Word choice correction, to complete the term. This amendment ensures that an electronic search of the hazardous waste rules for this type of waste will include this location in the search results.
- i Pursuant to SB294 (Senator Schaffer, 129th General Assembly), we are changing the “annual report” to a “biennial report” and correcting other text as necessary where the federal counterpart provision indicates a “biennial report.” These amendments improve the equivalence of the state rule to its federal counterpart (see 40 CFR 261.6).

RSFA Attachment A

Rule **3745-51-06** is amended as follows:

Location	Change	Reason
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- j These paragraphs reference the existing financial assurance rules, which were problematic to implement for the regulated community that uses this rule. The new (replacement) paragraph shows reference to a new financial assurance rule, 3745-51-100, that is being promulgated simultaneous to this amendment. That new financial assurance rule is designed for the regulated community that uses this rule, and resolves the problematic implementation issues.

This rule is submitted for 5-year review upon proposal. A new review date will be assigned.

3745-51-06

Requirements for recyclable materials.**(A) Recyclable materials.**

- (1) Hazardous wastes that are recycled are subject to the requirements for generators, transporters, and storage facilities of paragraphs (B) and (C) of this rule, except for the materials listed in paragraphs (A)(2), (A)(3), and (A)(4) of this rule. Hazardous wastes that are recycled will be known as "recyclable materials."
- (2) The following recyclable materials are not subject to the requirements of this rule but are regulated under Chapter 3745-266 of the Administrative Code and all applicable provisions of Chapter 3745-270 and rules 3745-50-40 to 3745-50-235 of the Administrative Code:
 - (a) Recyclable materials used in a manner constituting disposal (rules 3745-266-20 to 3745-266-23 of the Administrative Code);
 - (b) Hazardous wastes burned [as "burn" is defined in paragraph (A) of rule 3745-266-100 of the Administrative Code] for energy recovery in boilers and industrial furnaces that are not regulated under rules 3745-57-40 to 3745-57-51 or 3745-68-40 to 3745-68-52 of the Administrative Code (rules 3745-266-100 to 3745-266-112 of the Administrative Code);
 - (c) Recyclable materials from which precious metals are reclaimed (rule 3745-266-70 of the Administrative Code); ~~and,~~
 - (d) Spent lead-acid batteries that are being reclaimed (rule 3745-266-80 of the Administrative Code).
- (3) The following recyclable materials are not subject to regulation under rules 3745-50-40 to 3745-50-235 or Chapters 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, or 40 CFR Part 262 subpart E, and are not subject to the requirement to notify Ohio EPA or U.S. EPA of regulated waste activity:
 - (a) Industrial ethyl alcohol that is reclaimed except that, unless provided otherwise in an international agreement as specified in 40 CFR 262.58:
 - (i) A person initiating a shipment for reclamation in a foreign country, and any intermediary arranging for the shipment, ~~must~~shall

comply with the requirements applicable to a "primary exporter" in 40 CFR 262.53, 40 CFR 262.56(a)(1) to (a)(4), (a)(6), and (b) and 40 CFR 262.57, export such materials only upon consent of the "receiving country" and in conformance with the "EPA Acknowledgement of Consent" as defined in 40 CFR Part 262 subpart E, and provide a copy of the "EPA Acknowledgement of Consent" to the shipment to the transporter transporting the shipment for export;

[Comment 1: The terms "primary exporter," "receiving country," and "EPA Acknowledgement of Consent" are defined in 40 CFR 262.51.]

[Comment 2: 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 U.S. is solely regulated by the federal government.]

- (ii) A transporter transporting a shipment for export may not accept a shipment if ~~he~~the transporter knows the shipment does not conform to the "EPA Acknowledgement of Consent," ~~must~~shall ensure that a copy of the "EPA Acknowledgement of Consent" accompanies the shipment, and ~~must~~shall ensure that it is delivered to the facility designated by the person initiating the shipment.
- (b) Scrap metal that is not excluded under paragraph (A)(13) of rule 3745-51-04 of the Administrative Code;
- (c) Fuels produced from the refining of oil-bearing hazardous waste along with normal process streams at a petroleum refining facility, if such wastes result from normal petroleum refining, production, and transportation practices [this exemption does not apply to fuels produced from oil recovered from oil-bearing hazardous waste, where such recovered oil is already excluded under paragraph (A)(12)(b) of rule 3745-51-04 of the Administrative Code];
- (d) Oil and fuel produced from oil-bearing hazardous wastes.
 - (i) Hazardous waste fuel produced from oil-bearing hazardous wastes from petroleum refining, production, or transportation practices, or produced from oil reclaimed from such hazardous wastes,

where such hazardous wastes are reintroduced into a process that does not use distillation or does not produce products from crude oil so long as the resulting fuel meets the used oil specification under rule 3745-279-11 of the Administrative Code and so long as no other hazardous wastes are used to produce the hazardous waste fuel;

- (ii) Hazardous waste fuel produced from oil-bearing hazardous waste from petroleum refining production and transportation practices, where such hazardous wastes are reintroduced into a refining process after a point at which contaminants are removed, so long as the fuel meets the used oil fuel specification under rule 3745-279-11 of the Administrative Code;
 - (iii) Oil reclaimed from oil-bearing hazardous wastes from petroleum refining, production, and transportation practices, which reclaimed oil is burned as a fuel without reintroduction to a refining process, so long as the reclaimed oil meets the used oil specification under rule 3745-279-11 of the Administrative Code.
- (4) Used oil that is recycled and is also a hazardous waste solely because it exhibits a hazardous characteristic is not subject to the requirements of 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, but is regulated under Chapter 3745-279 of the Administrative Code. Used oil that is recycled includes any used oil which is reused, following its original use, for any purpose (including the purpose for which the oil was originally used). Such term includes, but is not limited to, oil which is re-refined, reclaimed, burned for energy recovery, or reprocessed.
- (5) Hazardous waste that is exported to or imported from designated member countries of the "Organization for Economic Cooperation and Development" (OECD) [as defined in 40 CFR 262.58(a)(1)] for purpose of recovery is subject to the requirements of 40 CFR Part 262 subpart H, if it is subject to either the federal manifesting requirements of 40 CFR Part 262, or to the universal waste management standards of Chapter 3745-273 of the Administrative Code.

(B) Generators and transporters of recyclable materials are subject to the applicable requirements of Chapters 3745-52 and 3745-53 of the Administrative Code, and the requirement to notify Ohio EPA or U.S. EPA of regulated waste activity, except as provided in paragraph (A) of this rule.

(C) Recyclable materials that are stored before being recycled, recycled without storage, or entered into a recycling process within seventy-two hours.

(1) Owners or operators of facilities that store recyclable materials before ~~they~~the materials are recycled ~~must~~shall obtain a hazardous waste installation and operation permit in accordance with Chapter 3734. of the Revised Code, except as provided in paragraph (C)(3)(a) of this rule, and are regulated under all applicable provisions of Chapters 3745-54, 3745-55, 3745-65, 3745-66, 3745-266, and 3745-270, and rules 3745-50-40 to 3745-50-235, 3745-56-20 to 3745-56-31, 3745-56-50 to 3745-56-59, 3745-67-20 to 3745-67-30, and 3745-67-50 to 3745-67-60 of the Administrative Code and the requirement to notify Ohio EPA or U.S. EPA of regulated waste activity, except as provided in paragraph (A) of this rule. (The recycling process itself is exempt from regulation.)

(2) Owners or operators of facilities that recycle recyclable materials without storing them before they are recycled are subject to all of the following requirements, except as provided in paragraph (A) of this rule:

(a) The requirement to notify Ohio EPA or U.S. EPA of regulated waste activity; ~~and~~.

(b) Rules 3745-65-71 and 3745-65-72 of the Administrative Code (dealing with the use of the manifest and manifest discrepancies).

(c) Reserved.

(3) Limited storage prior to recycling.

(a) Owners or operators of facilities that enter recyclable materials into a recycling process within seventy-two hours after arrival at the facility, except as provided in ~~paragraphs (A)(2)(a), (A)(2)(b), and (A)(2)(e)~~paragraph (A)(2) of this rule, may store recyclable materials in containers, tanks, or containment buildings without an Ohio hazardous waste permit, provided that all of the following requirements are met:

- (i) The notification and U.S. EPA identification number requirements of rule 3745-65-11 of the Administrative Code. A description of the recycling process ~~must~~shall be provided in the comments section of the notification form. The owner or operator ~~must~~shall renotify when there is a change in the recycling process or when the recycling operations cease;.
- (ii) The requirements for container management of rules 3745-66-71 to 3745-66-77 of the Administrative Code;.
- (iii) The requirements for tank management of rules 3745-66-90 to 3745-66-96, 3745-66-98, 3745-66-99, and paragraphs (A) and (B) of rule 3745-66-97 of the Administrative Code;.
- (iv) The requirements for containment buildings of rules 3745-256-100 to ~~3745-256-102~~3745-256-101 of the Administrative Code;.
- (v) The security requirements of rule 3745-65-14 of the Administrative Code;.
- (vi) The inspection requirements of rule 3745-65-15 of the Administrative Code;.
- (vii) The personnel training requirements of rule 3745-65-16 of the Administrative Code;.
- (viii) The requirements for ignitable wastes, reactive wastes, or incompatible wastes of rule 3745-65-17 of the Administrative Code;.
- (ix) The preparedness and prevention requirements of rules 3745-65-30 to 3745-65-37 of the Administrative Code;.
- (x) The contingency plan and emergency procedures requirements of rules 3745-65-50 to 3745-65-56 of the Administrative Code;.
- (xi) The manifest system, recordkeeping, and reporting requirements of rules 3745-65-70 to 3745-65-72 of the Administrative Code;.

- (xii) The operating record requirements of paragraphs (A) and (B)(3) to (B)(14) of rule 3745-65-73 of the Administrative Code;
- (xiii) Maintain an inventory log in the operating record containing this information for three years:
 - (a) The date and time when the recyclable material arrived at the facility;
 - (b) The quantity and type of material received;
 - (c) The name and address of the facility where the recyclable materials shipment originated; ~~and~~
 - (d) The date and time that the recyclable material was placed into the recycling process;
- (xiv) The availability, retention, and disposition of records requirements of rule 3745-65-74 of the Administrative Code;
- (xv) The ~~annual~~ biennial report requirements of rule 3745-65-75 of the Administrative Code;
- (xvi) The unmanifested waste report requirements of rule 3745-65-76 of the Administrative Code;
- (xvii) The additional reports requirements of rule 3745-65-77 of the Administrative Code;
- (xviii) The closure requirements of paragraphs (A) and (B) of rule 3745-66-11 and rule 3745-66-14 of the Administrative Code;
- ~~(xix) Demonstrate financial assurance for closure of the facility and liability coverage by submitting and maintaining these documents. The following documents must be approved by Ohio EPA prior to storing any material:
 - (a) A closure cost estimate that meets the requirements of rule 3745-66-42 of the Administrative Code;~~

~~(b) Financial assurance documentation that meets the requirements of rule 3745-66-43 of the Administrative Code; and~~

~~(c) Liability coverage documentation that demonstrates the coverage for sudden accidental occurrences requirements of rule 3745-66-47 of the Administrative Code.~~

(xix) The financial assurance requirements of rule 3745-51-100 of the Administrative Code.

(xx) The owner or operator ~~must~~shall give advance notice to the director of any anticipated noncompliance with the seventy-two hour time limit for storage. This notice ~~must~~shall contain all of the following:

(a) The cause of the anticipated noncompliance;₂

(b) The name, address, and telephone number of the owner or operator;₂

(c) The name, address, and telephone number of the facility;₂

(d) The date and time of the anticipated noncompliance;₂

(e) The name and quantity of ~~material(s)~~materials involved; ~~and~~.

(f) The estimated time frame for noncompliance.

(b) Owners or operators of facilities that do not enter recyclable materials into a recycling process within seventy-two hours after arrival at the facility, except as provided in ~~paragraphs (A)(2)(a), (A)(2)(b), and (A)(2)(e)~~paragraph (A)(2) of this rule, are subject to the requirements of paragraph (C)(1) of this rule.

(D) Reserved.

[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:

Five Year Review (FYR) Dates: 07/01/2015

Certification

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05/28/1987, 12/08/1988, 12/30/1989, 09/02/1997,
10/20/1998, 12/07/2000, 12/07/2004, 02/16/2009,
09/05/2010, 03/17/2012

RSFA Attachment A

Rule 3745-51-08 is amended as follows:		
Location	Change	Reason
title	after "under" add "the"	a
text	after "disposal of" add "polychlorinated biphenyl "	b
	add parentheses around the existing acronym "PCB"	c
ending [Note]	remove "Note" and add "Comment"	d

- a Missing word is added.
- b LSC requirement. Acronyms must be defined.
- c Punctuation correction.
- d Word choice correction. This amendment makes the text consistent with other locations of the similar text.

This rule is submitted for 5-year review upon proposal. A new review date will be assigned.

3745-51-08

PCB wastes regulated under the Toxic Substances Control Act.

The disposal of polychlorinated byphenyl (PCB)-containing dielectric fluids and electric equipment containing such fluids authorized for use and regulated under 40 CFR Part 761 and that are hazardous only because they fail the test for the toxicity characteristic leaching procedure (EPA hazardous waste numbers D018 to D043 only) are exempt from regulation under Chapters 3745-51, 3745-52, 3745-53, 3745-54 to 3745-57, 3745-65 to 3745-69, 3745-205, 3745-256, and 3745-270 of the Administrative Code, rules 3745-50-40 to 3745-50-235 of the Administrative Code, and the requirement to notify Ohio EPA or U.S. EPA of regulated waste activity.

[NoteComment: 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:

Five Year Review (FYR) Dates: 07/01/2015

Certification

Date

Promulgated Under: 119.03
Statutory Authority: 3734.12
Rule Amplifies: 3734.12
Prior Effective Dates: 02/11/1992, 12/07/2000, 12/07/2004, 02/16/2009

RSFA Attachment A

Rule 3745-51-10 is amended as follows:		
Location	Change	Reason
(B)(2)	after "through" remove "their"	a
	after "knowledge of" remove "their" and add "the"	b

a Unnecessary wording is removed.

b Word choice correction.

This rule is currently exempt, but due to a difference in the state (statutory) and the federal definitions of the term "solid waste" as used in the federal provision (40 CFR 261.10), this rule is submitted for 5-year review upon proposal. A new review date will be assigned.

3745-51-10

Criteria for identifying the characteristics of hazardous waste.

The director shall identify and define a characteristic of hazardous waste in rules 3745-51-20 to 3745-51-24 of the Administrative Code only upon determining that:

(A) A waste that exhibits the characteristic may:

- (1) Cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible illness; or
- (2) Pose a substantial present or potential hazard to human health or the environment when it is improperly treated, stored, transported, disposed of or otherwise managed; and

(B) The characteristic can be:

- (1) Measured by an available standardized test method which is reasonably within the capability of generators of waste or private sector laboratories that are available to serve generators of waste; or
- (2) Reasonably detected by generators of waste through ~~their~~ knowledge of ~~their~~the wastes.

Effective:

Five Year Review (FYR) Dates: 07/01/2015

Certification

Date

Promulgated Under: 119.03
Statutory Authority: 3734.12
Rule Amplifies: 3734.12
Prior Effective Dates: 04/15/1981, 05/22/1981 (Emer.), 08/26/1981 (Emer.),
12/02/1981, 05/29/1985 (Emer.), 08/29/1985,
10/20/1998

3745-51-11

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Appendix to rule 3745-51-11 of the Administrative Code

HAZARDOUS CONSTITUENTS

Common Name	Chemical Abstracts Name	Chemical Abstracts No.	EPA Haz. Waste No.
A2213	Ethanimidothioic acid, 2-(dimethylamino)-N-hydroxy-2-oxo-, methyl ester	30558-43-1	U394
Acetonitrile	Same	75-05-8	U003
Acetophenone	Ethanone, 1-phenyl-	98-86-2	U004
2-Acetylaminefluarone	Acetamide, N-9H-fluoren-2-yl-	53-96-3	U005
Acetyl chloride	Same	75-36-5	U006
1-Acetyl-2-thiourea	Acetamide, N-(aminothioxomethyl)-	591-08-2	P002
Acrolein	2-Propenal	107-02-8	P003
Acrylamide	2-Propenamamide	79-06-1	U007
Acrylonitrile	2-Propenenitrile	107-13-1	U009
Aflatoxins	Same	1402-68-2	----
Aldicarb	Propanal, 2-methyl-2-(methylthio)-, O-[(methylamino)carbonyl] oxime	116-06-3	P070
Aldicarb sulfone	Propanal, 2-methyl-2-(methylsulfonyl)-, O-[(methylamino)carbonyl] oxime	1646-88-4	P203
Alrin	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)-	309-00-2	P004
Allyl alcohol	2-Propen-1-ol	107-18-6	P005
Allyl chloride	1-Propane, 3-chloro	107-05-1	----
Aluminum phosphide	Same	20859-73-8	P006
4-Aminobiphenyl	[1,1'-Biphenyl]-4-amine	92-67-1	----
5-(Aminomethyl)- 3-isoxazolol	3(2H)-Isoxazolone, 5-(aminomethyl)-	2763-96-4	P007

Common Name	Chemical Abstracts Name	Chemical Abstracts No.	EPA Haz. Waste No.
4-Aminopyridine	4-Pyridinamine	504-24-5	P008
Amitrole	1H-1,2,4-Triazol-3-amine	61-82-5	U011
Ammonium vanadate	Vanadic acid, ammonium salt	7803-55-6	P119
Aniline	Benzenamine	62-53-3	U012
o-Anisidine (2-methoxyaniline)	Benzenamine, 2-Methoxy-	90-04-0	----
Antimony	Same	7440-36-0	----
Antimony compounds, N.O.S.*	-----	-----	----
Aramite	Sulfurous acid, 2-chloroethyl 2-[4-(1,1-dimethylethyl)phenoxy]-1- methylethyl ester	140-57-8	----
Arsenic	Same	7440-38-2	----
Arsenic compounds, N.O.S.*	-----	-----	----
Arsenic acid	Arsenic acid H_3AsO_4	7778-39-4	P010
Arsenic pentoxide	Arsenic oxide As_2O_5	1303-28-2	P011
Arsenic trioxide	Arsenic oxide As_2O_3	1327-53-3	P012
Auramine	Benzenamine, 4,4'-carbonimidoylbis[N,N-dimethyl	492-80-8	U014
Azaserine	L-Serine, diazoacetate (ester)	115-02-6	U015
Barban	Carbamic acid, (3-chlorophenyl)-, 4-chloro-2-butynyl ester	101-27-9	U280
Barium	Same	7440-39-3	----
Barium compounds, N.O.S.*	-----	-----	----
Barium cyanide	Same	542-62-1	P013

Common Name	Chemical Abstracts Name	Chemical Abstracts No.	EPA Haz. Waste No.
Bendiocarb	1,3-Benzodioxol-4-ol, 2,2-dimethyl-, methyl carbamate	22781-23-3	U278
Bendiocarb phenol	1,3-Benzodioxol-4-ol, 2,2-dimethyl-	22961-82-6	U364
Benomyl	Carbamic acid, [1-[(butylamino)carbonyl]-1Hbenzimidazol-2-yl]-, methyl ester	17804-35-2	U271
Benz[c]acridine	Same	225-51-4	U016
Benz[a]anthracene	Same	56-55-3	U018
Benzal chloride	Benzene, (dichloromethyl)-	98-87-3	U017
Benzene	Same	71-43-2	U019
Benzeneearsonic acid	Arsonic acid, phenyl-	98-05-5	----
Benzidine	[1,1'-Biphenyl]-4,4'-diamine	92-87-5	U021
Benzo[b]fluoranthene	Benz[e]acephenanthrylene	205-99-2	----
Benzo[j]fluoranthene	Same	205-82-3	----
Benzo(k)fluoranthene	Same	207-08-9	----
Benzo[a]pyrene	Same	50-32-8	U022
p-Benzoquinone	2,5-Cyclohexadiene-1,4-dione	106-51-4	U197
Benzotrichloride	Benzene, (trichloromethyl)-	98-07-7	U023
Benzyl chloride	Benzene, (chloromethyl)-	100-44-7	P028
Beryllium powder	Same	7440-41-7	P015
Beryllium compounds, N.O.S.*	-----	-----	----
Bis(pentamethylene)-thiuram tetrasulfide	Piperidine, 1,1'-(tetrathiodicarbonothioyl)-bis-	120-54-7	----
Butylate	Carbamothioic acid, bis(2-methylpropyl)-, S-ethyl ester	2008-41-5	----
Bromoacetone	2-Propanone, 1-bromo-	598-31-2	P017

Common Name	Chemical Abstracts Name	Chemical Abstracts No.	EPA Haz. Waste No.
Bromoform	Methane, tribromo-	75-25-2	U225
4-Bromophenyl phenyl ether	Benzene, 1-bromo-4-phenoxy-	101-55-3	U030
Brucine	Strychnidin-10-one, 2,3-dimethoxy-	357-57-3	P018
Butyl benzyl phthalate	1,2-Benzenedicarboxylic acid, butyl phenylmethyl ester	85-68-7	----
Cacodylic acid	Arsinic acid, dimethyl-	75-60-5	U136
Cadmium	Same	7440-43-9	----
Cadmium compounds, N.O.S.*	-----	-----	----
Calcium chromate	Chromic acid H ₂ CrO ₄ , calcium salt	13765-19-0	U032
Calcium cyanide	Calcium cyanide Ca(CN) ₂	592-01-8	P021
Carbaryl	1-Naphthalenol, methylcarbamate	63-25-2	U279
Carbendazim	Carbamic acid, 1H-benzimidazol-2-yl, methyl ester	10605-21-7	U372
Carbofuran	7-Benzofuranol, 2,3-dihydro-2,2-dimethyl-, methylcarbamate	1563-66-2	P127
Carbofuran phenol	7-Benzofuranol, 2,3-dihydro-2,2-dimethyl-	1563-38-8	U367
Carbon disulfide	Same	75-15-0	P022
Carbon oxyfluoride	Carbonic difluoride	353-50-4	U033
Carbon tetrachloride	Methane, tetrachloro-	56-23-5	U211
Carbosulfan	Carbamic acid, [(dibutylamino)thio] methyl-, 2,3-dihydro-2,2-dimethyl-7-benzofuranyl ester	55285-14-8	P189
Chloral	Acetaldehyde, trichloro-	75-87-6	U034
Chlorambucil	Benzenebutanoic acid, 4-[bis(2-chloroethyl)amino]-	305-03-3	U035

Common Name	Chemical Abstracts Name	Chemical Abstracts No.	EPA Haz. Waste No.
Chlordane	1,2,4,5,6,7,8,8-Octachloro-2,3,3a,4,7,7a-hexahydro-4,7-methano-1H-indene	57-74-9	U036
Chlordane (alpha and gamma isomers)	-----	-----	U036
Chlorinated benzenes, N.O.S.*	-----	-----	----
Chlorinated ethane, N.O.S.*	-----	-----	----
Chlorinated fluorocarbons, N.O.S.*	-----	-----	----
Chlorinated naphthalene, N.O.S.*	-----	-----	----
Chlorinated phenol, N.O.S.*	-----	-----	----
Chlornaphazin	Naphthalenamine, N,N'-bis(2-chloroethyl)-	494-03-1	U026
Chloroacetaldehyde	Acetaldehyde, chloro-	107-20-0	P023
Chloroalkyl ethers, N.O.S.*	-----	-----	----
p-Chloroaniline	Benzenamine, 4- chloro-	106-47-8	P024
Chlorobenzene	Benzene, chloro-	108-90-7	U037
Chlorobenzilate	Benzeneacetic acid, 4-chloro-alpha-(4-chlorophenyl)-alpha-hydroxy-, ethyl ester	510-15-6	U038
p-Chloro-m-cresol	Phenol, 4-chloro-3-methyl-	59-50-7	U039
2-Chloroethyl vinyl ether	Ethene, (2-chloroethoxy)-	110-75-8	U042
Chloroform	Methane, trichloro-	67-66-3	U044
Chloromethyl methyl ether	Methane, chloromethoxy-	107-30-2	U046
beta-Chloronaphthalene	Naphthalene, 2-chloro-	91-58-7	U047
o-Chlorophenol	Phenol, 2-chloro-	95-57-8	U048

Common Name	Chemical Abstracts Name	Chemical Abstracts No.	EPA Haz. Waste No.
1-(o-Chlorophenyl) thiourea	Thiourea, (2-chlorophenyl)-	5344-82-1	P026
Chloroprene	1,3-Butadiene, 2-chloro-	126-99-8	----
3-Chloropropionitrile	Propanenitrile, 3-chloro-	542-76-7	P027
Chromium	Same	7440-47-3	----
Chromium compounds, N.O.S.*	-----	-----	----
Chrysene	Same	218-01-9	U050
Citrus red No. 2	2-Naphthalenol, 1-[(2,5-dimethoxyphenyl)azo]-	6358-53-8	----
Coal tar creosote	Same	8007-45-2	----
Copper cyanide	Copper cyanide CuCN	544-92-3	P029
Copper dimethyldithiocarbamate	Copper, bis(dimethylcarbamo-dithioato-S,S')-	137-29-1	----
Creosote	Same	-----	U051
p-Cresidine	2-Methoxy-5-methylbenzenamine	120-71-8	----
Cresol (Cresylic acid)	Phenol, methyl-	1319-77-3	U052
Crotonaldehyde	2-Butenal	4170-30-3	U053
m-Cumenyl methylcarbamate	Phenol, 3-(methylethyl)-, methyl carbamate	64-00-6	P202
Cyanides (soluble salts and complexes) N.O.S.*	-----	-----	P030
Cyanogen	Ethanedinitrile	460-19-5	P031
Cyanogen bromide	Cyanogen bromide (CN)Br	506-68-3	U246
Cyanogen chloride	Cyanogen chloride (CN)Cl	506-77-4	P033
Cycasin	beta-D-Glucopyranoside, (methyl-ONN-azoxy)methyl	14901-08-7	----

Common Name	Chemical Abstracts Name	Chemical Abstracts No.	EPA Haz. Waste No.
Cycloate	Carbamothioic acid, cyclohexylethyl-, S-ethyl ester	1134-23-2	----
2-Cyclohexyl-4,6-dinitrophenol	Phenol, 2-cyclohexyl-4,6-dinitro-	131-89-5	P034
Cyclophosphamide	2H-1,3,2-Oxazaphosphorin-2-amine, N,N-bis(2-chloroethyl)tetrahydro-,2-oxide	50-18-0	U058
2,4-D	Acetic acid, (2,4-dichlorophenoxy)-	94-75-7	U240
2,4-D, salts, esters	-----	-----	U240
Daunomycin	5,12-Naphthacenedione, 8-acetyl-10-[(3-amino-2,3,6-trideoxy-alpha-L-lyxohexopyranosyl)oxy]-7,8,9,10-tetrahydro-6,8,11-trihydroxy-1-methoxy-, (8S-cis)-	20830-81-3	U059
Dazomet	2H-1,3,5-thiadiazine-2-thione, tetrahydro-3,5-dimethyl	533-74-4	----
DDD	Benzene, 1,1'-(2,2-dichloroethylidene)bis[4-chloro-	72-54-8	U060
DDE	Benzene, 1,1'-(dichloroethenylidene)bis[4-chloro-	72-55-9	----
DDT	Benzene, 1,1'-(2,2,2-trichloroethylidene)bis[4-chloro-	50-29-3	U061
Diallate	Carbamothioic acid, bis(1-methylethyl)-, -(2,3-dichloro-2-propenyl) ester	2303-16-4	U062
Dibenz[a,h]acridine	Same	226-36-8	----
Dibenz[a,j]acridine	Same	224-42-0	----
Dibenz[a,h]anthracene	Same	53-70-3	U063
7H-Dibenzo[c,g]carbazole	Same	194-59-2	----
Dibenzo[a,e]pyrene	Naphtho[1,2,3,4-def]chrysene	192-65-4	----
Dibenzo[a,h]pyrene	Dibenzo[b,def]chrysene	189-64-0	----
Dibenzo[a,i]pyrene	Benzo[rst]pentaphene	189-55-9	U064

Common Name	Chemical Abstracts Name	Chemical Abstracts No.	EPA Haz. Waste No.
1,2-Dibromo-3-chloropropane	Propane, 1,2-dibromo-3-chloro-	96-12-8	U066
Dibutyl phthalate	1,2-Benzenedicarboxylic acid, dibutyl ester	84-74-2	U069
o-Dichlorobenzene	Benzene, 1,2-dichloro-	95-50-1	U070
m-Dichlorobenzene	Benzene, 1,3-dichloro-	541-73-1	U071
p-Dichlorobenzene	Benzene, 1,4-dichloro-	106-46-7	U072
Dichlorobenzene, N.O.S.*	Benzene, dichloro-	25321-22-6	----
3,3'-Dichlorobenzidine	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dichloro-	91-94-1	U073
1,4-Dichloro-2-butene	2-Butene, 1,4-dichloro-	764-41-0	U074
Dichlorodifluoromethane	Methane, dichlorodifluoro-	75-71-8	U075
Dichloroethylene, N.O.S.*	Dichloroethylene	25323-30-2	----
1,1-Dichloroethylene	Ethene, 1,1-dichloro-	75-35-4	U078
1,2-Dichloroethylene	Ethene, 1,2-dichloro-, (E)-	156-60-5	U079
Dichloroethyl ether	Ethane, 1,1'-oxybis[2-chloro-	111-44-4	U025
Dichloroisopropyl ether	Propane, 2,2'-oxybis[2-chloro-	108-60-1	U027
Dichloromethoxy ethane	Ethane, 1,1'-[methylenebis(oxy)]bis[2-chloro-	111-91-1	U024
Dichloromethyl ether	Methane, oxybis[chloro-	542-88-1	P016
2,4-Dichlorophenol	Phenol, 2,4-dichloro-	120-83-2	U081
2,6-Dichlorophenol	Phenol, 2,6-dichloro-	87-65-0	U082
Dichlorophenylarsine	Arsonous dichloride, phenyl-	696-28-6	P036
Dichloropropane, N.O.S.*	Propane, dichloro-	26638-19-7	----
Dichloropropanol, N.O.S.*	Propanol, dichloro-	26545-73-3	----
Dichloropropene, N.O.S.*	1-Propene, dichloro-	26952-23-8	----
1,3-Dichloropropene	1-Propene, 1,3-dichloro-	542-75-6	U084

Common Name	Chemical Abstracts Name	Chemical Abstracts No.	EPA Haz. Waste No.
Dieldrin	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,2alpha,3beta,6beta,6alpha,7beta,7alpha)-	60-57-1	P037
1,2:3,4-Diepoxybutane	2,2'-Bioxirane	1464-53-5	U085
Diethylarsine	Arsine, diethyl-	692-42-2	P038
Diethylene glycol, dicarbamate	Ethanol, 2,2'-oxybis-, dicarbamate	5952-26-1	U395
1,4-Diethyleneoxide	1,4-Dioxane	123-91-1	U108
Diethylhexyl phthalate	1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester	117-81-7	U028
N,N'-Diethylhydrazine	Hydrazine, 1,2-diethyl-	1615-80-1	U086
O,O-Diethyl S-methyldithiophosphate	Phosphorodithioic acid, O,O-diethyl S-methyl ester	3288-58-2	U087
Diethyl-p-nitrophenyl phosphate	Phosphoric acid, diethyl 4-nitrophenyl ester	311-45-5	P041
Diethyl phthalate	1,2-Benzenedicarboxylic acid, diethyl ester	84-66-2	U088
O,O-Diethyl O-pyrazinyl phosphorothioate	Phosphorothioic acid, O,O-diethyl O-pyrazinyl ester	297-97-2	P040
Diethylstilbesterol	Phenol, 4,4'-(1,2-diethyl-1,2-ethenediyl)bis-(E)-	56-53-1	U089
Dihydrosafrole	1,3-Benzodioxole, 5-propyl-	94-58-6	U090
Diisopropylfluoro phosphate (DFP)	Phosphorofluoridic acid bis(1-methylethyl) ester	55-91-4	P043
Dimethoate	Phosphorodithioic acid, O,O-dimethyl S-[2-(methylamino)-2-oxoethyl] ester	60-51-5	P044
3,3'-Dimethoxybenzidine	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethoxy-	119-90-4	U091

Common Name	Chemical Abstracts Name	Chemical Abstracts No.	EPA Haz. Waste No.
p-Dimethylaminoazobenzene	Benzenamine, N,N-dimethyl-4-(phenylazo)-	60-11-7	U093
2,4-Dimethylaniline (2,4-xylidine)	Benzenamine, 2,4-dimethyl-	95-68-1	----
7,12-Dimethylbenz[a]anthracene	Benz[a]anthracene, 7,12-dimethyl-	57-97-6	U094
3,3'-Dimethylbenzidine	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethyl-	119-93-7	U095
Dimethylcarbamoyl chloride	Carbamic chloride, dimethyl-	79-44-7	U097
1,1-Dimethylhydrazine	Hydrazine, 1,1-dimethyl-	57-14-7	U098
1,2-Dimethylhydrazine	Hydrazine, 1,2-dimethyl-	540-73-8	U099
alpha,alpha-Dimethyl phenethylamine	Benzeneethanamine, alpha,alpha-dimethyl-	122-09-8	P046
2,4-Dimethylphenol	Phenol, 2,4-dimethyl-	105-67-9	U101
Dimethyl phthalate	1,2-Benzenedicarboxylic acid, dimethyl ester	131-11-3	U102
Dimethyl sulfate	Sulfuric acid, dimethyl ester	77-78-1	U103
Dimetilan	Carbamic acid, dimethyl-, 1-[(dimethylamino)carbonyl]-5-methyl-1-H-pyrazol-3-yl ester	644-64-4	P191
Dinitrobenzene, N.O.S.*	Benzene, dinitro-	25154-54-5	----
4,6-Dinitro-o-cresol	Phenol, 2-methyl-4,6-dinitro-	534-52-1	P047
4,6-Dinitro-o-cresol salts	-----	-----	P047
2,4-Dinitrophenol	Phenol, 2,4-dinitro-	51-28-5	P048
2,4-Dinitrotoluene	Benzene, 1-methyl-2,4-dinitro-	121-14-2	U105
2,6-Dinitrotoluene	Benzene, 2-methyl-1,3-dinitro-	606-20-2	U106
Dinoseb	Phenol, 2-(1-methylpropyl)-4,6-dinitro-	88-85-7	P020

Common Name	Chemical Abstracts Name	Chemical Abstracts No.	EPA Haz. Waste No.
Di-n-octyl phthalate	1,2-Benzenedicarboxylic acid, dioctyl ester	117-84-0	U017
Diphenylamine	Benzenamine, N-phenyl-	122-39-4	----
1,2-Diphenylhydrazine	Hydrazine, 1,2-diphenyl-	122-66-7	U109
Di-n-propylnitrosamine	1-Propanamine, N-nitroso-N-propyl-	621-64-7	U111
Disulfiram	Thioperoxydicarbonic diamide, tetraethyl	97-77-8	----
Disulfoton	Phosphorodithioic acid, O,O-diethyl S-[2-(ethylthio)ethyl] ester	298-04-4	P039
Dithiobiuret	Thioimidodicarbonic diamide [(H ₂ N)C(S)] ₂ NH	541-53-7	P049
Endosulfan	6,9-Methano-2,4,3-benzodioxathiepin, 6,7,8,9,10,10-hexachloro-1,5,5a,6,9,9a-hexahydro-, 3-oxide	115-29-7	P050
Endothall	7-Oxabicyclo[2.2.1]heptane-2,3-dicarboxylic acid	145-73-3	P088
Endrin	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)-	72-20-8	P051
Endrin metabolites	-----	-----	P051
Epichlorohydrin	Oxirane, (chloromethyl)-	106-89-8	U041
Epinephrine	1,2-Benzenediol, 4-[1-hydroxy-2-(methylamino)ethyl]-, (R)-	51-43-4	P042
EPTC	Carbamothioic acid, dipropyl-, S-ethyl ester	759-94-4	----
Ethyl carbamate (urethane)	Carbamic acid, ethyl ester	51-79-6	U238
Ethyl cyanide	Propanenitrile	107-12-0	P101
Ethyl ziram	Zinc, bis(diethylcarbamodithioato-S,S')-	14324-55-1	----
Ethylenebisdithiocarbamic acid	Carbamodithioic acid, 1,2-ethanediybis-	111-54-6	U114

Common Name	Chemical Abstracts Name	Chemical Abstracts No.	EPA Haz. Waste No.
Ethylenebisdithiocarbamic acid, salts and esters	-----	-----	U114
Ethylene dibromide	Ethane, 1,2-dibromo-	106-93-4	U067
Ethylene dichloride	Ethane, 1,2-dichloro-	107-06-2	U077
Ethylene glycol monoethyl ether	Ethanol, 2-ethoxy-	110-80-5	U359
Ethyleneimine	Aziridine	151-56-4	P054
Ethylene oxide	Oxirane	75-21-8	U115
Ethylenethiourea	2-Imidazolidinethione	96-45-7	U116
Ethylidene dichloride	Ethane, 1,1-dichloro-	75-34-3	U076
Ethyl methacrylate	2-Propenoic acid, 2-methyl-, ethyl ester	97-63-2	U118
Ethyl methanesulfonate	Methanesulfonic acid, ethyl ester	62-50-0	U119
Famphur	Phosphorothioic acid, O-[4-[(dimethylamino)sulfonyl]phenyl] O,O-dimethyl ester	52-85-7	P097
Ferbam	Iron, tris(dimethylcarbamo-dithioat-S,S')-,	14484-64-1	----
Fluoranthene	Same	206-44-0	U120
Fluorine	Same	7782-41-4	P056
Fluoroacetamide	Acetamide, 2-fluoro-	640-19-7	P057
Fluoroacetic acid, sodium salt	Acetic acid, fluoro-, sodium salt	62-74-8	P058
Formaldehyde	Same	50-00-0	U122
Formetanate hydrochloride	Methanimidamide, N,N-dimethyl-N'-[3-[[[(methylamino)carbonyl]oxy]phenyl]-, monohydrochloride	23422-53-9	P198
Formic acid	Same	64-18-6	U123

Common Name	Chemical Abstracts Name	Chemical Abstracts No.	EPA Haz. Waste No.
Formparanate	Methanimidamide, N,N-dimethyl-N'-[2-methyl-4-[[[(methylamino)carbonyl]oxy]phenyl]-	17702-57-7	P197
Glycidylaldehyde	Oxiranecarboxyaldehyde	765-34-4	U126
Halomethanes, N.O.S.*	-----	-----	----
Heptachlor	4,7-Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro-	76-44-8	P059
Heptachlor epoxide	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)-	1024-57-3	----
Heptachlor epoxide (alpha, beta, and gamma isomers)	-----	-----	----
Heptachlorodibenzofurans	-----	-----	----
Heptachlorodibenzo-p-dioxins	-----	-----	----
Hexachlorobenzene	Benzene, hexachloro-	118-74-1	U127
Hexachlorobutadiene	1,3-Butadiene, 1,1,2,3,4,4-hexachloro-	87-68-3	U128
Hexachlorocyclopentadiene	1,3-Cyclopentadiene, 1,2,3,4,5,5-hexachloro-	77-47-4	U130
Hexachlorodibenzo-p-dioxins	-----	-----	----
Hexachlorodibenzofurans	-----	-----	----
Hexachloroethane	Ethane, hexachloro-	67-72-1	U131
Hexachlorophene	Phenol, 2,2'-methylenebis[3,4,6-trichloro-	70-30-4	U132
Hexachloropropene	1-Propene, 1,1,2,3,3,3-hexachloro-	1888-71-7	U243
Hexaethyltetraphosphate	Tetraphosphoric acid, hexaethyl ester	757-58-4	P062
Hydrazine	Same	302-01-2	U133
Hydrogen cyanide	Hydrocyanic acid	74-90-8	P063

Common Name	Chemical Abstracts Name	Chemical Abstracts No.	EPA Haz. Waste No.
Hydrogen fluoride	Hydrofluoric acid	7664-39-3	U134
Hydrogen sulfide	Hydrogen sulfide H ₂ S	7783-06-4	U135
Indeno[1,2,3-cd]pyrene	Same	193-39-5	U137
3-Iodo-2-propynyl n-butylcarbamate	Carbamic acid, butyl-, 3-iodo-2-propynyl ester	55406-53-6	----
Isobutyl alcohol	1-Propanol, 2-methyl-	78-83-1	U140
Isodrin	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)-	465-73-6	P060
Isolan	Carbamic acid, dimethyl-, 3-methyl-1- (1-methylethyl)-1H-pyrazol-5-yl ester	119-38-0	P192
Isosafrole	1,3-Benzodioxole, 5-(1-propenyl)-	120-58-1	U141
Kepone	1,3,4-Metheno-2H-cyclobuta[cd] pentalen-2-one, 1,1a,3,3a,4,5,5,5a,5b,6- decachlorooctahydro-	143-50-0	U142
Lasiocarpine	2-Butenoic acid, 2-methyl-, 7- [[2,3-dihydroxy-2-(1-methoxyethyl)-3- methyl-1-oxobutoxy]methyl]-2,3,5,7a- tetrahydro-1H-pyrrolizin-1-yl ester, [1S-[1alpha(Z),7-(2S*,3R*),7aalpha]]-	303-34-4	U143
Lead	Same	7439-92-1	----
Lead compounds, N.O.S.*	-----	-----	----
Lead acetate	Acetic acid, lead(2+) salt	301-04-2	U144
Lead phosphate	Phosphoric acid, lead(2+) salt (2:3)	7446-27-7	U145
Lead subacetate	Lead, bis(acetato-O)-tetrahydroxytri-	1335-32-6	U146
Lindane	Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha,2alpha,3beta,4alpha,5alpha, 6beta)-	58-89-9	U129
Maleic anhydride	2,5-Furandione	108-31-6	U147

Common Name	Chemical Abstracts Name	Chemical Abstracts No.	EPA Haz. Waste No.
Maleic hydrazide	3,6-Pyridazinedione, 1,2-dihydro-	123-33-1	U148
Malononitrile	Propanedinitrile	109-77-3	U149
Manganese dimethyldithiocarbamate	Manganese, bis(dimethylcarbamo-dithioato-S,S')-	15339-36-3	P196
Melphalan	L-Phenylalanine, 4-[bis(2-chloroethyl)aminol]-	148-82-3	U150
Mercury	Same	7439-97-6	U151
Mercury compounds, N.O.S.*	-----	-----	----
Mercury fulminate	Fulminic acid, mercury(2+) salt	628-86-4	P065
Metam sodium	Carbamodithioic acid, methyl-, monosodium salt	137-42-8	----
Methacrylonitrile	2-Propenenitrile, 2-methyl-	126-98-7	U152
Methapyrilene	1,2-Ethanediamine, N,N-dimethyl-N'-2-pyridinyl-N'-(2-thienylmethyl)-	91-80-5	U155
Methiocarb	Phenol, (3,5-dimethyl-4-(methylthio)-, methylcarbamate	2032-65-7	P199
Methomyl	Ethanimidothioic acid, N-[[[(methylamino)carbonyl]oxy]-, methyl ester	16752-77-5	P066
Methoxychlor	Benzene, 1,1'-(2,2,2-trichloroethylidene)bis[4-methoxy-	72-43-5	U247
Methyl bromide	Methane, bromo-	74-83-9	U029
Methyl chloride	Methane, chloro-	74-87-3	U045
Methyl chlorocarbonate	Carbonochloridic acid, methyl ester	79-22-1	U156
Methyl chloroform	Ethane, 1,1,1-trichloro-	71-55-6	U226
3-Methylcholanthrene	Benz[j]aceanthrylene, 1,2-dihydro-3-methyl-	56-49-5	U157

Common Name	Chemical Abstracts Name	Chemical Abstracts No.	EPA Haz. Waste No.
4,4'-Methylenebis (2-chloroaniline)	Benzenamine, 4,4'-methylenebis[2-chloro-	101-14-4	U158
Methylene bromide	Methane, dibromo-	74-95-3	U068
Methylene chloride	Methane, dichloro-	75-09-2	U080
Methyl ethyl ketone (MEK)	2-Butanone	78-93-3	U159
Methyl ethyl ketone peroxide	2-Butanone, peroxide	1338-23-4	U160
Methyl hydrazine	Hydrazine, methyl-	60-34-4	P068
Methyl iodide	Methane, iodo-	74-88-4	U138
Methyl isocyanate	Methane, isocyanato-	624-83-9	P064
2-Methylactonitrile	Propanenitrile, 2-hydroxy-2-methyl-	75-86-5	P069
Methyl methacrylate	2-Propenoic acid, 2-methyl-, methyl ester	80-62-6	U162
Methylmethanesulfonate	Methanesulfonic acid, methyl ester	66-27-3	----
Methyl parathion	Phosphorothioic acid, O,O-dimethyl O-(4-nitrophenyl) ester	298-00-0	P071
Methylthiouracil	4(1H)-Pyrimidinone, 2,3-dihydro-6-methyl-2-thioxo-	56-04-2	U164
Metolcarb	Carbamic acid, methyl-, 3-methylphenyl ester	1129-41-5	P190
Mexacarbate	Phenol, 4-(dimethylamino)-3,5-dimethyl-, methylcarbamate (ester)	315-18-4	P128
Mitomycin C	Azirino[2',3':3,4]pyrrolo[1,2-a]indole-4,7-dione,6-amino-8-[[aminocarbonyl]oxy]methyl]-1,1a,2,8,8a,8b-hexahydro-8a-methoxy-5-methyl-, [1aS-(1aalpha,8beta,8aalpha,8balph)]-	50-07-7	U010
MNNG	Guanidine, N-methyl-N'-nitro-N-nitroso-	70-25-7	U163
Molinate	1H-Azepine-1-carbothioic acid, hexahydro-, S-ethyl ester	2212-67-1	----

Common Name	Chemical Abstracts Name	Chemical Abstracts No.	EPA Haz. Waste No.
Mustard gas	Ethane, 1,1'-thiobis[2-chloro-	505-60-2	----
Naphthalene	Same	91-20-3	U165
1,4-Naphthoquinone	1,4-Naphthalenedione	130-15-4	U166
alpha-Naphthylamine	1-Naphthalenamine	134-32-7	U167
beta-Naphthylamine	2-Naphthalenamine	91-59-8	U168
alpha-Naphthylthiourea	Thiourea, 1-naphthalenyl-	86-88-4	P072
Nickel	Same	7440-02-0	----
Nickel compounds, N.O.S.*	-----	-----	----
Nickel carbonyl	Nickel carbonyl Ni(CO) ₄ , (T-4)-	13463-39-3	P073
Nickel cyanide	Nickel cyanide Ni(CN) ₂	557-19-7	P074
Nicotine	Pyridine, 3-(1-methyl-2-pyrrolidinyl)-,(S)-	54-11-5	P075
Nicotine salts	-----	-----	P075
Nitric oxide	Nitrogen oxide NO	10102-43-9	P076
p-Nitroaniline	Benzenamine, 4-nitro-	100-01-6	P077
Nitrobenzene	Benzene, nitro-	98-95-3	U169
Nitrogen dioxide	Nitrogen oxide NO ₂	10102-44-0	P078
Nitrogen mustard	Ethanamine, 2-chloro-N-(2-chloroethyl)-N-methyl-	51-75-2	----
Nitrogen mustard, hydrochloride salt	-----	-----	----
Nitrogen mustard N-oxide	Ethanamine, 2-chloro-N-(2-chloroethyl)- N-methyl-, N-oxide	126-85-2	----
Nitrogen mustard, n-oxide, hydrochloride salt	-----	-----	----
Nitroglycerin	1,2,3-Propanetriol, trinitrate	55-63-0	P081
p-Nitrophenol	Phenol, 4-nitro-	100-02-7	U170

Common Name	Chemical Abstracts Name	Chemical Abstracts No.	EPA Haz. Waste No.
2-Nitropropane	Propane, 2-nitro-	79-46-9	U171
Nitrosamines, N.O.S.*	-----	35576-91-1	----
N-Nitrosodi-n-butylamine	1-Butanamine, N-butyl-N-nitroso-	924-16-3	U172
N-Nitrosodiethanolamine	Ethanol, 2,2'-(nitrosoimino)bis-	1116-54-7	U173
N-Nitrosodiethylamine	Ethanamine, N-ethyl-N-nitroso-	55-18-5	U174
N-Nitrosodimethylamine	Methanamine, N-methyl-N-nitroso-	62-75-9	P082
N-Nitroso-N-ethylurea	Urea, N-ethyl-N-nitroso-	759-73-9	U176
N-Nitrosomethylethylamine	Ethanamine, N-methyl-N-nitroso-	10595-95-6	----
N-Nitroso-N-methylurea	Urea, N-methyl-N-nitroso-	684-93-5	U177
N-Nitroso-N-methylurethane	Carbamic acid, methylnitroso-, ethyl ester	615-53-2	U178
N-Nitrosomethylvinylamine	Vinylamine, N-methyl-N-nitroso-	4549-40-0	P084
N-Nitrosomorpholine	Morpholine, 4-nitroso-	59-89-2	----
N-Nitrosornicotine	Pyridine, 3-(1-nitroso-2-pyrrolidinyl)-,(S)-	16543-55-8	----
N-Nitrosopiperidine	Piperidine, 1-nitroso-	100-75-4	U179
N-Nitrosopyrrolidine	Pyrrolidine, 1-nitroso-	930-55-2	U180
N-Nitrososarcosine	Glycine, N-methyl-N-nitroso-	13256-22-9	----
5-Nitro-o-toluidine	Benzenamine, 2-methyl-5-nitro-	99-55-8	U181
Octachlorodibenzo-p-dioxin (OCDD)	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	----
Octachlorodibenzofuran (OCDF)	1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	----
Octamethylpyrophosphoramidate	Diphosphoramidate, octamethyl-	152-16-9	P085
Osmium tetroxide	Osmium oxide OsO ₄ , (T-4)-1,3,5-	20816-12-0	P087

Common Name	Chemical Abstracts Name	Chemical Abstracts No.	EPA Haz. Waste No.
Oxamyl	Ethanimidothioic acid, 2-(dimethylamino)-N-[[[(methylamino)carbonyl]oxy]-2-oxo-, methyl ester	23135-22-0	P194
Paraldehyde	Trioxane, 2,4,6-trimethyl-	123-63-7	U182
Parathion	Phosphorothioic acid, O,O-diethyl O-(4-nitrophenyl) ester	56-38-2	P089
Pebulate	Carbamothioic acid, butylethyl-, S-propyl ester	1114-71-2	----
Pentachlorobenzene	Benzene, pentachloro-	608-93-5	U183
Pentachlorodibenzo-p-dioxins	-----	-----	----
Pentachlorodibenzofurans	-----	-----	----
Pentachloroethane	Ethane, pentachloro-	76-01-7	U184
Pentachloronitrobenzene (PCNB)	Benzene, pentachloronitro-	82-68-8	U185
Pentachlorophenol	Phenol, pentachloro-	87-86-5	See F027
Phenacetin	Acetamide, N-(4-ethoxyphenyl)-	62-44-2	U187
Phenol	Same	108-95-2	U188
Phenylenediamine	Benzenediamine	25265-76-3	----
1,2-Phenylenediamine	1,2-Benzenediamine	95-54-5	----
1,3-Phenylenediamine	1,3-Benzenediamine	108-45-2	----
Phenylmercury acetate	Mercury, (acetato-O)phenyl-	62-38-4	P092
Phenylthiourea	Thiourea, phenyl-	103-85-5	P093
Phosgene	Carbonic dichloride	75-44-5	P095
Phosphine	Same	7803-51-2	P096
Phorate	Phosphorodithioic acid, O,O-diethyl S-[(ethylthio)methyl] ester	298-02-2	P094

Common Name	Chemical Abstracts Name	Chemical Abstracts No.	EPA Haz. Waste No.
Phthalic acid esters, N.O.S.*	-----	-----	----
Phthalic anhydride	1,3-Isobenzofurandione	85-44-9	U190
Physostigmine	Pyrrolo[2,3-b]indol-5-01, 1,2,3,3a,8,8a-hexahydro-1,3a,8-trimethyl-, methylcarbamate (ester),)3aS-cis)-	57-47-6	P204
Physostigmine salicylate	Benzoic acid, 2-hydroxy-, compd. with (3aS-cis)-1,2,3,3a,8,8a-hexahydro-1,3a,8-trimethylpyrrolo[2,3-b]indol-5-yl methylcarbamate ester (1:1)	57-64-7	P188
2-Picoline	Pyridine, 2-methyl-	109-06-8	U191
Polychlorinated biphenyls, N.O.S.*	-----	-----	----
Potassium cyanide	Potassium cyanide K(CN)	151-50-8	P098
Potassium dimethyldithiocarbamate	Carbamodithioic acid, dimethyl, potassium salt	128-03-0	----
Potassium n-hydroxymethyl-n-methyl-dithiocarbamate	Carbamodithioic acid, (hydroxymethyl)methyl-, monopotassium salt	51026-28-9	----
Potassium n-methyldithiocarbamate	Carbamodithioic acid, methyl-monopotassium salt	137-41-7	----
Potassium pentachlorophenate	Pentachlorophenol, potassium salt	7778736	None
Potassium silver cyanide	Argentate(1-), bis(cyano-C)-, potassium	506-61-6	P099
Promecarb	Phenol, 3-methyl-5-(1-methylethyl)-, methyl carbamate	2631-37-0	P201
Pronamide	Benzamide,5-dichloro-N-(1,1-dimethyl-2-propynyl)-	23950-58-5	U192
1,3-Propane sultone	1,2-Oxathiolane, 2,2-dioxide	1120-71-4	U193

Common Name	Chemical Abstracts Name	Chemical Abstracts No.	EPA Haz. Waste No.
Propham	Carbamic acid, phenyl-, 1-methylethyl ester	122-42-9	U373
Propoxur	Phenol, 2-(1-methylethoxy)-, methylcarbamate	114-26-1	U411
n-Propylamine	1-Propanamine	107-10-8	U194
Propargyl alcohol	2-Propyn-1-ol	107-19-7	P102
Propylene dichloride	propane, 1,2-dichloro-	78-87-5	U083
1,2-Propylenimine	Aziridine, 2-methyl-	75-55-8	P067
Propylthiouracil	4(1H)-Pyrimidinone, 2,3-dihydro-6-propyl-2-thioxo-	51-52-5	----
Prosulfocarb	Carbamothioic acid, dipropyl-, S-(phenylmethyl) ester	52888-80-9	U387
Pyridine	Same	110-86-1	U196
Reserpine	Yohimban-16-carboxylic acid, 1,17-dimethoxy- 18-[(3,4,5-trimethoxybenzoyl)oxy]-,methyl ester, (3beta,16beta,17alpha,18beta,20alpha)-	50-55-5	U200
Resorcinol	1,3-Benzenediol	108-46-3	U201
Saccharin	1,2-Benzisothiazol-3(2H)-one, 1,1-dioxide	81-07-2	U202
Saccharin salts	-----	-----	U202
Safrole	1,3-Benzodioxole, 5-(2-propenyl)-	94-59-7	U203
Selenium	Same	7782-49-2	----
Selenium compounds, N.O.S.*	-----	-----	----
Selenium dioxide	Selenious acid	7783-00-8	U204
Selenium sulfide	Selenium sulfide SeS ₂	7488-56-4	U205

Common Name	Chemical Abstracts Name	Chemical Abstracts No.	EPA Haz. Waste No.
Selenium, tetrakis (dimethyl-dithiocarbamate)	Carbamodithioic acid, dimethyl-, tetraanhydrosulfide with orthothioselenious acid	144-34-3	----
Selenourea	Same	630-10-4	P103
Silver	Same	7440-22-4	----
Silver compounds, N.O.S.*	-----	-----	----
Silver cyanide	Silver cyanide Ag(CN)	506-64-9	P104
Silvex (2,4,5-TP)	Propanoic acid, 2-(2,4,5-trichlorophenoxy)-	93-72-1	See F027
Sodium cyanide	Sodium cyanide Na(CN)	143-33-9	P106
Sodium dibutyldithiocarbamate	Carbamodithioic acid, dibutyl-, sodium salt	136-30-1	----
Sodium diethyldithiocarbamate	Carbamodithioic acid, diethyl-, sodium salt	148-18-5	----
Sodium dimethyldithiocarbamate	Carbamodithioic acid, dimethyl-, sodium salt	128-04-1	----
Sodium pentachlorophenate	Pentachlorophenol, sodium salt	131522	None
Streptozotocin	D-Glucose, 2-deoxy-2-[[[(methylnitrosoamino)carbonyl]amino]-	18883-66-4	U206
Strychnine	Strychnidin-10-one	57-24-9	P108
Strychnine salts	-----	-----	P108
Sulfallate	Carbamodithioic acid, diethyl-, 2-chloro-2-propenyl ester	95-06-7	----
TCDD	Dibenzo[b,e][1,4]dioxin, 2,3,7,8-tetrachloro-	1746-01-6	----
Tetrabutylthiuram disulfide	Thioperoxydicarbonic diamide, tetrabutyl	1634-02-2	----
1,2,4,5-Tetrachlorobenzene	Benzene, 1,2,4,5-tetrachloro-	95-94-3	U207
Tetrachlorodibenzo-p-dioxins	-----	-----	----

Common Name	Chemical Abstracts Name	Chemical Abstracts No.	EPA Haz. Waste No.
Tetrachlorodibenzofurans	-----	-----	----
Tetrachloroethane, N.O.S.*	Ethane, tetrachloro-, N.O.S.	25322-20-7	----
1,1,1,2-Tetrachloroethane	Ethane, 1,1,1,2-tetrachloro-	630-20-6	U208
1,1,2,2-Tetrachloroethane	Ethane, 1,1,2,2-tetrachloro-	79-34-5	U209
Tetrachloroethylene	Ethene, tetrachloro-	127-18-4	U210
2,3,4,6-Tetrachlorophenol	Phenol, 2,3,4,6-tetrachloro-	58-90-2	See F027
2,3,4,6-Tetrachlorophenol, potassium salt	Same	53535276	None
2,3,4,6-Tetrachlorophenol, sodium salt	Same	25567559	None
Tetraethyldithiopyro phosphate	Thiodiphosphoric acid, tetraethyl ester	3689-24-5	P109
Tetraethyl lead	Plumbane, tetraethyl-	78-00-2	P110
Tetraethyl pyrophosphate	Diphosphoric acid, tetraethyl ester	107-49-3	P111
Tetramethylthiuram monosulfide	Bis(dimethylthiocarbamoyl) sulfide	97-74-5	----
Tetranitromethane	Methane, tetranitro-	509-14-8	P112
Thallium	Same	7440-28-0	----
Thallium compounds, N.O.S.*	-----	-----	----
Thallic oxide	Thallium oxide Tl_2O_3	1314-32-5	P113
Thallium(I) acetate	Acetic acid, thallium(1+) salt	563-68-8	U214
Thallium(I) carbonate	Carbonic acid, dithallium(1+) salt	6533-73-9	U215
Thallium(I) chloride	Thallium chloride $TlCl$	7791-12-0	U216
Thallium(I) nitrate	Nitric acid, thallium(1+) salt	10102-45-1	U217
Thallium selenite	Selenious acid, dithallium(1+) salt	12039-52-0	P114
Thallium(I) sulfate	Sulfuric acid, dithallium(1+) salt	7446-18-6	P115

Common Name	Chemical Abstracts Name	Chemical Abstracts No.	EPA Haz. Waste No.
Thioacetamide	Ethanethioamide	62-55-5	U218
Thiodicarb	Ethanimidothioic acid, N,N'-[thiobis [(methylimino)carbonyloxy]]bis-, dimethyl ester	59669-26-0	U410
Thiofanox	2-Butanone, 3,3-dimethyl-1-(methylthio)-, 0-[(methylamino)carbonyl] oxime	39196-18-4	P045
Thiomethanol	Methanethiol	74-93-1	U153
Thiophanate-methyl	Carbamic acid, [1,2-phenylenebis (iminocarbonothioyl)]bis-, dimethyl ester	23564-05-8	U409
Thiophenol	Benzenethiol	108-98-5	P014
Thiosemicarbazide	Hydrazinecarbothioamide	79-19-6	P116
Thiourea	Same	62-56-6	U219
Thiram	Thioperoxydicarbonicdiamide [(H ₂ N)C(S)] ₂ S ₂ , tetramethyl-	137-26-8	U244
Tirpate	1,3-Dithiolane-2-carboxaldehyde, 2,4-dimethyl-, O-[(methylamino)carbonyl] oxime	26419-73-8	P185
Toluene	Benzene, methyl-	108-88-3	U220
Toluenediamine	Benzenediamine, ar-methyl-	25376-45-8	U221
Toluene-2,4-diamine	1,3-Benzenediamine, 4-methyl-	95-80-7	----
Toluene-2,6-diamine	1,3-Benzenediamine, 2-methyl-	823-40-5	----
Toluene-3,4-diamine	1,2-Benzenediamine, 4-methyl-	496-72-0	----
Toluenediisocyanate	Benzene, 1,3-diisocyanatomethyl-	26471-62-5	U223
o-Toluidine	Benzenamine, 2-methyl-	95-53-4	U328
o-Toluidine hydrochloride	Benzenamine, 2-methyl-, hydrochloride	636-21-5	U222
p-Toluidine	Benzenamine, 4-methyl-	106-49-0	U353
Toxaphene	Same	8001-35-2	P123

Common Name	Chemical Abstracts Name	Chemical Abstracts No.	EPA Haz. Waste No.
Triallate	Carbamothioic acid, bis(1-methylethyl)-, S-(2,3,3-trichloro-2-propenyl) ester	2303-17-5	U389
1,2,4-Trichlorobenzene	Benzene, 1,2,4-trichloro-	120-82-1	----
1,1,2-Trichloroethane	Ethane, 1,1,2-trichloro-	79-00-5	U227
Trichloroethylene	Ethene, trichloro-	79-01-6	U228
Trichloromethanethiol	Methanethiol, trichloro-	75-70-7	P118
Trichloromono fluoromethane	Methane, trichlorofluoro-	75-69-4	U121
2,4,5-Trichlorophenol	Phenol, 2,4,5-trichloro-	95-95-4	See F027
2,4,6-Trichlorophenol	Phenol, 2,4,6-trichloro-	88-06-2	See F027
2,4,5-T	Acetic acid, (2,4,5-trichlorophenoxy)-	93-76-5	See F027
Trichloropropane, N.O.S.*	-----	25735-29-9	----
1,2,3-Trichloropropane	Propane, 1,2,3-trichloro-	96-18-4	----
Triethylamine	Ethanamine, N,N-diethyl	121-44-8	U404
O,O,O-Triethyl phosphorothioate	Phosphorothioic acid, O,O,O-triethyl ester	126-68-1	----
1,3,5-Trinitrobenzene	Benzene, 1,3,5-trinitro-	99-35-4	U234
Tris(1-aziridinyl) phosphine sulfide	Aziridine, 1,1',1''-phosphinothioylidynetris-	52-24-4	----
Tris(2,3-dibromopropyl) phosphate	1-Propanol, 2,3-dibromo-, phosphate (3:1)	126-72-7	U235
Trypan blue	2,7-Naphthalenedisulfonic acid, 3,3'-[(3,3'-dimethyl[1,1'-biphenyl]-4,4'-diyl)bis(azo)]-bis[5-amino-4-hydroxy-, tetrasoidum salt	72-57-1	U236
Uracil mustard	2,4-(1H,3H)-Pyrimidinedione, 5-[bis(2-chloroethyl)amino]-	66-75-1	U237
Vanadium pentoxide	Vanadium oxide V ₂ O ₅	1314-62-1	P120

Common Name	Chemical Abstracts Name	Chemical Abstracts No.	EPA Haz. Waste No.
Vernolate	Carbamothioic acid, dipropyl-, S-propyl ester	1929-77-7	----
Vinyl chloride	Ethene, chloro-	75-01-4	U043
Warfarin	2H-1-Benzopyran-2-one,4-hydroxy-3-(3-oxo-1-phenylbutyl)-, when present at concentrations less than 0.3%	81-81-2	U248
Warfarin	2H-1-Benzopyran-2-one,4-hydroxy-3-(3-oxo-1-phenylbutyl)-, when present at concentrations greater than 0.3%	81-81-2	P001
Warfarin salts,	when present at concentrations less than 0.3%	-----	U248
Warfarin salts,	when present at concentrations greater than 0.3%	-----	P001
Zinc cyanide	Zinc cyanide $Zn(CN)_2$	557-21-1	P121
Zinc phosphide	Zinc phosphide Zn_3P_2 , when present at concentrations of 10% or less	1314-84-7	U249
Zinc phosphide	Zinc phosphide Zn_3P_2 , when present at concentrations of greater than 10%	1314-84-7	P122
Ziram	Zinc, bis(dimethylcarbamodithioato-S,S')-, (T-4)-	137-30-4	P205
* The abbreviation N.O.S. (not otherwise specified) signifies those members of the general class not specifically listed by name in this appendix.			

[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."]

RSFA Attachment A

Rule 3745-51-11 is amended as follows:		
Location	Change	Reason
TEXT AMENDMENTS		
(A)(1)	remove "It" and add "The waste"	a
(A)(2) *	-remove "It" and add "The waste" -remove "it" and add "the waste"	a
(A)(2)[Comment] [new]	add [Comment] to define/explain the acronym term in the text of (A)(2)	*
(A)(3)	remove "It" and add "The waste"	a
	after "transported" add a comma and remove "or"	b, c
(A)(3)(a)	remove the ending semicolon and add a period	b
(A)(3)(b)	remove the ending semicolon and add a period	b
(A)(3)(c)	remove "(A)(3)(a)" and add "(A)(3)(g)"	d
	remove the ending semicolon and add a period	b
(A)(3)(d)	remove the ending semicolon and add a period	b
(A)(3)(e)	remove the ending semicolon and add a period	b
(A)(3)(f)	remove the ending semicolon and add a period	b
(A)(3)(g)	remove the ending semicolon and add a period	b
(A)(3)(h)	remove the ending semicolon and add a period	b
(A)(3)(i)	remove the ending semicolon and add a period	b
(A)(3)(j)	remove the ending "; and" and add a period	b, c
(A)(3)(k)	remove "they" and add "those substances"	a
(B)	remove "he" and add "the director"	a
	add quotation marks around the defined term "hazardous waste"	e
	remove "found"	c
(D)	-after "administrator" remove "of the U.S. EPA" -remove "United States"	c
	remove "federal register" [lower case] and add "Federal Register" [upper case]	f

RSFA Attachment A

Rule 3745-51-11 is amended as follows:		
Location	Change	Reason
ending [Comment]	remove the indented comment and add the same comment not indented	g
APPENDIX AMENDMENTS		
Saccharin	remove row from table	FR 12/17/2010
Saccharin salts	remove row from table	FR 12/17/2010

- a Word choice correction.
- b Punctuation correction.
- c Unnecessary wording is removed.
- d Cross-reference correction.
- e This punctuation correction (adding quotation marks around defined terms) is made in all hazardous waste rules, as they are amended, at locations of defined terms that are designated as such in the text.
- f LSC requirement, to comply with rule-writing style manual.
- g This amendment corrects the format/structure of the rule at this location.
- * The amendments at this location have been changed, or added, as the result of a comment on the Interested Parties draft rule.

This rule is submitted for 5-year review upon proposal. A new review date will be assigned.

The appendix to this rule appears in a different font from most other rules at the request of LSC.

3745-51-11

Criteria for listing hazardous waste.

(A) The director will list a waste as a hazardous waste only upon determining that the waste meets one of the following criteria:

- (1) ~~The waste~~ exhibits any of the characteristics of hazardous waste identified in rules 3745-51-20 to 3745-51-24 of the Administrative Code.
- (2) ~~The waste~~ has been found to be fatal to humans in low doses or, in the absence of data on human toxicity, ~~the waste~~ has been shown in studies to have an oral LD50 toxicity (rat) of less than fifty milligrams per kilogram, an inhalation LC50 toxicity (rat) of less than two milligrams per liter, or a dermal LD50 toxicity (rabbit) of less than two hundred milligrams per kilogram or is otherwise capable of causing or significantly contributing to an increase in serious irreversible, or incapacitating reversible illness. (~~Waste~~~~Wastes~~ listed in accordance with these criteria will be designated acute hazardous ~~waste~~~~wastes~~.)

[Comment: As used in this paragraph, LD (lethal dosage) and LC (lethal concentration) are standard measures of toxicity. A LD50 dosage, and a LC50 concentration, are fatal to fifty per cent of the test subjects.]

- (3) ~~The waste~~ contains any of the toxic constituents listed in the appendix to this rule and, after considering the following factors, the director concludes that the waste is capable of posing a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, ~~or~~ disposed of, or otherwise managed:
 - (a) The nature of the toxicity presented by the constituent;
 - (b) The concentration of the constituent in the waste;
 - (c) The potential of the constituent or any toxic degradation product of the constituent to migrate from the waste into the environment under the types of improper management considered in paragraph ~~(A)(3)(a)~~(A)(3)(g) of this rule;
 - (d) The persistence of the constituent or any toxic degradation product of the constituent;

- (e) The potential for the constituent or any toxic degradation product of the constituent to degrade into nonharmful constituents and the rate of degradation;
 - (f) The degree to which the constituent or any degradation product of the constituent bioaccumulates in ecosystems;
 - (g) The plausible types of improper management to which the waste could be subjected;
 - (h) The quantities of the waste generated at individual generation sites or on a regional or national basis;
 - (i) The nature and severity of the human health and environmental damage that has occurred as a result of the improper management of wastes containing the constituent;
 - (j) Action taken by other governmental agencies or regulatory programs based on the health or environmental hazard posed by the waste or waste constituent; ~~and~~
 - (k) Such other factors as may be appropriate. Substances will be listed in the appendix to this rule only if ~~they~~ those substances have been shown in scientific studies to have toxic, carcinogenic, mutagenic or teratogenic effects on humans or other life forms. (Wastes listed in accordance with these criteria will be designated toxic wastes.)
- (B) The director may list classes or types of waste as hazardous waste if ~~he~~ the director has reason to believe that individual wastes, within the class or type of waste, typically or frequently are hazardous under the definition of "hazardous waste" ~~found~~ in Section 1004(5) of the Resource Conservation and Recovery Act.
- (C) The director will use the criteria for listing specified in this rule to establish the exclusion limits referred to in rule 3745-51-05 of the Administrative Code.
- (D) The director shall not list any waste that the administrator ~~of the U.S. EPA~~ delisted or excluded by an amendment to the federal regulations, any waste that the administrator declined to list by publishing a denial of a rulemaking petition or by withdrawal of a proposed listing in the ~~United States federal register~~ Federal Register after May 18, 1980, or any waste oil or polychlorinated biphenyl not listed by the administrator.

~~[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:

Five Year Review (FYR) Dates: 07/01/2015

Certification

Date

Promulgated Under:	119.03
Statutory Authority:	3734.12
Rule Amplifies:	3734.12
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3745-51-20

1

Appendix ~~of~~to rule 3745-51-20 of the Administrative Code

Representative Sampling Methods

The methods and equipment used for sampling waste materials will vary with the form and consistency of the waste materials to be sampled. Samples collected using the sampling protocols listed below, for sampling waste with properties similar to the indicated materials, will be considered by Ohio EPA to be representative of the waste.

The following are newer approved equivalent methods:

Standard Guide for Representative Sampling for Management of Waste and Media,
ASTM Standard D6044-96(~~2003~~)(2009)

Extremely viscous liquid- ASTM Standard ~~D140-01(2003)~~D140/D140M-14

Crushed or powdered material- ASTM Standard ~~D346-90(1998)~~D346/D346M-11

Practice for Sampling Soils and Contaminated Media with Hand Operated Bucket
Auger, ~~WK571(2/7/2003)~~D6907-2005(2010)

The following are older approved equivalent methods:

Extremely viscous liquid- ASTM Standard D140-70

Crushed or powdered material- ASTM Standard D346-75

Soil or rock-like material- ASTM Standard D420-69

Soil-like material- ASTM Standard D1452-65

Fly ash-like material- ASTM Standard D2234-76

Containerized liquid wastes- "COLISWA"

Liquid waste in pits, ponds, lagoons, and similar reservoirs- "Pond Sampler"

This manual also contains additional information on application of these protocols.

[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."]

RSFA Attachment A

Rule 3745-51-20 is amended as follows:		
Location	Change	Reason
Text Amendments		
(A)	add quotation marks around the defined term "waste"	a
	remove "it" and add "the waste"	b
(A)[Comment]	remove "sets forth" and add "provides"	b
(B)	[2 times] remove "set forth" and add "identified"	b
	remove "must" and add "shall"	b, c
(C)	remove "rules 3745-50-40 to 3745-50-235" and add "Chapter 3745-50"	d
(C)[Comment]	after "Comment" add "1" to number the comment	e
	after "the appendix" remove "of" and add "to"	f
	remove the typo word "previously" and add "previously"	g
	remove "set forth"	b
ending [Comment]	remove the indented comment and add the same comment not indented	h
	after "Comment" add "2" to number the comment	e
Appendix Amendments		
appendix title	after "Appendix" remove "of" and add "to"	f
in "newer approved equivalent methods"	after "Standard Guide for Representative Sampling for Management of Waste and Media, ASTM Standard D6044-96" remove "(2003)" and add "(2009)"	i
	after "Extremely viscous liquid- ASTM Standard" remove "D140-01(2003)" and add "D140/D140M-14"	i
	after "Crushed or powdered material- ASTM Standard" remove "D346-90(1998)" and add "D346/D346M-11"	i
	after "Practice for Sampling Soils and Contaminated Media with Hand Operated Bucket Auger," remove "WK571(2/7/2003)" and add "D6907-2005(2010)"	i

RSFA Attachment A

Rule **3745-51-20** is amended as follows:

Location	Change	Reason
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- a This punctuation correction (adding quotation marks around defined terms) is made in all hazardous waste rules, as they are amended, at locations of defined terms that are designated as such in the text.
- b Word choice correction.
- c The change of “must” to “shall” is an LSC requirement.
- d Cross-reference correction.
- e Clarification.
- f Word choice correction per LSC manual.
- g Spelling correction.
- h This amendment corrects the format/structure of the rule at this location.
- i This document number is changed to match the same amendment in rule 3745-50-11. Verification research regarding that rule indicates that the existing document, or its number, have been updated. The federal counterpart provisions to 3745-50-11 and this rule (40 CFR 260.11 and 40 CFR Part 261 Appendix I, respectively) have not yet been amended to account for this update.

This rule is submitted for 5-year review upon proposal. A new review date will be assigned.

The appendix to this rule appears in a different font from most other rules at the request of LSC.

3745-51-20

Characteristics of hazardous waste- general.

- (A) A "waste," as defined in rule 3745-51-02 of the Administrative Code, which is not excluded from regulation as a hazardous waste under paragraph (B) of rule 3745-51-04 of the Administrative Code, is a hazardous waste if ~~it~~ the waste exhibits any of the characteristics identified in rules 3745-51-20 to 3745-51-24 of the Administrative Code.

[Comment: Rule 3745-52-11 of the Administrative Code ~~sets forth~~ provides the generator's responsibility to determine whether his waste exhibits one or more of the characteristics identified in rules 3745-51-20 to 3745-51-24 of the Administrative Code.]

- (B) A hazardous waste which is identified by a characteristic ~~set forth~~ identified in rules 3745-51-20 to 3745-51-24 of the Administrative Code is assigned every EPA hazardous waste number that is applicable as ~~set forth~~ identified in rules 3745-51-20 to 3745-51-24 of the Administrative Code. This number ~~must~~ shall be used in complying with the requirement to notify Ohio EPA or U.S. EPA of regulated waste activity and all applicable recordkeeping and reporting requirements of Chapters 3745-52, 3745-53, 3745-54 to 3745-57, 3745-65 to 3745-69, 3745-205, 3745-256, 3745-266, and 3745-270, and rules 3745-50-40 to 3745-50-235 of the Administrative Code.

- (C) For the purposes of rules 3745-51-20 to 3745-51-24 of the Administrative Code, the director will consider a sample obtained using any of the applicable sampling methods specified in the appendix to this rule to be a representative sample within the meaning of ~~rules 3745-50-40 to 3745-50-235~~ Chapter 3745-50 of the Administrative Code.

[Comment 1: Since the sampling methods in the appendix ~~of~~ to this rule are not being formally adopted by Ohio EPA, a person who wishes to employ an alternative sampling method, including ~~previously~~ previously approved equivalent ASTM methods, is not required to demonstrate the equivalency of his method under the procedures ~~set forth~~ in 40 CFR 260.20 and 40 CFR 260.21.]

[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 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:

Five Year Review (FYR) Dates: 07/01/2015

Certification

Date

Promulgated Under: 119.03
Statutory Authority: 3734.12
Rule Amplifies: 3734.12
Prior Effective Dates: 04/15/1981, 05/29/1985 (Emer.), 08/29/1985,
11/13/1987, 12/30/1989, 02/11/1992, 09/02/1997,
12/07/2000, 12/07/2004, 02/16/2009

RSFA Attachment A

Rule 3745-51-21 is amended as follows:		
Location	Change	Reason
(A)(1)	after "sixty degrees" add "Celsius"	a, b
	-add parentheses around the existing "C" -after the amended "Celsius (C)" remove the opening parenthesis before "one" and add an opening bracket	c
	after "forty degrees" add "Fahrenheit"	a, b
	-add the beginning parenthesis around the existing "F" -add the closing bracket after the amended "(F)"	c
	-after "D-93-80" add a comma inside the quotation mark and remove the existing comma outside the quotation mark - after "D-3278-78" add a period inside the quotation mark and remove the existing period outside the quotation mark	b, c
(A)(2)	add a comma after "moisture"	c
(A)(3)(b)(i)	add a comma after the 2nd occurrence of "mixture"	c
	remove "must" and add "shall"	d
	after "approved by the director" remove the comma and add "of the"	c, e
	remove "Technology" and add "Safety Administration"	f
	in last sentence, remove "Note" and add "Comment"	e
(A)(3)(b)(ii)	after "Explosives" remove the apostrophe and add a closing quotation mark	c
	remove "Flame Projection Apparatus" " [upper case, including the ending quotation mark] and add "flame projection apparatus" [lower case, no punctuation]	c, g
	remove "Note" and add "Comment"	e
(A)(3)(b)(iii)	after "Explosives" remove the apostrophe and add a closing quotation mark	c
	remove "Open Drum Apparatus" " [upper case, including the ending quotation mark] and add "open drum apparatus" [lower case, no punctuation]	c, g
	remove "Note" and add "Comment"	e

RSFA Attachment A

Rule 3745-51-21 is amended as follows:		
Location	Change	Reason
(A)(3)(b)(iv)	after “Explosives” remove the apostrophe and add a closing quotation mark	c
	remove “Closed Drum Apparatus” [upper case, including the ending quotation mark] and add “Closed drum apparatus” [lower case, no punctuation]	c, g
	remove “Note” and add “Comment”	e
(A)(4)	add quotation marks around the 2nd occurrence of “oxidizer,”	c
	remove “Note” and add “Comment”	e
(A)(4)(a)	remove “must” and add “shall”	d
	add quotation marks around the existing “organic peroxide”	c
	after “peroxide” add “(see [Comment 4] of this rule)”	h
(A)(4)(a)(i)	after “definition of a” remove: “Class A” explosive or a “Class B” explosive,” and add: “Class 1” explosive in “Division 1.1,” “Division 1.2,” or “Division 1.3,”	c, i
	after “as” remove “defined” and add “described”	e
	remove “must” and add “shall”	d
(A)(4)(a)(iv)	remove “Note” and add “Comment”	e
[Note 1] - [Note 4]	remove the 4 indented notes and add the same 4 notes, not indented	j
	in each, change “Note” to “Comment” in the new language	e
[Comment 1]	correct the text and upper/lower case	c, g
[Comment 4]	correct the punctuation proximate to the defined terms	c
ending [Comment]	remove the indented comment and add the same comment not indented	j
[Comment 5]	number this comment as “Comment 5”	k

a Abbreviations and acronyms must be defined upon use.

RSFA Attachment A

Rule **3745-51-21** is amended as follows:

Location	Change	Reason
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- b LSC requirement.
- c Punctuation correction.
- d The change of “must” to “shall” is an LSC requirement.
- e Word choice correction. This amendment makes the phrase consistent with other locations of the similar phrase.
- f This amendment corrects the name of the government entity being referenced.
- g The upper case is removed from this phrase because this is not a title.
- h This cross-reference is added to clarify the location of the definition of the term that is used here.
- i Cross-reference correction. These federal references have changed; see 49 CFR 173.50 and 49 CFR 173.53. The corresponding federal rule (40 CFR 261.21) has not been updated to make these corrections; the Ohio rule is more accurate than the federal counterpart in these cross-references.
- j This amendment corrects the format/structure of the rule at this location.
- k Comment number is added for clarification in references.

This rule is submitted for 5-year review upon proposal. A new review date will be assigned.

3745-51-21

Characteristic of ignitability.

(A) A waste exhibits the characteristic of ignitability if a representative sample of the waste has any of the following properties:

- (1) It is a liquid, other than an aqueous solution containing less than twenty-four per cent alcohol by volume, and has a flash point less than sixty degrees Celsius (C) ~~(one hundred forty degrees Fahrenheit (F))~~, as determined by a "Pensky-Martens Closed Cup Tester," using the test method specified in "ASTM Standard D-93-79 or D-93-80," or a "Setaflash Closed Cup Tester," using the test method specified in "ASTM Standard D-3278-78":
- (2) It is not a liquid and is capable, under standard temperature and pressure, of causing fire through friction, absorption of moisture, or spontaneous chemical changes and, when ignited, burns so vigorously and persistently that it creates a hazard.
- (3) It is an ignitable compressed gas.
 - (a) The term "compressed gas" designates any material or mixture having in the container an absolute pressure exceeding forty pounds per square inch (psi) at seventy degrees F or, regardless of the pressure at seventy degrees F, having an absolute pressure exceeding one hundred four psi at one hundred thirty degrees F; or any liquid flammable material having a vapor pressure exceeding forty absolute at one hundred degrees F as determined by "ASTM Test D-323."
 - (b) A compressed gas is characterized as ignitable if any one of the following occurs:
 - (i) Either a mixture of thirteen per cent or less (by volume) with air forms a flammable mixture, or the flammable range with air is wider than twelve per cent regardless of the lower limit. These limits are determined at atmospheric temperature and pressure. The method of sampling and test procedure ~~must~~shall be acceptable to the "Bureau of Explosives" and approved by the director, of the "Pipeline and Hazardous Materials ~~Technology~~Safety Administration" of the U.S. department of transportation (U.S. DOT) (see [~~Note~~Comment 2] of this rule).

- (ii) Using the "Bureau of Explosives" ~~Flame—Projection Apparatus~~ flame protection apparatus (see [NoteComment 1] of this rule), the flame projects more than eighteen inches beyond the ignition source with valve opened fully, or, the flame flashes back and burns at the valve with any degree of valve opening.
 - (iii) Using the "Bureau of Explosives" ~~Open Drum Apparatus~~ open drum apparatus (see [NoteComment 1] of this rule), there is any significant propagation of flame away from the ignition source.
 - (iv) Using the "Bureau of Explosives" ~~Closed Drum Apparatus~~ closed drum apparatus (see [NoteComment 1] of this rule), there is any explosion of the vapor-air mixture in the drum.
- (4) It is an oxidizer. An "oxidizer," for the purpose of this rule, is a substance such as chlorate, permanganate, inorganic peroxide, or a nitrate, that yields oxygen readily to stimulate the combustion of organic matter (see [NoteComment 4] of this rule).
- (a) An organic compound containing the bivalent -O-O- structure and which may be considered a derivative of hydrogen peroxide where one or more of the hydrogen atoms have been replaced by organic radicals ~~must~~shall be classed as an "organic peroxide" (see [Comment 4] of this rule unless:
 - (i) The material meets the definition of a ~~"Class A" explosive or a "Class B" explosive,~~ "Class 1" explosive in "Division 1.1," "Division 1.2," or "Division 1.3," as ~~defined~~described in paragraph (A)(8) of rule 3745-51-23 of the Administrative Code, in which case, it ~~must~~shall be classed as an explosive,
 - (ii) The material is forbidden to be offered for transportation according to 49 CFR 172.101 and 49 CFR 173.21,
 - (iii) It is determined that the predominant hazard of the material containing an organic peroxide is other than that of an organic peroxide, or
 - (iv) According to data on file with the "Pipeline and Hazardous Materials Safety Administration" in the U.S. DOT (see [NoteComment 3] of this rule), it has been determined that the material does not present a hazard in transportation.

(b) Reserved.

(B) A waste that exhibits the characteristic of ignitability has the EPA hazardous waste number of D001.

~~{Note 1: A description of the "Bureau of Explosives' Flame Projection Apparatus, Open Drum Apparatus, Closed Drum Apparatus," and the method of tests may be procured from the "Bureau of Explosives."}~~

~~{Note 2: As part of a U.S. DOT reorganization, the "Office of Hazardous Materials Technology" (OHMT), which was the office listed in the 1980 publication of 49 CFR 173.300 for the purposes of approving sampling and test procedures for a flammable gas, ceased operations on February 20, 2005. OHMT programs moved to the "Pipeline and Hazardous Materials Safety Administration" (PHMSA) in the U.S. DOT.}~~

~~{Note 3: As part of a U.S. DOT reorganization, the "Research and Special Programs Administration" (RSPA) which was the office listed in the 1980 publication of 49 CFR 173.151a for the purposes of determining that a material does not present a hazard in transport, ceased operations on February 20, 2005. RSPA programs moved to the "Pipeline and Hazardous Materials Safety Administration" (PHMSA) in the U.S. DOT.}~~

~~{Note 4: The U.S. DOT regulatory definition of an oxidizer was contained in 49 CFR 173.151, and the definition of an organic peroxide was contained in 49 CFR 173.151a. An organic peroxide is a type of oxidizer.}~~

~~{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 1: A description of the "Bureau of Explosives" flame projection apparatus, open drum apparatus, closed drum apparatus, and the method of tests may be procured from the "Bureau of Explosives" at www.boe.aar.com.]

[Comment 2: As part of a U.S. DOT reorganization, the "Office of Hazardous Materials Technology" (OHMT), which was the office listed in the 1980 publication of 49 CFR 173.300 for the purposes of approving sampling and test procedures for a flammable gas, ceased operations on February 20, 2005. OHMT programs moved to the "Pipeline and Hazardous Materials Safety Administration" (PHMSA) in the U.S. DOT.]

[Comment 3: As part of a U.S. DOT reorganization, the "Research and Special Programs Administration" (RSPA) which was the office listed in the 1980 publication of 49 CFR 173.151a for the purposes of determining that a material does not present a hazard in

transport, ceased operations on February 20, 2005. RSPA programs moved to the "Pipeline and Hazardous Materials Safety Administration" (PHMSA) in the U.S. DOT.]

[Comment 4: The U.S. DOT regulatory definition of an "oxidizer" is in 49 CFR 173.127, and the definition of an "organic peroxide" is in 49 CFR 173.128; see also 49 CFR 173.152. An organic peroxide is a type of oxidizer.]

[Comment 5: 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:

Five Year Review (FYR) Dates: 07/01/2015

Certification

Date

Promulgated Under: 119.03
Statutory Authority: 3734.12
Rule Amplifies: 3734.12
Prior Effective Dates: 04/15/1981, 05/22/1981 (Emer.), 08/26/1981 (Emer.),
12/02/1981, 05/29/1985 (Emer.), 08/29/1985,
02/11/1992, 09/02/1997, 12/07/2004, 02/16/2009

RSFA Attachment A

Rule 3745-51-22 is amended as follows:		
Location	Change	Reason
(A)(2) *	after "6.35" remove "mm" add "millimeters"	a *
	in the parenthetical, remove "0.250" and add "0.25"	b
	after "fifty-five degrees" remove "C" and add "Celsius"	a *
	after "one hundred thirty degrees" remove "F" and add "Fahrenheit"	a *
ending [Comment]	remove the indented comment and add the same comment not indented	c

- a This amendment removes the unnecessary abbreviation.
- b Unnecessary characters are removed.
- c This amendment corrects the format/structure of the rule at this location.
- * This amendment was made, or changed, in response to a comment on the Interested Parties draft rule.

This rule is currently exempt, but due to a difference in the state (statute) and the federal definitions of the term "solid waste" as used in the federal provision (40 CFR 261.22), this rule is submitted for 5-year review upon proposal. A new review date will be assigned.

3745-51-22

Characteristic of corrosivity.

(A) A waste exhibits the characteristic of corrosivity if a representative sample of the waste has either of the following properties:

(1) It is aqueous and has a pH less than or equal to two or greater than or equal to 12.5, as determined by a pH meter using method 9040C in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" U.S. EPA publication SW-846.

(2) It is a liquid and corrodes steel (SAE 1020) at a rate greater than 6.35 ~~mm~~ millimeters (~~0.2500.25~~ inch) per year at a test temperature of fifty-five degrees ~~C~~ Celsius (one hundred thirty degrees ~~F~~ Fahrenheit) as determined by method 1110A in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" U.S. EPA publication SW-846.

(B) A waste that exhibits the characteristic of corrosivity has the EPA hazardous waste number of D002.

~~[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:

Five Year Review (FYR) Dates: 07/01/2015

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Date

Promulgated Under:	119.03
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Rule Amplifies:	3734.12
Prior Effective Dates:	04/15/1981, 05/22/1981 (Emer.), 08/26/1981 (Emer.), 12/02/1981, 05/29/1985 (Emer.), 08/29/1985, 02/11/1992, 09/02/1997, 12/07/2004, 02/16/2009

RSFA Attachment A

Rule 3745-51-24 is amended as follows:		
Location	Change	Reason
(A)	-after "contaminants listed in" add "the" -after "table" remove "1 of" and add "in"	a, b
(B)	-after "specified in" add "the" -after "table" remove "1 of" and add "in"	a, b
Table heading	after "Table" remove "1"	b
ending [Comment]	remove the indented comment and add the same comment not indented	c

- a Word choice correction. This amendment makes the phrase consistent with other locations of the similar phrase.
- b There is only one table in this rule, so the unnecessary reference to "1" is being removed.
- c This amendment corrects the format or structure of the rule at this location.

This rule is currently exempt, but due to a difference in the state (statute) and federal definitions of the term "solid waste" as used in the federal provision (40 CFR 261.24), this rule is submitted for 5-year review upon proposal. A new review date will be assigned.

3745-51-24

Toxicity characteristic.

- (A) A waste (except manufactured gas plant waste) exhibits the characteristic of toxicity if, using the toxicity characteristic leaching procedure, test method 1311 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," U.S. EPA publication SW-846, the extract from a representative sample of the waste contains any of the contaminants listed in the table 4-01 in this rule at a concentration equal to or greater than the respective value given in that table. Where the waste contains less than 0.5 per cent filterable solids, the waste itself, after filtering using the methodology outlined in method 1311, is considered to be the extract for the purposes of this rule.
- (B) A waste that exhibits the characteristic of toxicity has the EPA hazardous waste number specified in the table 4-01 in this rule which corresponds to the toxic contaminant causing it to be hazardous.

EPA Haz. Waste Number	Contaminant	CAS ¹ Number	Regulatory Level (mg/L)
D004	Arsenic	7440-38-2	5.0
D005	Barium	7440-39-3	100.0
D018	Benzene	71-43-2	0.5
D006	Cadmium	7440-43-9	1.0
D019	Carbon tetrachloride	56-23-5	0.5
D020	Chlordane	57-74-9	0.03
D021	Chlorobenzene	108-90-7	100.0
D022	Chloroform	67-66-3	6.0
D007	Chromium	7440-47-3	5.0
D023	o-Cresol	95-48-7	200.0 ³
D024	m-Cresol	108-39-4	200.0 ³
D025	p-Cresol	106-44-5	200.0 ³

D026	Cresol	-----	200.0 ³
D016	2,4-D	94-75-7	10.0
D027	1,4-Dichlorobenzene	106-46-7	7.5
D028	1,2-Dichloroethane	107-06-2	0.5
D029	1,1-Dichloroethylene	75-35-4	0.7
D030	2,4-Dinitrotoluene	121-14-2	0.13 ²
D012	Endrin	72-20-8	0.02
D031	Heptachlor (and its epoxide)	76-44-8	0.008
D032	Hexachlorobenzene	118-74-1	0.13 ²
D033	Hexachlorobutadiene	87-68-3	0.5
D034	Hexachloroethane	67-72-1	3.0
D008	Lead	7439-92-1	5.0
D013	Lindane	58-89-9	0.4
D009	Mercury	7439-97-6	0.2
D014	Methoxychlor	72-43-5	10.0
D035	Methyl ethyl ketone	78-93-3	200.0
D036	Nitrobenzene	98-95-3	2.0
D037	Pentachlorophenol	87-86-5	100.0
D038	Pyridine	110-86-1	5.0 ²
D010	Selenium	7782-49-2	1.0
D011	Silver	7440-22-4	5.0
D039	Tetrachloroethylene	127-18-4	0.7
D015	Toxaphene	8001-35-2	0.5
D040	Trichloroethylene	79-01-6	0.5
D041	2,4,5-Trichlorophenol	95-95-4	400.0

D042	2,4,6-Trichlorophenol	88-06-2	2.0
D017	2,4,5-TP (Silvex)	93-72-1	1.0
D043	Vinyl chloride	75-01-4	0.2
¹ Chemical abstracts service number.			
² Quantitation limit is greater than the calculated regulatory level. The quantitation limit therefore becomes the regulatory level.			
³ If o-, m-, and p-Cresol concentrations cannot be differentiated, the total cresol (D026) concentration is used. The regulatory level of total cresol is 200 mg/L.			

~~[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:

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12/02/1981, 05/29/1985 (Emer.), 08/29/1985,
03/31/1992, 02/14/1995, 09/02/1997, 12/07/2004,
02/16/2009

RSFA Attachment A

Rule 3745-51-33 is amended as follows:		
Location	Change	Reason
intro	-[5 times] remove “they” and add “the materials or items” -[3 times] remove “their” and add “the”	a
(C)[Comment]	-after “reclaimed” remove the semicolon and add a comma -after “transported” add a comma -after “recycling” add a comma	b
	remove “it” and add “the container”	a
(D)	after “water” add a comma	b
after (E)[Comment]	in the line immediately above the table, remove “their”	c
after (F)[Comment]	in the line immediately above the table, remove “their”	c
(F), alphabetical table	remove the U202 row at 1,2-Benziso...	FR 12/17/2010
	remove the U202 row at Saccharin, and...	FR 12/17/2010
(F), numerical table	remove the U202 row at 1,2-Benziso...	FR 12/17/2010
	remove the U202 row at Saccharin, and...	FR 12/17/2010
(G)	-remove “product(s)” and add “products” -remove “intermediate(s)” and add “intermediates” -after “ingredient. “ remove “It” and add “That term” -after “waste because” remove “it” and add “such waste” -remove “set forth” and add “identified”	a

- a Word choice correction.
- b Punctuation correction.
- c Unnecessary text is removed.

3745-51-33 Discarded commercial chemical products, off-specification species, container residues, and spill residues thereof.

The following materials or items are hazardous wastes if and when ~~they~~the materials or items are discarded or intended to be discarded as described in paragraph (A)(2)(a) of rule 3745-51-02 of the Administrative Code, when ~~they~~the materials or items are mixed with waste oil or used oil or other material and applied to the land for dust suppression or road treatment, when ~~they~~the materials or items are otherwise applied to the land in lieu of ~~their~~the original intended use or when ~~they~~the materials or items are contained in products that are applied to the land in lieu of ~~their~~the original intended use, or when, in lieu of ~~their~~the original intended use, ~~they~~the materials or items are produced for use as (or as a component of) a fuel, distributed for use as a fuel, or burned as a fuel.

- (A) Any commercial chemical product, or manufacturing chemical intermediate having the generic name listed in paragraph (E) or (F) of this rule.
- (B) Any off-specification commercial chemical product or manufacturing chemical intermediate which, if it met specifications, would have the generic name listed in paragraph (E) or (F) of this rule.
- (C) Any residue remaining in a container or in an inner liner removed from a container that has held any commercial chemical product or manufacturing chemical intermediate having the generic name listed in paragraph (E) or (F) of this rule, unless the container is “empty” as described in paragraph (B) of rule 3745-51-07 of the Administrative Code.

[Comment: Unless the residue is being beneficially used or reused, or legitimately recycled or reclaimed, or being accumulated, stored, transported, or treated prior to such use, re-use, recycling, or reclamation, Ohio EPA considers the residue to be intended for discard, and thus, a hazardous waste. An example of a legitimate re-use of the residue would be where the residue remains in the container and the container is used to hold the same commercial chemical product or manufacturing chemical intermediate ~~in the~~the container previously held. An example of the discard of the residue would be where the drum is sent to a drum reconditioner who reconditions the drum but discards the residue.]

- (D) Any residue or contaminated soil, water or other debris resulting from the cleanup of a spill, into or on any land or water, of any commercial chemical product or manufacturing chemical intermediate having the generic name listed in paragraph (E) or (F) of this rule, or any residue or contaminated soil, water, or other debris resulting from the cleanup of a spill, into or on any land or water, of any off-specification chemical product and manufacturing chemical intermediate which, if it met specifications, would have the generic name listed in paragraph (E) or (F) of this rule.

- (E) The commercial chemical products, manufacturing chemical intermediates or off-specification commercial chemical products or manufacturing chemical intermediates referred to in paragraphs (A) to (D) of this rule are identified as acute hazardous wastes (H) and are subject to the small quantity exclusion described in paragraph (E) of rule 3745-51-05 of the Administrative Code.

[Comment: For the convenience of the regulated community, the primary hazardous properties of these materials have been indicated by the letters T (toxicity), and R (reactivity). Absence of a letter indicates that the compound only is listed for acute toxicity. Wastes are first listed in alphabetical order by substance and then listed again in numerical order by EPA hazardous waste number.]

These wastes and ~~their~~ corresponding EPA hazardous waste numbers are:

(E) Alphabetical List		
EPA Hazardous Waste #	CAS #	Substance
P023	107-20-0	Acetaldehyde, chloro-
P002	591-08-2	Acetamide, N-(aminothioxomethyl)-
P057	640-19-7	Acetamide, 2-fluoro-
P058	62-74-8	Acetic acid, fluoro-, sodium salt
P002	591-08-2	1-Acetyl-2-thiourea
P003	107-02-8	Acrolein
P070	116-06-3	Aldicarb
P203	1646-88-4	Aldicarb sulfone
P004	309-00-2	Aldrin
P005	107-18-6	Allyl alcohol
P006	20859-73-8	Aluminum phosphide (R,T)
P007	2763-96-4	5-(Aminomethyl)-3-isoxazolol
P008	504-24-5	4-Aminopyridine
P009	131-74-8	Ammonium picrate (R)
P119	7803-55-6	Ammonium vanadate
P099	506-61-6	Argentate(1-), bis(cyano-C)-, potassium

(E) Alphabetical List		
EPA Hazardous Waste #	CAS #	Substance
P010	7778-39-4	Arsenic acid H_3AsO_4
P012	1327-53-3	Arsenic oxide As_2O_3
P011	1303-28-2	Arsenic oxide As_2O_5
P011	1303-28-2	Arsenic pentoxide
P012	1327-53-3	Arsenic trioxide
P038	692-42-2	Arsine, diethyl-
P036	696-28-6	Arsonous dichloride, phenyl-
P054	151-56-4	Aziridine
P067	75-55-8	Aziridine, 2-methyl-
P013	542-62-1	Barium cyanide
P024	106-47-8	Benzenamine, 4-chloro-
P077	100-01-6	Benzenamine, 4-nitro-
P028	100-44-7	Benzene, (chloromethyl)-
P042	51-43-4	1,2-Benzenediol, 4-[1-hydroxy-2-(methylamino)ethyl]-, (R)-
P046	122-09-8	Benzeneethanamine, alpha,alpha-dimethyl-
P014	108-98-5	Benzenethiol
P127	1563-66-2	7-Benzofuranol, 2,3-dihydro-2,2-dimethyl-, methylcarbamate
P188	57-64-7	Benzoic acid, 2hydroxy-, compd. with 3aS-cis)-1,2,3,3a,8,8a-hexahydro-1,3a,8-trimethylpyrrolo [2,3-b]indol-5yl methylcarbamate ester (1:1)
P001	81-81-2 *	2H-1-Benzopyran-2-one, -hydroxy-3-(3-oxo-1-phenylbutyl)-, and salts, when present at concentrations greater than 0.3 per cent
P028	100-44-7	Benzyl chloride
P015	7440-41-7	Beryllium powder
P017	598-31-2	Bromoacetone
P018	357-57-3	Brucine

(E) Alphabetical List		
EPA Hazardous Waste #	CAS #	Substance
P045	39196-18-4	2-Butanone, 3,3-dimethyl-1-(methylthio)-, -[(methylamino)carbonyl] oxime
P021	592-01-8	Calcium cyanide
P021	592-01-8	Calcium cyanide Ca(CN) ₂
P189	55285-14-8	Carbamic acid, [(dibutylamino)-thio]methyl-, 2,3-dihydro-2,2-dimethyl-7benzofuranyl ester
P191	644-64-4	Carbamic acid, dimethyl-, 1-[(dimethyl-amino)carbonyl]-5-methyl-1H-pyrazol-3yl ester
P192	119-38-0	Carbamic acid, dimethyl-, 3-methyl-1-(1-methylethyl)-1H-pyrazol-5-yl ester
P190	1129-41-5	Carbamic acid, methyl-, 3-methylphenyl ester
P127	1563-66-2	Carbofuran
P022	75-15-0	Carbon disulfide
P095	75-44-5	Carbonic dichloride
P189	55285-14-8	Carbosulfan
P023	107-20-0	Chloroacetaldehyde
P024	106-47-8	p-Chloroaniline
P026	5344-82-1	1-(o-Chlorophenyl)thiourea
P027	542-76-7	3-Chloropropionitrile
P029	544-92-3	Copper cyanide
P029	544-92-3	Copper cyanide Cu(CN)
P202	64-00-6	m-Cumenyl methylcarbamate
P030	-----	Cyanides (soluble cyanide salts), not otherwise specified
P031	460-19-5	Cyanogen
P033	506-77-4	Cyanogen chloride
P033	506-77-4	Cyanogen chloride (CN)Cl
P034	131-89-5	2-Cyclohexyl-4,6-dinitrophenol

(E) Alphabetical List		
EPA Hazardous Waste #	CAS #	Substance
P016	542-88-1	Dichloromethyl ether
P036	696-28-6	Dichlorophenylarsine
P037	60-57-1	Dieldrin
P038	692-42-2	Diethylarsine
P041	311-45-5	Diethyl-p-nitrophenyl phosphate
P040	297-97-2	O,O-Diethyl O-pyrazinyl phosphorothioate
P043	55-91-4	Diisopropylfluorophosphate (DFP)
P004	309-00-2	1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexa-chloro-1,4,4a,5,8,8a,-hexahydro-, (1alpha,4alpha,4abeta,5alpha,8alpha,8abeta)-
P060	465-73-6	1,4,5,8-Dimethanonaphthalene,1,2,3,4,10,10-hexa-chloro- 1,4,4a,5,8,8a-hexahydro-, (1alpha,4alpha,4abeta,5beta,8beta,8abeta)-
P037	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)-
P051	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)-, and metabolites
P044	60-51-5	Dimethoate
P046	122-09-8	alpha,alpha-Dimethylphenethylamine
P191	644-64-4	Dimetilan
P047	534-52-1 *	4,6-Dinitro-o-cresol, and salts
P048	51-28-5	2,4-Dinitrophenol
P020	88-85-7	Dinoseb
P085	152-16-9	Diphosphoramidate, octamethyl-
P111	107-49-3	Diphosphoric acid, tetraethyl ester
P039	298-04-4	Disulfoton

(E) Alphabetical List		
EPA Hazardous Waste #	CAS #	Substance
P049	541-53-7	Dithiobiuret
P185	26419-73-8	1,3-Dithiolane-2-carboxaldehyde, 2,4-dimethyl-, O-[(methylamino)-carbonyl]oxime
P050	115-29-7	Endosulfan
P088	145-73-3	Endothall
P051	72-20-8	Endrin
P051	72-20-8	Endrin, and metabolites
P042	51-43-4	Epinephrine
P031	460-19-5	Ethanedinitrile
P194	23135-22-0	Ethanimidothioic acid, 2-(dimethylamino)-N-[[methylamino]carbonyl]oxy]-2-oxo-, methyl ester
P066	16752-77-5	Ethanimidothioic acid, N-[[methylamino]carbonyl]oxy]-, methyl ester
P101	107-12-0	Ethyl cyanide
P054	151-56-4	Ethyleneimine
P097	52-85-7	Famphur
P056	7782-41-4	Fluorine
P057	640-19-7	Fluoroacetamide
P058	62-74-8	Fluoroacetic acid, sodium salt
P198	23422-53-9	Formetanate hydrochloride
P197	17702-57-7	Formparanate
P065	628-86-4	Fulminic acid, mercury(2+) salt (R,T)
P059	76-44-8	Heptachlor
P062	757-58-4	Hexaethyl tetraphosphate
P116	79-19-6	Hydrazinecarbothioamide
P068	60-34-4	Hydrazine, methyl-
P063	74-90-8	Hydrocyanic acid

(E) Alphabetical List		
EPA Hazardous Waste #	CAS #	Substance
P063	74-90-8	Hydrogen cyanide
P096	7803-51-2	Hydrogen phosphide
P060	465-73-6	Isodrin
P192	119-38-0	Isolan
P202	64-00-6	3-Isopropylphenyl N-methylcarbamate
P007	2763-96-4	3(2H)-Isoxazolone, 5-(aminomethyl)-
P196	15339-36-3	Manganese, bis(dimethylcarbamodithioata-S,S')-,
P196	15339-36-3	Manganese, dimethyldithiocarbamate
P092	62-38-4	Mercury, (acetato-O)phenyl-
P065	628-86-4	Mercury fulminate (R,T)
P082	62-75-9	Methanamine, N-methyl-N-nitroso-
P064	624-80-9	Methane, isocyanato-
P016	542-88-1	Methane, oxybis[chloro-
P112	509-14-8	Methane, tetranitro- (R)
P118	75-70-7	Methanethiol, trichloro-
P198	23422-53-9	Methanimidamide, N,N-dimethyl-N'-[3-[[[(methylamino)-carbonyl]oxy]phenyl]-, monohydrochloride
P197	17702-57-7	Methanimidamide, N-dimethyl-N'-[2-methyl-4-[[[(methylamino) carbonyl]oxy]phenyl]-
P199	2032-65-7	Methiocarb
P050	115-29-7	6,9-Methano-2,4,3-benzodioxathiepin, 6,7,8,9,10,10-hexachloro-1,5,5a,6,9,9a-hexahydro-, 3-oxide
P059	76-44-8	4,7-Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro-
P066	16752-77-5	Methomyl
P068	60-34-4	Methyl hydrazine
P064	624-83-9	Methyl isocyanate

(E) Alphabetical List		
EPA Hazardous Waste #	CAS #	Substance
P069	75-86-5	2-Methylactonitrile
P071	298-00-0	Methyl parathion
P190	1129-41-5	Metolcarb
P128	315-18-4	Mexacarbate
P072	86-88-4	alpha-Naphthylthiourea
P073	13463-39-3	Nickel carbonyl
P073	13463-39-3	Nickel carbonyl Ni(CO) ₄ , (T-4)-
P074	557-19-7	Nickel cyanide
P074	557-19-7	Nickel cyanide Ni(CN) ₂
P075	54-11-5 *	Nicotine, and salts
P076	10102-43-9	Nitric oxide
P077	100-01-6	p-Nitroaniline
P078	10102-44-0	Nitrogen dioxide
P076	10102-43-9	Nitrogen oxide NO
P078	10102-44-0	Nitrogen oxide NO ₂
P081	55-63-0	Nitroglycerine (R)
P082	62-75-9	N-Nitrosodimethylamine
P084	4549-40-0	N-Nitrosomethylvinylamine
P085	152-16-9	Octamethylpyrophosphoramide
P087	20816-12-0	Osmium oxide OsO ₄ , (T-4)-
P087	20816-12-0	Osmium tetroxide
P088	145-73-3	7-Oxabicyclo[2.2.1]heptane-2,3-dicarboxylic acid
P194	23135-22-0	Oxamyl
P089	56-38-2	Parathion
P034	131-89-5	Phenol, 2-cyclohexyl-4,6-dinitro-

(E) Alphabetical List		
EPA Hazardous Waste #	CAS #	Substance
P128	315-18-4	Phenol, 4-(dimethylamino)-3,5-dimethyl-, methylcarbamate (ester)
P199	2032-65-7	Phenol, (3,5-dimethyl-4-(methylthio)-, methylcarbamate
P048	51-28-5	Phenol, 2,4-dinitro-
P047	534-52-1 *	Phenol, 2-methyl-4,6-dinitro-, and salts
P201	2631-37-0	Phenol, 3-methyl-5-(1-methylethyl)-, methyl carbamate
P202	64-00-6	Phenol, 3-(1-methylethyl)-, methyl carbamate
P020	88-85-7	Phenol, 2-(1-methylpropyl)-4,6-dinitro-
P009	131-74-8	Phenol, 2,4,6-trinitro-, ammonium salt (R)
P092	62-38-4	Phenylmercury acetate
P093	103-85-5	Phenylthiourea
P204	57-47-6	Physostigmine
P188	57-64-7	Physostigmine salicylate
P094	298-02-2	Phorate
P095	75-44-5	Phosgene
P096	7803-51-2	Phosphine
P041	311-45-5	Phosphoric acid, diethyl 4-nitrophenyl ester
P039	298-04-4	Phosphorodithioic acid, O,O-diethyl S-[2-(ethylthio)ethyl] ester
P094	298-02-2	Phosphorodithioic acid, O,O-diethyl S-[(ethylthio)methyl] ester
P044	60-51-5	Phosphorodithioic acid, O,O-dimethyl S-[2-(methylamino)-2-oxoethyl] ester
P043	55-91-4	Phosphorofluoridic acid, bis(1-methylethyl) ester
P089	56-38-2	Phosphorothioic acid, O,O-diethyl O-(4-nitrophenyl) ester
P040	297-97-2	Phosphorothioic acid, O,O-diethyl O-pyrazinyl ester
P097	52-85-7	Phosphorothioic acid, O-[4-[(dimethylamino)sulfonyl]phenyl] O,O-dimethyl ester
P071	298-00-0	Phosphorothioic acid, O,O,-dimethyl O-(4-nitrophenyl) ester

(E) Alphabetical List		
EPA Hazardous Waste #	CAS #	Substance
P110	78-00-2	Plumbane, tetraethyl-
P098	151-50-8	Potassium cyanide
P098	151-50-8	Potassium cyanide K(CN)
P099	506-61-6	Potassium silver cyanide
P201	2631-37-0	Promecarb
P203	1646-88-4	Propanal, 2-methyl-2-(methyl-sulfonyl)-, O-[(methylamino)carbonyl] oxime
P070	116-06-3	Propanal, 2-methyl-2-(methylthio)-, -[(methylamino)carbonyl]oxime
P101	107-12-0	Propanenitrile
P027	542-76-7	Propanenitrile, 3-chloro-
P069	75-86-5	Propanenitrile, 2-hydroxy-2-methyl-
P081	55-63-0	1,2,3-Propanetriol, trinitrate (R)
P017	598-31-2	2-Propanone, 1-bromo-
P102	107-19-7	Propargyl alcohol
P003	107-02-8	2-Propenal
P005	107-18-6	2-Propen-1-ol
P067	75-55-8	1,2-Propylenimine
P102	107-19-7	2-Propyn-1-ol
P008	504-24-5	4-Pyridinamine
P075	54-11-5 *	Pyridine, 3-(1-methyl-2-pyrrolidinyl)-, (S)-, and salts
P204	57-47-6	Pyrrolo[2,3-b]indol-5-ol, 1,2,3,3a,8,8a-hexahydro-1,3a,8-thrimethyl-, methylcarbamate (ester), (3aS-cis)-
P114	12039-52-0	Selenious acid, dithallium(1+) salt
P103	630-10-4	Selenourea
P104	506-64-9	Silver cyanide
P104	506-64-9	Silver cyanide Ag(CN)

(E) Alphabetical List		
EPA Hazardous Waste #	CAS #	Substance
P105	26628-22-8	Sodium azide
P106	143-33-9	Sodium cyanide
P106	143-33-9	Sodium cyanide Na(CN)
P108	57-24-9 *	Strychnidin-10-one, and salts
P018	357-57-3	Strychnidin-10-one, 2,3-dimethoxy-
P108	57-24-9 *	Strychnine, and salts
P115	7446-18-6	Sulfuric acid, dithallium(1+) salt
P109	3689-24-5	Tetraethyldithiopyrophosphate
P110	78-00-2	Tetraethyl lead
P111	107-49-3	Tetraethyl pyrophosphate
P112	509-14-8	Tetranitromethane (R)
P062	757-58-4	Tetraphosphoric acid, hexaethyl ester
P113	1314-32-5	Thallic oxide
P113	1314-32-5	Thallium oxide Tl ₂ O ₃
P114	12039-52-0	Thallium(I) selenite
P115	7446-18-6	Thallium(I) sulfate
P109	3689-24-5	Thiodiphosphoric acid, tetraethyl ester
P045	39196-18-4	Thiofanox
P049	541-53-7	Thioimidodicarbonic diamide [(H ₂ N)C(S)] ₂ NH
P014	108-98-5	Thiophenol
P116	79-19-6	Thiosemicarbazide
P026	5344-82-1	Thiourea, (2-chlorophenyl)-
P072	86-88-4	Thiourea, 1-naphthalenyl-
P093	103-85-5	Thiourea, phenyl-
P185	26419-73-8	Tirpate

(E) Alphabetical List		
EPA Hazardous Waste #	CAS #	Substance
P123	8001-35-2	Toxaphene
P118	75-70-7	Trichloromethanethiol
P119	7803-55-6	Vanadic acid, ammonium salt
P120	1314-62-1	Vanadium oxide V ₂ O ₅
P120	1314-62-1	Vanadium pentoxide
P084	4549-40-0	Vinylamine, N-methyl-N-nitroso-
P001	81-81-2 *	Warfarin, and salts, when present at concentrations greater than 0.3 per cent
P205	137-30-4	Zinc, bis(dimethylcarbamo-dithioato-S,S')-
P121	557-21-1	Zinc cyanide
P121	557-21-1	Zinc cyanide Zn(CN) ₂
P122	1314-84-7	Zinc phosphide Zn ₃ P ₂ , when present at concentrations greater than 10 per cent (R,T)
P205	137-30-4	Ziram
* CAS Number given for parent compound only.		

(E) Numerical List		
EPA Hazardous Waste #	CAS #	Substance
P001	81-81-2 *	2H-1-Benzopyran-2-one, -hydroxy-3-(3-oxo-1-phenylbutyl)-, and salts, when present at concentrations greater than 0.3 per cent
P001	81-81-2 *	Warfarin, and salts, when present at concentrations greater than 0.3 per cent
P002	591-08-2	Acetamide, N-(aminothioxomethyl)-
P002	591-08-2	1-Acetyl-2-thiourea
P003	107-02-8	Acrolein

(E) Numerical List		
EPA Hazardous Waste #	CAS #	Substance
P003	107-02-8	2-Propenal
P004	309-00-2	Aldrin
P004	309-00-2	1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexa-chloro-1,4,4a,5,8,8a,-hexahydro-, (1alpha,4alpha,4abeta,5alpha,8alpha,8abeta)-
P005	107-18-6	Allyl alcohol
P005	107-18-6	2-Propen-1-ol
P006	20859-73-8	Aluminum phosphide (R,T)
P007	2763-96-4	5-(Aminomethyl)-3-isoxazolol
P007	2763-96-4	3(2H)-Isoxazolone, 5-(aminomethyl)-
P008	504-24-5	4-Aminopyridine
P008	504-24-5	4-Pyridinamine
P009	131-74-8	Ammonium picrate (R)
P009	131-74-8	Phenol, 2,4,6-trinitro-, ammonium salt (R)
P010	7778-39-4	Arsenic acid H_3AsO_4
P011	1303-28-2	Arsenic oxide As_2O_5
P011	1303-28-2	Arsenic pentoxide
P012	1327-53-3	Arsenic oxide As_2O_3
P012	1327-53-3	Arsenic trioxide
P013	542-62-1	Barium cyanide
P014	108-98-5	Benzenethiol
P014	108-98-5	Thiophenol
P015	7440-41-7	Beryllium powder
P016	542-88-1	Dichloromethyl ether
P016	542-88-1	Methane, oxybis[chloro-
P017	598-31-2	Bromoacetone
P017	598-31-2	2-Propanone, 1-bromo-

(E) Numerical List		
EPA Hazardous Waste #	CAS #	Substance
P018	357-57-3	Brucine
P018	357-57-3	Strychnidin-10-one, 2,3-dimethoxy-
P020	88-85-7	Dinoseb
P020	88-85-7	Phenol, 2-(1-methylpropyl)-4,6-dinitro-
P021	592-01-8	Calcium cyanide
P021	592-01-8	Calcium cyanide Ca(CN) ₂
P022	75-15-0	Carbon disulfide
P023	107-20-0	Acetaldehyde, chloro-
P023	107-20-0	Chloroacetaldehyde
P024	106-47-8	Benzenamine, 4-chloro-
P024	106-47-8	p-Chloroaniline
P026	5344-82-1	1-(o-Chlorophenyl)thiourea
P026	5344-82-1	Thiourea, (2-chlorophenyl)-
P027	542-76-7	3-Chloropropionitrile
P027	542-76-7	Propanenitrile, 3-chloro-
P028	100-44-7	Benzene, (chloromethyl)-
P028	100-44-7	Benzyl chloride
P029	544-92-3	Copper cyanide
P029	544-92-3	Copper cyanide Cu(CN)
P030	----	Cyanides (soluble cyanide salts), not otherwise specified
P031	460-19-5	Cyanogen
P031	460-19-5	Ethanedinitrile
P033	506-77-4	Cyanogen chloride
P033	506-77-4	Cyanogen chloride (CN)Cl
P034	131-89-5	2-Cyclohexyl-4,6-dinitrophenol
P034	131-89-5	Phenol, 2-cyclohexyl-4,6-dinitro-

(E) Numerical List		
EPA Hazardous Waste #	CAS #	Substance
P036	696-57-1	Arsonous dichloride, phenyl-
P036	696-57-1	Dichlorophenylarsine
P037	60-57-1	Dieldrin
P037	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)-
P038	692-42-2	Arsine, diethyl-
P038	692-42-2	Diethylarsine
P039	298-04-4	Disulfoton
P039	298-04-4	Phosphorodithioic acid, O,O-diethyl S-[2-(ethylthio)ethyl] ester
P040	297-97-2	O,O-Diethyl O-pyrazinyl phosphorothioate
P040	297-97-2	Phosphorothioic acid, O,O-diethyl O-pyrazinyl ester
P041	311-45-5	Diethyl-p-nitrophenyl phosphate
P041	311-45-5	Phosphoric acid, diethyl 4-nitrophenyl ester
P042	51-43-4	1,2-Benzenediol, 4-[1-hydroxy-2-(methylamino)ethyl]-, (R)-
P042	51-43-4	Epinephrine
P043	55-91-4	Diisopropylfluorophosphate (DFP)
P043	55-91-4	Phosphorofluoridic acid, bis(1-methylethyl) ester
P044	60-51-5	Dimethoate
P044	60-51-5	Phosphorodithioic acid, O,O-dimethyl S-[2-(methylamino)-2-oxoethyl] ester
P045	39196-18-4	2-Butanone, 3,3-dimethyl-1-(methylthio)-, O-[(methylamino)carbonyl] oxime
P045	39196-18-4	Thiofanox
P046	122-09-8	Benzeneethanamine, alpha,alpha-dimethyl-
P046	122-09-8	alpha,alpha-Dimethylphenethylamine
P047	534-52-1 *	4,6-Dinitro-o-cresol, and salts
P047	534-52-1 *	Phenol, 2-methyl-4,6-dinitro-, and salts

(E) Numerical List		
EPA Hazardous Waste #	CAS #	Substance
P048	51-28-5	2,4-Dinitrophenol
P048	51-28-5	Phenol, 2,4-dinitro-
P049	541-53-7	Dithiobiuret
P049	541-53-7	Thioimidodicarbonic diamide [(H ₂ N)C(S)] ₂ NH
P050	115-29-7	Endosulfan
P050	115-29-7	6,9-Methano-2,4,3-benzodioxathiepin, 6,7,8,9,10,10-hexachloro-1,5,5a,6,9,9a-hexahydro-, 3-oxide
P051	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)-, and metabolites
P051	72-20-8	Endrin
P051	72-20-8	Endrin, and metabolites
P054	151-56-4	Aziridine
P054	151-56-4	Ethyleneimine
P056	7782-41-4	Fluorine
P057	640-19-7	Acetamide, 2-fluoro-
P057	640-19-4	Fluoroacetamide
P058	62-74-8	Acetic acid, fluoro-, sodium salt
P058	62-74-8	Fluoroacetic acid, sodium salt
P059	76-44-8	Heptachlor
P059	76-44-8	4,7-Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro-
P060	465-73-6	1,4,5,8-Dimethanonaphthalene,1,2,3,4,10,10- hexa-chloro-1,4,4a,5,8,8a-hexahydro-, (1alpha,4alpha,4abeta,5beta,8beta,8abeta)-
P060	465-73-6	Isodrin
P062	757-58-4	Hexaethyl tetraphosphate
P062	757-58-4	Tetraphosphoric acid, hexaethyl ester

(E) Numerical List		
EPA Hazardous Waste #	CAS #	Substance
P063	74-90-8	Hydrocyanic acid
P063	74-90-8	Hydrogen cyanide
P064	624-83-9	Methane, isocyanato-
P064	624-83-9	Methyl isocyanate
P065	628-86-4	Fulminic acid, mercury(2+) salt (R,T)
P065	628-86-4	Mercury fulminate (R,T)
P066	16752-77-5	Ethanimidothioic acid, N-[[[(methylamino)carbonyl]oxy]-, methyl ester
P066	16752-77-5	Methomyl
P067	75-55-8	Aziridine, 2-methyl-
P067	75-55-8	1,2-Propylenimine
P068	60-34-4	Hydrazine, methyl-
P068	60-34-4	Methyl hydrazine
P069	75-86-5	2-Methylactonitrile
P069	75-86-5	Propanenitrile, 2-hydroxy-2-methyl-
P070	116-06-3	Aldicarb
P070	116-06-3	Propanal, 2-methyl-2-(methylthio)-, O-[(methylamino)carbonyl]oxime
P071	298-00-0	Methyl parathion
P071	298-00-0	Phosphorothioic acid, O,O,-dimethyl O-(4-nitrophenyl) ester
P072	86-88-4	alpha-Naphthylthiourea
P072	86-88-4	Thiourea, 1-naphthalenyl-
P073	13463-39-3	Nickel carbonyl
P073	13463-39-3	Nickel carbonyl Ni(CO) ₄ , (T-4)-
P074	57-19-7	Nickel cyanide
P074	57-19-7	Nickel cyanide Ni(CN) ₂
P075	54-11-5 *	Nicotine, and salts

(E) Numerical List		
EPA Hazardous Waste #	CAS #	Substance
P075	54-11-5 *	Pyridine, 3-(1-methyl-2-pyrrolidinyl)-, (S)-, and salts
P076	10102-43-9	Nitric oxide
P076	10102-43-9	Nitrogen oxide NO
P077	100-01-6	Benzenamine, 4-nitro-
P077	100-01-6	p-Nitroaniline
P078	10102-44-0	Nitrogen dioxide
P078	10102-44-0	Nitrogen oxide NO ₂
P081	55-63-0	Nitroglycerine (R)
P081	55-63-0	1,2,3-Propanetriol, trinitrate (R)
P082	62-75-9	Methanamine, N-methyl-N-nitroso-
P082	62-75-9	N-Nitrosodimethylamine
P084	4549-40-0	N-Nitrosomethylvinylamine
P084	4549-40-0	Vinylamine, N-methyl-N-nitroso-
P085	152-16-9	Diphosphoramidate, octamethyl-
P085	152-16-9	Octamethylpyrophosphoramidate
P087	20816-12-0	Osmium oxide OsO ₄ , (T-4)-
P087	20816-12-0	Osmium tetroxide
P088	145-73-3	Endothall
P088	145-73-3	7-Oxabicyclo[2.2.1]heptane-2,3-dicarboxylic acid
P089	56-38-2	Parathion
P089	56-38-2	Phosphorothioic acid, O,O-diethyl O-(4-nitrophenyl) ester
P092	62-38-4	Mercury, (acetato-O)phenyl-
P092	62-38-4	Phenylmercury acetate
P093	103-85-5	Phenylthiourea
P093	103-85-5	Thiourea, phenyl-
P094	298-02-2	Phorate

(E) Numerical List		
EPA Hazardous Waste #	CAS #	Substance
P094	298-02-2	Phosphorodithioic acid, O,O-diethyl S-[(ethylthio)methyl] ester
P095	75-44-5	Carbonic dichloride
P095	75-44-5	Phosgene
P096	7803-51-2	Hydrogen phosphide
P096	7803-51-2	Phosphine
P097	52-85-7	Famphur
P097	52-85-7	Phosphorothioic acid, O-[4-[(dimethylamino) sulfonyl]phenyl] O,O-dimethyl ester
P098	151-50-8	Potassium cyanide
P098	151-50-8	Potassium cyanide K(CN)
P099	506-61-6	Argentate(1-), bis(cyano-C)-, potassium
P099	506-61-6	Potassium silver cyanide
P101	107-12-0	Ethyl cyanide
P101	107-12-0	Propanenitrile
P102	107-19-7	Propargyl alcohol
P102	107-19-7	2-Propyn-1-ol
P103	630-10-4	Selenourea
P104	506-64-9	Silver cyanide
P104	506-64-9	Silver cyanide Ag(CN)
P105	26628-22-8	Sodium azide
P106	143-33-9	Sodium cyanide
P106	143-33-9	Sodium cyanide Na(CN)
P108	157-24-9 *	Strychnidin-10-one, and salts
P108	157-24-9 *	Strychnine, and salts
P109	3689-24-5	Tetraethyldithiopyrophosphate
P109	3689-24-5	Thiodiphosphoric acid, tetraethyl ester
P110	78-00-2	Plumbane, tetraethyl-

(E) Numerical List		
EPA Hazardous Waste #	CAS #	Substance
P110	78-00-2	Tetraethyl lead
P111	107-49-3	Diphosphoric acid, tetraethyl ester
P111	107-49-3	Tetraethyl pyrophosphate
P112	509-14-8	Methane, tetranitro- (R)
P112	509-14-8	Tetranitromethane (R)
P113	1314-32-5	Thallic oxide
P113	1314-32-5	Thallium oxide Tl_2O_3
P114	12039-52-0	Selenious acid, dithallium(1+) salt
P114	12039-52-0	Thallium(I) selenite
P115	7446-18-6	Sulfuric acid, dithallium(1+) salt
P115	7446-18-6	Thallium(I) sulfate
P116	79-19-6	Hydrazinecarbothioamide
P116	79-19-6	Thiosemicarbazide
P118	75-70-7	Methanethiol, trichloro-
P118	75-70-7	Trichloromethanethiol
P119	7803-55-6	Ammonium vanadate
P119	7803-55-6	Vanadic acid, ammonium salt
P120	1314-62-1	Vanadium oxide V_2O_5
P120	1314-62-1	Vanadium pentoxide
P121	557-21-1	Zinc cyanide
P121	557-21-1	Zinc cyanide $Zn(CN)_2$
P122	1314-84-7	Zinc phosphide Zn_3P_2 , when present at concentrations greater than 10 per cent (R, T)
P123	8001-35-2	Toxaphene
P127	1563-66-2	7-Benzofuranol, 2,3-dihydro-2,2-dimethyl-, methylcarbamate
P127	1563-66-2	Carbofuran
P128	315-18-4	Mexacarbate

(E) Numerical List		
EPA Hazardous Waste #	CAS #	Substance
P128	315-18-4	Phenol, 4-(dimethylamino)-3,5-dimethyl-, methylcarbamate (ester)
P185	26419-73-8	1,3-Dithiolane-2-carboxaldehyde, 2,4-dimethyl-, O-[(methylamino)-carbonyl]oxime
P185	26419-73-8	Tirpate
P188	57-64-7	Benzoic acid, 2hydroxy-, compd. With (3a <i>S</i> -cis)-1,2,3,3a,8,8a-hexahydro-1,3a,8-trimethylpyrrolo [2,3- <i>b</i>]indol-5yl methylcarbamate ester (1:1)
P188	57-64-7	Physostigmine salicylate
P189	55285-14-8	Carbamic acid, [(dibutylamino)-thio]methyl-, 2,3-dihydro-2,2-dimethyl- 7benzofuranyl ester
P189	55285-14-8	Carbosulfan
P190	1129-41-5	Carbamic acid, methyl-, 3-methylphenyl ester
P190	1129-41-5	Metolcarb
P191	644-64-4	Carbamic acid, dimethyl-, 1-[(dimethyl-amino)carbonyl]-5-methyl-1 <i>H</i> -pyrazol-3yl ester
P191	644-64-4	Dimetilan
P192	119-38-0	Carbamic acid, dimethyl-, 3-methyl-1-(1-methylethyl)-1 <i>H</i> -pyrazol-5-yl ester
P192	119-38-0	Isolan
P194	23135-22-0	Ethanimidothioic acid, 2-(dimethylamino)- <i>N</i> - [[(methylamino) carbonyl]oxy]-2-oxo-, methyl ester
P194	23135-22-0	Oxamyl
P196	15339-36-3	Manganese, bis(dimethylcarbomodithioata- <i>S,S'</i>)-,
P196	15339-36-3	Manganese, dimethyldithiocarbamate
P197	17702-57-7	Formparanate
P197	17702-57-7	Methanimidamide, <i>N,N</i> -dimethyl- <i>N'</i> -[2-methyl-4-[[[(methylamino)carbonyl]oxy]phenyl]-
P198	23422-53-9	Formetanate hydrochloride

(E) Numerical List		
EPA Hazardous Waste #	CAS #	Substance
P198	23422-53-9	Methanimidamide, N,N-dimethyl-N'-[3- [[methylamino)-carbonyl]oxy]phenyl]-, monohydrochloride
P199	2032-65-7	Methiocarb
P199	2032-65-7	Phenol, (3,5-dimethyl-4-(methylthio)-, methylcarbamate
P201	2631-37-0	Phenol, 3-methyl-5-(1-methylethyl)-, methyl carbamate
P201	2631-37-0	Promecarb
P202	64-00-6	m-Cumenyl methylcarbamate
P202	64-00-6	3-Isopropylphenyl N-methylcarbamate
P202	64-00-6	Phenol, 3-(1-methylethyl)-, methyl carbamate
P203	1646-88-4	Aldicarb sulfone
P203	1646-88-4	Propanal, 2-methyl-2-(methyl-sulfonyl)-, O-[(methylamino)carbonyl] oxime
P204	57-47-6	Physostigmine
P204	57-47-6	Pyrrolo[2,3-b]indol-5-ol, 1,2,3,3a,8,8a-hexahydro- 1,3a,8-thrimethyl-, methylcarbamate (ester), (3aS-cis)-
P205	137-30-4	Zinc, bis(dimethylcarbamo-dithioato-S,S')-
P205	137-30-4	Ziram
* CAS Number given for parent compound only.		

(F) The commercial chemical products, manufacturing chemical intermediates, or off-specification commercial chemical products referred to in paragraphs (A) to (D) of this rule, are identified as toxic wastes (T) unless otherwise designated and are subject to the small quantity generator exclusion defined in paragraphs (A) and (G) of rule 3745-51-05 of the Administrative Code.

[Comment: For the convenience of the regulated community, the primary hazardous properties of these materials have been indicated by the letters T (toxicity), R (reactivity), I (ignitability) and C (corrosivity). Absence of a letter indicates that the compound is only listed for toxicity. Wastes are first listed in alphabetical order by substance and then listed again in numerical order by EPA hazardous waste number.]

These wastes and ~~their~~ corresponding EPA hazardous waste numbers are:

(F) Alphabetical List		
EPA Hazardous Waste #	CAS #	Substance
U394	30558-43-1	A2213
U001	75-07-0	Acetaldehyde (I)
U034	75-87-6	Acetaldehyde, trichloro-
U187	62-44-2	Acetamide, N-(4-ethoxyphenyl)-
U005	53-96-3	Acetamide, N-9H-fluoren-2-yl-
U240	94-75-7 *	Acetic acid, (2,4-dichlorophenoxy)-, salts and esters
U112	141-78-6	Acetic acid ethyl ester (I)
U144	301-04-2	Acetic acid, lead(2+) salt
U214	563-68-8	Acetic acid, thallium(1+) salt
See F027	93-76-5	Acetic acid, (2,4,5-trichlorophenoxy)-
U002	67-64-1	Acetone (I)
U003	75-05-8	Acetonitrile (I,T)
U004	98-86-2	Acetophenone
U005	53-96-3	2-Acetylaminofluorene
U006	75-36-5	Acetyl chloride (C,R,T)
U007	79-06-1	Acrylamide
U008	79-10-7	Acrylic acid (I)
U009	107-13-1	Acrylonitrile
U011	61-82-5	Amitrole
U012	62-53-3	Aniline (I,T)
U136	75-60-5	Arsinic acid, dimethyl-
U014	492-80-8	Auramine
U015	115-02-6	Azaserine

(F) Alphabetical List		
EPA Hazardous Waste #	CAS #	Substance
U010	50-07-7	Azirino[2',3':3,4]pyrrolo[1,2-a]indole-4,7-dione, 6-amino-8-[[aminocarbonyloxy]methyl]-1,1a,2,8,8a,8b-hexahydro-8a-methoxy-5-methyl-, [1aS-(1aalpha, 8beta, 8aalpha, 8balph)]-
U280	101-27-9	Barban
U278	22781-23-3	Bendiocarb
U364	22961-82-6	Bendiocarb phenol
U271	17804-35-2	Benomyl
U157	56-49-5	Benz[j]aceanthrylene, 1,2-dihydro-3-methyl-
U016	225-51-4	Benz[c]acridine
U017	98-87-3	Benzal chloride
U192	23950-58-5	Benzamide, 3,5-dichloro-N-(1,1-dimethyl-2-propynyl)-
U018	56-55-3	Benz[a]anthracene
U094	57-97-6	Benz[a]anthracene, 7,12-dimethyl-
U012	62-53-3	Benzenamine (I,T)
U014	492-80-8	Benzenamine, 4,4'-carbonimidoylbis[N,N-dimethyl-
U049	3165-93-3	Benzenamine, 4-chloro-2-methyl-, hydrochloride
U093	60-11-7	Benzenamine, N,N-dimethyl-4-(phenylazo)-
U328	95-53-4	Benzenamine, 2-methyl-
U353	106-49-0	Benzenamine, 4-methyl-
U158	101-14-4	Benzenamine, 4,4'-methylenebis[2-chloro-
U222	636-21-5	Benzenamine, 2-methyl-, hydrochloride
U181	99-55-8	Benzenamine, 2-methyl-5-nitro-
U019	71-43-2	Benzene (I,T)
U038	510-15-6	Benzeneacetic acid, 4-chloro-alpha-(4-chlorophenyl)-alpha-hydroxy-, ethyl ester
U030	101-55-3	Benzene, 1-bromo-4-phenoxy-

(F) Alphabetical List		
EPA Hazardous Waste #	CAS #	Substance
U035	305-03-3	Benzenebutanoic acid, 4-[bis(2-chloroethyl)amino]-
U037	108-90-7	Benzene, chloro-
U221	25376-45-8	Benzenediamine, ar-methyl-
U028	117-81-7	1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester
U069	84-74-2	1,2-Benzenedicarboxylic acid, dibutyl ester
U088	84-66-2	1,2-Benzenedicarboxylic acid, diethyl ester
U102	131-11-3	1,2-Benzenedicarboxylic acid, dimethyl ester
U107	117-84-0	1,2-Benzenedicarboxylic acid, dioctyl ester
U070	95-50-1	Benzene, 1,2-dichloro-
U071	541-73-1	Benzene, 1,3-dichloro-
U072	106-46-7	Benzene, 1,4-dichloro-
U060	72-54-8	Benzene, 1,1'-(2,2-dichloroethylidene)bis[4-chloro-
U017	98-87-3	Benzene, (dichloromethyl)-
U223	26471-62-5	Benzene, 1,3-diisocyanatomethyl- (R,T)
U239	1330-20-7	Benzene, dimethyl- (I)
U201	108-46-3	1,3-Benzenediol
U127	118-74-1	Benzene, hexachloro-
U056	110-82-7	Benzene, hexahydro- (I)
U220	108-88-3	Benzene, methyl-
U105	121-14-2	Benzene, 1-methyl-2,4-dinitro-
U106	606-20-2	Benzene, 2-methyl-1,3-dinitro-
U055	98-82-8	Benzene, (1-methylethyl)- (I)
U169	98-95-3	Benzene, nitro-
U183	608-93-5	Benzene, pentachloro-
U185	82-68-8	Benzene, pentachloronitro-
U020	98-09-9	Benzenesulfonic acid chloride (C,R)

(F) Alphabetical List		
EPA Hazardous Waste #	CAS #	Substance
U020	98-09-9	Benzenesulfonyl chloride (C,R)
U207	95-94-3	Benzene, 1,2,4,5-tetrachloro-
U061	50-29-3	Benzene, 1,1'-(2,2,2-trichloroethylidene)bis[4-chloro-
U247	72-43-5	Benzene, 1,1'-(2,2,2-trichloroethylidene)bis[4-methoxy-
U023	98-07-7	Benzene, (trichloromethyl)-
U234	99-35-4	Benzene, 1,3,5-trinitro-
U021	92-87-5	Benzidine
U202	81-07-2	1,2-Benzisothiazol-3(2H)-one, 1,1-dioxide, and salts
U364	22961-82-6	1,3-Benzodioxol-4-ol, 2,2-dimethyl-
U278	22781-3	1,3-Benzodioxol-4-ol, 2,2-dimethyl-, methyl carbamate
U203	94-59-7	1,3-Benzodioxole, 5-(2-propenyl)-
U141	120-58-1	1,3-Benzodioxole, 5-(1-propenyl)-
U090	94-58-6	1,3-Benzodioxole, 5-propyl-
U367	1563-38-8	7-Benzofuranol, 2,3-dihydro-2,2-dimethyl-
U064	189-55-9	Benzo[rs]pentaphene
U248	81-81-2 *	2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenyl-butyl)-, and salts, when present at concentrations of 0.3 per cent or less
U022	50-32-8	Benzo[a]pyrene
U197	106-51-4	p-Benzoquinone
U023	98-07-7	Benzotrichloride (C,R,T)
U085	1464-53-5	2,2'-Bioxirane
U021	92-87-5	[1,1'-Biphenyl]-4,4'-diamine
U073	91-94-1	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dichloro-
U091	119-90-4	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethoxy-
U095	119-93-7	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethyl-
U225	75-25-2	Bromoform

(F) Alphabetical List		
EPA Hazardous Waste #	CAS #	Substance
U030	101-55-3	4-Bromophenyl phenyl ether
U128	87-68-3	1,3-Butadiene, 1,1,2,3,4,4-hexachloro-
U172	924-16-3	1-Butanamine, N-butyl-N-nitroso-
U031	71-36-3	1-Butanol (I)
U159	78-93-3	2-Butanone (I,T)
U160	1338-23-4	2-Butanone, peroxide (R,T)
U053	4170-30-3	2-Butenal
U074	764-41-0	2-Butene, 1,4-dichloro- (I,T)
U143	303-34-4	2-Butenoic acid, 2-methyl-, 7-[[2,3-dihydroxy-2-(1-methoxyethyl)-3-methyl-1-oxobutoxy]methyl]-2,3,5,7a-tetrahydro-1H-pyrrolizin-1-yl ester, 1S-[1alpha(Z),7(2S*,3R*),7alpha]]-
U031	71-36-3	n-Butyl alcohol (I)
U136	75-60-5	Cacodylic acid
U032	13765-19-0	Calcium chromate
U372	10605-21-7	Carbamic acid, 1H-benzimidazol-2-yl, methyl ester
U271	17804-35-2	Carbamic acid, [1-[(buthylamino)carbonyl]-1H-benzimidazol-2-yl], methyl ester
U280	101-27-9	Carbamic acid, (3-chlorophenyl)-, 4-chloro-2-butyryl ester
U238	51-79-6	Carbamic acid, ethyl ester
U178	615-53-2	Carbamic acid, methylnitroso-, ethyl ester
U373	122-42-9	Carbamic acid, phenyl-, 1-methylethyl ester
U409	23564-05-8	Carbamic acid, [1,2-phenylenebis(iminocarbobothioyl)]bis-, dimethyl ester
U097	79-44-7	Carbamic chloride, dimethyl-
U114	111-54-6 *	Carbamodithioic acid, 1,2-ethanedylbis-, salts and esters
U062	2303-16-4	Carbamothioic acid, bis(1-methylethyl)-, S-(2,3-dichloro-2-propenyl) ester

(F) Alphabetical List		
EPA Hazardous Waste #	CAS #	Substance
U389	2303-17-5	Carbamothioic acid, bis(1-methylethyl)-, S-(2,3,3-trichloro-2-propenyl) ester
U387	52888-80-9	Carbamothioic acid, dipropyl-, S-(phenylmethyl) ester
U279	63-25-2	Carbaryl
U372	10605-21-7	Carbendazim
U367	1563-38-8	Carbofuran phenol
U215	6533-73-9	Carbonic acid, dithallium(1+) salt
U033	353-50-4	Carbonic difluoride
U156	79-22-1	Carbonochloridic acid, methyl ester (I,T)
U033	353-50-4	Carbon oxyfluoride (R,T)
U211	56-23-5	Carbon tetrachloride
U034	75-87-6	Chloral
U035	305-03-3	Chlorambucil
U036	57-74-9	Chlordane, alpha and gamma isomers
U026	494-03-1	Chlornaphazin
U037	108-90-7	Chlorobenzene
U038	510-15-6	Chlorobenzilate
U039	59-50-7	p-Chloro-m-cresol
U042	110-75-8	2-Chloroethyl vinyl ether
U044	67-66-3	Chloroform
U046	107-30-2	Chloromethyl methyl ether
U047	91-58-7	beta-Chloronaphthalene
U048	95-57-8	o-Chlorophenol
U049	3165-93-3	4-Chloro-o-toluidine, hydrochloride
U032	13765-19-0	Chromic acid H ₂ CrO ₄ , calcium salt
U050	218-01-9	Chrysene

(F) Alphabetical List		
EPA Hazardous Waste #	CAS #	Substance
U051	-----	Creosote
U052	1319-77-3	Cresol (Cresylic acid)
U053	4170-30-3	Crotonaldehyde
U055	98-82-8	Cumene (I)
U246	506-68-3	Cyanogen bromide (CN)Br
U197	106-51-4	2,5-Cyclohexadiene-1,4-dione
U056	110-82-7	Cyclohexane (I)
U129	58-89-9	Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha,2alpha,3beta,4alpha,5alpha,6beta)-
U057	108-94-1	Cyclohexanone (I)
U130	77-47-4	1,3-Cyclopentadiene, 1,2,3,4,5,5-hexachloro-
U058	50-18-0	Cyclophosphamide
U240	94-75-7 *	2,4-D, salts and esters
U059	20830-81-3	Daunomycin
U060	72-54-8	DDD
U061	50-29-3	DDT
U062	2303-16-4	Diallate
U063	53-70-3	Dibenz[a,h]anthracene
U064	189-55-9	Dibenzo[a,i]pyrene
U066	96-12-8	1,2-Dibromo-3-chloropropane
U069	84-74-2	Dibutyl phthalate
U070	95-50-1	o-Dichlorobenzene
U071	541-73-1	m-Dichlorobenzene
U072	106-46-7	p-Dichlorobenzene
U073	91-94-1	3,3'-Dichlorobenzidine
U074	764-41-0	1,4-Dichloro-2-butene (I,T)

(F) Alphabetical List		
EPA Hazardous Waste #	CAS #	Substance
U075	75-71-8	Dichlorodifluoromethane
U078	75-35-4	1,1-Dichloroethylene
U079	156-60-5	1,2-Dichloroethylene
U025	111-44-4	Dichloroethyl ether
U027	108-60-1	Dichloroisopropyl ether
U024	111-91-1	Dichloromethoxy ethane
U081	120-83-2	2,4-Dichlorophenol
U082	87-65-0	2,6-Dichlorophenol
U084	542-75-6	1,3-Dichloropropene
U085	1464-53-5	1,2:3,4-Diepoxybutane (I,T)
U395	5952-26-1	Diethylene glycol, dicarbamate
U108	123-91-1	1,4-Diethyleneoxide
U028	117-81-7	Diethylhexyl phthalate
U086	1615-80-1	N,N'-Diethylhydrazine
U087	3288-58-2	O,O-Diethyl S-methyl dithiophosphate
U088	84-66-2	Diethyl phthalate
U089	56-53-1	Diethylstilbesterol
U090	94-58-6	Dihydrosafrole
U091	119-90-4	3,3'-Dimethoxybenzidine
U092	124-40-3	Dimethylamine (I)
U093	60-11-7	p-Dimethylaminoazobenzene
U094	57-97-6	7,12-Dimethylbenz[a]anthracene
U095	119-93-7	3,31-Dimethylbenzidine
U096	80-15-9	alpha,alpha-Dimethylbenzylhydroperoxide (R)
U097	79-44-7	Dimethylcarbamoyl chloride
U098	57-14-7	1,1-Dimethylhydrazine

(F) Alphabetical List		
EPA Hazardous Waste #	CAS #	Substance
U099	540-73-8	1,2-Dimethylhydrazine
U101	105-67-9	2,4-Dimethylphenol
U102	131-11-3	Dimethyl phthalate
U103	77-78-1	Dimethyl sulfate
U105	121-14-2	2,4-Dinitrotoluene
U106	606-20-2	2,6-Dinitrotoluene
U107	117-84-0	Di-n-octyl phthalate
U108	123-91-1	1,4-Dioxane
U109	122-66-7	1,2-Diphenylhydrazine
U110	142-84-7	Dipropylamine (I)
U111	621-64-7	Di-n-propylnitrosamine
U041	106-89-8	Epichlorohydrin
U001	75-07-0	Ethanal (I)
U174	55-18-5	Ethanamine, N-ethyl-N-nitroso-
U404	121-44-8	Ethanamine, N, N-diethyl-
U155	91-80-5	1,2-Ethanediamine, N,N-dimethyl-N'-2-pyridinyl-N'-(2-thienylmethyl)-
U067	106-93-4	Ethane, 1,2-dibromo-
U076	75-34-3	Ethane, 1,1-dichloro-
U077	107-06-2	Ethane, 1,2-dichloro-
U131	67-72-1	Ethane, hexachloro-
U024	111-91-1	Ethane, 1,1'-[methylenebis(oxy)]bis[2-chloro-
U117	60-29-7	Ethane, 1,1'-oxybis-(I)
U025	111-44-4	Ethane, 1,1'-oxybis[2-chloro-
U184	76-01-7	Ethane, pentachloro-
U208	630-20-6	Ethane, 1,1,1,2-tetrachloro-

(F) Alphabetical List		
EPA Hazardous Waste #	CAS #	Substance
U209	79-34-5	Ethane, 1,1,2,2-tetrachloro-
U226	71-55-6	Ethane, 1,1,1-trichloro-
U227	79-00-5	Ethane, 1,1,2-trichloro-
U218	62-55-5	Ethanethioamide
U410	59669-26-0	Ethanimidothioic acid, N,N'-[thiobis [(methylimino)carbonyloxy]]bis-, dimethyl ester
U394	30558-43-1	Ethanimidothioic acid, 2-(dimethylamino)-hydroxy-2-oxo-, methyl ester
U359	110-80-5	Ethanol, 2-ethoxy-
U173	1116-54-7	Ethanol, 2,2'-(nitrosoimino)bis-
U395	5952-26-1	Ethanol, 2,2'-oxybis-, dicarbamate
U004	98-86-2	Ethanone, 1-phenyl-
U043	75-01-4	Ethene, chloro-
U042	110-75-8	Ethene, (2-chloroethoxy)-
U078	75-35-4	Ethene, 1,1-dichloro-
U079	156-60-5	Ethene, 1,2-dichloro-, (E)-
U210	127-18-4	Ethene, tetrachloro-
U228	79-01-6	Ethene, trichloro-
U112	141-78-6	Ethyl acetate (I)
U113	140-88-5	Ethyl acrylate (I)
U238	51-79-6	Ethyl carbamate (urethane)
U117	60-29-7	Ethyl ether (I)
U114	111-54-6 *	Ethylenebisdithiocarbamic acid, salts and esters
U067	106-93-4	Ethylene dibromide
U077	107-06-2	Ethylene dichloride
U359	110-80-5	Ethylene glycol monoethyl ether

(F) Alphabetical List		
EPA Hazardous Waste #	CAS #	Substance
U115	75-21-8	Ethylene oxide (I,T)
U116	96-45-7	Ethylenethiourea
U076	75-34-3	Ethylidene dichloride
U118	97-63-2	Ethyl methacrylate
U119	62-50-0	Ethyl methanesulfonate
U120	206-44-0	Fluoranthene
U122	50-00-0	Formaldehyde
U123	64-18-6	Formic acid (C,T)
U124	110-00-9	Furan (I)
U125	98-01-1	2-Furancarboxaldehyde (I)
U147	108-31-6	2,5-Furandione
U213	109-99-9	Furan, tetrahydro-(I)
U125	98-01-1	Furfural (I)
U124	110-00-9	Furfuran (I)
U206	18883-66-4	Glucopyranose, 2-deoxy-2-(3-methyl-3-nitrosoureido)-, D-
U206	18883-66-4	D-Glucose, 2-deoxy-2-[[[(methylnitrosoamino)-carbonyl]amino]-
U126	765-34-4	Glycidylaldehyde
U163	70-25-7	Guanidine, N-methyl-N'-nitro-N-nitroso-
U127	118-74-1	Hexachlorobenzene
U128	87-68-3	Hexachlorobutadiene
U130	77-47-4	Hexachlorocyclopentadiene
U131	67-72-1	Hexachloroethane
U132	70-30-4	Hexachlorophene
U243	1888-71-7	Hexachloropropene
U133	302-01-2	Hydrazine (R,T)

(F) Alphabetical List		
EPA Hazardous Waste #	CAS #	Substance
U086	1615-80-1	Hydrazine, 1,2-diethyl-
U098	57-14-7	Hydrazine, 1,1-dimethyl-
U099	540-73-8	Hydrazine, 1,2-dimethyl-
U109	122-66-7	Hydrazine, 1,2-diphenyl-
U134	7664-39-3	Hydrofluoric acid (C,T)
U134	7664-39-3	Hydrogen fluoride (C,T)
U135	7783-06-4	Hydrogen sulfide
U135	7783-06-4	Hydrogen sulfide H ₂ S
U096	80-15-9	Hydroperoxide, 1-methyl-1-phenylethyl- (R)
U116	96-45-7	2-Imidazolidinethione
U137	193-39-5	Indeno[1,2,3-cd]pyrene
U190	85-44-9	1,3-Isobenzofurandione
U140	78-83-1	Isobutyl alcohol (I,T)
U141	120-58-1	Isosafrole
U142	143-50-0	Kepone
U143	303-34-4	Lasiocarpine
U144	301-04-2	Lead acetate
U146	1335-32-6	Lead, bis(acetato-O)tetrahydroxytri-
U145	7446-27-7	Lead phosphate
U146	1335-32-6	Lead subacetate
U129	58-89-9	Lindane
U163	70-25-7	MNNG
U147	108-31-6	Maleic anhydride
U148	123-33-1	Maleic hydrazide
U149	109-77-3	Malononitrile
U150	148-82-3	Melphalan

(F) Alphabetical List		
EPA Hazardous Waste #	CAS #	Substance
U151	7439-97-6	Mercury
U152	126-98-7	Methacrylonitrile (I, T)
U092	124-40-3	Methanamine, N-methyl- (I)
U029	74-83-9	Methane, bromo-
U045	74-87-3	Methane, chloro- (I, T)
U046	107-30-2	Methane, chloromethoxy-
U068	74-95-3	Methane, dibromo-
U080	75-09-2	Methane, dichloro-
U075	75-71-8	Methane, dichlorodifluoro-
U138	74-88-4	Methane, iodo-
U211	56-23-5	Methane, tetrachloro-
U225	75-25-2	Methane, tribromo-
U044	67-66-3	Methane, trichloro-
U121	75-69-4	Methane, trichlorofluoro-
U119	62-50-0	Methanesulfonic acid, ethyl ester
U153	74-93-1	Methanethiol (I, T)
U036	57-74-9	4,7-Methano-1H-indene,1,2,4,5,6,7,8,8-octachloro-2,3,3a,4,7,7a-hexahydro-
U154	67-56-1	Methanol (I)
U155	91-80-5	Methapyrilene
U142	143-50-0	1,3,4-Metheno-2H-cyclobuta[cd]pentalen-2-one, 1,1a,3,3a,4,5,5,5a,5b,6-decachlorooctahydro-
U247	72-43-5	Methoxychlor
U154	67-56-1	Methyl alcohol (I)
U029	74-83-9	Methyl bromide
U186	504-60-9	1-Methylbutadiene (I)

(F) Alphabetical List		
EPA Hazardous Waste #	CAS #	Substance
U045	74-87-3	Methyl chloride (I,T)
U156	79-22-1	Methyl chlorocarbonate (I,T)
U226	71-55-6	Methyl chloroform
U157	56-49-5	3-Methylcholanthrene
U158	101-14-4	4,4'-Methylenebis(2-chloroaniline)
U068	74-95-3	Methylene bromide
U080	75-09-2	Methylene chloride
U159	78-93-3	Methyl ethyl ketone (MEK) (I,T)
U160	1338-23-4	Methyl ethyl ketone peroxide (R,T)
U138	74-88-4	Methyl iodide
U161	108-10-1	Methyl isobutyl ketone (I)
U162	80-62-6	Methyl methacrylate (I,T)
U161	108-10-1	4-Methyl-2-pentanone (I)
U164	56-04-2	Methylthiouracil
U010	50-07-7	Mitomycin C
U059	20830-81-3	5,12-Naphthacenedione, -acetyl-10- [(3-amino-2,3,6-trideoxy)-alpha-L-lyxo-hexopyranosyl)oxy]- 7,8,9,10-tetrahydro-6,8,11-trihydroxy-1-methoxy-, (8S-cis)-
U167	134-32-7	1-Naphthalenamine
U168	91-59-8	2-Naphthalenamine
U026	494-03-1	Naphthalenamine, N,N'-bis(2-chloroethyl)-
U165	91-20-3	Naphthalene
U047	91-58-7	Naphthalene, 2-chloro-
U166	130-15-4	1,4-Naphthalenedione
U236	72-57-1	2,7-Naphthalenedisulfonic acid, 3,3'-[(3,3'-dimethyl[1,1'-biphenyl]-4,4'-diyl)bis(azo)bis [5-amino-4-hydroxy]-, tetrasodium salt

(F) Alphabetical List		
EPA Hazardous Waste #	CAS #	Substance
U279	63-25-2	1-Naphthalenol, methylcarbamate
U166	130-15-4	1,4-Naphthoquinone
U167	134-32-7	alpha-Naphthylamine
U168	91-59-8	beta-Naphthylamine
U217	10102-45-1	Nitric acid, thallium(1+) salt
U169	98-95-3	Nitrobenzene (I,T)
U170	100-02-7	p-Nitrophenol
U171	79-46-9	2-Nitropropane (I,T)
U172	924-16-3	N-Nitrosodi-n-butylamine
U173	1116-54-7	N-Nitrosodiethanolamine
U174	55-18-5	N-Nitrosodiethylamine
U176	759-73-9	N-Nitroso-N-ethylurea
U177	684-93-5	N-Nitroso-N-methylurea
U178	615-53-2	N-Nitroso-N-methylurethane
U179	100-75-4	N-Nitrosopiperidine
U180	930-55-2	N-Nitrosopyrrolidine
U181	99-55-8	5-Nitro-o-toluidine
U193	1120-71-4	1,2-Oxathiolane, 2,2-dioxide
U058	50-18-0	2H-1,3,2-Oxazaphosphorin-2-amine, N,N-bis(2-chloroethyl)tetrahydro-, 2-oxide
U115	75-21-8	Oxirane (I,T)
U126	765-34-4	Oxiranecarboxyaldehyde
U041	106-89-8	Oxirane, (chloromethyl)-
U182	123-63-7	Paraldehyde
U183	608-93-5	Pentachlorobenzene
U184	76-01-7	Pentachloroethane

(F) Alphabetical List		
EPA Hazardous Waste #	CAS #	Substance
U185	82-68-8	Pentachloronitrobenzene (PCNB)
See F027	87-86-5	Pentachlorophenol
U161	108-10-1	Pentanol, 4-methyl-
U186	504-60-9	1,3-Pentadiene (I)
U187	62-44-2	Phenacetin
U188	108-95-2	Phenol
U048	95-57-8	Phenol, 2-chloro-
U039	59-50-7	Phenol, 4-chloro-3-methyl-
U081	120-83-2	Phenol, 2,4-dichloro-
U082	87-65-0	Phenol, 2,6-dichloro-
U089	56-53-1	Phenol, 4,4'-(1,2-diethyl-1,2-ethenediyl)bis-, (E)-
U101	105-67-9	Phenol, 2,4-dimethyl-
U052	1319-77-3	Phenol, methyl-
U132	70-30-4	Phenol, 2,2'-methylenebis[3,4,6-trichloro-
U411	114-26-1	Phenol, 2-(1-methylethoxy)-, methylcarbamate
U170	100-02-7	Phenol, 4-nitro-
See F027	87-86-5	Phenol, pentachloro-
See F027	58-90-2	Phenol, 2,3,4,6-tetrachloro-
See F027	95-95-4	Phenol, 2,4,5-trichloro-
See F027	88-06-2	Phenol, 2,4,6-trichloro-
U150	148-82-3	L-Phenylalanine, 4-[bis(2-chloroethyl)amino]-
U145	7446-27-7	Phosphoric acid, lead(2+) salt (2:3)
U087	3288-58-2	Phosphorodithioic acid, O,O-diethyl S-methyl ester
U189	1314-80-3	Phosphorus sulfide (R)
U190	85-44-9	Phthalic anhydride
U191	109-06-8	2-Picoline

(F) Alphabetical List		
EPA Hazardous Waste #	CAS #	Substance
U179	100-75-4	Piperidine, 1-nitroso-
U192	23950-58-5	Pronamide
U194	107-10-8	1-Propanamine (I,T)
U111	621-64-7	1-Propanamine, N-nitroso-N-propyl-
U110	142-84-7	1-Propanamine, N-propyl- (I)
U066	96-12-8	Propane, 1,2-dibromo-3-chloro-
U083	78-87-5	Propane, 1,2-dichloro-
U171	79-46-9	Propane, 2-nitro- (I,T)
U027	108-60-1	Propane, 2,2'-oxybis[2-chloro-
U193	1120-71-4	1,3-Propane sultone
U149	109-77-3	Propanedinitrile
See F027	93-72-1	Propanoic acid, 2-(2,4,5-trichlorophenoxy)-
U235	126-72-7	1-Propanol, 2,3-dibromo-, phosphate (3:1)
U140	78-83-1	1-Propanol, 2-methyl- (I,T)
U002	67-64-1	2-Propanone (I)
U007	79-06-1	2-Propenamide
U084	542-75-6	1-Propene, 1,3-dichloro-
U243	1888-71-7	1-Propene, 1,1,2,3,3,3-hexachloro-
U009	107-13-1	2-Propenenitrile
U152	126-98-7	2-Propenenitrile, 2-methyl- (I,T)
U008	79-10-7	2-Propenoic acid (I)
U113	140-88-5	2-Propenoic acid, ethyl ester (I)
U118	97-63-2	2-Propenoic acid, 2-methyl-, ethyl ester
U162	80-62-6	2-Propenoic acid, 2-methyl-, methyl ester (I,T)
U373	122-42-9	Propham
U411	114-26-1	Propoxur

(F) Alphabetical List		
EPA Hazardous Waste #	CAS #	Substance
U194	107-10-8	n-Propylamine (I,T)
U083	78-87-5	Propylene dichloride
U387	52888-80-9	Prosulfocarb
U148	123-33-1	3,6-Pyridazinedione, 1,2-dihydro-
U196	110-86-1	Pyridine
U191	109-06-8	Pyridine, 2-methyl-
U237	66-75-1	2,4-(1H,3H)-Pyrimidinedione, 5-[bis(2-chloroethyl)amino]-
U164	56-04-2	4(1H)-Pyrimidinone, 2,3-dihydro-6-methyl-2-thioxo-
U180	930-55-2	Pyrrolidine, 1-nitroso-
U200	50-55-5	Reserpine
U201	108-46-3	Resorcinol
U202	81-07-2	Saccharin, and salts
U203	94-59-7	Safrole
U204	7783-00-8	Selenious acid
U204	7783-00-8	Selenium dioxide
U205	7488-56-4	Selenium sulfide
U205	7488-56-4	Selenium sulfide SeS ₂ (R,T)
U015	115-02-6	L-Serine, diazoacetate (ester)
See F027	93-72-1	Silvex (2,4,5-TP)
U206	18883-66-4	Streptozotocin
U103	77-78-1	Sulfuric acid, dimethyl ester
U189	1314-80-3	Sulfur phosphide (R)
See F027	93-76-5	2,4,5-T
U207	95-94-3	1,2,4,5-Tetrachlorobenzene
U208	630-20-6	1,1,1,2-Tetrachloroethane
U209	79-34-5	1,1,2,2-Tetrachloroethane

(F) Alphabetical List		
EPA Hazardous Waste #	CAS #	Substance
U210	127-18-4	Tetrachloroethylene
See F027	58-90-2	2,3,4,6-Tetrachlorophenol
U213	109-99-9	Tetrahydrofuran (I)
U214	563-68-8	Thallium(I) acetate
U215	6533-73-9	Thallium(I) carbonate
U216	7791-12-0	Thallium(I) chloride
U216	7791-12-0	Thallium chloride TlCl
U217	10102-45-1	Thallium(I) nitrate
U218	62-55-5	Thioacetamide
U410	59669-26-0	Thiodicarb
U153	74-93-1	Thiomethanol (I,T)
U244	137-26-8	Thioperoxydicarbonic diamide [(H ₂ N)C(S)] ₂ S ₂ , tetramethyl-
U409	23564-05-8	Thiophanate-methyl
U219	62-56-6	Thiourea
U244	137-26-8	Thiram
U220	108-88-3	Toluene
U221	25376-45-8	Toluenediamine
U223	26471-62-5	Toluene diisocyanate (R,T)
U328	95-53-4	o-Toluidine
U353	106-49-0	p-Toluidine
U222	636-21-5	o-Toluidine hydrochloride
U389	2303-17-5	Triallate
U226	71-55-6	1,1,1-Trichloroethane
U011	61-82-5	1H-1,2,4-Triazol-3-amine
U227	79-00-5	1,1,2-Trichloroethane
U228	79-01-6	Trichloroethylene

(F) Alphabetical List		
EPA Hazardous Waste #	CAS #	Substance
U121	75-69-4	Trichloromonofluoromethane
See F027	95-95-4	2,4,5-Trichlorophenol
See F027	88-06-2	2,4,6-Trichlorophenol
U404	121-44-8	Triethylamine
U234	99-35-4	1,3,5-Trinitrobenzene (R,T)
U182	123-63-7	1,3,5-Trioxane, 2,4,6-trimethyl-
U235	126-72-7	Tris(2,3-dibromopropyl) phosphate
U236	72-57-1	Trypan blue
U237	66-75-1	Uracil mustard
U176	759-73-9	Urea, N-ethyl-N-nitroso-
U177	684-93-5	Urea, N-methyl-N-nitroso-
U043	75-01-4	Vinyl chloride
U248	81-81-2 *	Warfarin, and salts, when present at concentrations of 0.3 per cent or less
U239	1330-20-7	Xylene (I)
U200	50-55-5	Yohimban-16-carboxylic acid, 11,17-dimethoxy-18- [(3,4,5- trimethoxybenzoyl)oxy]-, methyl ester, (3beta,16beta,17alpha,18beta,20alpha)-
U249	1314-84-7	Zinc phosphide Zn ₃ P ₂ , when present at concentrations of 10 per cent or less
* CAS Number given for parent compound only.		

(F) Numerical List		
EPA Hazardous Waste #	CAS #	Substance
U001	75-07-0	Acetaldehyde (I)
U001	75-07-0	Ethanal (I)
U002	67-64-1	Acetone (I)
U002	67-64-1	2-Propanone (I)
U003	75-05-8	Acetonitrile (I,T)
U004	98-86-2	Acetophenone
U004	98-86-2	Ethanone, 1-phenyl-
U005	53-96-3	Acetamide, N-9H-fluoren-2-yl-
U005	53-96-3	2-Acetylaminofluorene
U006	75-36-5	Acetyl chloride (C,R,T)
U007	79-06-1	Acrylamide
U007	79-06-1	2-Propenamide
U008	79-10-7	Acrylic acid (I)
U008	79-10-7	2-Propenoic acid (I)
U009	107-13-1	Acrylonitrile
U009	107-13-1	2-Propenenitrile
U010	50-07-7	Azirino[2',3':3,4]pyrrolo[1,2-a]indole-4,7-dione, 6-amino-8- [[(aminocarbonyl)oxy]methyl]-1,1a,2,8,8a,8b-hexahydro-8a-methoxy-5-methyl-, [1aS-(1aalpha, 8beta,8aalpha,8balph)]-
U010	50-07-7	Mitomycin C
U011	61-82-5	Amitrole
U011	61-82-5	1H-1,2,4-Triazol-3-amine
U012	62-53-3	Aniline (I,T)
U012	62-53-3	Benzenamine (I,T)
U014	492-80-8	Auramine
U014	492-80-8	Benzenamine, 4,4'-carbonimidoylbis[N,N-dimethyl-

(F) Numerical List		
EPA Hazardous Waste #	CAS #	Substance
U015	115-02-6	Azaserine
U015	115-02-6	L-Serine, diazoacetate (ester)
U016	225-51-4	Benz[c]acridine
U017	98-87-3	Benzal chloride
U017	98-87-3	Benzene, (dichloromethyl)-
U018	56-55-3	Benz[a]anthracene
U019	71-43-2	Benzene (I,T)
U020	98-09-9	Benzenesulfonic acid chloride (C,R)
U020	98-09-9	Benzenesulfonyl chloride (C,R)
U021	92-87-5	Benzidine
U021	92-87-5	[1,1'-Biphenyl]-4,4'-diamine
U022	50-32-8	Benzo[a]pyrene
U023	98-07-7	Benzene, (trichloromethyl)-
U023	98-07-7	Benzotrichloride (C,R,T)
U024	111-91-1	Dichloromethoxy ethane
U024	111-91-1	Ethane, 1,1'-[methylenebis(oxy)]bis[2-chloro-
U025	111-44-4	Dichloroethyl ether
U025	111-44-4	Ethane, 1,1'-oxybis[2-chloro-
U026	494-03-1	Chlornaphazin
U026	494-03-1	Naphthalenamine, N,N'-bis(2-chloroethyl)-
U027	108-60-1	Dichloroisopropyl ether
U027	108-60-1	Propane, 2,2'-oxybis[2-chloro-
U028	117-81-7	1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester
U028	117-81-7	Diethylhexyl phthalate
U029	74-83-9	Methane, bromo-
U029	74-83-9	Methyl bromide

(F) Numerical List		
EPA Hazardous Waste #	CAS #	Substance
U030	101-55-3	Benzene, 1-bromo-4-phenoxy-
U030	101-55-3	4-Bromophenyl phenyl ether
U031	71-36-3	1-Butanol (I)
U031	71-36-3	n-Butyl alcohol (I)
U032	13765-19-0	Calcium chromate
U032	13765-19-0	Chromic acid H ₂ CrO ₄ , calcium salt
U033	353-50-4	Carbonic difluoride
U033	353-50-4	Carbon oxyfluoride (R,T)
U034	75-87-6	Acetaldehyde, trichloro-
U034	75-87-6	Chloral
U035	305-03-3	Benzenebutanoic acid, 4-[bis(2-chloroethyl)amino]-
U035	305-03-3	Chlorambucil
U036	57-74-9	Chlordane, alpha and gamma isomers
U036	57-74-9	4,7-Methano-1H-indene,1,2,4,5,6,7,8,8-octachloro-2,3,3a,4,7,7a-hexahydro-
U037	108-90-7	Benzene, chloro-
U037	108-90-7	Chlorobenzene
U038	510-15-6	Benzeneacetic acid, -chloro-alpha-(4-chlorophenyl)-alpha-hydroxy-, ethyl ester
U038	510-15-6	Chlorobenzilate
U039	59-50-7	p-Chloro-m-cresol
U039	59-50-7	Phenol, 4-chloro-3-methyl-
U041	106-89-8	Epichlorohydrin
U041	106-89-8	Oxirane, (chloromethyl)-
U042	110-75-8	2-Chloroethyl vinyl ether
U042	110-75-8	Ethene, (2-chloroethoxy)-
U043	75-01-4	Ethene, chloro-

(F) Numerical List		
EPA Hazardous Waste #	CAS #	Substance
U043	75-01-4	Vinyl chloride
U044	67-66-3	Chloroform
U044	67-66-3	Methane, trichloro-
U045	74-87-3	Methane, chloro- (I, T)
U045	74-87-3	Methyl chloride (I,T)
U046	107-30-2	Chloromethyl methyl ether
U046	107-30-2	Methane, chloromethoxy-
U047	91-58-7	beta-Chloronaphthalene
U047	91-58-7	Naphthalene, 2-chloro-
U048	95-57-8	o-Chlorophenol
U048	95-57-8	Phenol, 2-chloro-
U049	3165-93-3	Benzenamine, 4-chloro-2-methyl-, hydrochloride
U049	3165-93-3	4-Chloro-o-toluidine, hydrochloride
U050	218-01-9	Chrysene
U051	----	Creosote
U052	1319-77-3	Cresol (Cresylic acid)
U052	1319-77-3	Phenol, methyl-
U053	4170-30-3	2-Butenal
U053	4170-30-3	Crotonaldehyde
U055	98-82-8	Benzene, (1-methylethyl)- (I)
U055	98-82-8	Cumene (I)
U056	110-82-7	Benzene, hexahydro- (I)
U056	110-82-7	Cyclohexane (I)
U057	108-94-1	Cyclohexanone (I)
U058	50-18-0	Cyclophosphamide
U058	50-18-0	2H-1,3,2-Oxazaphosphorin-2-amine, N,N-bis(2-chloroethyl)tetrahydro-, 2-oxide

(F) Numerical List		
EPA Hazardous Waste #	CAS #	Substance
U059	20830-81-3	Daunomycin
U059	20830-81-3	5,12-Naphthacenedione, 8-acetyl-10-[(3-amino-2,3,6-trideoxy)-alpha-L-lyxo-hexopyranosyl oxy]-7,8,9,10-tetrahydro-6,8,11-trihydroxy-1-methoxy-, (8S-cis)-
U060	72-54-8	Benzene, 1,1'-(2,2-dichloroethylidene)bis[4-chloro-
U060	72-54-8	DDD
U061	50-29-3	Benzene, 1,1'-(2,2,2-trichloroethylidene)bis[4-chloro-
U061	50-29-3	DDT
U062	2303-16-4	Carbamothioic acid, bis(1-methylethyl)-, S-(2,3-dichloro-2-propenyl) ester
U062	2303-16-4	Diallate
U063	53-70-3	Dibenz[a,h]anthracene
U064	189-55-9	Benzo[rst]pentaphene
U064	189-55-9	Dibenzo[a,i]pyrene
U066	96-12-8	1,2-Dibromo-3-chloropropane
U066	96-12-8	Propane, 1,2-dibromo-3-chloro-
U067	106-93-4	Ethane, 1,2-dibromo-
U067	106-93-4	Ethylene dibromide
U068	74-95-3	Methane, dibromo-
U068	74-95-3	Methylene bromide
U069	84-74-2	1,2-Benzenedicarboxylic acid, dibutyl ester
U069	84-74-2	Dibutyl phthalate
U070	95-50-1	Benzene, 1,2-dichloro-
U070	95-50-1	o-Dichlorobenzene
U071	541-73-1	Benzene, 1,3-dichloro-
U071	541-73-1	m-Dichlorobenzene
U072	106-46-7	Benzene, 1,4-dichloro-

(F) Numerical List		
EPA Hazardous Waste #	CAS #	Substance
U072	106-46-7	p-Dichlorobenzene
U073	91-94-1	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dichloro-
U073	91-94-1	3,3'-Dichlorobenzidine
U074	764-41-0	2-Butene, 1,4-dichloro- (I,T)
U074	764-41-0	1,4-Dichloro-2-butene (I,T)
U075	75-71-8	Dichlorodifluoromethane
U075	75-71-8	Methane, dichlorodifluoro-
U076	75-34-3	Ethane, 1,1-dichloro-
U076	75-34-3	Ethylidene dichloride
U077	107-06-2	Ethane, 1,2-dichloro-
U077	107-06-2	Ethylene dichloride
U078	75-35-4	1,1-Dichloroethylene
U078	75-35-4	Ethene, 1,1-dichloro-
U079	156-60-5	1,2-Dichloroethylene
U079	156-60-5	Ethene, 1,2-dichloro-, (E)-
U080	75-09-2	Methane, dichloro-
U080	75-09-2	Methylene chloride
U081	120-83-2	2,4-Dichlorophenol
U081	120-83-2	Phenol, 2,4-dichloro-
U082	87-65-0	2,6-Dichlorophenol
U082	87-65-0	Phenol, 2,6-dichloro-
U083	78-87-5	Propane, 1,2-dichloro-
U083	78-87-5	Propylene dichloride
U084	542-75-6	1,3-Dichloropropene
U084	542-75-6	1-Propene, 1,3-dichloro-
U085	1464-53-5	2,2'-Bioxirane

(F) Numerical List		
EPA Hazardous Waste #	CAS #	Substance
U085	1464-53-5	1,2:3,4-Diepoxybutane (I,T)
U086	1615-80-1	N,N'-Diethylhydrazine
U086	1615-80-1	Hydrazine, 1,2-diethyl-
U087	3288-58-2	O,O-Diethyl S-methyl dithiophosphate
U087	3288-58-2	Phosphorodithioic acid, O,O-diethyl S-methyl ester
U088	84-66-2	1,2-Benzenedicarboxylic acid, diethyl ester
U088	84-66-2	Diethyl phthalate
U089	56-53-1	Diethylstilbesterol
U089	56-53-1	Phenol, 4,4'-(1,2-diethyl-1,2-ethenediyl)bis-, (E)-
U090	94-58-6	1,3-Benzodioxole, 5-propyl-
U090	94-58-6	Dihydrosafrole
U091	119-90-4	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethoxy-
U091	119-90-4	3,3'-Dimethoxybenzidine
U092	124-40-3	Dimethylamine (I)
U092	124-40-3	Methanamine, N-methyl- (I)
U093	60-11-7	Benzenamine, N,N-dimethyl-4-(phenylazo)-
U093	60-11-7	p-Dimethylaminoazobenzene
U094	57-97-6	Benz[a]anthracene, 7,12-dimethyl-
U094	57-97-6	7,12-Dimethylbenz[a]anthracene
U095	119-93-7	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethyl-
U095	119-93-7	3,3'-Dimethylbenzidine
U096	80-15-9	alpha,alpha-Dimethylbenzylhydroperoxide (R)
U096	80-15-9	Hydroperoxide, 1-methyl-1-phenylethyl- (R)
U097	79-44-7	Carbamic chloride, dimethyl-
U097	79-44-7	Dimethylcarbamoyl chloride
U098	57-14-7	1,1-Dimethylhydrazine

(F) Numerical List		
EPA Hazardous Waste #	CAS #	Substance
U098	57-14-7	Hydrazine, 1,1-dimethyl-
U099	540-73-8	1,2-Dimethylhydrazine
U099	540-73-8	Hydrazine, 1,2-dimethyl-
U101	105-67-9	2,4-Dimethylphenol
U101	105-67-9	Phenol, 2,4-dimethyl-
U102	131-11-3	1,2-Benzenedicarboxylic acid, dimethyl ester
U102	131-11-3	Dimethyl phthalate
U103	77-78-1	Dimethyl sulfate
U103	77-78-1	Sulfuric acid, dimethyl ester
U105	121-14-2	Benzene, 1-methyl-2,4-dinitro-
U105	121-14-2	2,4-Dinitrotoluene
U106	606-20-2	Benzene, 2-methyl-1,3-dinitro-
U106	606-20-2	2,6-Dinitrotoluene
U107	117-84-0	1,2-Benzenedicarboxylic acid, dioctyl ester
U107	117-84-0	Di-n-octyl phthalate
U108	123-91-1	1,4-Diethyleneoxide
U108	123-91-1	1,4-Dioxane
U109	122-66-7	1,2-Diphenylhydrazine
U109	122-66-7	Hydrazine, 1,2-diphenyl-
U110	142-84-7	Dipropylamine (I)
U110	142-84-7	1-Propanamine, N-propyl- (I)
U111	621-64-7	Di-n-propylnitrosamine
U111	621-64-7	1-Propanamine, N-nitroso-N-propyl-
U112	141-78-6	Acetic acid ethyl ester (I)
U112	141-78-6	Ethyl acetate (I)
U113	140-88-5	Ethyl acrylate (I)

(F) Numerical List		
EPA Hazardous Waste #	CAS #	Substance
U113	140-88-5	2-Propenoic acid, ethyl ester (I)
U114	111-54-6 *	Carbamodithioic acid, 1,2-ethanediylbis-, salts and esters
U114	111-54-6 *	Ethylenebisdithiocarbamic acid, salts and esters
U115	75-21-8	Ethylene oxide (I,T)
U115	75-21-8	Oxirane (I,T)
U116	96-45-7	Ethylenethiourea
U116	96-45-7	2-Imidazolidinethione
U117	60-29-7	Ethane, 1,1'-oxybis-(I)
U117	60-29-7	Ethyl ether (I)
U118	97-63-2	Ethyl methacrylate
U118	97-63-2	2-Propenoic acid, 2-methyl-, ethyl ester
U119	62-50-0	Ethyl methanesulfonate
U119	62-50-0	Methanesulfonic acid, ethyl ester
U120	206-44-0	Fluoranthene
U121	75-69-4	Methane, trichlorofluoro-
U121	75-69-4	Trichloromonofluoromethane
U122	50-00-0	Formaldehyde
U123	64-18-06	Formic acid (C,T)
U124	110-00-9	Furan (I)
U124	110-00-9	Furfuran (I)
U125	98-01-1	2-Furancarboxaldehyde (I)
U125	98-01-1	Furfural (I)
U126	765-34-4	Glycidylaldehyde
U126	765-34-4	Oxiranecarboxyaldehyde
U127	118-74-1	Benzene, hexachloro-
U127	118-74-1	Hexachlorobenzene

(F) Numerical List		
EPA Hazardous Waste #	CAS #	Substance
U128	87-68-3	1,3-Butadiene, 1,1,2,3,4,4-hexachloro-
U128	87-68-3	Hexachlorobutadiene
U129	58-89-9	Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha,2alpha,3beta,4alpha,5alpha,6beta)-
U129	58-89-9	Lindane
U130	77-47-4	1,3-Cyclopentadiene, 1,2,3,4,5,5-hexachloro-
U130	77-47-4	Hexachlorocyclopentadiene
U131	67-72-1	Ethane, hexachloro-
U131	67-72-1	Hexachloroethane
U132	70-30-4	Hexachlorophene
U132	70-30-4	Phenol, 2,2'-methylenebis[3,4,6-trichloro-
U133	302-01-2	Hydrazine (R,T)
U134	7664-39-3	Hydrofluoric acid (C,T)
U134	7664-39-3	Hydrogen fluoride (C,T)
U135	7783-06-4	Hydrogen sulfide
U135	7783-06-4	Hydrogen sulfide H ₂ S
U136	75-60-5	Arsinic acid, dimethyl-
U136	75-60-5	Cacodylic acid
U137	193-39-5	Indeno[1,2,3-cd]pyrene
U138	74-88-4	Methane, iodo-
U138	74-88-4	Methyl iodide
U140	78-83-1	Isobutyl alcohol (I,T)
U140	78-83-1	1-Propanol, 2-methyl- (I,T)
U141	120-58-1	1,3-Benzodioxole, 5-(1-propenyl)-
U141	120-58-1	Isosafrole
U142	143-50-0	Kepone

(F) Numerical List		
EPA Hazardous Waste #	CAS #	Substance
U142	143-50-0	1,3,4-Metheno-2H-cyclobuta[cd]pentalen-2-one, 1,1a,3,3a,4,5,5,5a,5b,6-decachlorooctahydro-
U143	303-34-4	2-Butenoic acid, -methyl-,7-[[2,3-dihydroxy-2-(1-methoxyethyl)-3-methyl-1-oxobutoxy]methyl]-2,3,5,7a-tetrahydro-1H-pyrrolizin-1-yl ester, 1S-[1alpha(Z),7(2S*,3R*),7alpha]]-
U143	303-34-4	Lasiocarpine
U144	301-04-2	Acetic acid, lead(2+) salt
U144	301-04-2	Lead acetate
U145	7446-27-7	Lead phosphate
U145	7446-27-7	Phosphoric acid, lead(2+) salt (2:3)
U146	1335-32-6	Lead, bis(acetato-O)tetrahydroxytri-
U146	1335-32-6	Lead subacetate
U147	108-31-6	2,5-Furandione
U147	108-31-6	Maleic anhydride
U148	123-33-1	Maleic hydrazide
U148	123-33-1	3,6-Pyridazinedione, 1,2-dihydro-
U149	109-77-3	Malononitrile
U149	109-77-3	Propanedinitrile
U150	148-82-3	Melphalan
U150	148-82-3	L-Phenylalanine, 4-[bis(2-chloroethyl)amino]-
U151	7439-97-6	Mercury
U152	126-98-7	Methacrylonitrile (I, T)
U152	126-98-7	2-Propenenitrile, 2-methyl- (I,T)
U153	74-93-1	Methanethiol (I, T)
U153	74-93-1	Thiomethanol (I,T)
U154	67-56-1	Methanol (I)
U154	67-56-1	Methyl alcohol (I)

(F) Numerical List		
EPA Hazardous Waste #	CAS #	Substance
U155	91-80-5	1,2-Ethanediamine, N,N-dimethyl-N'-2-pyridinyl-N'-(2-thienylmethyl)-
U155	91-80-5	Methapyrilene
U156	79-22-1	Carbonochloridic acid, methyl ester (I,T)
U156	79-22-1	Methyl chlorocarbonate (I,T)
U157	56-49-5	Benz[j]aceanthrylene, 1,2-dihydro-3-methyl-
U157	56-49-5	3-Methylcholanthrene
U158	101-14-4	Benzenamine, 4,4'-methylenebis[2-chloro-
U158	101-14-4	4,4'-Methylenebis(2-chloroaniline)
U159	78-93-3	2-Butanone (I,T)
U159	78-93-3	Methyl ethyl ketone (MEK) (I,T)
U160	1338-23-4	2-Butanone, peroxide (R,T)
U160	1338-23-4	Methyl ethyl ketone peroxide (R,T)
U161	108-10-1	Methyl isobutyl ketone (I)
U161	108-10-1	4-Methyl-2-pentanone (I)
U161	108-10-1	Pentanol, 4-methyl-
U162	80-62-6	Methyl methacrylate (I,T)
U162	80-62-6	2-Propenoic acid, 2-methyl-, methyl ester (I,T)
U163	70-25-7	Guanidine, N-methyl-N'-nitro-N-nitroso-
U163	70-25-7	MNNG
U164	56-04-2	Methylthiouracil
U164	56-04-2	4(1H)-Pyrimidinone, 2,3-dihydro-6-methyl-2-thioxo-
U165	91-20-3	Naphthalene
U166	130-15-4	1,4-Naphthalenedione
U166	130-15-4	1,4-Naphthoquinone
U167	134-32-7	1-Naphthalenamine
U167	134-32-7	alpha-Naphthylamine

(F) Numerical List		
EPA Hazardous Waste #	CAS #	Substance
U168	91-59-8	2-Naphthalenamine
U168	91-59-8	beta-Naphthylamine
U169	98-95-3	Benzene, nitro-
U169	98-95-3	Nitrobenzene (I,T)
U170	100-02-7	p-Nitrophenol
U170	100-02-7	Phenol, 4-nitro-
U171	79-46-9	2-Nitropropane (I,T)
U171	79-46-9	Propane, 2-nitro- (I,T)
U172	924-16-3	1-Butanamine, N-butyl-N-nitroso-
U172	924-16-3	N-Nitrosodi-n-butylamine
U173	1116-54-7	Ethanol, 2,2'-(nitrosoimino)bis-
U173	1116-54-7	N-Nitrosodiethanolamine
U174	55-18-5	Ethanamine, N-ethyl-N-nitroso-
U174	55-18-5	N-Nitrosodiethylamine
U176	759-73-9	N-Nitroso-N-ethylurea
U176	759-73-9	Urea, N-ethyl-N-nitroso-
U177	684-93-5	N-Nitroso-N-methylurea
U177	684-93-5	Urea, N-methyl-N-nitroso-
U178	615-53-2	Carbamic acid, methylnitroso-, ethyl ester
U178	615-53-2	N-Nitroso-N-methylurethane
U179	100-75-4	N-Nitrosopiperidine
U179	100-75-4	Piperidine, 1-nitroso-
U180	930-55-2	N-Nitrosopyrrolidine
U180	930-55-2	Pyrrolidine, 1-nitroso-
U181	99-55-8	Benzenamine, 2-methyl-5-nitro-
U181	99-55-8	5-Nitro-o-toluidine

(F) Numerical List		
EPA Hazardous Waste #	CAS #	Substance
U182	123-63-7	Paraldehyde
U182	123-63-7	1,3,5-Trioxane, 2,4,6-trimethyl-
U183	608-93-5	Benzene, pentachloro-
U183	608-93-5	Pentachlorobenzene
U184	76-01-7	Ethane, pentachloro-
U184	76-01-7	Pentachloroethane
U185	82-68-8	Benzene, pentachloronitro-
U185	82-68-8	Pentachloronitrobenzene (PCNB)
U186	504-60-9	1-Methylbutadiene (I)
U186	504-60-9	1,3-Pentadiene (I)
U187	62-44-2	Acetamide, N-(4-ethoxyphenyl)-
U187	62-44-2	Phenacetin
U188	108-95-2	Phenol
U189	1314-80-3	Phosphorus sulfide (R)
U189	1314-80-3	Sulfur phosphide (R)
U190	85-44-9	1,3-Isobenzofurandione
U190	85-44-9	Phthalic anhydride
U191	109-06-8	2-Picoline
U191	109-06-8	Pyridine, 2-methyl-
U192	23950-58-5	Benzamide, 3,5-dichloro-N-(1,1-dimethyl-2-propynyl)-
U192	23950-58-5	Pronamide
U193	1120-71-4	1,2-Oxathiolane, 2,2-dioxide
U193	1120-71-4	1,3-Propane sultone
U194	107-10-8	1-Propanamine (I,T)
U194	107-10-8	n-Propylamine (I,T)
U196	110-86-1	Pyridine

(F) Numerical List		
EPA Hazardous Waste #	CAS #	Substance
U197	106-51-4	p-Benzoquinone
U197	106-51-4	2,5-Cyclohexadiene-1,4-dione
U200	50-55-5	Reserpine
U200	50-55-5	Yohimban-16-carboxylic acid, 11,17-dimethoxy-18-[(3,4,5-trimethoxybenzoyl)oxy]-, methyl ester, (3beta,16beta,17alpha,18beta,20alpha)-
U201	108-46-3	1,3-Benzenediol
U201	108-46-3	Resorcinol
U202	81-07-2	1,2-Benzisothiazol-3(2H)-one, 1,1-dioxide, and salts
U202	81-07-2	Saccharin, and salts
U203	94-59-7	1,3-Benzodioxole, 5-(2-propenyl)-
U203	94-59-7	Safrole
U204	7783-00-8	Selenious acid
U204	7783-00-8	Selenium dioxide
U205	7488-56-4	Selenium sulfide
U205	7488-56-4	Selenium sulfide SeS ₂ (R,T)
U206	18883-66-4	Glucopyranose, 2-deoxy-2-(3-methyl-3-nitrosoureido)-, D-
U206	18883-66-4	D-Glucose, 2-deoxy-2-[[[(methylnitrosoamino)-carbonyl]amino]-
U206	18883-66-4	Streptozotocin
U207	95-94-3	Benzene, 1,2,4,5-tetrachloro-
U207	95-94-3	1,2,4,5-Tetrachlorobenzene
U208	630-20-6	Ethane, 1,1,1,2-tetrachloro-
U208	630-20-6	1,1,1,2-Tetrachloroethane
U209	79-34-5	Ethane, 1,1,2,2-tetrachloro-
U209	79-34-5	1,1,2,2-Tetrachloroethane
U210	127-18-4	Ethene, tetrachloro-

(F) Numerical List		
EPA Hazardous Waste #	CAS #	Substance
U210	127-18-4	Tetrachloroethylene
U211	56-23-5	Carbon tetrachloride
U211	56-23-5	Methane, tetrachloro-
U213	109-99-9	Furan, tetrahydro-(I)
U213	109-99-9	Tetrahydrofuran (I)
U214	563-68-8	Acetic acid, thallium(1+) salt
U214	563-68-8	Thallium(I) acetate
U215	6533-73-9	Carbonic acid, dithallium(1+) salt
U215	6533-73-9	Thallium(I) carbonate
U216	7791-12-0	Thallium(I) chloride
U216	7791-12-0	Thallium chloride TlCl
U217	10102-45-1	Nitric acid, thallium(1+) salt
U217	10102-45-1	Thallium(I) nitrate
U218	62-55-5	Ethanethioamide
U218	62-55-5	Thioacetamide
U219	62-56-6	Thiourea
U220	108-88-3	Benzene, methyl-
U220	108-88-3	Toluene
U221	25376-45-8	Benzenediamine, ar-methyl-
U221	25376-45-8	Toluenediamine
U222	636-21-5	Benzenamine, 2-methyl-, hydrochloride
U222	636-21-5	o-Toluidine hydrochloride
U223	26471-62-5	Benzene, 1,3-diisocyanatomethyl- (R,T)
U223	26471-62-5	Toluene diisocyanate (R,T)
U225	75-25-2	Bromoform
U225	75-25-2	Methane, tribromo-

(F) Numerical List		
EPA Hazardous Waste #	CAS #	Substance
U226	71-55-6	Ethane, 1,1,1-trichloro-
U226	71-55-6	Methyl chloroform
U226	71-55-6	1,1,1-Trichloroethane
U227	79-00-5	Ethane, 1,1,2-trichloro-
U227	79-00-5	1,1,2-Trichloroethane
U228	79-01-6	Ethene, trichloro-
U228	79-01-6	Trichloroethylene
U234	99-35-4	Benzene, 1,3,5-trinitro-
U234	99-35-4	1,3,5-Trinitrobenzene (R,T)
U235	126-72-7	1-Propanol, 2,3-dibromo-, phosphate (3:1)
U235	126-72-7	Tris(2,3-dibromopropyl) phosphate
U236	72-57-1	2,7-Naphthalenedisulfonic acid, 3,3'-[(3,3'-dimethyl[1,1'-biphenyl]-4,4'-diyl)bis(azo)bis[5-amino-4-hydroxy]-, tetrasodium salt
U236	72-57-1	Trypan blue
U237	66-75-1	2,4-(1H,3H)-Pyrimidinedione, 5-[bis(2-chloroethyl)amino]-
U237	66-75-1	Uracil mustard
U238	51-79-6	Carbamic acid, ethyl ester
U238	51-79-6	Ethyl carbamate (urethane)
U239	1330-20-7	Benzene, dimethyl- (I)
U239	1330-20-7	Xylene (I)
U240	94-75-7 *	Acetic acid, (2,4-dichlorophenoxy)-, salts and esters
U240	94-75-7 *	2,4-D, salts and esters
U243	1888-71-7	Hexachloropropene
U243	1888-71-7	1-Propene, 1,1,2,3,3,3-hexachloro-
U244	137-26-8	Thioperoxydicarbonic diamide [(H ₂ N)C(S)] ₂ S ₂ , tetramethyl-
U244	137-26-8	Thiram

(F) Numerical List		
EPA Hazardous Waste #	CAS #	Substance
U246	506-68-3	Cyanogen bromide (CN)Br
U247	72-43-5	Benzene, 1,1'-(2,2,2-trichloroethylidene)bis[4-methoxy-
U247	72-43-5	Methoxychlor
U248	81-81-2 *	2H-1-Benzopyran-2-one,4-hydroxy-3-(3-oxo-1-phenyl-butyl)-, and salts, when present at concentrations of 0.3 per cent or less
U248	81-81-2 *	Warfarin, and salts, when present at concentrations of 0.3 per cent or less
U249	1314-84-7	Zinc phosphide Zn ₃ P ₂ , when present at concentrations of 10 per cent or less
U271	17804-35-2	Benomyl
U271	17804-35-2	Carbamic acid, [1-[(buthylamino)carbonyl]-1H-benzimidazol-2-yl], methyl ester
U278	22781-23-3	Bendiocarb
U278	22781-23-3	1,3-Benzodioxol-4-ol, 2,2-dimethyl-, methyl carbamate
U279	63-25-2	Carbaryl
U279	63-25-2	1-Naphthalenol, methylcarbamate
U280	101-27-9	Barban
U280	101-27-9	Carbamic acid, (3-chlorophenyl)-, 4-chloro-2-butynyl ester
U328	95-53-4	Benzenamine, 2-methyl-
U328	95-53-4	o-Toluidine
U353	106-49-0	Benzenamine, 4-methyl-
U353	106-49-0	p-Toluidine
U359	110-80-5	Ethanol, 2-ethoxy-
U359	110-80-5	Ethylene glycol monoethyl ether
U364	22961-82-6	Bendiocarb phenol
U364	22961-82-6	1,3-Benzodioxol-4-ol, 2,2-dimethyl-
U367	1563-38-8	7-Benzofuranol, 2,3-dihydro-2,2-dimethyl-

(F) Numerical List		
EPA Hazardous Waste #	CAS #	Substance
U367	1563-38-8	Carbofuran phenol
U372	10605-21-7	Carbamic acid, 1H-benzimidazol-2-yl, methyl ester
U372	10605-21-7	Carbendazim
U373	122-42-9	Carbamic acid, phenyl-, 1-methylethyl ester
U373	122-42-9	Propham
U387	52888-80-9	Carbamothioic acid, dipropyl-, S-(phenylmethyl) ester
U387	52888-80-9	Prosulfocarb
U389	2303-17-5	Carbamothioic acid, bis(1-methylethyl)-, S-(2,3,3-trichloro-2-propenyl) ester
U389	2303-17-5	Triallate
U394	30558-43-1	A2213
U394	30558-43-1	Ethanimidothioic acid, 2-(dimethylamino)-N-hydroxy-2-oxo-, methyl ester
U395	5952-26-1	Diethylene glycol, dicarbamate
U395	5952-26-1	Ethanol, 2,2'-oxybis-, dicarbamate
U404	121-44-8	Ethanamine, N, N-diethyl-
U404	121-44-8	Triethylamine
U409	23564-05-8	Carbamic acid, [1,2-phenylenebis (iminocarbonyl)]bis-, dimethyl ester
U409	23564-05-8	Thiophanate-methyl
U410	59669-26-0	Ethanimidothioic acid, N,N'-[thiobis [(methylimino)carbonyloxy]]bis-, dimethyl ester
U410	59669-26-0	Thiodicarb
U411	114-26-1	Phenol, 2-(1-methylethoxy)-, methylcarbamate
U411	114-26-1	Propoxur
See F027	93-76-5	Acetic acid, (2,4,5-trichlorophenoxy)-
See F027	87-86-5	Pentachlorophenol
See F027	87-86-5	Phenol, pentachloro-

(F) Numerical List		
EPA Hazardous Waste #	CAS #	Substance
See F027	58-90-2	Phenol, 2,3,4,6-tetrachloro-
See F027	95-95-4	Phenol, 2,4,5-trichloro-
See F027	88-06-2	Phenol, 2,4,6-trichloro-
See F027	93-72-1	Propanoic acid, 2-(2,4,5-trichlorophenoxy)-
See F027	93-72-1	Silvex (2,4,5-TP)
See F027	93-76-5	2,4,5-T
See F027	58-90-2	2,3,4,6-Tetrachlorophenol
See F027	95-95-4	2,4,5-Trichlorophenol
See F027	88-06-2	2,4,6-Trichlorophenol
* CAS Number given for parent compound only.		

- (G) As used in this rule, the phrase "commercial chemical ~~product(s)~~products or manufacturing chemical ~~intermediate(s)~~intermediates having the generic name listed in ... " refers to a chemical substance which is manufactured or formulated for commercial or manufacturing use which consists of the commercially pure grade of the chemical, any technical grades of the chemical that are produced or marketed, and all formulations in which the chemical is the sole active ingredient. ~~That term~~ does not refer to a material, such as a manufacturing process waste, that contains any of the substances listed in paragraph (E) or (F) of this rule. Where a manufacturing process waste is deemed to be a hazardous waste because ~~such waste~~ contains a substance listed in paragraph (E) or (F) of this rule, such waste will be listed in either rule 3745-51-31 or 3745-51-32 of the Administrative Code, or will be identified as a hazardous waste by the characteristics ~~set forth~~identified in rules 3745-51-20 to 3745-51-24 of the Administrative Code.

Effective:

Five Year Review (FYR) Dates: Exempt

Certification

Date

Promulgated Under: 119.03
Statutory Authority: 3734.12
Rule Amplifies: 3734.12
Prior Effective Dates: 04/15/1981, 05/22/1981 (Emer.), 08/26/1981 (Emer.),
12/02/1981, 01/07/1983, 05/29/1985 (Emer.),
08/29/1985, 01/30/1986, 09/22/1986, 11/13/1987,
12/08/1988, 12/30/1989, 06/29/1990, 02/11/1992,
02/14/1995, 09/02/1997, 12/07/2000, 12/07/2004,
09/05/2010, 03/17/2012

RSFA Attachment A

Rule 3745-51-35 is amended as follows:		
Location	Change	Reason
(A)	remove "definition" and add "description"	a
(B)	remove "must" and add "shall"	b
(B)(1)	remove "must" and add "shall"	b
(B)(1)(a)	remove the ending semicolon and add a period	c
(B)(1)(b)	remove the ending "; or" and add a period	c, d
(B)(2)(a)	add "all of the following" before the colon	e
(B)(2)(a)(i)	remove the ending semicolon and add a period	c
(B)(2)(a)(ii)	remove the ending semicolon and add a period	c
(B)(2)(a)(iii)	remove the ending semicolon and add a period	c
(B)(2)(a)(iv)	remove the ending "; and" and add a period	c, d
(B)(2)(b)	remove "must" and add "shall"	b
(B)(2)(b)(i)	remove the ending "; and" and add a period	c, d
(B)(2)(c)(i)	remove "must" and add "shall"	b
(B)(2)(d)	remove "must" and add "shall"	b
(B)(3)(a)	add "all of the following" before the colon	e
(B)(3)(a)(i)	remove the ending semicolon and add a period	c
(B)(3)(a)(ii)	remove the ending "; and" and add a period	c, d
(B)(3)(b)	remove "must" and add "shall"	b
(B)(4)	remove "and/or" and add "or"	a
(C)	remove "must" and add "shall"	b
	add "all of" before "the following"	e
(C)(1)	remove the ending semicolon and add a period	c
(C)(2)	remove the ending semicolon and add a period	c
(C)(3)	remove the ending semicolon and add a period	c
(C)(4)	remove the ending semicolon and add a period	c

RSFA Attachment A

Rule 3745-51-35 is amended as follows:		
Location	Change	Reason
(C)(5)	remove the ending semicolon and add a period	c
(C)(6)	remove the ending semicolon and add a period	c
(C)(7)	remove the ending semicolon and add a period	c
(C)(8)	remove the ending semicolon and add a period	c
(C)(9)	remove the ending semicolon and add a period	c
(C)(10)	remove “instrument(s)” and add “instruments”	a
	remove the ending semicolon and add a period	c
(C)(11)	remove ‘ “QA/QC” ‘ and add “Quality assurance/quality control (QA/QC)”	f
	remove the ending “; and” and add a period	c, d
ending [Comment]	remove the indented comment and add the same comment not indented	g

- a Word choice correction.
- b The change of “must” to “shall” is an LSC requirement.
- c Punctuation correction.
- d Unnecessary text is removed.
- e This amendment adds specificity to the provision.
- f LSC requirement; acronyms must be defined.
- g This amendment corrects the format/structure of the rule at this location.

3745-51-35

Deletion of certain EPA hazardous waste numbers following equipment cleaning and replacement.

- (A) Wastes from wood preserving processes at plants that do not resume or initiate use of chlorophenolic preservatives will not meet the listing ~~definition~~description of F032 once the generator has met all of the requirements of paragraphs (B) and (C) of this rule. These wastes may, however, continue to meet another hazardous waste listing description or may exhibit one or more of the hazardous waste characteristics.
- (B) Generators ~~must~~shall either clean or replace all process equipment that may have come into contact with chlorophenolic formulations or constituents thereof, including, but not limited to, treatment cylinders, sumps, tanks, piping systems, drip pads, fork lifts, and trams, in a manner that minimizes or eliminates the escape of hazardous waste or constituents, leachate, contaminated drippage, or hazardous waste decomposition products to the ground water, surface water, or atmosphere.
- (1) Generators ~~must~~shall do one of the following:
- (a) Prepare and follow an equipment cleaning plan and clean equipment in accordance with this rule;~~;~~.
 - (b) Prepare and follow an equipment replacement plan and replace equipment in accordance with this rule;~~;~~or.
 - (c) Document cleaning and replacement in accordance with this rule, carried out after termination of use of chlorophenolic preservations.
- (2) Cleaning requirements.
- (a) Prepare and sign a written equipment cleaning plan that describes all of the following:
- (i) The equipment to be cleaned;~~;~~.
 - (ii) How the equipment will be cleaned;~~;~~.
 - (iii) The solvent to be used in cleaning;~~;~~.
 - (iv) How solvent rinses will be tested;~~;~~and.
 - (v) How cleaning residues will be disposed.

(b) Equipment ~~must~~shall be cleaned as follows:

- (i) Remove all visible residues from process equipment;~~and~~.
- (ii) Rinse process equipment with an appropriate solvent until dioxins and dibenzofurans are not detected in the final solvent rinse.

(c) Analytical requirements.

- (i) Rinses ~~must~~shall be tested by using an appropriate method.
- (ii) "Not detected" means at or below the lower method calibration limit (MCLs): The 2,3,7,8-TCDD-based MCL- 0.01 parts per trillion (ppt), sample weight of one thousand grams, IS spiking level of one ppt, final extraction volume of ten to fifty microliters. For other congeners- multiply the values by 1.0 for TCDF/PeCDD/PeCDF, by 2.5 for HxCDD/HxCDF, HpCDD/HpCDF, and by 5.0 for OCDD/OCDF.

(d) The generator ~~must~~shall manage all residues from the cleaning process as F032 waste.

(3) Replacement requirements.

(a) Prepare and sign a written equipment replacement plan that describes all of the following:

- (i) The equipment to be replaced;~~;~~
- (ii) How the equipment will be replaced;~~and~~.
- (iii) How the equipment will be disposed.

(b) The generator ~~must~~shall manage the discarded equipment as F032 waste.

- (4) Documentation requirements. Document that previous equipment cleaning ~~and/or~~ replacement was performed in accordance with this rule and occurred after cessation of use of chlorophenolic preservatives.
- (C) The generator ~~must~~shall maintain all of the following records documenting the cleaning and replacement as part of the facility's operating record:
- (1) The name and address of the facility;₂
 - (2) Formulations previously used and the date on which their use ceased in each process at the plant;₂
 - (3) Formulations currently used in each process at the plant;₂
 - (4) The equipment cleaning or replacement plan;₂
 - (5) The name and address of any persons who conducted the cleaning and replacement;₂
 - (6) The dates on which cleaning and replacement were accomplished;₂
 - (7) The dates of sampling and testing;₂
 - (8) A description of the sample handling and preparation techniques, including techniques used for extraction, containerization, preservation, and chain-of-custody of the samples;₂
 - (9) A description of the tests performed, the date the tests were performed, and the results of the tests;₂
 - (10) The name and model numbers of the ~~instrument(s)~~instruments used in performing the tests;₂
 - (11) "~~QA/QC~~Quality assurance/quality control (QA/QC) documentation; ~~and~~₂
 - (12) The following statement signed by the generator or his authorized representative:

"I certify under penalty of law that all process equipment required to be cleaned or replaced under rule 3745-51-35 of the Administrative Code was cleaned or replaced as represented in the equipment cleaning and replacement plan and accompanying documentation. I am aware that there are significant penalties for providing false information, including the possibility of fine or imprisonment."

~~[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:

Five Year Review (FYR) Dates: Exempt

Certification

Date

Promulgated Under: 119.03
Statutory Authority: 3734.12
Rule Amplifies: 3734.12
Prior Effective Dates: 09/02/1997, 12/07/2004, 02/16/2009

RSFA Attachment A

This is rule **3745-51-38** that is **to be rescinded**.

This rule is amended by FR 12/19/2008 and FR 06/15/2010, and is rescinded by FR 04/08/2015 so it is being rescinded and is not replaced. When the draft rules were provided to Interested Parties for review, this rule had a replacement new rule, but that was prior to the 04/08/2015 FR that removed the federal counterpart rule (40 CFR 261.38) from the CFR.

This rule is submitted for 5-year review upon proposal.

TO BE RESCINDED

3745-51-38 Comparable/syngas fuel exclusion.

Materials that meet the following comparable/syngas fuel requirements are not wastes:

- (A) Comparable fuel specifications.
- (1) Physical specifications.
- (a) Heating value. The heating value must exceed five thousand British thermal unit (Btu) per pounds (eleven thousand five hundred Joules per gram).
- (b) Viscosity. The viscosity must not exceed fifty centistokes, as-fired.
- (2) Constituent specifications. For compounds listed in the table in this rule, the specification levels and, where non-detect is the specification, minimum required detection limits are:

Table: Detection and detection limit values for comparable fuel specification					
Chemical name	CAS #	Composite value (mg/kg)	Heating value (Btu/lb)	Concentration limit (mg/kg at 10,000 Btu/lb)	Minimum required detection limit (mg/kg)
Total nitrogen as N	NA	9,000	18400	4,900	--
Total halogens as Cl	NA	1,000	18400	540	--
Total organic halogens as Cl	NA	--	--	25 or individual halogenated organics listed below	--
Polychlorinated biphenyls, total [arocolors, total]	1336-36-3	nondetect	--	nondetect	1.4
Cyanide, total	57-12-5	nondetect	--	nondetect	1
Metals:					
Antimony, total	7440-36-0	nondetect	--	12	--
Arsenic, total	7440-38-2	nondetect	--	0.23	--
Barium, total	7440-39-3	nondetect	--	23	--
Beryllium, total	7440-41-7	nondetect	--	1.2	--
Cadmium, total	7440-43-9	nondetect	nondetect	--	1.2
Chromium, total	7440-47-3	nondetect	--	2.3	--
Cobalt	7440-48-4	nondetect	--	4.6	--
Lead, total	7439-92-1	57	18400	31	--
Manganese	7439-96-5	nondetect	--	1.2	--

Chemical name	CAS #	Composite value (mg/kg)	Heating value (Btu/lb)	Concentration limit (mg/kg at 10,000 Btu/lb)	Minimum required detection limit (mg/kg)
Mercury, total	7439-97-6	nondetect	--	0.25	--
Nickel, total	7440-02-0	106	18400	58	--
Selenium, total	7782-49-2	nondetect	--	0.23	--
Silver, total	7440-22-4	nondetect	--	2.3	--
Thallium, total	7440-28-0	nondetect	--	23	--
Hydrocarbons:					
Benzo[a]anthracene	56-55-3	nondetect	--	2,400	--
Benzene	71-43-2	8,000	19600	4,100	--
Benzo[b]fluoranthene	205-99-2	nondetect	--	2,400	--
Benzo[k]fluoranthene	207-08-9	nondetect	--	2,400	--
Benzo[a]pyrene	50-32-8	nondetect	--	2,400	--
Chrysene	218-01-9	nondetect	--	2,400	--
Dibenzo[a,h]anthracene	53-70-3	nondetect	--	2,400	--
7,12-Dimethylbenz[a]anthracene	57-97-6	nondetect	--	2,400	--
Fluoranthene	206-44-0	nondetect	--	2,400	--
Indeno(1,2,3-cd)pyrene	193-39-5	nondetect	--	2,400	--
3-Methylcholanthrene	56-49-5	nondetect	--	2,400	--
Naphthalene	91-20-3	6,200	19400	3,200	--
Toluene	108-88-3	69,000	19400	36,000	--
Oxygenates:					
Acetophenone	98-86-2	nondetect	--	2,400	--
Acrolein	107-02-8	nondetect	--	39	--
Allyl alcohol	107-18-6	nondetect	--	30	--
Bis(2-ethylhexyl) phthalate [Di-2-ethylhexyl phthalate]	117-81-7	nondetect	--	2,400	--
Butyl benzyl phthalate	85-68-7	nondetect	--	2,400	--
o-Cresol [2-Methyl phenol]	95-48-7	nondetect	--	2,400	--
m-Cresol [3-Methyl phenol]	108-39-4	nondetect	--	2,400	--
p-Cresol [4-Methyl phenol]	106-44-5	nondetect	--	2,400	--
Di-n-butyl phthalate	84-74-2	nondetect	--	2,400	--
Diethyl phthalate	84-66-2	nondetect	--	2,400	--

Chemical name	CAS #	Composite value (mg/kg)	Heating value (Btu/lb)	Concentration limit (mg/kg at 10,000 Btu/lb)	Minimum required detection limit (mg/kg)
2,4-Dimethylphenol	105-67-9	nondetect	--	2,400	--
Dimethyl phthalate	131-11-3	nondetect	--	2,400	--
Di-n-octyl phthalate	117-84-0	nondetect	--	2,400	--
Endothall	145-73-3	nondetect	--	100	--
Ethyl methacrylate	97-63-2	nondetect	--	39	--
2-Ethoxyethanol [Ethylene glycol monoethyl ether]	110-80-5	nondetect	--	100	--
Isobutyl alcohol	78-83-1	nondetect	--	39	--
Isosafrole	120-58-1	nondetect	--	2,400	--
Methyl ethyl ketone [2-Butanone]	78-93-3	nondetect	--	39	--
Methyl methacrylate	80-62-6	nondetect	--	39	--
1,4-Naphthoquinone	130-15-4	nondetect	--	2,400	--
Phenol	108-95-2	nondetect	--	2,400	--
Propargyl alcohol [2-Propyn-1-ol]	107-19-7	nondetect	--	30	--
Safrole	94-59-7	nondetect	--	2,400	--
Sulfonated organics:					
Carbon disulfide	75-15-0	nondetect	--	nondetect	39
Disulfoton	298-04-4	nondetect	--	nondetect	2,400
Ethyl methanesulfonate	62-50-0	nondetect	--	nondetect	2,400
Methyl methanesulfonate	66-27-3	nondetect	--	nondetect	2,400
Phorate	298-02-2	nondetect	--	nondetect	2,400
1,3-Propane sultone	1120-71-4	nondetect	--	nondetect	100
Tetraethyldithiopyrophos phate [Sulfotepp]	3689-24-5	nondetect	--	nondetect	2,400
Thiophenol [Benzenethiol]	108-98-5	nondetect	--	nondetect	30
O,O,O-Triethyl phosphorothioate	126-68-1	nondetect	--	nondetect	2,400
Nitrogenated organics:					
Acetonitrile [Methyl cyanide]	75-05-8	nondetect	--	nondetect	39
2-Acetylaminofluorene [2-AAF]	53-96-3	nondetect	--	nondetect	2,400
Acrylonitrile	107-13-1	nondetect	--	nondetect	39
4-Aminobiphenyl	92-67-1	nondetect	--	nondetect	2,400

Chemical name	CAS #	Composite value (mg/kg)	Heating value (Btu/lb)	Concentration limit (mg/kg at 10,000 Btu/lb)	Minimum required detection limit (mg/kg)
4-Aminopyridine	504-24-5	nondetect	--	nondetect	100
Aniline	62-53-3	nondetect	--	nondetect	2,400
Benzidine	92-87-5	nondetect	--	nondetect	2,400
Dibenz[a,j]acridine	224-42-0	nondetect	--	nondetect	2,400
O,O-Diethyl O-pyrazinyl phosphoro-thioate [Thionazin]	297-97-2	nondetect	--	nondetect	2,400
Dimethoate	60-51-5	nondetect	--	nondetect	2,400
p-(Dimethylamino) azobenzene [4-Dimethylamino azobenzene]	60-11-7	nondetect	--	nondetect	2,400
3,3'-Dimethylbenzidine	119-93-7	nondetect	--	nondetect	2,400
alpha,alpha-Dimethyl phenethylamine	122-09-8	nondetect	--	nondetect	2,400
3,3'-Dimethoxybenzidine	119-90-4	nondetect	--	nondetect	100
1,3-Dinitrobenzene]	99-65-0	nondetect	--	nondetect	2,400
4,6-Dinitro-o-cresol	534-52-1	nondetect	--	nondetect	2,400
2,4-Dinitrophenol	51-28-5	nondetect	--	nondetect	2,400
2,4-Dinitrotoluene	121-14-2	nondetect	--	nondetect	2,400
2,6-Dinitrotoluene	606-20-2	nondetect	--	nondetect	2,400
Dinoseb [2-sec-Butyl-4,6-dinitrophenol]	88-85-7	nondetect	--	nondetect	2,400
Diphenylamine	122-39-4	nondetect	--	nondetect	2,400
Ethyl carbamate [Urethane]	51-79-6	nondetect	--	nondetect	100
Ethylenethiourea (2-Imidazolidinethione)	96-45-7	nondetect	--	nondetect	110
Famphur	52-85-7	nondetect	--	nondetect	2,400
Methacrylonitrile	126-98-7	nondetect	--	nondetect	39
Methapyrilene	91-80-5	nondetect	--	nondetect	2,400
Methomyl	16752-77-5	nondetect	--	nondetect	57
2-Methylactonitrile [Acetone cyanohydrin]	75-86-5	nondetect	--	nondetect	100
Methyl parathion	298-00-0	nondetect	--	nondetect	2,400
MNNG (N-Metyl-N-nitroso-N'-nitroguanidine)	70-25-7	nondetect	--	nondetect	110

Chemical name	CAS #	Composite value (mg/kg)	Heating value (Btu/lb)	Concentration limit (mg/kg at 10,000 Btu/lb)	Minimum required detection limit (mg/kg)
1-Naphthylamine, [alpha-Naphthylamine]	134-32-7	nondetect	--	nondetect	2,400
2-Naphthylamine, [beta-Naphthylamine]	91-59-8	nondetect	--	nondetect	2,400
Nicotine	54-11-5	nondetect	--	nondetect	100
4-Nitroaniline, [p-Nitroaniline]	100-01-6	nondetect	--	nondetect	2,400
Nitrobenzene	98-95-3	nondetect	--	nondetect	2,400
p-Nitrophenol, [p-Nitrophenol]	100-02-7	nondetect	--	nondetect	2,400
5-Nitro-o-toluidine	99-55-8	nondetect	--	nondetect	2,400
N-Nitrosodi-n-butylamine	924-16-3	nondetect	--	nondetect	2,400
N-Nitrosodiethylamine	55-18-5	nondetect	--	nondetect	2,400
N-Nitrosodiphenylamine, [Diphenylnitrosamine]	86-30-6	nondetect	--	nondetect	2,400
N-Nitroso-n-methylethylamine	10595-95-6	nondetect	--	nondetect	2,400
N-Nitrosomorpholine	59-89-2	nondetect	--	nondetect	2,400
N-Nitrosopiperidine	100-75-4	nondetect	--	nondetect	2,400
N-Nitrosopyrrolidine	930-55-2	nondetect	--	nondetect	2,400
2-Nitropropane	79-46-9	nondetect	--	nondetect	30
Parathion	56-38-2	nondetect	--	nondetect	2,400
Phenacetin	62-44-2	nondetect	--	nondetect	2,400
1,4-Phenylene diamine, [p-Phenylenediamine]	106-50-3	nondetect	--	nondetect	2,400
N-Phenylthiourea	103-85-5	nondetect	--	nondetect	57
2-Picoline [alpha-Picoline]	109-06-8	nondetect	--	nondetect	2,400
Propylthiouracil [6-Propyl-2-thiouracil]	51-52-5	nondetect	--	nondetect	100
Pyridine	110-86-1	nondetect	--	nondetect	2,400
Strychnine	57-24-9	nondetect	--	nondetect	100
Thioacetamide	62-55-5	nondetect	--	nondetect	57
Thiofanox	39196-18-4	nondetect	--	nondetect	100
Thiourea	62-56-6	nondetect	--	nondetect	57
Toluene-2,4-diamine [2,4-Diaminotoluene]	95-80-7	nondetect	--	nondetect	57

Chemical name	CAS #	Composite value (mg/kg)	Heating value (Btu/lb)	Concentration limit (mg/kg at 10,000 Btu/lb)	Minimum required detection limit (mg/kg)
Toluene-2,6-diamine [2,6-Diaminotoluene]	823-40-5	nondetect	--	nondetect	57
o-Toluidine	95-53-4	nondetect	--	nondetect	2,400
p-Toluidine	106-49-0	nondetect	--	nondetect	100
1,3,5-Trinitrobenzne, [sym-Trinitobenzene]	99-35-4	nondetect	--	nondetect	2,400
Halogenated organics:					
Allyl chloride	107-05-1	nondetect	--	nondetect	39
Aramite	140-57-8	nondetect	--	nondetect	2,400
Benzal chloride [Dichloromethyl benzene]	98-87-3	nondetect	--	nondetect	100
Benzyl chloride	100-44-77	nondetect	--	nondetect	100
bis(2-Chloroethyl)ether [Dichloroethyl ether]	111-44-4	nondetect	--	nondetect	2,400
Bromoform [Tribromomethane]	75-25-2	nondetect	--	nondetect	39
Bromomethane [Methyl bromide]	74-83-9	nondetect	--	nondetect	39
4-Bromophenyl phenyl ether [p-Bromo diphenyl ether]	101-55-3	nondetect	--	nondetect	2,400
Carbon tetrachloride	56-23-5	nondetect	--	nondetect	39
Chlordane	57-74-9	nondetect	--	nondetect	14
p-Chloroaniline	106-47-8	nondetect	--	nondetect	2,400
Chlorobenzene	108-90-7	nondetect	--	nondetect	39
Chlorobenzilate	510-15-6	nondetect	--	nondetect	2,400
p-Chloro-m-cresol	59-50-7	nondetect	--	nondetect	2,400
2-Chloroethyl vinyl ether	110-75-8	nondetect	--	nondetect	39
Chloroform	67-66-3	nondetect	--	nondetect	39
Chloromethane [Methyl chloride]	74-87-3	nondetect	--	nondetect	39
2-Chlorophthalene [beta-Chlorophthalene]	91-58-7	nondetect	--	nondetect	2,400
2-Chlorophenol [o-Chlorophenol]	95-57-8	nondetect	--	nondetect	2,400
Chloroprene [2-Chloro-1,3-butadiene]	1126-99-8	nondetect	--	nondetect	39

Chemical name	CAS #	Composite value (mg/kg)	Heating value (Btu/lb)	Concentration limit (mg/kg at 10,000 Btu/lb)	Minimum required detection limit (mg/kg)
2,4-D [2,4- Dichlorophenoxy acetic acid]	94-75-7	nondetect	--	nondetect	7
Diallate	2303-16-4	nondetect	--	nondetect	2,400
1,2-Dibromo-3-chloro propane	96-12-8	nondetect	--	nondetect	39
1,2-Dichlorobenzene [o-Dichlorobenzene]	95-50-1	nondetect	--	nondetect	2,400
1,3-Dichlorobenzene [m-Dichlorobenzene]	541-73-1	nondetect	--	nondetect	2,400
1,4-Dichlorobenzene [p-Dichlorobenzene]	106-46-7	nondetect	--	nondetect	2,400
3,3'-Dichlorobenzidine	91-94-1	nondetect	--	nondetect	2,400
Dichlorodifluoromethane [CFC-12]	75-71-8	nondetect	--	nondetect	39
1,2-Dichloroethane [Ethylene dichloride]	107-06-2	nondetect	--	nondetect	39
1,1-Dichloroethylene [Vinylidene chloride]	75-35-4	nondetect	--	nondetect	39
Dichloromethoxy ethane [Bis(2-chloroethoxy) methane]	111-91-1	nondetect	--	nondetect	2,400
2,4-Dichlorophenol	120-83-2	nondetect	--	nondetect	2,400
2,6-Dichlorophenol	87-65-0	nondetect	--	nondetect	2,400
1,2-Dichloropropane [Propylene dichloride]	78-87-5	nondetect	--	nondetect	39
cis-1,3-Dichloro propylene	10061-01-5	nondetect	--	nondetect	39
trans-1,3-Dichloro propylene	10061-02-6	nondetect	--	nondetect	39
1,3-Dichloro-2-propanol	96-23-1	nondetect	--	nondetect	30
Endosulfan I	959-98-8	nondetect	--	nondetect	1.4
Endosulfan II	33213-65-9	nondetect	--	nondetect	1.4
Endrin	72-20-8	nondetect	--	nondetect	1.4
Endrin aldehyde	7421-93-4	nondetect	--	nondetect	1.4
Endrin Ketone	53494-70-5	nondetect	--	nondetect	1.4

Chemical name	CAS #	Composite value (mg/kg)	Heating value (Btu/lb)	Concentration limit (mg/kg at 10,000 Btu/lb)	Minimum required detection limit (mg/kg)
Epichlorohydrin [1-Chloro-2,3-epoxy propane]	106-89-8	nondetect	--	nondetect	30
Ethylidene dichloride [1,1-Dichloroethane]	75-34-3	nondetect	--	nondetect	39
2-Fluoroacetamide	640-19-7	nondetect	--	nondetect	100
Heptachlor	76-44-8	nondetect	--	nondetect	1.4
Heptachlor epoxide	1024-57-3	nondetect	--	nondetect	2.8
Hexachlorobenzene	118-74-1	nondetect	--	nondetect	2,400
Hexachloro-1,3-butadiene [Hexachlorobutadiene]	87-68-3	nondetect	--	nondetect	2,400
Hexachlorocyclopentadiene	77-47-4	nondetect	--	nondetect	2,400
Hexachloroethane	67-72-1	nondetect	--	nondetect	2,400
Hexachlorophene	70-30-4	nondetect	--	nondetect	59,000
Hexachloropropene [Hexachloropropylene]	1888-71-7	nondetect	--	nondetect	2,400
Isodrin	465-73-6	nondetect	--	nondetect	2,400
Kepone [Chlordecone]	143-50-0	nondetect	--	nondetect	4,700
Lindane [gamma-BHC] [gamma-Hexachloro cyclohexane]	58-89-9	nondetect	--	nondetect	1.4
Methylene chloride [Dichloromethane]	75-09-2	nondetect	--	nondetect	39
4,4'-Methylene-bis(2-chloroaniline)	101-14-4	nondetect	--	nondetect	100
Methyl iodide [Iodomethane]	74-88-4	nondetect	--	nondetect	39
Pentachlorobenzene	608-93-5	nondetect	--	nondetect	2,400
Pentachloroethane	76-01-7	nondetect	--	nondetect	39
Pentachloronitrobenzene [PCNB] [Quintobenzene] [Quintozene]	82-68-8	nondetect	--	nondetect	2,400
Pentachlorophenol	87-86-5	nondetect	--	nondetect	2,400
Pronamide	23950-58-5	nondetect	--	nondetect	2,400

Chemical name	CAS #	Composite value (mg/kg)	Heating value (Btu/lb)	Concentration limit (mg/kg at 10,000 Btu/lb)	Minimum required detection limit (mg/kg)
Silvex [2,4,5-Trichloro phenoxypropionic acid]	93-72-1	nondetect	--	nondetect	7
2,3,7,8-Tetrachloro dibenzo-p-dioxin [2,3,7,8-TCDD]	1746-01-6	nondetect	--	nondetect	30
1,2,4,5-Tetrachloro benzene	95-94-3	nondetect	--	nondetect	2,400
1,1,2-Tetrachloro ethane	79-34-5	nondetect	--	nondetect	39
Tetrachloroethylene [Perchloroethylene]	127-18-4	nondetect	--	nondetect	39
2,3,4,6-Tetrachloro phenol	58-90-2	nondetect	--	nondetect	2,400
1,2,4-Trichlorobenzene	120-82-1	nondetect	--	nondetect	2,400
1,1,1-Trichloroethane [Methyl chloroform]	71-55-6	nondetect	--	nondetect	39
1,1,2-Trichloroethane [Vinyl trichloride]	79-00-5	nondetect	--	nondetect	39
Trichloroethylene	79-01-6	nondetect	--	nondetect	39
Trichlorofluoromethane [Trichloromonofluoro methane]	75-69-4	nondetect	--	nondetect	39
2,4,5-Trichlorophenol	95-95-4	nondetect	--	nondetect	2,400
2,4,6-Trichlorophenol	88-06-2	nondetect	--	nondetect	2,400
1,2,3-Trichloropropane	96-18-4	nondetect	--	nondetect	39
Vinyl Chloride	75-01-4	nondetect	--	nondetect	39
Note: NA means Not Applicable					

(B) Synthesis gas fuel specification. Synthesis gas fuel (i.e., syngas fuel) that is generated from hazardous waste must:

- (1) Have a minimum Btu value of one hundred Btu per standard cubic foot;
- (2) Contain less than one part per million by volume (ppmv) of total halogen;
- (3) Contain less than three hundred ppmv of total nitrogen other than diatomic nitrogen (N₂);

- (4) Contain less than two hundred ppmv of hydrogen sulfide; and
 - (5) Contain less than one ppmv of each hazardous constituent in the target list of constituents in the appendix to rule 3745-51-11 of the Administrative Code.
- (C) Implementation. Waste that meets the comparable or syngas fuel specifications provided by paragraph (A) or (B) of this rule [these constituent levels must be achieved by the comparable fuel when generated, or as a result of treatment or blending, as provided in paragraph (C)(3) or (C)(4) of this rule] is excluded from being a waste provided that the following requirements are met:
- (1) Notices. For purposes of this rule, the person claiming and qualifying for the exclusion is called the comparable/syngas fuel generator and the person burning the comparable/syngas fuel is called the comparable/syngas burner. The person who generates the comparable fuel or syngas fuel must claim and certify to the exclusion.
 - (a) The director and authorized state/unauthorized states.
 - (i) If the comparable/syngas fuel is generated and burned in Ohio, the generator must submit a one-time notice to the director certifying compliance with the conditions of the exclusion and providing documentation as required by paragraph (C)(1)(a)(v) of this rule;
 - (ii) If the comparable/syngas fuel is generated in Ohio but will be burned in an authorized state, the generator must submit a one-time notice to the director and to the state RCRA and Clean Air Act (CAA) directors in the authorized state, certifying compliance with the conditions of the exclusion and providing documentation as required by paragraph (C)(1)(a)(v) of this rule. If the comparable/syngas fuel is generated in Ohio but will be burned in an unauthorized state, the generator must submit a one-time notice to the director and to the U.S.EPA Regional RCRA and CAA director, certifying compliance with the conditions of the exclusion and providing documentation as required by paragraph (C)(1)(a)(v) of this rule.

- (iii) If the comparable/syngas fuel is generated in an authorized state and will be burned in Ohio, the generator must submit a one-time notice to the director and to the state RCRA and CAA directors in the authorized state, certifying compliance with the conditions of the exclusion and providing documentation as required by paragraph (C)(1)(a)(v) of this rule. If the comparable/syngas fuel is generated in an unauthorized state and will be burned in Ohio, the generator must submit a one-time notice to the director and to the U.S.EPA Regional RCRA and CAA director, certifying compliance with the conditions of the exclusion and providing documentation as required by paragraph (C)(1)(a)(v) of this rule.
- (iv) If the generator is a company that generates comparable/syngas fuel at more than one facility, the generator must specify at which sites the comparable/syngas fuel will be generated;
- (v) A comparable/syngas fuel generator's notification to the director must contain the following items:
 - (a) The name, address, and U.S. EPA identification number of the person claiming the exclusion;
 - (b) The applicable EPA hazardous waste numbers for the hazardous waste;
 - (c) Name and address of the units, meeting the requirements of paragraph (C)(2) of this rule, that will burn the comparable/syngas fuel; and
 - (d) The following statement is signed and submitted by the person claiming the exclusion, or his authorized representative:

"Under penalty of criminal and civil prosecution for making or submitting false statements, representations, or omissions, I certify that the requirements of rule 3745-51-38 of the Administrative Code have been met for all waste identified in this notification. Copies of the records and information required by paragraph (C)(10) of rule 3745-51-38 of the Administrative Code are available at the comparable/syngas fuel generator's facility. Based on my inquiry of the individuals immediately responsible for obtaining the information, the information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for reckless violations."

- (b) Public notice. Prior to burning an excluded comparable/syngas fuel, the burner must publish in a major newspaper of general circulation local to the site where the fuel will be burned, a notice entitled "Notification of Burning a Comparable/Syngas Fuel Excluded Under the Resource Conservation and Recovery Act" containing the following information:
 - (i) Name, address, and U.S. EPA identification number of the generating facility;
 - (ii) Name and address of the unit(s) that will burn the comparable/syngas fuel;
 - (iii) A brief, general description of the manufacturing, treatment, or other process generating the comparable/syngas fuel;
 - (iv) An estimate of the average and maximum monthly and annual quantity of the waste claimed to be excluded; and
 - (v) Name and mailing address of the regional or state directors to whom the claim was submitted.
- (2) Burning. The comparable/syngas fuel exclusion for fuels meeting the requirements of paragraphs (A) or (B) and (C)(1) of this rule applies only if the fuel is burned in the following units that also must be subject to federal/state/local air emission requirements, including all applicable CAA "Maximum Achievable Control Technologies (MACT)" requirements:

- (a) "Industrial furnaces" as defined in rule 3745-50-10 of the Administrative Code;
 - (b) "Boilers," as defined in rule 3745-50-10 of the Administrative Code, that are further defined as follows:
 - (i) Industrial boilers located on the site of a facility engaged in a manufacturing process where substances are transformed into new products, including the component parts of products, by mechanical or chemical processes; or
 - (ii) Utility boilers used to produce electric power, steam, heated or cooled air, or other gases or fluids for sale;
 - (c) Hazardous waste incinerators subject to regulation under rules 3745-57-40 to 3745-57-51 or 3745-68-40 to 3745-68-52 of the Administrative Code or applicable CAA MACT standards.
 - (d) Gas turbines used to produce electric power, steam, heated or cooled air, or other gases or fluids for sale.
- (3) Blending to meet the viscosity specification. A hazardous waste blended to meet the viscosity specification must:
- (a) As generated and prior to any blending, manipulation, or processing meet the constituent and heating value specifications of paragraphs (A)(1)(a) and (A)(2) of this rule;
 - (b) Be blended at a facility that is subject to the applicable requirements of Chapters 3745-54 to 3745-57, 3745-65 to 3745-69, 3745-205, and 3745-256 of the Administrative Code, or rule 3745-52-34 of the Administrative Code; and
 - (c) Not violate the dilution prohibition of paragraph (C)(6) of this rule.
- (4) Treatment to meet the comparable fuel exclusion specifications.
- (a) A hazardous waste may be treated to meet the exclusion specifications of paragraphs (A)(1) and (A)(2) of this rule provided the treatment:
 - (i) Destroys or removes the constituent listed in the specification or raises the heating value by removing or destroying hazardous constituents or materials;

- (ii) Is performed at a facility that is subject to the applicable requirements of Chapters 3745-54 to 3745-57, 3745-65 to 3745-69, 3745-205, and 3745-256 of the Administrative Code, or rule 3745-52-34 of the Administrative Code; and
 - (iii) Does not violate the dilution prohibition of paragraph (C)(6) of this rule.
 - (b) Residuals resulting from the treatment of a hazardous waste listed in rules 3745-51-30 to 3745-51-35 of the Administrative Code to generate a comparable fuel remain a hazardous waste.
- (5) Generation of a syngas fuel.
 - (a) A syngas fuel can be generated from the processing of hazardous wastes to meet the exclusion specifications of paragraph (B) of this rule provided the processing:
 - (i) Destroys or removes the constituent listed in the specification or raises the heating value by removing or destroying constituents or materials;
 - (ii) Is performed at a facility that is subject to the applicable requirements of Chapters 3745-54 to 3745-57, 3745-65 to 3745-69, 3745-205, and 3745-256 of the Administrative Code, or rule 3745-52-34 of the Administrative Code or is an exempt recycling unit pursuant to paragraph (C) of rule 3745-51-06 of the Administrative Code; and
 - (iii) Does not violate the dilution prohibition of paragraph (C)(6) of this rule.
 - (b) Residuals resulting from the treatment of a hazardous waste listed in rules 3745-51-30 to 3745-51-35 of the Administrative Code to generate a syngas fuel remain a hazardous waste.
- (6) Dilution prohibition for comparable and syngas fuels. No generator, transporter, handler, or owner or operator of a treatment, storage, or disposal facility shall in any way dilute a hazardous waste to meet the exclusion specifications of paragraph (A)(1)(a), (A)(2), or (B) of this rule.

- (7) Waste analysis plans. The generator of a comparable/syngas fuel must develop and follow a written waste analysis plan which describes the procedures for sampling and analysis of the hazardous waste to be excluded. The plan must be followed and retained at the facility excluding the waste.
- (a) At a minimum, the plan must specify:
- (i) The parameters for which each hazardous waste will be analyzed and the rationale for the selection of those parameters;
 - (ii) The test methods which will be used to test for these parameters;
 - (iii) The sampling method which will be used to obtain a representative sample of the waste to be analyzed;
 - (iv) 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; and
 - (v) If process knowledge is used in the waste determination, any information prepared by the generator in making such determination.
- (b) The waste analysis plan must also contain records of the following:
- (i) The dates and times waste samples were obtained, and the dates the samples were analyzed;
 - (ii) The names and qualifications of the person(s) who obtained the samples;
 - (iii) A description of the temporal and spatial locations of the samples;
 - (iv) The name and address of the laboratory facility at which analyses of the samples were performed;
 - (v) A description of the analytical methods used, including any clean-up and sample preparation methods;

- (vi) All quantitation limits achieved and all other quality control results for the analysis (including method blanks, duplicate analyses, matrix spikes, etc.), laboratory quality assurance data, and description of any deviations from analytical methods written in the plan or from any other activity written in the plan which occurred;
 - (vii) All laboratory results demonstrating that the exclusion specifications have been met for the waste; and
 - (viii) All laboratory documentation that support the analytical results, unless a contract between the claimant and the laboratory provides for the documentation to be maintained by the laboratory for the period specified in paragraph (C)(11) of this rule and also provides for the availability of the documentation to the claimant upon request.
- (c) Syngas fuel generators must submit for approval, prior to performing sampling, analysis, or any management of a syngas fuel as an excluded waste, a waste analysis plan containing the elements of paragraph (C)(7)(a) of this rule to the director. The approval of waste analysis plans must be stated in writing and received by the facility prior to sampling and analysis to demonstrate the exclusion of a syngas. The approval of the waste analysis plan may contain such provisions and conditions as the director deems appropriate.
- (8) Comparable fuel sampling and analysis.
- (a) General. For each waste for which an exclusion is claimed, the generator of the hazardous waste must test for all the constituents in the appendix to rule 3745-51-11 of the Administrative Code, except those that the generator determines, based on testing or knowledge, should not be present in the waste. The generator is required to document the basis of each determination that a constituent should not be present. The generator may not determine that any of the following categories of constituents should not be present:
 - (i) A constituent that triggered the toxicity characteristic for the waste constituents that were the basis of the listing of the waste stream, or constituents for which there is a treatment standard for the waste code in rule 3745-270-40 of the Administrative Code;

- (ii) A constituent detected in previous analysis of the waste;
 - (iii) Constituents introduced into the process that generates the waste; or
 - (iv) Constituents that are byproducts or side reactions to the process that generates the waste.
- (b) For each waste for which the exclusion is claimed where the generator of the comparable/syngas fuel is not the original generator of the hazardous waste, the generator of the comparable/syngas fuel may not use process knowledge pursuant to paragraph (C)(8)(a) of this rule and must test to determine that all of the constituent specifications of paragraphs (A)(2) and (B) of this rule have been met.
- (c) The comparable/syngas fuel generator may use any reliable analytical method to demonstrate that no constituent of concern is present at concentrations above the specification levels. It is the responsibility of the generator to ensure that the sampling and analysis are unbiased, precise, and representative of the waste. For the waste to be eligible for exclusion, a generator must demonstrate that:
 - (i) Each constituent of concern is not present in the waste above the specification level at the ninety-five per cent upper confidence limit around the mean; and
 - (ii) The analysis could have detected the presence of the constituent at or below the specification level at the ninety-five per cent upper confidence limit around the mean.
- (d) Nothing in paragraphs (C) to (C)(13) of this rule preempts, overrides, or otherwise negates the provision in rule 3745-52-11 of the Administrative Code, which requires any person who generates a waste to determine if that waste is a hazardous waste.
- (e) In an enforcement action, the burden of proof to establish conformance with the exclusion specification shall be on the generator claiming the exclusion.
- (f) The generator must conduct sampling and analysis in accordance with their waste analysis plan developed under paragraph (C)(7) of this rule.

- (g) Syngas fuel and comparable fuel that has not been blended in order to meet the kinematic viscosity specifications must be analyzed as generated.
- (h) If a comparable fuel is blended in order to meet the kinematic viscosity specifications, the generator must:
 - (i) Analyze the fuel as generated to ensure that it meets the constituent and heating value specifications; and
 - (ii) After blending, analyze the fuel again to ensure that the blended fuel continues to meet all comparable/syngas fuel specifications.
- (i) Excluded comparable/syngas fuel must be re-tested, at a minimum, annually and must be retested after a process change that could change the chemical or physical properties of the waste.

[Note: Any claim under this rule must be valid and accurate for all hazardous constituents; a determination not to test for a hazardous constituent will not shield a generator from liability should that constituent later be found in the waste above the exclusion specifications.]

- (9) Speculative accumulation. Any persons handling a comparable/syngas fuel are subject to the speculative accumulation test under paragraph (C)(4) of rule 3745-51-02 of the Administrative Code.
- (10) Records. The generator must maintain records of the following information on-site:
 - (a) All information required to be submitted to the implementing authority as part of the notification of the claim:
 - (i) The owner/operator name, address, and U.S. EPA identification number of the person claiming the exclusion;
 - (ii) The applicable EPA hazardous waste numbers for each hazardous waste excluded as a fuel; and
 - (iii) The certification signed by the person claiming the exclusion or his authorized representative.

- (b) A brief description of the process that generated the hazardous waste and process that generated the excluded fuel, if not the same;
- (c) An estimate of the average and maximum monthly and annual quantities of each waste claimed to be excluded;
- (d) Documentation for any claim that a constituent is not present in the hazardous waste as required under paragraph (C)(8)(a) of this rule;
- (e) The results of all analyses and all detection limits achieved as required under paragraph (C)(8) of this rule;
- (f) If the excluded waste was generated through treatment or blending, documentation as required under paragraph (C)(3) or (C)(4) of this rule;
- (g) If the waste is to be shipped off-site, a certification from the burner as required under paragraph (C)(12) of this rule;
- (h) A waste analysis plan and the results of the sampling and analysis that includes the following:
 - (i) The dates and times waste samples were obtained, and the dates the samples were analyzed;
 - (ii) The names and qualifications of the person(s) who obtained the samples;
 - (iii) A description of the temporal and spatial locations of the samples;
 - (iv) The name and address of the laboratory facility at which analyses of the samples were performed;
 - (v) A description of the analytical methods used, including any clean-up and sample preparation methods;
 - (vi) All quantitation limits achieved and all other quality control results for the analysis (including method blanks, duplicate analyses, matrix spikes, etc.), laboratory quality assurance data, and description of any deviations from analytical methods written in the plan or from any other activity written in the plan which occurred;

- (vii) All laboratory analytical results demonstrating that the exclusion specifications have been met for the waste; and
- (viii) All laboratory documentation that support the analytical results, unless a contract between the claimant and the laboratory provides for the documentation to be maintained by the laboratory for the period specified in paragraph (C)(11) of this rule and also provides for the availability of the documentation to the claimant upon request; and
- (i) If the generator ships comparable/syngas fuel off-site for burning, the generator must retain for each shipment the following information on-site:
 - (i) The name and address of the facility receiving the comparable/syngas fuel for burning;
 - (ii) The quantity of comparable/syngas fuel shipped and delivered;
 - (iii) The date of shipment or delivery;
 - (iv) A cross-reference to the record of comparable/syngas fuel analysis or other information used to make the determination that the comparable/syngas fuel meets the specifications as required under paragraph (C)(8) of this rule; and
 - (v) A one-time certification by the burner as required under paragraph (C)(12) of this rule.
- (11) Records retention. Records must be maintained for the period of three years. A generator must maintain a current waste analysis plan during that three year period.
- (12) Burner certification. Prior to submitting a notification to the state and regional directors, a comparable/syngas fuel generator who intends to ship their fuel off-site for burning must obtain a one-time written, signed statement from the burner:
 - (a) Certifying that the comparable/syngas fuel will only be burned in an industrial furnace or boiler, utility boiler, or hazardous waste incinerator, as required under paragraph (C)(2) of this rule;

- (b) Identifying the name and address of the units that will burn the comparable/syngas fuel; and
 - (c) Certifying that the state in which the burner is located is authorized to exclude wastes as comparable/syngas fuel under the provisions of this rule, 40 CFR 261.38, or authorized law in another state.
- (13) Ineligible waste codes. Wastes that are listed because of presence of dioxins or furans, as set out in the appendix to rule 3745-51-30 of the Administrative Code, are not eligible for this exclusion, and any fuel produced from or otherwise containing these wastes remains a hazardous waste subject to full hazardous waste management 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."]

Effective:

Five Year Review (FYR) Dates: 07/01/2015

Certification

Date

Promulgated Under: 119.03
Statutory Authority: 3734.12
Rule Amplifies: 3734.12
Prior Effective Dates: 07/27/2001, 12/07/2004, 02/16/2009

RSFA Attachment A

This is new rule **3745-51-100**. It does not replace any rescinded rule; it has no direct federal counterpart provision in 40 CFR.

This new rule is necessary because 72-hour recyclers using the provisions of 3745-51-06 (as effective 03/17/2012) are subject to financial assurance requirements referenced in 3745-51-06 (C)(3)(a)(xix) that they cannot comply with due to some cross-references. Simultaneous to this new rule, we are promulgating an amendment to 3745-51-06 that removes references to the problematic requirements, and adds reference to the corrected requirements in this rule.

This new rule is submitted for 5-year review under ORC 106 (formerly 119.032). A new review date will be assigned.

Note: The text of paragraph (B) was changed slightly in response to a comment on the Interested Parties draft rule.

3745-51-100

Financial assurance for seventy-two hour recyclers.

Owners or operators of facilities that enter recyclable materials into a recycling process within seventy-two hours after arrival at the facility, except as provided in paragraph (A)(2) of rule 3745-51-06 of the Administrative Code, may store recyclable materials in containers, tanks, or containment buildings without an Ohio hazardous waste permit, provided that the financial assurance requirements of this rule are met. All financial assurance documentation shall be approved by Ohio EPA prior to storing any material and shall comply with this rule.

(A) The owner or operator shall have a detailed written estimate, in current dollars, of the cost of closing the facility in accordance with paragraphs (A) and (B) of rule 3745-66-11 and rule 3745-66-14 of the Administrative Code. The cost estimate:

(1) Shall equal the cost of final closure at the point in the active life of the facility when the extent and manner of its operation would make closure the most expensive.

(2) Shall be based on the costs to the owner or operator of hiring a third party to close the facility. A third party is a party who is neither a parent nor a subsidiary of the owner or operator. (See the definition of "parent corporation" in rule 3745-66-41 of the Administrative Code.)

(3) May not incorporate any salvage value that may be realized with the sale of recyclable materials, hazardous wastes, nonhazardous wastes, facility structures or equipment, or land or other asset associated with the facility.

(4) May not incorporate a zero cost for recyclable materials, or hazardous wastes, or nonhazardous wastes that might have economic value.

(B) During the active life of the facility, the owner or operator shall adjust the closure cost estimate for inflation within sixty days prior to the anniversary date of the establishment of the financial instruments used to comply with rule 3745-66-43 of the Administrative Code. For owners or operators using the financial test, the cost estimate shall be updated for inflation within thirty days after the close of the firm's fiscal year and before, or in conjunction with, submittal of updated information to the director as specified in paragraph (E)(3) of rule 3745-66-43 of the Administrative Code. The adjustment may be made by recalculating the closure cost estimate in current dollars, or by using an inflation factor derived as specified in 40 CFR 265.142(b).

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

- (2) Subsequent adjustments are made by multiplying the latest adjusted closure cost estimate by the latest inflation factor.
- (C) During the active life of the facility, the owner or operator shall revise the closure cost estimate no later than thirty days after a change in owner or operator's closure requirements that would increase the cost of conducting closure, or no later than sixty days after an unexpected event which increases the cost of conducting closure in accordance with paragraphs (A) and (B) of rule 3745-66-11 and rule 3745-66-14 of the Administrative Code. The revised cost estimate shall be adjusted for inflation as specified in paragraph (B) of this rule. The revised closure cost estimate shall be submitted to the director within thirty days after the estimate is revised.
- (D) The owner or operator shall keep the following at the facility during the active life of the facility: the latest closure cost estimate prepared in accordance with paragraphs (A) and (C) of this rule, and, when this estimate has been adjusted in accordance with paragraph (B) of this rule, the latest closure cost estimate.
- (E) A copy of the facility's current, detailed closure cost estimate prepared in accordance with paragraphs (A) and (B) of this rule shall be submitted annually to the director.
- (1) For owners and operators using a financial mechanism other than the financial test, such submittal of the closure cost estimate shall be made within thirty days after a revision or update to the estimate made in accordance with paragraph (B) of this rule.
- (2) For owners and operators using a financial test, such submittal of the closure cost estimate shall be made within ninety days after the close of the firm's fiscal year following a revision or update to the estimate in accordance with paragraph (B) of this rule.
- (F) The owner or operator shall provide financial assurance documentation that meets the requirements of paragraphs (A) to (G) of rule 3745-66-43 of the Administrative Code, except that where paragraph (H) of rule 3745-66-43 of the Administrative Code is referenced in paragraphs (A) to (G) of rule 3745-66-43 of the Administrative Code, that requirement shall be replaced with the requirements of paragraph (G) of this rule.
- (G) Release of the owner or operator from the requirements of providing financial assurance in accordance with paragraph (F) of this rule. Within sixty days after receiving written documentation from the owner or operator that the final closure has been completed in accordance with paragraphs (A) and (B) of rule 3745-66-11 and rule 3745-66-14 of the Administrative Code, the director will notify the owner or operator in writing that the owner or operator is no longer required by this rule to maintain financial assurance for final closure of the facility, unless the director has reason to believe that final closure has not been in accordance with paragraphs (A) and (B) of rule 3745-66-11 and rule 3745-66-14 of the Administrative Code. The

director will provide the owner or operator a detailed written statement of any such reason to believe final closure has not been completed.

(H) The owner or operator shall provide liability coverage for sudden accidental occurrences that meet the requirements of paragraph (A) of rule 3745-66-47 of the Administrative Code.

(I) Period of liability coverage. Within sixty days after receiving written documentation from the owner or operator that final closure has been completed in accordance with paragraphs (A) and (B) of rule 3745-66-11 and rule 3745-66-14 of the Administrative Code, the director will notify the owner or operator in writing that the owner or operator is no longer required by this rule to maintain liability coverage for that facility, unless the director has reason to believe that final closure has not been completed.

[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:

Five Year Review (FYR) Dates:

Certification

Date

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

RSFA Attachment A

Rule 3745-52-21 is amended as follows:		
Location	Change	Reason
(A)	remove "it" and add "the registrant"	a
ending [Comment]	remove the indented comment and add the same comment not indented	b

- a Word choice correction.
- b This amendment corrects the format or structure of the rule at this location.

The requirements in the corresponding federal rule (40 CFR 262.21) are not delegable to states, so Ohio's rule cannot contain similar language.

This rule is submitted for 5-year review upon proposal. A new review date will be assigned.

3745-52-21

Manifest tracking numbers, manifest printing, and obtaining manifests.

- (A) A registrant may not print, or have printed, the manifest for use or distribution unless ~~the registrant~~ has received approval from U.S. EPA pursuant to 40 CFR 262.21.
- (B) Ohio EPA will recognize decisions of U.S. EPA regarding manifest tracking numbers, manifest printing, and obtaining manifests under 40 CFR 262.21. Ohio EPA has no additional requirements regarding manifest tracking numbers, manifest printing, or obtaining manifests other than those in 40 CFR 262.21.

~~[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:

Five Year Review (FYR) Dates: 07/01/2015

Certification

Date

Promulgated Under: 119.03
Statutory Authority: 3734.12
Rule Amplifies: 3734.12
Prior Effective Dates: 02/16/2009

RSFA Attachment A

Rule 3745-52-30 is amended as follows:		
Location	Change	Reason
text	after "49 CFR" remove "Parts" and add "Part"	a
	after "173," add "49 CFR Part"	a
	after "178" add a comma	b
	after "and" add "49 CFR Part" before "179"	a

- a Cross-reference format correction. This cross-reference is being written out more completely so that it will be able to be found via an electronic search for the citation.
- b Punctuation correction.

3745-52-30

Packaging.

Before transporting hazardous wastes or offering hazardous wastes for transportation off-site, the generator shall package the waste in accordance with the applicable United States department of transportation regulations on packaging, under 49 CFR ~~Parts~~Part 173, 49 CFR Part 178, and 49 CFR Part 179.

Effective:

Five Year Review (FYR) Dates: Exempt

Certification

Date

Promulgated Under: 119.03
Statutory Authority: 3734.12
Rule Amplifies: 3734.12
Prior Effective Dates: 07/27/1980, 04/15/1981

RSFA Attachment A

Rule 3745-52-34 is amended as follows:		
Location	Change	Reason
(A)	remove "and/or" and add "or"	a
(A)(1)	at the end add "in or using a combination of" before the colon	b
(A)(1)(a)	remove "In containers" and add "Containers"	c
	remove the ending "; and/or" and add a period	d, e
(A)(1)(a) [Comment]	-after "generators" remove "must" -after "also" add "shall"	f
(A)(1)(b)	remove "In tanks" and add "Tanks"	c
	remove the ending "; and/or" and add a period	d, e
(A)(1)(b) [Comment]	-after "generators" remove "must" -after "also" add "shall"	f
(A)(1)(c)	remove "On drip" and add "Drip"	c
(A)(1)(c)(i)	remove the ending "; and" and add a period	d, e
(A)(1)(c)(ii)	remove the ending "; and/or" and add a period	d, e
(A)(1)(d)	remove "In containment" and add "Containment"	c
	remove "must" and add "shall"	f
(A)(1)(e)	remove "and/or" and add "or"	a
	remove "all requirements in"	e
(A)(2)	remove "and/or" and add "or"	a
	remove the ending semicolon and add a period	d
(A)(3)	remove "and/or" and add "or"	a
	at end: -after "Waste" add a period inside the quotation mark -after the quotation mark remove "; and"	d, e
(B)	remove "the requirements of"	e
	remove "he" and add "the owner or operator"	a
	remove "must" and add "shall"	f
(C)	add text: "A generator:"	g

RSFA Attachment A

Rule 3745-52-34 is amended as follows:		
Location	Change	Reason
(C)(1)	remove “A generator may” and add “May”	g
	remove “he” and add “the generator”	a
(C)(1)(b)	remove “his” and add “the”	a
(C)(2)	remove “A generator who” and add “Who”	g
	[3 times] remove “must” and add “shall”	f
(D)	remove “and/or” and add “or”	a
(D)(2)	remove “the requirements of”	e
(D)(3)	remove “the requirements of”	e
(D)(4)	remove “the requirements of”	e
(D)(5)(a)	remove “must” and add “shall”	f
(D)(5)(b)	remove “must” and add “shall”	f
(D)(5)(b)(ii)	remove “alarm(s)” and add “alarms”	a
(D)(5)(c)	remove “must” and add “shall”	f
(D)(5)(d)	remove “his” and add “the emergency coordinator’s”	a
	remove “must” and add “shall”	f
(D)(5)(d)(iii)	[2 times] remove “must” and add “shall”	f
	remove “national response center [using their twenty-four-hour toll free number: (800) 424-8802]” and add ‘ “National Response Center” using their twenty-four hour toll free number: 800/424-8802 ‘	h
(E)	remove “must” and add “shall”	f
	-[2 times] remove “his” and add “the” -remove “and/or” and add “or” -remove “he” and add “the generator”	a
	remove “the requirements of”	e
(F)	add text: “A generator who:”	g
(F)(1)	remove “A generator who generates” and add “Generates”	g
	remove “and/or” and add “or”	a

RSFA Attachment A

Rule 3745-52-34 is amended as follows:		
Location	Change	Reason
(F)(1)(a)	-remove "He" and add "The generator" -remove "and/or" and add "or"	a
(F)(1)(b)	-remove "He" and add "The generator" -remove "he" and add "the generator" -[2 times] remove "his" and add "the" -remove "and/or" and add "or"	a
(F)(2)	remove "A generator who is" and add "Is"	g
	-remove "and/or" and add "or" -remove "he" and add "the generator"	a
	remove "the requirements of"	e
	remove "must" and add "shall"	f
(G)(4)(a)	at the end add "in any combination of the following" before the colon	b
(G)(4)(a)(i)	remove "In containers" and add "Containers"	c
	remove the ending "; and/or" and add a period	d, e
(G)(4)(a)(i) [Comment]	-after "generators" remove "must" -after "also" add "shall"	f
(G)(4)(a)(ii)	remove "In tanks" and add "Tanks"	c
	remove the ending "; and/or" and add a period	d, e
(G)(4)(a)(ii) [Comment]	-after "generators" remove "must" -after "also" add "shall"	f
(G)(4)(a)(iii)	remove "In containment" and add "Containment"	c
	remove "its" and add "the"	a
	remove "must" and add "shall"	f
(G)(4)(b)	remove "all the requirements in"	e
(G)(4)(d)	-after "waste" within the quotation marks remove the semicolon -after the quotation mark and before "and" add a semicolon	d, i
(H)	remove "must" and add "shall"	f
	in last sentence, remove "the requirements of"	e

RSFA Attachment A

Rule 3745-52-34 is amended as follows:		
Location	Change	Reason
(I)	[3 times] remove “must” and add “shall”	f
	remove “the requirements of”	e
(M)	remove “must” and add “shall”	f
	at the end add “either” before the colon	b
(M)(1)	remove the ending “; or” and add a period	d, e

- a Word choice correction.
- b This amendment adds specificity to the rule.
- c This text is slightly re-written to provide clearer paragraph or sentence structure.
- d Punctuation correction.
- e Unnecessary text is removed.
- f The change of “must” to “shall” is an LSC requirement.
- g This amendment (new text in the parent paragraph, same text removed from the subparagraph) is designed to eliminate the occasion of a paragraph designation without text.
- h This amendment corrects the use of upper case, punctuation, and the format of the phone number.
- i LSC requirement.

This rule is submitted for 5-year review upon proposal. A new review date will be assigned.

3745-52-34

Accumulation time of hazardous waste.

(A) Except as provided in paragraphs (D), (E), and (F) of this rule, a generator may, for ninety days or less, accumulate ~~and/or~~ conduct treatment of hazardous waste that is generated on-site without an Ohio hazardous waste permit, provided that:

(1) The waste is placed in or using a combination of:

- (a) ~~In containers~~Containers and the generator complies with the applicable requirements in rules 3745-66-70 to 3745-66-77 of the Administrative Code; ~~and/or~~.

[Comment: Pursuant to federal law, generators ~~must~~ also shall comply with the applicable requirements of 40 CFR Part 265 subparts AA, BB, and CC.]

- (b) ~~In tanks~~Tanks and the generator complies with the applicable requirements of rules 3745-66-90 to 3745-66-101 of the Administrative Code, except paragraph (C) of rule 3745-66-97 and rule 3745-66-100 of the Administrative Code; ~~and/or~~.

[Comment: Pursuant to federal law, generators ~~must~~ also shall comply with the applicable requirements of 40 CFR Part 265 subparts AA, BB, and CC.]

- (c) ~~On drip~~Drip pads and the generator complies with rules 3745-69-40 to 3745-69-45 of the Administrative Code and maintains the following records at the facility:

(i) A description of procedures that will be followed to ensure that all wastes are removed from the drip pad and associated collection system at least once every ninety days; ~~and~~.

(ii) Documentation of each waste removal, including the quantity of waste removed from the drip pad and the sump or collection system and the date and time of removal; ~~and/or~~.

- (d) ~~In containment~~Containment buildings and the generator complies with rules 3745-256-100 to 3745-256-102 of the Administrative Code, has placed its professional engineer certification that the building complies with the design standards specified in rule 3745-256-101 of the Administrative Code in the operating record no later than sixty days after the date of initial operation of the unit. Professional engineer certification is required prior to operation of the unit. The owner or operator ~~must~~shall maintain the following records at the facility:
- (i) A written description of procedures to ensure that each waste volume remains in the unit for no more than ninety days, a written description of the waste generation and management practices for the facility showing that they are consistent with respecting the ninety-day limit, and documentation that the procedures are complied with; or
 - (ii) Documentation that the unit is emptied at least once every ninety days.
- (e) In addition, a generator who, for ninety days or less, accumulates ~~and/or~~or conducts treatment of hazardous waste that is generated on site without an Ohio hazardous waste permit is exempt from ~~all requirements in~~ rules 3745-66-10 to 3745-66-21 and 3745-66-40 to 3745-66-48 of the Administrative Code except for paragraphs (A) and (B) of rule 3745-66-11 and rule 3745-66-14 of the Administrative Code.
- (2) The date upon which each period of accumulation ~~and/or~~or treatment begins is clearly marked and visible for inspection on each container;
 - (3) While being accumulated ~~and/or~~or treated on-site, each container and tank is labeled or marked clearly with the words "Hazardous Waste," ~~and~~
 - (4) The generator complies with the requirements for owners or operators in rules 3745-65-16, 3745-65-30 to 3745-65-37, 3745-65-50 to 3745-65-56 and all applicable requirements of Chapter 3745-270 of the Administrative Code.
- (B) A generator of one thousand kilograms or greater of hazardous waste in a calendar month, or greater than one kilogram of acute hazardous waste listed in rule 3745-51-31 or paragraph (E) of rule 3745-51-33 of the Administrative Code in a calendar month, who accumulates hazardous waste for more than ninety days, is an operator of a storage facility and is subject to ~~the requirements of~~ Chapters 3745-54 to 3745-57, 3745-65 to 3745-69, 3745-205, and 3745-256 of the Administrative

Code and the permit requirements of rules 3745-50-40 to 3745-50-235 of the Administrative Code unless ~~he~~the owner or operator has been granted an extension to the ninety-day period. Such extension may be granted by the director if hazardous wastes ~~must~~shall remain on-site for longer than ninety days due to unforeseen, temporary, and uncontrollable circumstances. An extension of up to thirty days may be granted at the discretion of the director on a case-by-case basis.

(C) A generator:

(1) ~~A generator may~~May accumulate as much as fifty-five gallons of hazardous waste or one quart of acutely hazardous waste listed in rule 3745-51-31 or paragraph (E) of rule 3745-51-33 of the Administrative Code in containers at or near any point of generation where wastes initially accumulate, which is under the control of the operator of the process generating the waste, without a permit and without complying with paragraph (A) or (D) of this rule provided ~~he~~the generator:

(a) Complies with rules 3745-66-71, 3745-66-72, and paragraph (A) of rule 3745-66-73 of the Administrative Code; and

(b) Marks ~~his~~the containers either with the words "Hazardous Waste" or with other words that identify the contents of the containers.

(2) ~~A generator who~~Who accumulates either hazardous waste or acutely hazardous waste listed in rule 3745-51-31 or paragraph (E) of rule 3745-51-33 of the Administrative Code in excess of the amounts listed in paragraph (C)(1) of this rule at or near any point of generation ~~must~~shall, with respect to that amount of excess waste, comply within three days with paragraph (A) of this rule or other applicable provisions of Chapter 3745-52 of the Administrative Code. During the three-day period, the generator ~~must~~shall continue to comply with paragraphs (C)(1)(a) and (C)(1)(b) of this rule. The generator ~~must~~shall mark the container holding the excess accumulation of hazardous waste with the date the excess amount began accumulating.

(D) A generator who generates greater than one hundred kilograms but less than one thousand kilograms of hazardous waste in a calendar month may, for one hundred eighty days or less, accumulate ~~and/or~~and/or conduct treatment of hazardous waste that is generated on-site without an Ohio hazardous waste permit, provided that:

(1) The quantity of waste accumulated on-site never exceeds six thousand kilograms;

- (2) The generator complies with ~~the requirements of~~ rules 3745-66-70 to 3745-66-74 and rule 3745-66-77 of the Administrative Code;
- (3) The generator complies with ~~the requirements of~~ rule 3745-66-101 of the Administrative Code;
- (4) The generator complies with ~~the requirements of~~ paragraphs (A)(2) and (A)(3) of this rule, rules 3745-65-30 to 3745-65-37 of the Administrative Code, and all applicable requirements of Chapter 3745-270 of the Administrative Code; and
- (5) The generator complies with the following requirements:
 - (a) At all times there ~~must~~shall be at least one employee either on the 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 emergency response measures specified in paragraph (D)(5)(d) of this rule. This employee is the emergency coordinator.
 - (b) The generator ~~must~~shall post the following information next to the telephone:
 - (i) The name and telephone number of the emergency coordinator;
 - (ii) Location of fire extinguishers and spill control material, and, if present, fire ~~alarm(s)~~alarms; and
 - (iii) The telephone number of the fire department, unless the facility has a direct alarm.
 - (c) The generator ~~must~~shall ensure that all employees are thoroughly familiar with proper waste handling and emergency procedures, relevant to their responsibilities during normal facility operations and emergencies;
 - (d) The emergency coordinator or ~~his~~the emergency coordinator's designee ~~must~~shall respond to any emergencies that arise. The applicable responses are as follows:

- (i) In the event of a fire, call the fire department or attempt to extinguish it using a fire extinguisher;
 - (ii) In the event of a spill, contain the flow of hazardous waste to the extent possible, and as soon as is practicable, clean up the hazardous waste and any contaminated materials or soil;
 - (iii) In the event of a fire, explosion, or other release which could threaten human health outside the facility, or when the generator has knowledge that a spill has reached surface water, the generator ~~must~~shall immediately notify the ~~national response center [using their twenty-four hour toll free number: (800) 424-8802]~~National Response Center using their twenty-four hour toll free number: 800/424-8802". The report ~~must~~shall include the following information:
 - (a) The name, address, and U.S. EPA identification number of the generator;
 - (b) Date, time, and type of incident (e.g., spill or fire);
 - (c) Quantity and type of hazardous waste involved in the incident;
 - (d) Extent of injuries, if any; and
 - (e) Estimated quantity and disposition of recovered materials, if any.
- (E) A generator who generates greater than one hundred kilograms but less than one thousand kilograms of hazardous waste in a calendar month and who ~~must~~shall transport ~~his~~the waste, or offer ~~his~~the waste for transportation, over a distance of two hundred miles or more for off-site treatment, storage, or disposal, may, for two hundred seventy days or less, accumulate ~~and/or~~ conduct treatment of hazardous waste that is generated on-site without an Ohio hazardous waste permit provided that ~~he~~the generator complies with ~~the requirements of~~ paragraph (D) of this rule.
- (F) A generator who:
- (1) ~~A generator who generates~~Generates greater than one hundred kilograms but less than one thousand kilograms of hazardous waste in a calendar month is an operator of a storage ~~and/or~~ treatment facility if:

- (a) ~~He~~The generator accumulates ~~and/or~~ treats hazardous waste in quantities exceeding six thousand kilograms; or
- (b) ~~He~~The generator, for more than one hundred eighty days (or for more than two hundred seventy days if ~~he~~the generator transports ~~his~~the waste, or offers ~~his~~the waste for transportation, over a distance of two hundred miles or more), accumulates ~~and/or~~ conducts treatment of hazardous waste that is generated on-site.
- (2) ~~A generator who is~~Is an operator of a storage ~~and/or~~ treatment facility as described in paragraph (F)(1) of this rule is subject to ~~the requirements of~~ Chapters 3745-54 to 3745-57, 3745-65 to 3745-69, 3745-205, and 3745-256 and rules 3745-50-40 to 3745-50-235 of the Administrative Code unless ~~he~~the generator has been granted an extension to the one hundred eighty-day (or two hundred seventy-day if applicable) period. Such extension, of up to thirty days, may be granted at the discretion of the director on a case-by-case basis if hazardous waste ~~must~~shall remain on-site for longer than one-hundred eighty days (or two-hundred seventy days if applicable) due to unforeseen, temporary, and uncontrollable circumstances.
- (G) A generator who generates one thousand kilograms or greater of hazardous waste per calendar month who also generates wastewater treatment sludges from electroplating operations that meet the listing description for EPA hazardous waste number F006, may accumulate F006 waste on-site for more than ninety days, but not more than one hundred eighty days without having an Ohio hazardous waste permit, provided that:
- (1) The generator has implemented pollution prevention practices that reduce the amount of any hazardous substances, pollutants or contaminants entering F006 or otherwise released to the environment prior to its recycling;
- (2) The F006 waste is legitimately recycled through metals recovery;
- (3) No more than twenty thousand kilograms of F006 waste is accumulated on-site at any one time; and
- (4) The F006 waste is managed in accordance with the following:
- (a) The F006 waste is placed in any combination of the following:

- (i) ~~In containers~~Containers and the generator complies with the applicable requirements of rules 3745-66-70 to 3745-66-77 of the Administrative Code;~~and/or.~~

[Comment: Pursuant to federal law, generators ~~must~~ also shall comply with the applicable requirements of 40 CFR Part 265 subparts AA, BB, and CC.]

- (ii) ~~In tanks~~Tanks and the generator complies with the applicable requirements of rules 3745-66-90 to 3745-66-101 of the Administrative Code except paragraph (C) of rule 3745-66-97 and rule 3745-66-100 of the Administrative Code;~~and/or.~~

[Comment: Pursuant to federal law, generators ~~must~~ also shall comply with the applicable requirements of 40 CFR Part 265 subparts AA, BB, and CC.]

- (iii) ~~In containment~~Containment buildings and the generator complies with rules 3745-256-100 to 3745-256-102 of the Administrative Code, and has placed ~~its~~the professional engineer certification that the building complies with the design standards specified in rule 3745-256-102 of the Administrative Code in the facility's operating record prior to operation of the unit. The owner or operator ~~must~~shall maintain the following records at the facility:

(a) A written description of procedures to ensure that the F006 waste remains in the unit for no more than one hundred eighty days, a written description of the waste generation and management practices for the facility showing that they are consistent with the one hundred eighty-day limit, and documentation that the generator is complying with the procedures; or

(b) Documentation that the unit is emptied at least once every one hundred eighty days.

- (b) In addition, such a generator is exempt from ~~all the requirements in~~ rules 3745-66-10 to 3745-66-21 and 3745-66-40 to 3745-66-48 of the Administrative Code, except for rules 3745-66-11 and 3745-66-14 of the Administrative Code;

- (c) The date upon which each period of accumulation begins is clearly marked and visible for inspection on each container;
 - (d) While being accumulated on-site, each container and tank is labeled or marked clearly with the words "hazardous waste;" and
 - (e) The generator complies with the requirements for owners or operators in paragraph (A)(5) of rule 3745-270-07 and rules 3745-65-16, 3745-65-30 to 3745-65-37, and 3745-65-50 to 3745-65-56 of the Administrative Code.
- (H) A generator who generates one thousand kilograms or greater of hazardous waste per calendar month who also generates wastewater treatment sludges from electroplating operations that meet the listing description for EPA hazardous waste number F006, and who ~~must~~shall transport this waste, or offer this waste for transportation, over a distance of two hundred miles or more for off-site metals recovery, may accumulate F006 waste on-site for more than ninety days, but not more than two hundred seventy days without an Ohio hazardous waste permit if the generator complies with ~~the requirements of~~ paragraphs (G)(1) to (G)(4)(e) of this rule.
- (I) A generator accumulating F006 in accordance with paragraphs (G) to (G)(4)(e) and (H) of this rule who accumulates F006 waste on-site for more than one hundred eighty days (or for more than two hundred seventy days if the generator ~~must~~shall transport this waste, or offer this waste for transportation, over a distance of two hundred miles or more), or who accumulates more than twenty thousand kilograms of F006 waste on-site is an operator of a storage facility and is subject to ~~the requirements of~~ Chapters 3745-54 to 3745-57, 3745-65 to 3745-69, 3745-205, and 3745-256 of the Administrative Code, and the permit requirements of rules 3745-50-40 to 3745-50-235 of the Administrative Code unless the generator has been granted either an extension to the one hundred eighty-day (or two hundred seventy-day if applicable) period or an exception to the twenty thousand kilogram accumulation limit. Such extension, of up to thirty days, or exception to the accumulation limit, may be granted at the discretion of the director on a case-by-case basis if hazardous waste ~~must~~shall remain on-site for longer than one hundred eighty days (or two hundred seventy days if applicable) or if more than twenty thousand kilograms of F006 waste ~~must~~shall remain on-site due to unforeseen, temporary, and uncontrollable circumstances.
- (J) Reserved.
- (K) Reserved.

(L) Reserved.

(M) A generator who sends a shipment of hazardous waste to a designated facility with the understanding that the designated facility can accept and manage the waste and later receives that shipment back as a rejected load or residue in accordance with the manifest discrepancy provisions of rule 3745-54-72 or 3745-65-72 of the Administrative Code may accumulate the waste on-site in accordance with paragraphs (A) and (B) or (D), (E), and (F) of this rule, depending on the amount of hazardous waste on-site in that calendar month. Upon receipt of the return shipment, the generator ~~must~~shall either:

- (1) Sign item 18c of the manifest, if the transporter returned the shipment using the original manifest;~~or~~ .
- (2) Sign item 20 of the manifest, if the transporter returned the shipment using a new 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."]

Effective:

Five Year Review (FYR) Dates: 07/01/2015

Certification

Date

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08/26/1981 (Emer.), 12/02/1981, 01/07/1983,
05/29/1985 (Emer.), 08/29/1985, 09/22/1986,
12/08/1988, 12/30/1989, 04/01/1990, 02/11/1992,
02/14/1995, 09/02/1997, 10/20/1998, 12/07/2000,
03/13/2002, 12/07/2004, 02/16/2009, 09/05/2010,
03/17/2012

RSFA Attachment A

Rule 3745-52-200 is amended as follows:		
Location	Change	Reason
title	-after "Definitions" add a dash -remove "pertaining to the -after "university" remove "lab rules" and add "labs"	a
(A)	in Central accumulation area -remove "paragraph" and add "paragraphs"	b
	-after "paragraph (A)" add "to (B)"	FR 12/20/2010
	-remove "must" and add "shall"	b, c
	-remove "and/or" and add "or"	b
(D)	in Formal written affiliation agreement for a non-profit research institute -remove "and/or" and add "or"	b
(G)	in Laboratory clean-out -remove "supervisor/occupant" and add "supervisor or occupant"	b
(H)	in Laboratory worker -remove "and/or" and add "or" -"supervisors/managers" and add "supervisors or managers"	b
(M)	in "Unwanted material" -in 1 st sentence, after "experiments" add a comma	d

- a These amendments put the rule title into a format more similar to other "definitions" rules in the hazardous waste management program.
- b Word choice correction.
- c LSC requirement.
- d Punctuation correction.

This rule is submitted for 5-year review upon proposal. A new review date will be assigned.

3745-52-200

Definitions- ~~pertaining to the university lab rules~~labs.

The following definitions apply to rules 3745-52-200 to 3745-52-216 of the Administrative Code:

- (A) "Central accumulation area" means an on-site hazardous waste accumulation area subject to either ~~paragraph~~paragraphs (A) to (B) of rule 3745-52-34 of the Administrative Code (large quantity generators), or paragraphs (D) to (F) of rule 3745-52-34 of the Administrative Code (small quantity generators). A central accumulation area at an eligible academic entity that chooses to be subject to rules 3745-52-200 to 3745-52-216 of the Administrative Code ~~must~~shall also comply with rule 3745-52-11 of the Administrative Code when accumulating unwanted material ~~and/or~~or hazardous waste.
- (B) "College" or "university" means a private or public, post-secondary, degree-granting, academic institution, that is accredited by an accrediting agency listed annually by the U.S. department of education.
- (C) "Eligible academic entity" means a college or university, or a non-profit research institute that is owned by or has a formal written affiliation agreement with a college or university, or a teaching hospital that is owned by or has a formal written affiliation agreement with a college or university.
- (D) "Formal written affiliation agreement for a non-profit research institute" means a written document that establishes a relationship between institutions for the purposes of research ~~and/or~~or education and is signed by an "authorized representative of a facility," as defined in rule 3745-50-10 of the Administrative Code, from each institution. A relationship on a project-by-project or grant-by-grant basis is not considered a formal written affiliation agreement.
- (E) "A formal written affiliation agreement for a teaching hospital" means a master affiliation agreement and program letter of agreement, as defined by the "Accreditation Council for Graduate Medical Education," with an accredited medical program or medical school.
- (F) "Laboratory" means an area owned by an eligible academic entity where relatively small quantities of chemicals and other substances are used on a non-production basis for teaching or research (or diagnostic purposes at a teaching hospital) and are stored and used in containers that are easily manipulated by one person. Photo laboratories, art studios, and field laboratories are considered laboratories. Areas such as chemical stockrooms and preparatory laboratories that provide a support function to teaching or research laboratories (or diagnostic laboratories at teaching hospitals) are also considered laboratories.

- (G) "Laboratory clean-out" means an evaluation of the inventory of chemicals and other materials in a laboratory that are no longer needed or that have expired and the subsequent removal of those chemicals or other unwanted materials from the laboratory. A clean-out may occur for several reasons. It may be on a routine basis (e.g., at the end of a semester or academic year) or as a result of a renovation, relocation, or change in laboratory ~~supervisor/occupant~~supervisor or occupant. A regularly scheduled removal of unwanted material as required by rule 3745-52-208 of the Administrative Code does not qualify as a laboratory clean-out.
- (H) "Laboratory worker" means a person who handles chemicals ~~and/or~~ unwanted material in a laboratory and may include, but is not limited to, faculty, staff, post-doctoral fellows, interns, researchers, technicians, ~~supervisors/managers~~supervisors or managers, and principal investigators. A person does not need to be paid or otherwise compensated for work in the laboratory to be considered a laboratory worker. Undergraduate and graduate students in a supervised classroom setting are not laboratory workers.
- (I) "Non-profit research institute" means an organization that conducts research as its primary function and files as a non-profit organization under the tax code of 26 U.S.C. 501(c)(3).
- (J) "Reactive acutely hazardous unwanted material" means an unwanted material that is one of the acutely hazardous commercial chemical products listed in paragraph (E) of rule 3745-51-33 of the Administrative Code for reactivity.
- (K) "Teaching hospital" means a hospital that trains students to become physicians, nurses, or other health or laboratory personnel.
- (L) "Trained professional" means a person who has completed the applicable hazardous waste training requirements of rule 3745-65-16 of the Administrative Code for large quantity generators, or is knowledgeable about normal operations and emergencies in accordance with paragraph (D)(5)(c) of rule 3745-52-34 of the Administrative Code for small quantity generators and conditionally exempt small quantity generators. A trained professional may be an employee of the eligible academic entity or may be a contractor or vendor who meets the requisite training requirements.

(M) "Unwanted material" means any chemical, mixtures of chemicals, products of experiments, or other material from a laboratory that is no longer needed, wanted, or usable in the laboratory and that is destined for hazardous waste determination by a trained professional. Unwanted materials include reactive acutely hazardous unwanted materials and materials that may eventually be determined not to be waste pursuant to rule 3745-51-02 of the Administrative Code, or a hazardous waste pursuant to rule 3745-51-03 of the Administrative Code. If an eligible academic entity elects to use another equally effective term in lieu of unwanted material, as allowed by paragraph (A)(1)(a) of rule 3745-52-206 of the Administrative Code, the equally effective term has the same meaning and is subject to the same requirements as unwanted material under rules 3745-52-200 to 3745-52-216 of the Administrative Code.

(N) "Working container" means a small container (i.e., two gallons or less) that is in use at a laboratory bench, hood, or other work station, to collect unwanted material from a laboratory experiment or procedure.

[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:

Five Year Review (FYR) Dates: 07/01/2015

Certification

Date

Promulgated Under: 119.03
Statutory Authority: 3734.12
Rule Amplifies: 3734.12
Prior Effective Dates: 09/05/2010, 03/17/2012

RSFA Attachment A

Rule 3745-52-201 is amended as follows:		
Location	Change	Reason
title	-remove "of the" and add a dash -remove "lab rules" and add "labs"	a
(A)	remove "they" and add "such generators"	b
(B)	remove "they" and add "such generators"	b

- a Format and word choice correction. This amendment makes the phrase and punctuation consistent with other locations of the similar phrase and punctuation in the hazardous waste "applicability" rules.
- b This amendment is designed to eliminate the pronoun.

3745-52-201

Applicability of ~~the~~ university lab ~~rules~~labs.

- (A) Large quantity generators and small quantity generators. Rules 3745-52-200 to 3745-52-216 of the Administrative Code provide alternative requirements to the requirements in rule 3745-52-11 and paragraph (C) of rule 3745-52-34 of the Administrative Code for the hazardous waste determination and accumulation of hazardous waste in laboratories owned by eligible academic entities that choose to be subject to rules 3745-52-200 to 3745-52-216 of the Administrative Code, provided that ~~they~~such generators complete the notification requirements of rule 3745-52-203 of the Administrative Code.
- (B) Conditionally exempt small quantity generators. Rules 3745-52-200 to 3745-52-216 of the Administrative Code provide alternative requirements to the conditional exemption in paragraph (B) of rule 3745-51-05 of the Administrative Code for the accumulation of hazardous waste in laboratories owned by eligible academic entities that choose to be subject to rules 3745-52-200 to 3745-52-216 of the Administrative Code, provided that ~~they~~such generators complete the notification requirements of rule 3745-52-203 of the Administrative Code.

Effective:

Five Year Review (FYR) Dates: Exempt

Certification

Date

Promulgated Under: 119.03
Statutory Authority: 3734.12
Rule Amplifies: 3734.12
Prior Effective Dates: 09/05/2010

RSFA Attachment A

Rule 3745-52-206 is amended as follows:		
Location	Change	Reason
intro	remove "must" and add "shall"	a
	remove "the requirements in"	b
(A)(1)	remove "must" and add "shall"	a
(A)(1)(a)	-within the quotation marks containing the word "Plan" remove the semicolon -add a semicolon after the quotation mark before "and"	c
(A)(1)(b)(i)	remove "chemical(s)," and add "chemicals."	c, d
(A)(2)	remove "must" and add "shall"	a
(A)(2)(b)	remove "number(s)" and add "numbers"	d
(A)(2)(b)(i)	remove "and/or" and add "or"	d
(B)	[2 times] remove "must" and add "shall"	a
(B)(2)	after "container" remove the semicolon and add a comma	c
(B)(3)	remove "must" and add "shall"	a
(B)(3)(a)	remove "consolidating" and add "bulking"	FR 12/20/2010
(B)(3)(b)	[2 times] remove "must" and add "shall"	a
(B)(3)(c)	remove the ending period and add a colon	c

- a The change of "must" to "shall" is an LSC requirement.
- b Unnecessary text is removed.
- c Punctuation correction.
- d Word choice correction.
- e This amendment adds specificity to the provision.

This rule is submitted for 5-year review upon proposal. A new review date will be assigned.

3745-52-206

Labeling and management standards for containers of unwanted material in the laboratory.

An eligible academic entity ~~must~~shall manage containers of unwanted material while in the laboratory in accordance with ~~the requirements in~~ this rule.

(A) Labeling. Label unwanted material as follows:

(1) The following information ~~must~~shall be affixed or attached to the container:

(a) The words "unwanted material" or another equally effective term that is to be used consistently by the eligible academic entity and that is identified in "Part I" of the "Laboratory Management Plan;"₁ and

(b) Sufficient information to alert emergency responders to the contents of the container. Examples of information that would be sufficient to alert emergency responders to the contents of the container include, but are not limited to:

(i) The name of the ~~chemical(s),~~chemicals.

(ii) The type or class of chemical, such as organic solvents or halogenated organic solvents.

(2) The following information may be affixed or attached to the container, but ~~must~~shall at a minimum be associated with the container:

(a) The date that the unwanted material first began accumulating in the container, and

(b) Information sufficient to allow a trained professional to properly identify whether an unwanted material is a waste or hazardous waste and to assign the proper EPA hazardous waste ~~number(s)~~numbers, pursuant to rule 3745-52-11 of the Administrative Code. Examples of information that would allow a trained professional to properly identify whether an unwanted material is a waste or hazardous waste include, but are not limited to:

- (i) The name ~~and/or~~ description of the chemical contents or composition of the unwanted material, or, if known, the product of the chemical reaction,
 - (ii) Whether the unwanted material has been used or is unused,
 - (iii) A description of the manner in which the chemical was produced or processed, if applicable.
- (B) Management of containers in the laboratory. An eligible academic entity ~~must~~shall properly manage containers of unwanted material in the laboratory to assure safe storage of the unwanted material, to prevent leaks, spills, emissions to the air, adverse chemical reactions, and dangerous situations that may result in harm to human health or the environment. Proper container management ~~must~~shall include the following:
- (1) Containers are maintained and kept in good condition and damaged containers are replaced, overpacked, or repaired; and
 - (2) Containers are compatible with their contents to avoid reactions between the contents and the container; and are made of, or lined with, material that is compatible with the unwanted material so that the container's integrity is not impaired; and
 - (3) Containers ~~must~~shall be kept closed at all times, except:
 - (a) When adding, removing, or ~~consolidating~~bulking unwanted material; or
 - (b) A working container may be open until the end of the procedure or work shift, or until it is full, whichever comes first, at which time the working container either ~~must~~shall be closed or the contents ~~must~~shall be emptied into a separate container that is then closed; or
 - (c) When venting of a container is necessary:
 - (i) For the proper operation of laboratory equipment, such as with in-line collection of unwanted materials from high performance liquid chromatographs; or

- (ii) To prevent dangerous situations, such as build-up of extreme pressure.

[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:

Five Year Review (FYR) Dates: 07/01/2015

Certification

Date

Promulgated Under: 119.03
Statutory Authority: 3734.12
Rule Amplifies: 3734.12
Prior Effective Dates: 09/05/2010

RSFA Attachment A

Rule 3745-52-212 is amended as follows:		
Location	Change	Reason
Intro	remove "it must" and add "that eligible academic entity shall"	a, b
(A)	remove "must" and add "shall"	b
	remove "laboratory(ies)" and add "laboratories"	a
(B)	[2 times] remove "laboratory(ies)" and add "laboratories"	a
	remove "must" and add "shall"	b
(C)	remove "it" and add "the unwanted material"	a
(D)	remove "must" and add "shall"	b
(E)	remove "must" and add "shall"	b
	add "do all of the following" before the colon	c
(E)(1)	after "attached to the container" remove "(or on the label that is affixed or attached to the container, if that is preferred)"	FR 12/20/2010
	remove the ending "; and" and add a period	d, e
(E)(2)	remove "number(s)" and add "numbers"	a
	remove the ending "; and" and add a period	d, e
(E)(3)	remove the ending "; and" and add a period	d, e

- a Word choice correction.
- b The change from "must" to "shall" is an LSC requirement.
- c This amendment adds specificity to the provision.
- d Punctuation correction
- e Unnecessary text is removed.

This rule is submitted for 5-year review upon proposal. A new review date will be assigned.

3745-52-212

Making the hazardous waste determination at an on-site interim or permitted treatment, storage, or disposal facility.

If an eligible academic entity makes the hazardous waste determination pursuant to rule 3745-52-11 of the Administrative Code, for unwanted material at an on-site interim or permitted treatment, storage, or disposal facility, ~~it must~~that eligible academic entity shall comply with the following:

- (A) A trained professional ~~must~~shall accompany all unwanted material that is transferred from the ~~laboratory(ies)~~laboratories to an on-site interim or permitted treatment, storage, or disposal facility.
- (B) All unwanted material removed from the ~~laboratory(ies)~~laboratories shall be taken directly from the ~~laboratory(ies)~~laboratories to the on-site interim or permitted treatment, storage, or disposal facility.
- (C) The unwanted material becomes subject to the terms of the eligible academic entity's hazardous waste permit or interim as soon as ~~it~~the unwanted material arrives in the on-site treatment, storage or disposal facility.
- (D) A trained professional ~~must~~shall determine, pursuant to rule 3745-52-11 of the Administrative Code, if the unwanted material is a hazardous waste within four calendar days after the unwanted material arrives at an on-site interim or permitted treatment, storage, or disposal facility.
- (E) If the unwanted material is a hazardous waste, the eligible academic entity ~~must~~shall do all of the following:
- (1) Write the words "hazardous waste" on the container label that is affixed or attached to the container (~~or on the label that is affixed or attached to the container, if that is preferred~~) within four calendar days after arriving at the on-site interim or permitted treatment, storage, or disposal facility and before the hazardous waste may be removed from the on-site interim or permitted treatment, storage, or disposal facility;~~and~~.
 - (2) Write the appropriate EPA hazardous waste ~~number(s)~~numbers on the container label that is associated with the container (or on the label that is affixed or attached to the container, if that is preferred) before the hazardous waste may be treated or disposed on-site or transported off-site;~~and~~.

- (3) Count the hazardous waste toward the eligible academic entity's generator status, pursuant to paragraphs (C) and (D) of rule 3745-51-05 of the Administrative Code in the calendar month that the hazardous waste determination was made;~~and~~.
- (4) Manage the hazardous waste according to all applicable hazardous waste rules.

Effective:

Five Year Review (FYR) Dates: 07/01/2015

Certification

Date

Promulgated Under: 119.03
Statutory Authority: 3734.12
Rule Amplifies: 3734.12
Prior Effective Dates: 09/05/2010

RSFA Attachment A

Rule 3745-52-214 is amended as follows:		
Location	Change	Reason
intro	1 st sentence: remove “must” and add “shall”	a
	4 th sentence: remove “must” and add “shall”	a
	5 th sentence: -remove “In” -remove “its” and add “the” -remove “, an eligible academic entity must” and add “shall” -after “describe” remove “its”	a, b, c, d
	6 th sentence: -remove “must” and add “shall” -remove “that it develops” and add “developed”	a, d
	7 th sentence: -remove “In” -remove “its” and add “the” -remove “, an eligible academic entity must” and add “shall” -after “describe” remove “its”	a, b, c, d
	8 th sentence: -remove “its” and add “the” -remove “eligible academic entity’s” -after the 2 nd “LMP” remove the comma	b, c, d, e
	9 th sentence: -remove “An eligible academic entity” and add “ “Part II” of the LMP” -after “practices” remove “in “Part II” of its LMP if it chooses”	b, d
	(A)	1 st sentence: -remove “must” and add “shall” -remove “its” and add “the”
	2 nd sentence: -remove “In” -remove “its” and add “the” -remove “, an eligible academic entity must” and add “shall”	a, b, c, d
(A)(1)	at the end remove “including” and add “as follows”	FR 12/20/2010
(B)	-remove “In” -remove “its” and add “the” -remove “, an eligible academic entity must” and add “shall”	a, b, c, d

RSFA Attachment A

Rule 3745-52-214 is amended as follows:		
Location	Change	Reason
(B)(1)	after "Describe" remove "its" and add "the"	b, c, d
	after "labeling and management" remove ", including how the eligible academic entity will manage containers used for in-line collection of unwanted materials, such as with high performance liquid chromatographs and other laboratory equipment"	FR 12/20/2010
(B)(2)	-after "Describe" remove "its" and add "the" -remove "their" and add "the" -after "duties" add "of the laboratory workers and students"	b, c, d
(B)(3)	after "Describe" remove "its" and add "the"	b, c, d
(B)(4)	after "Describe" remove "its" and add "the"	b, c, d
(B)(4)(a)	in 2 nd sentence, remove "its" and add "the"	b, c, d
(B)(4)(b)(i)	after "Describe" remove "its" and add "the"	b, c, d
	-after "days when" add "maximum volumes of" -after "have" add "been" -after "exceeded" remove "their maximum volumes"	d
(B)(4)(b)(ii)	after "Describe" remove "its" and add "the"	b, c, d
	-after "communicating that" add "maximum volumes of" -after "have" add "been" -after "exceeded" remove "their maximum volumes"	d
(B)(5)	after "Describe" remove "its" and add "the"	b, c, d
(B)(6)	after "Describe" remove "its" and add "the"	b, c, d
	add "both" before the colon	f
(B)(6)(a)	remove the ending "; and" and add a period	b, e
(B)(7)	after "Describe" remove "its" and add "the"	b, c, d
	add "all of the following" before the colon	f
(B)(7)(a)	remove the ending "; and" and add a period	b, e

RSFA Attachment A

Rule 3745-52-214 is amended as follows:		
Location	Change	Reason
(B)(7)(b)	remove “they exceed their expiration date and/or as they degrade; and” and add “the expiration date of those chemicals is exceeded or as those chemicals degrade.”	b, d, e, g
(B)(7)(c)	remove “they exceed their expiration date and/or as they degrade; and” and add “the expiration date of those chemicals is exceeded or as those chemicals degrade.”	b, d, e, g
(C)	-remove “must” and add “shall” -remove “its” and add “the”	a, c, d
(D)	-remove “must” and add “shall” -remove “its” and add “the”	a, c, d
	after “LMP” remove the comma	e

- a The change of “must” to “shall” is an LSC requirement.
- b Unnecessary text is removed.
- c Word choice correction.
- d This amendment is designed to slightly re-write the provision to remove “its” and other pronouns, which changes the subject of the text from the eligible academic entity to the document that needs to be complied with in the circumstances described. This might also involve some re-arranging of the phrases in the sentence, or adding appropriate text, to correct grammar and sentence structure.
- e Punctuation correction.
- f This amendment adds specificity to the provision.
- g This amendment is designed to slightly re-write the sentence to remove the term “and/or”.

3745-52-214

Laboratory management plan.

An eligible academic entity ~~must~~shall develop and retain a written "Laboratory Management Plan" (LMP), or revise an existing written plan. The LMP is a site-specific document that describes how the eligible academic entity will manage unwanted materials in compliance with rules 3745-52-200 to 3745-52-216 of the Administrative Code. An eligible academic entity may write one LMP for all the laboratories owned by the eligible academic entity that have opted to use rules 3745-52-200 to 3745-52-216 of the Administrative Code, even if the laboratories are located at sites with different U.S. EPA identification numbers. The LMP ~~must~~shall contain two parts with a total of nine elements identified in paragraphs (A) and (B) of this rule. ~~In "Part I" of its~~the LMP, ~~an eligible academic entity must~~shall describe its procedures for each of the elements listed in paragraph (A) of this rule. An eligible academic entity ~~must~~shall implement and comply with the specific provisions ~~that it develops~~developed to address the elements in "Part I" of the LMP. ~~In "Part II" of its~~the LMP, ~~an eligible academic entity must~~shall describe its best management practices for each of the elements listed in paragraph (B) of this rule. The specific actions taken by an eligible academic entity to implement each element in "Part II" of ~~its~~the LMP may vary from the procedures described in the ~~eligible academic entity's~~ LMP, without constituting a violation of rules 3745-52-200 to 3745-52-216 of the Administrative Code. ~~An eligible academic entity~~"Part II" of the LMP may include additional elements and best management practices ~~in "Part II" of its LMP if it chooses.~~

(A) The eligible academic entity ~~must~~shall implement and comply with the specific provisions of "Part I" of ~~its~~the LMP. ~~In "Part I" of its~~the LMP, ~~an eligible academic entity must~~ shall:

(1) Describe procedures for container labeling in accordance with paragraph (A) of rule 3745-52-206 of the Administrative Code, ~~including~~as follows:

(a) Identifying whether the eligible academic entity will use the term "unwanted material" on the containers in the laboratory. If not, identify an equally effective term that will be used in lieu of unwanted material and consistently by the eligible academic entity. The equally effective term, if used, has the same meaning and is subject to the same requirements as "unwanted material."

(b) Identifying the manner in which information that is "associated with the container" will be imparted.

- (2) Identify whether the eligible academic entity will comply with paragraph (A)(1) or (A)(2) of rule 3745-52-208 of the Administrative Code for regularly scheduled removals of unwanted material from the laboratory.

(B) ~~In "Part II" of its~~the LMP, ~~an eligible academic entity must~~ shall:

- (1) Describe ~~its~~the intended best practices for container labeling and management; ~~including how the eligible academic entity will manage containers used for in-line collection of unwanted materials, such as with high performance liquid chromatographs and other laboratory equipment~~ (see the required standards in rule 3745-52-206 of the Administrative Code).
- (2) Describe ~~its~~the intended best practices for providing training for laboratory workers and students commensurate with ~~their~~the duties of the laboratory workers and students [see the required standards in paragraph (A) of rule 3745-52-207 of the Administrative Code].
- (3) Describe ~~its~~the intended best practices for providing training to ensure safe on-site transfers of unwanted material and hazardous waste by trained professionals [see the required standards in paragraph (D)(1) of rule 3745-52-207 of the Administrative Code].
- (4) Describe ~~its~~the intended best practices for removing unwanted material from the laboratory, including:
 - (a) For regularly scheduled removals. Develop a regular schedule for identifying and removing unwanted materials from ~~its~~the laboratories [see the required standards in paragraphs (A)(1) and (A)(2) of rule 3745-52-208 of the Administrative Code].
 - (b) For removals when maximum volumes are exceeded:
 - (i) Describe ~~its~~the intended best practices for removing unwanted materials from the laboratory within ten calendar days when maximum volumes of unwanted materials have been exceeded ~~their maximum volumes~~ [see the required standards in paragraph (D) of rule 3745-52-208 of the Administrative Code].
 - (ii) Describe ~~its~~the intended best practices for communicating that maximum volumes of unwanted materials have been exceeded ~~their maximum volumes~~.

- (5) Describe ~~its~~the intended best practices for making hazardous waste determinations, including specifying the duties of the individuals involved in the process (see the required standards in rules 3745-52-11 and 3745-52-209 to 3745-52-212 of the Administrative Code).
- (6) Describe ~~its~~the intended best practices for laboratory clean-outs, if the eligible academic entity plans to use the incentives for laboratory clean-outs provided in rule 3745-52-213 of the Administrative Code, including both:
- (a) Procedures for conducting laboratory clean-outs [see the required standards in paragraphs (A)(1) to (A)(3) of rule 3745-52-213 of the Administrative Code]; ~~and~~.
 - (b) Procedures for documenting laboratory clean-outs [see the required standards in paragraph (A)(4) of rule 3745-52-213 of the Administrative Code].
- (7) Describe ~~its~~the intended best practices for emergency prevention, including all of the following:
- (a) Procedures for emergency prevention, notification, and response, appropriate to the hazards in the laboratory; ~~and~~.
 - (b) A list of chemicals that the eligible academic entity has, or is likely to have, that become more dangerous when ~~they exceed their expiration date and/or as they degrade; and~~the expiration date of those chemicals is exceeded or as those chemicals degrade.
 - (c) Procedures to safely dispose of chemicals that become more dangerous when ~~they exceed their expiration date and/or as they degrade; and~~the expiration date of those chemicals is exceeded or as those chemicals degrade.
 - (d) Procedures for the timely characterization of unknown chemicals.
- (C) An eligible academic entity ~~must~~shall make ~~its~~the LMP available to laboratory workers, students, or any others at the eligible academic entity who request it.
- (D) An eligible academic entity ~~must~~shall review and revise ~~its~~the LMP; as needed.

Effective:

Five Year Review (FYR) Dates: Exempt

Certification

Date

Promulgated Under: 119.03
Statutory Authority: 3734.12
Rule Amplifies: 3734.12
Prior Effective Dates: 09/05/2010

RSFA Attachment A

Rule 3745-53-22 is amended as follows:		
Location	Change	Reason
title	add "- transporters"	a
(A)	remove "from" and add "after"	b
(B)	remove "from" and add "after"	b
(C)(1)	remove "must" and add "shall"	c
	remove "from" and add "after"	b
	remove the ending "; and" and add a period	d
(C)(2)	remove "must" and add "shall"	c
	remove "from" and add "after"	b
(C)(2) [Comment]	remove "intermediate" [lower case] and add "Intermediate" [upper case]	e
	remove "these rules" and add ' the "hazardous waste rules" as defined in rule 3745-50-10 of the Administrative Code '	f
(D)	remove "from" and add "after"	b

- a This amendment sets this rule apart from other hazardous waste rules that have the same title.
- b Word choice correction. This amendment makes the phrase consistent with other locations of the similar phrase.
- c The change of "must" to "shall" is an LSC requirement.
- d Unnecessary text is removed, and punctuation is corrected.
- e Capitalization correction.
- f Vague language is replaced by specific language to clarify the intent of the comment.

3745-53-22

Recordkeeping- transporters.

- (A) A transporter of hazardous waste shall keep a copy of the manifest signed by the generator, himself, and the next designated transporter or the owner or operator of the designated facility for a period of three years ~~from~~after the date the hazardous waste was accepted by the initial transporter.
- (B) For shipments delivered to the designated facility by water (bulk shipment), each water (bulk shipment) transporter shall retain a copy of a shipping paper containing all the information required in paragraph (E)(2) of rule 3745-53-20 of the Administrative Code for a period of three years ~~from~~after the date the hazardous waste was accepted by the initial transporter.
- (C) For shipments of hazardous waste by rail in the state of Ohio:
- (1) The initial rail transporter ~~must~~shall keep a copy of the manifest and shipping paper with all the information required in paragraph (F)(2) of rule 3745-53-02 of the Administrative Code for a period of three years ~~from~~after the date the hazardous waste was accepted by the initial transporter; ~~and~~.
 - (2) The final rail transporter ~~must~~shall keep a copy of the signed manifest (or the shipping paper if signed by the designated facility in lieu of the manifest) for a period of three years from the date the hazardous waste was accepted by the initial transporter.

[Comment: ~~intermediate~~Intermediate rail transporters are not required to keep records pursuant to ~~these rules~~the "hazardous waste rules" as defined in rule 3745-50-10 of the Administrative Code.]
- (D) A transporter who transports hazardous waste out of the United States shall keep a copy of the manifest indicating that the hazardous waste left the United States, for a period of three years ~~from~~after the date the hazardous waste was accepted by the initial transporter.
- (E) The periods of retention referred to in this rule are extended automatically during the course of any unresolved action regarding the regulated activity or as requested by the director.

Effective:

Five Year Review (FYR) Dates: Exempt

Certification

Date

Promulgated Under: 119.03
Statutory Authority: 3734.12
Rule Amplifies: 3734.12
Prior Effective Dates: 07/27/1980, 04/15/1981, 12/02/1981

RSFA Attachment A

Rule 3745-53-30 is amended as follows:		
Location	Change	Reason
(A)	remove “must” and add “shall”	a
	in the parenthetical, remove “and/or” and add “and”	b
(C)	remove “must” and add “shall”	a
(C)(1)	remove “of such discharge to the Ohio EPA office of emergency response, by use of its twenty-four-hour number 1-800-282-9378; and” and add ‘ , if required by 49 CFR 171.15, to the “National Response Center” at 800/424-8802. ’	c
(C)(1)[Comment] [new]	add the following new bracketed comment: [Comment: The public utilities commission of Ohio, which has adopted 49 CFR 171.15 by reference, also requires notice of such discharge.]	d
(C)(2)	remove “the Ohio EPA office of emergency response” and add “49 CFR 171.16.”	c, e
[Comment] after (C)(2)	remove the comment	f
ending [Comment] [old]	remove the indented comment	g
(C)(3) [new]	add this new paragraph: Give notice to the Ohio EPA “Emergency Response Unit” at 800/282-9378.	h
ending [Comment] [new]	add the same text that was formerly the indented ending comment, but not indented	g

- a The change of “must” to “shall” is an LSC requirement.
- b Word choice correction.
- c This amendment improves the equivalence of this text with its federal counterpart provision (40 CFR 263.30).

RSFA Attachment A

Rule **3745-53-30** is amended as follows:

Location	Change	Reason
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- d This amendment adds the same information to this rule as is added at other locations of the same text.
- e The address shown in the federal provision [see 40 CFR 263.30(c)(2)] is incorrect, so the federal error is not included in the Ohio rule language.
- f The text of this comment now appears in other locations in this rule. This amendment is designed to make this rule more similar to its federal counterpart provision (40 CFR 263.30).
- g This amendment corrects the format/structure of the rule at this location.
- h This amendment re-locates and corrects the requirements that was removed from (C)(2). The name of the party to be contacted is corrected, punctuation is corrected to maintain the upper case (LSC requirement), and punctuation in the telephone number is corrected (LSC requirement).

The addition of language and a comment to this rule make it different enough from its federal counterpart provision (40 CFR 263.30) to make it subject to 5-year review. However, these amendments do not make the Ohio rule more stringent, or less stringent, than its federal counterpart. This rule is submitted for 5-year review upon proposal. A new review date will be assigned.

3745-53-30

Immediate action.

(A) In the event of a discharge of hazardous waste during transportation, the transporter ~~must~~shall take appropriate immediate action to protect human health and the environment. (e.g., notify local authorities ~~and/or~~and Ohio EPA, dike the discharge area).

(B) If a discharge of hazardous waste occurs during transportation and an official (state or local government or federal agency) acting within the scope of his official responsibilities determines that immediate removal of such waste is necessary to protect human health or the environment, that official may authorize the removal of the waste by transporters who do not have a U.S. EPA identification number and without the preparation of a manifest.

(C) An air, rail, highway, or water transporter who has discharged hazardous waste ~~must~~shall:

- (1) Give notice ~~of such discharge to the Ohio EPA office of emergency response, by use of its twenty-four hour number 1-800-282-9378; and, if required by 49 CFR 171.15, to the "National Response Center" at 800/424-8802.~~

[Comment: The public utilities commission of Ohio, which has adopted 49 CFR 171.15 by reference, also requires notice of such discharge.]

- (2) Report in writing as required by ~~the Ohio EPA office of emergency response~~49 CFR 171.16.

~~[Comment: Immediate notice of such discharges is to be given to the national response center by telephone (toll free) at 800-424-8802, pursuant to 49 CFR Section 171.15. In addition, written notification of such discharges is also to be submitted, pursuant to 49 CFR Section 171.15, to the "Director, Office of Hazardous Materials Regulations, Materials Transportation Bureau, U.S. Department of Transportation, Washington, D.C. 20590," and to the public utilities commission of Ohio, which has adopted 49 CFR Section 171.15 by reference. For water (bulk shipment) transporters, see notice requirement set forth in 33 CFR Section 153.203.]~~

~~[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."]~~

- (3) Give notice to the Ohio EPA "Emergency Response Unit" at 800/282-9378.

[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:

Five Year Review (FYR) Dates: 07/01/2015

Certification

Date

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08/26/1981 (Emer.), 12/02/1981, 05/29/1985 (Emer.),
08/29/1985, 03/09/2001, 12/07/2004

RSFA Attachment A

Rule 3745-53-31 is amended as follows:		
Location	Change	Reason
title	remove "clean up" [2 words] and add "cleanup" [1 word]	a
text	-after "Ohio EPA" add a comma -after "federal" remove "agency personnel" and add ", state, or local authorities,"	b

- a Word choice correction. This amendment makes the phrase consistent with other locations of the similar phrase.
- b These corrections to punctuation, sentence structure, and word choice are designed to more closely mirror the language of the federal provision (see 40 CFR 263.31).

3745-53-31

Discharge ~~clean-up~~cleanup.

A transporter shall clean up any hazardous waste discharge that occurs during transportation or take such action as may be required or approved by Ohio EPA, or federal ~~agency personnel, state, or local authorities,~~ so that the hazardous waste discharge no longer presents a hazard to human health or the environment.

Effective:

Five Year Review (FYR) Dates: Exempt

Certification

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Prior Effective Dates: 04/15/1981, 05/29/1985 (Emer.), 08/29/1985

RSFA Attachment A

Rule 3745-54-01 is amended as follows:		
Location	Change	Reason
(B)	remove "The standards in"	a
(D)	remove "The requirements of"	a
(E)	remove "The requirements of"	a
(G)	remove "The requirements of"	a
(G)(2)	remove "the requirements of"	a
(G)(3)	remove "and/or" and add "or"	b
(G)(5)	add quotation marks around the defined term "totally enclosed treatment facility," [the existing comma is inside the quotation mark]	c
(G)(6)	-add quotation marks around the defined term "elementary neutralization unit"	c
	-add quotation marks around the defined term "wastewater treatment unit"	
	after "hazardous ignitable" remove "(D001) wastes (other" and add "waste (D001) [other"	b, d, e
	in the now-bracketed phrase, after "D001 high" add "total organic carbon"	f *
	add parentheses around the existing acronym "TOC"	e
	remove "defined" and add "described"	b
	after "for hazardous waste" remove the closing parenthesis and add a closing bracket	e
	-after "or reactive" remove "(D003)"	d
	-after "waste" add "(D003)" before the existing comma	
remove "must" and add "shall"	g	
remove "the requirements in"	a	
(G)(8)	add text: "Regarding response situations."	h
(G)(8)(a)(i)	remove the ending semicolon and add a period	e *
(G)(8)(a)(ii)	remove the ending semicolon and add a period	e *
(G)(8)(a)(iii)	remove the ending semicolon and add a period	e *

RSFA Attachment A

Rule 3745-54-01 is amended as follows:		
Location	Change	Reason
(G)(8)(a)(iv)	add quotation marks around the defined term “explosives or munitions emergency response specialist”	c
(G)(8)(b)	remove “must” and add “shall”	g
(G)(8)(d)	remove “must” and add “shall”	g
(G)(9)	remove “meeting” and add “that meet”	b
(G)(10)	add quotation marks around the defined term “container”	c
(G)(11)	-add quotation marks around the defined term “Universal waste handlers” -add quotation marks around the defined term “universal waste transporters”	c
(G)(11)(a)	remove the ending semicolon and add a period	e
(G)(11)(b)	remove the ending semicolon and add a period	e
(G)(11)(c)	remove the ending “; and” and add a period	a, e
(H)	remove “The requirements of”	a
(I)	remove “the requirements of”	a
(J)	-in 1 st sentence, remove “The requirements of rules” and add “Rules” -in last sentence, remove “the requirements of”	a
	at the end remove “must” and add “shall”	g
(J)(1)	remove “EPA9029” [without a space] and add “EPA 9029” [with a space]	i
	remove the ending semicolon and add a period	e *
(J)(2)	[2 times] remove “must” and add “shall”	g
	remove “must” and add “is required to”	b
	remove the ending semicolon and add a period	e
(J)(3)	add “both” before the colon	j *
(J)(3)(a)	remove the ending “; and” and add a period	a, e *
(J)(3)(b)	remove “the requirements of”	a
	remove the ending semicolon and add a period	e *

RSFA Attachment A

Rule 3745-54-01 is amended as follows:		
Location	Change	Reason
(J)(4)	[2 times] remove “must” and add “shall”	g
	in last sentence, remove “owner/operator must” and add “owner or operator shall”	b, g
	remove the ending semicolon and add a period	e *
(J)(5)	remove “the requirements of”	a
	remove the ending semicolon and add a period	e *
(J)(6)	-[2 times] after “ignitable” add “waste” -after “reactive” add “waste”	k
	remove the ending semicolon and add a period	e *
(J)(7)	remove “owner/operator must” and add “owner or operator shall”	b, g
	remove “owner/operator” and add “owner or operator”	b
	remove the ending semicolon and add a period	e *
(J)(8)	remove the ending semicolon and add a period	e *
(J)(9)	remove “the requirements of”	a
	remove the ending semicolon and add a period	e *
(J)(10)	[4 times] remove “must” and add “shall”	g
	remove the ending semicolon and add a period	e *
(J)(11)	[2 times] remove “must” and add “shall”	g
	remove the ending semicolon and add a period	e *
(J)(12)	remove the ending “; and” and add a period	a, e *

- a Unnecessary text is removed.
- b Word choice correction.
- c This punctuation correction (adding quotations around defined terms) is made in all hazardous waste rules, as they are amended, at locations of defined terms that are designated as such in the text.

RSFA Attachment A

Rule **3745-54-01** is amended as follows:

Location	Change	Reason
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- d The parenthetical waste code (e.g., D001) is relocated in the sentence so that the term being discussed is not interrupted by a parenthetical insertion. This amendment ensures that a search of the hazardous waste rules for this type of waste will include this location in the search results.
- e Punctuation correction.
- f Text is added to define the acronym upon its first use. LSC requirement.
- g The change of “must” to “shall” is an LSC requirement.
- h This amendment is designed to eliminate the occasion of a paragraph designation that contains no text.
- i Typo correction.
- j This amendment adds specificity to the rule.
- k Word choice correction, to complete the term. This amendment ensures that a search of the hazardous waste rules for this type of waste will include this location in the search results.
- * This amendment was made, or changed, in response to a comment on the Interested Parties draft rule.

This rule is submitted for 5-year review upon proposal. A new review date will be assigned.

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) ~~The standards in~~ 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. ~~The requirements of~~ 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 it is injected underground.]
- (E) ~~The requirements of~~ Chapters 3745-54 to 3745-57 and 3745-205 of the Administrative Code apply to the owner or operator of a 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 of the Administrative Code.
- (F) Reserved.
- (G) ~~The requirements of~~ Chapters 3745-54 to 3745-57 and 3745-205 of the Administrative Code do not apply to:

- (1) Reserved.

- (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 ~~the requirements of~~ Chapters 3745-54 to 3745-57 and 3745-205 of the Administrative Code 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 ~~and/or~~ conducting treatment of hazardous waste that is generated on-site in compliance with rule 3745-52-34 of the Administrative Code.
- (4) A farmer disposing of waste pesticides from his own use in compliance with rule 3745-52-70 of the Administrative Code.
- (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) wastes (other waste (D001)~~ [other than the D001 high total organic carbon (TOC) subcategory ~~defined 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 ~~must~~shall comply with ~~the requirements in~~ 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;
 - (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 ~~must~~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 CFR Parts 122 and 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 his 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 ~~must~~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 its disposition.
- (9) A transporter storing manifested shipments of hazardous waste in containers ~~meeting that meet~~ the requirements of rule 3745-52-30 of the Administrative Code at a transfer facility for a period of ten days or less.

- (10) The addition of sorbent material to waste in a "container" (as defined in rule 3745-50-10 of the Administrative Code) or the addition of waste to sorbent 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)(c) of this rule. These handlers are subject to regulation under Chapter 3745-273 of the Administrative Code when handling the following 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; and
 - (d) Lamps as described in rule 3745-273-05 of the Administrative Code.
- (12) Reserved.
- (H) ~~The requirements of~~ 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 ~~the requirements of~~ 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) ~~The requirements of rules~~ 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 ~~the requirements 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 ~~must~~shall:

- (1) Obtain a U.S. EPA identification number by applying to Ohio EPA using Ohio EPA form ~~EPA9029~~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 ~~must~~shall contain all of the information which ~~must~~is required to be 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 ~~must~~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 ~~the requirements 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 ~~must~~shall conduct these inspections often enough to identify problems in time to correct them before they harm human health or the environment, and ~~must~~shall remedy the problem before it leads to a human health or environmental hazard. Where a hazard is imminent or has already occurred, the ~~owner/operator must~~owner or operator shall take remedial action immediately;.
- (5) Provide personnel with classroom or on-the-job training on how to perform their duties in a way that ensures the remediation waste management site complies with ~~the requirements of~~ 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/operator must~~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/operator~~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 ~~the requirements of~~ 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 ~~must~~shall address proper design, construction, maintenance, and operation of remediation waste management units at the site. The goal of the plan ~~must~~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 plan ~~must~~shall explain specifically how to treat, store, and dispose of the hazardous remediation waste in question, and ~~must~~shall be implemented immediately whenever a fire, explosion, or release of hazardous waste or hazardous waste constituents which could threaten human health or the environment;
- (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 ~~must~~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 ~~must~~shall have the authority to commit the resources needed to carry out the contingency plan;
- (12) Develop, maintain, and implement a plan to meet the requirements in 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:

Five Year Review (FYR) Dates: 07/01/2015

Certification

Date

Promulgated Under:	119.03
Statutory Authority:	3734.12
Rule Amplifies:	3734.12
Prior Effective Dates:	04/15/1981, 01/07/1983, 11/29/1983, 01/30/1986, 12/30/1989, 04/01/1990, 09/02/1997, 10/20/1998, 12/07/2000, 03/13/2002, 12/07/2004, 09/05/2010

RSFA Attachment A

Rule 3745-54-13 is amended as follows:		
Location	Change	Reason
(A)	add text "The analysis."	a
(A)(1)	remove "he must" and add "the owner or operator shall"	b, c
	[2 times] remove "must" and add "shall"	c
	in last sentence, remove "the requirements of"	d
(A)(3)	[2 times] remove "must" and add "shall"	c
	remove "it" and add "the analysis"	b
(A)(4)	remove "must" and add "shall"	c
	remove "it" and add "the hazardous waste"	b
(B)	[2 times] remove "must" and add "shall"	c
	remove "He must" and add "The owner or operator shall"	b, c
(B)(3)(a)	remove the ending "; or" and add a period	d, e
(B)(4)	remove the ending "; and" and add a period	d, e
(C)	-after "this rule" remove "must"	c, f
	-after "also" add "shall"	
	remove "it" and add "the hazardous waste"	
	remove "must" and add "shall"	c
ending [Comment 1]	remove the indented comment and add the same comment not indented	g
	in the new language, change the "must" to "shall"	c
ending [Comment 2]	remove the indented comment and add the same comment not indented	g

- a This amendment is designed to eliminate the occurrence of a paragraph designation that does not contain text.
- b Word choice correction.
- c The change of "must" to "shall" is an LSC requirement.

RSFA Attachment A

Rule **3745-54-13** is amended as follows:

Location	Change	Reason
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- d Unnecessary text is removed.
- e Punctuation correction.
- f Sentence structure correction (verb placement).
- g This amendment corrects the format/structure of the rule at this location.

This rule is submitted for 5-year review upon proposal. A new review date will be assigned.

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, ~~he must~~the owner or operator shall obtain a detailed chemical and physical analysis of a representative sample of the wastes. At a minimum, this analysis ~~must~~shall contain all the information which ~~must~~shall be known to treat, store, or dispose of the waste in accordance with ~~the requirements of~~ 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 ~~must~~shall be repeated as necessary to ensure that ~~it~~the analysis is accurate and up to date. At a minimum, the analysis ~~must~~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 ~~must~~shall inspect and, if necessary, analyze each hazardous waste movement received at the facility to determine whether ~~it~~the hazardous waste matches the identity of the waste specified on the accompanying manifest or shipping paper.
- (B) The owner or operator ~~must~~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. ~~He must~~The owner or operator shall keep this plan at the facility. At a minimum, the plan ~~must~~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; ~~or,~~
 - (b) An equivalent sampling method.
 - (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; ~~and,~~
 - (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 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:
 - (a) Such residues are prohibited from land disposal under section 3004(d) of RCRA; or
 - (b) Reserved.
- (C) For off-site facilities, the waste analysis plan required in paragraph (B) of this rule ~~must~~ 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 ~~it~~ the hazardous waste matches the identity of the waste designated on the accompanying manifest or shipping paper. At a minimum, the plan ~~must~~ 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 must 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."]~~

[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."]

Effective:

Five Year Review (FYR) Dates: 07/01/2015

Certification

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, 01/30/1986, 12/30/1989, 04/01/1990,
02/11/1992, 09/02/1997, 10/20/1998, 12/07/2000,
03/13/2002, 12/07/2004, 02/16/2009

RSFA Attachment A

Rule 3745-54-15 is amended as follows:		
Location	Change	Reason
(A)	remove "must" and add "shall"	a
	remove "his" and add "the"	b
	add "either" before the colon	c
(A)(1)	remove the ending "; or" and add a period	d, e
(A)(2)	remove "must" and add "shall"	a
(B)	add text: "Inspection schedule."	f
(B)(1)	remove "must" and add "shall"	a
(B)(2)	remove "He must" and add "The owner or operator shall"	a, b
(B)(3)	remove "must" and add "shall"	a
(B)(4)	remove "it" and add "the frequency of inspection"	b
	[2 times] remove "must" and add "shall"	a
(B)(4)[Comment]	-remove "it" and add "the inspection schedule is" -remove "protects" and add "protective of"	b
(C)	[2 times] remove "must" and add "shall"	a
(D)	[2 times] remove "must" and add "shall"	a
	remove "He must" and add "The owner or operator shall"	a, b
	remove "from" and add "after"	b

- a The change of "must" to "shall" is an LSC requirement.
- b Word choice correction.
- c This amendment adds specificity to the provision.
- d Unnecessary text is removed.
- e Punctuation correction.

RSFA Attachment A

Rule **3745-54-15** is amended as follows:

Location	Change	Reason
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- f This amendment is designed to eliminate the occurrence of a paragraph designation that contains no text.

This rule is submitted for 5-year review upon proposal. A new review date will be assigned.

3745-54-15

General inspection requirements.

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

(1) Release of hazardous waste constituents to the environment;~~or,~~

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

(B) Inspection schedule.

(1) The owner or operator ~~must~~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) ~~He must~~The owner or operator shall keep this schedule at the facility.

(3) The schedule ~~must~~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, ~~it~~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, ~~must~~shall be inspected daily when in use. At a minimum, the inspection schedule ~~must~~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 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 ~~must~~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 ~~must~~shall be taken immediately.
- (D) The owner or operator ~~must~~shall record inspections in an inspection log or summary. ~~He must~~The owner or operator shall keep these records for at least three years ~~from~~after the date of inspection. At a minimum, these records ~~must~~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:

Five Year Review (FYR) Dates: 07/01/2015

Certification

Date

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08/29/1985, 12/08/1988, 12/30/1989, 06/29/1990,
12/07/2004, 09/05/2010

RSFA Attachment A

Rule 3745-54-18 is amended as follows:		
Location	Change	Reason
(A)(1)	remove “must” and add “shall”	a
(A)(2)(c) [Comment]	remove “which are”	b
(B)(1)	remove “must” and add “shall”	a
(B)(1)(b)(iv)[Comment]	remove “must” and add “shall”	a
(B)(2)(c)[Comment]	remove “found”	b
(C)	-after “mines” add a comma -after “mine” add a comma	c
ending [Comment 1]	remove the indented comment and add the same comment not indented	d
ending [Comment 2]	remove the indented comment and add the same comment not indented	d

- a The change of “must” to “shall” is an LSC requirement.
- b Unnecessary text is removed.
- c Punctuation correction.
- d This amendment corrects the format/structure of the rule at this location.

This rule is submitted for 5-year review upon proposal. A new review date will be assigned.

3745-54-18

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

(1) Portions of new facilities where treatment, storage, or disposal of hazardous waste will be conducted ~~must~~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 ~~which are~~ 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 ~~must~~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 ~~must~~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 ~~found~~ 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 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."]~~

[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:

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12/07/2004, 02/16/2009

RSFA Attachment A

Rule 3745-54-37 is amended as follows:		
Location	Change	Reason
title	remove "Arrangements/agreements" and add "Arrangements"	a
(A)	remove "arrangements/agreements" and add "arrangements"	a
	remove "these" and add "the following"	b
(A)(1)	after "fire departments, and" add "local"	b
	remove the ending semicolon and add a period	c
(A)(2)	[2 times] remove "agreements" and add "arrangements"	a
	remove the ending semicolon and add a period	c
(A)(3)	remove "Ohio EPA" and add "local"	b
	remove the ending "; and" and add a period	c, d
(B)	after "Where" add "local"	b
	remove "agreements or"	a

- a Word choice correction. This amendment makes the use of the words "agreements" and "arrangements" more consistent across the hazardous waste management rules.
- b Word choice correction.
- c Punctuation correction.
- d Unnecessary text is removed.

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:

Five Year Review (FYR) Dates: Exempt

Certification

Date

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

RSFA Attachment A

Rule 3745-54-52 is amended as follows:		
Location	Change	Reason
(A)	[2 times] remove "must" and add "shall"	a
(B)	remove "he" and add "the owner or operator"	b
	remove "the requirements of"	c
(C)	remove "must" and add "shall"	a
	remove "agreed to by" and add "with"	b, d
	after "contractors, and" add "state and " before "local"	e
(D)	[5 times] remove "must" and add "shall"	a
	-after "names," add "home" before "addresses" -remove "phone numbers (office and home)" and add "home or cellular telephone numbers"	f
(E)	[3 times] remove "must" and add "shall"	a
(F)	[2 times] remove "must" and add "shall"	a
	in 2 nd sentence, after "This" add "evacuation"	g
	remove "signal(s)" and add "signals"	h

- a The change of "must" to "shall" is an LSC requirement.
- b Word choice correction.
- c Unnecessary text is removed.
- d This amendment makes the phrase consistent with other locations of the similar phrase.
- e This amendment improves the equivalence of this phrase with its federal counterpart provision in 40 CFR 264.52(c).
- f Specific wording is added to clarify the requirement. The reference to the location of the telephone is being updated, since now most people and businesses use more options than office telephones.

RSFA Attachment A

Rule **3745-54-52** is amended as follows:

Location	Change	Reason
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- g This amendment adds specificity to the phrase, since several “plans” are discussed in this rule.
- h Word choice correction.

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, ~~he~~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:

Five Year Review (FYR) Dates: Exempt

Certification

Date

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08/29/1985, 12/07/2004, 09/05/2010, 03/17/2012

RSFA Attachment A

Rule 3745-54-53 is amended as follows:		
Location	Change	Reason
intro	at the end add "both" before the colon	a
(A)	remove "; and" and add a period	b
(B)	-after "hospitals, and" remove "Ohio EPA and" -after "emergency response teams" add "described in the contingency plan pursuant to paragraph (C) of rule 3745-54-52 of the Administrative Code"	c
ending [Comment] [new]	add the following bracketed comment after (B): [Comment: A copy of the contingency plan shall be submitted 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.]	c

- a This amendment adds specificity to the text.
- b Punctuation correction, and unnecessary text is removed.
- c This language is amended in order to clarify that the contingency plan document need not be submitted to Ohio EPA under this rule. However, the contingency plan does need to be submitted to Ohio EPA under circumstances described in other rules, as described in the new comment in this rule.

The addition of language and a comment to this rule make it different enough from its federal counterpart provision (40 CFR 264.53) to make it subject to 5-year review. However, these changes do not make the Ohio rule more stringent, or less stringent, than its federal counterpart. This rule is submitted for 5-year review upon proposal. A new review date will be assigned.

3745-54-53

Copies of contingency plan.

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

(A) Maintained at the facility; ~~and~~.

(B) Submitted to all local police departments, fire departments, hospitals, and ~~Ohio EPA~~ ~~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 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:

Five Year Review (FYR) Dates: 07/01/2015

Certification

Date

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

RSFA Attachment A

Rule 3745-54-54 is amended as follows:		
Location	Change	Reason
(A)	after “amended” remove the comma	a
	add “any of the following” before the colon	b
(A)(1)	remove “revised” and add “modified”	c
	remove the ending semicolon and add a period	a
(A)(2)	remove the ending semicolon and add a period	a
(A)(3)	remove the ending semicolon and add a period	a
(A)(4)	remove the ending semicolon and add a period	a
(A)(5)	remove the ending “; or” and add a period	a, d

- a Punctuation correction.
- b This amendment adds specificity to the provision.
- c Word choice correction.
- d Unnecessary text is removed.

This rule is currently exempt, but because it is sufficiently different from the federal provision (40 CFR 264.54), this rule is submitted for 5-year review upon proposal. [The federal rule does not contain the language in the state rule at (A)(6) or (B).] A new review date will be assigned.

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 ~~revised~~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~~;~~~~or~~.
 - (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.

Effective:

Five Year Review (FYR) Dates: 07/01/2015

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Prior Effective Dates: 04/15/1981, 01/07/1983

RSFA Attachment A

Rule 3745-54-56 is amended as follows:		
Location	Change	Reason
(A)	remove "his" and add "the emergency coordinator's"	a
	remove "must" and add "shall"	a, b
(A)(1)	remove the ending "; and" and add a period	c, d
(A)(2)	after "Notify" add "the"	e
	after "Ohio EPA" add ' "Emergency Response Unit" at 800/282-9378, '	f, g
	remove "agencies" and add "authorities"	a
(B)	remove "must" and add "shall"	a, b
	remove "He" and add "The emergency coordinator"	a
(C)	remove "set forth"	c
	[2 times] remove "must" and add "shall"	a, b
(D)	-after "health" remove the comma -after "environment" remove the comma	d
	remove ", he must report his findings as follows" before the colon	c
(D)(1)	remove "his" and add "the emergency coordinator's"	a
	remove "he must" and add "the emergency coordinator shall"	a, b
	remove ". He must" and add ", and shall"	a, b, h
	remove the ending "; and" and add a period	c, d
(D)(2)	-remove "He must" and add "The emergency coordinator shall" -remove "report must" and add "notification shall"	a, b
	remove "emergency response team using their twenty-four-hour toll free number 800-282-9378" and add ' "Emergency Response Unit" at 800/282-9378 '	f, g
	add "all of the following" before the colon	i

RSFA Attachment A

Rule 3745-54-56 is amended as follows:		
Location	Change	Reason
(D)(2)(a)	remove “reporter;” and add “the emergency coordinator who is making the notification.”	a, d
(D)(2)(b)	remove the ending semicolon and add a period	d
(D)(2)(c)	remove the ending semicolon and add a period	d
(D)(2)(d)	remove “material(s)” and add “material”	a
	remove the ending semicolon and add a period	d
(D)(2)(e)	remove the ending “; and“ and add a period	c, d
(D)(2)(f)	remove both commas from the sentence	d
(E)	[2 times] remove “must” and add “shall”	a, b
(F)	remove “must” and add “shall”	a, b
(G)	remove “must” and add “shall”	a, b
(G)[Comment]	remove “must” and add “shall”	a, b
(H)	remove “must” and add “shall”	a, b
	after “that” remove the comma	d
	remove “area(s)” and add “areas”	a
(H)(1)	remove the ending “; and “ and add a period	c, d
(I)	[3 times] remove “must” and add “shall”	a, b
	-after “requires” remove “implementing” -after “the contingency plan” add “to be implemented”	h
	add “all of the following” before the colon	i
(I)(1)	remove the ending semicolon and add a period	d
(I)(2)	remove the ending semicolon and add a period	d
(I)(3)	remove the ending semicolon and add a period	d
(I)(4)	remove “material(s)” and add “material”	a
	remove the ending semicolon and add a period	d
(I)(5)	remove the ending semicolon and add a period	d

RSFA Attachment A

Rule 3745-54-56 is amended as follows:		
Location	Change	Reason
(l)(6)	remove the ending “; and “ and add a period	c, d

- a Word choice correction.
- b The change of “must” to “shall” is an LSC requirement.
- c Unnecessary text is removed.
- d Punctuation correction.
- e This amendment improves the equivalence of this phrase with its federal counterpart provision (see 40 CFR 264.56).
- f This amendment corrects the names of the parties to be contacted (update).
- g This amendment corrects the punctuation in the telephone number. LSC requirement.
- h This amendment improves the grammar of the sentence.
- i This amendment adds specificity to the text.

This rule is submitted for 5-year review upon proposal. A new review date will be assigned.

3745-54-56

Emergency procedures.

- (A) Whenever there is an imminent or actual emergency situation, the emergency coordinator, or ~~his~~the emergency coordinator's designee when the emergency coordinator is on call, ~~must~~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 ~~agencies~~authorities with designated response roles.
- (B) Whenever there is a release, fire, or explosion, the emergency coordinator ~~must~~shall immediately identify the character, exact source, amount, and areal extent of any released materials. ~~He~~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 ~~set forth~~ in paragraphs (A) and (B) of this rule, the emergency coordinator ~~must~~shall assess possible hazards to human health or the environment that may result from the release, fire, or explosion. This assessment ~~must~~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; ~~he must report his findings as follows:~~
- (1) If ~~his~~the emergency coordinator's assessment indicates that evacuation of local areas may be advisable, ~~he must~~the emergency coordinator shall immediately notify appropriate local authorities. ~~He must, and shall~~ be available to help appropriate officials decide whether local areas should be evacuated; ~~and,~~
 - (2) ~~He must~~The emergency coordinator shall immediately notify the Ohio EPA ~~emergency response team using their twenty four hour toll free number 800-282-9378~~"Emergency Response Unit" at 800/282-9378. The report ~~must~~shall include all of the following:
 - (a) Name and telephone number of ~~reporter;~~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 ~~material(s)~~materials involved, to the extent known;~~;~~
 - (e) The extent of injuries, if any;~~and~~.
 - (f) The possible hazards to human health; or the environment; outside the facility.
- (E) During an emergency, the emergency coordinator ~~must~~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 ~~must~~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 ~~must~~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 ~~must~~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 ~~must~~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 ~~must~~shall ensure that; in the affected ~~area(s)~~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;~~and~~.

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

Effective:

Five Year Review (FYR) Dates: 07/01/2015

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Date

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09/05/2010

RSFA Attachment A

Rule 3745-54-70 is amended as follows:		
Location	Change	Reason
(A)	add text: Applicability.	a
(A)(1)	remove "The requirements of rules" and add "Rules"	b

- a This amendment eliminates the occasion of a paragraph designation that does not contain text.
- b Unnecessary wording is removed. This amendment makes the phrase consistent with other locations of the similar phrase.

This rule is submitted for 5-year review upon proposal. As this rule is considered equivalent to its federal counterpart provision (40 CFR 264.70), we request its exemption from further 5-year reviews under ORC 106.3 and 106.031 (formerly ORC 119.032).

The state rule's structure in (A) is different from the structure of the federal rule's (a) in that the state rule breaks out the requirements into (A)(1), (A)(2), and (A)(3), but the requirements of the state rule are the same as the requirements in the federal rule.

The state rule's (B) is reserved where the federal rule (b) contains text. The federal language in (b) is date-specific transitional language, and all the dates are past. Dates relevant to the applicability of Ohio's hazardous waste rules are shown in OAC 3745-50-11, and not generally in rule text. The state rule's (B) is maintained as "reserved" as a placeholder.

The state rule has cross-references in (A)(2) and (A)(3) that are not exactly the same as the references in the federal language. The state rule contains the correct references; the federal references are errors that Ohio has researched and corrected in the Ohio rule. U.S. EPA has reviewed these corrections and has agreed that the Ohio references are correct; they consider the state rule equivalent to its federal counterpart.

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.

Effective:

Five Year Review (FYR) Dates: 07/01/2015 and Exempt

Certification

Date

Promulgated Under: 119.03
Statutory Authority: 3734.12
Rule Amplifies: 3734.12
Prior Effective Dates: 04/15/1981, 05/29/1985 (Emer.), 08/29/1985,
12/30/1989, 02/11/1992, 03/13/2002, 12/07/2004,
02/16/2009

3745-54-73

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 ~~must~~shall keep a written operating record at ~~his~~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 ~~must~~shall be recorded, as ~~it~~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 common name and the EPA hazardous waste ~~number(s)~~numbers from Chapter 3745-51 of the Administrative Code which apply to the waste. The waste description also ~~must~~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 ~~must~~shall include the process that produced ~~it~~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 ~~defined~~identified in rules 3745-51-20 to 3745-51-24 of the Administrative Code, has a four-digit EPA hazardous waste number assigned to ~~it~~the hazardous waste. This number ~~must~~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 ~~must~~shall include all applicable EPA hazardous waste numbers.

Unit of measure	Code ¹
Gallons	G
Gallons per hour	E
Gallons per day	U
Liters	L
Liters per hour	H

Table 1	
Unit of measure	Code ¹
Liters per day	V
Short tons per hour	D
Metric tons per hour	W
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 ~~method(s)~~ methods [by handling ~~code(s)~~ codes as specified in Table 2 of this appendix] and ~~date(s)~~ dates of treatment, storage, or disposal.

Table 2- Handling Codes for Treatment, Storage, and Disposal Methods	
Enter the handling code(s) <u>codes</u> listed below that most closely represents the technique(s) <u>techniques</u> 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)
	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

Table 2- Handling Codes for Treatment, Storage, and Disposal Methods

	T27	Cyanide destruction
	T28	Degradation
	T29	Detoxification
	T30	Ion exchange
	T31	Neutralization
	T32	Ozonation
	T33	Photolysis
	T34	Other (specify)
(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

Table 2- Handling Codes for Treatment, Storage, and Disposal Methods

	T57	Evaporation
	T58	High gradient magnetic separation
	T59	Leaching
	T55	Electrodialysis
	T56	Electrolysis
	T57	Evaporation
	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

Table 2- Handling Codes for Treatment, Storage, and Disposal Methods	
	T83 Aggregate kiln
	T84 Phosphate kiln
	T85 Coke oven
	T86 Blast furnace
	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 / Open burning or Open detonation
	X02 Mechanical processing
	X03 Thermal unit
	X04 Geologic repository
	X99 Other Subpart X (specify)

RSFA Attachment A

Rule 3745-54-73 is amended as follows:		
Location	Change	Reason
Text Amendments		
(A)	remove "must" and add "shall"	a
(B)	remove "must" and add "shall"	a
(B)(1)	-remove "method(s)" and add "methods" -remove "date(s)" and add "dates"	b
	remove "must" and add "shall"	a
(B)(2)	[3 times] remove "must" and add "shall"	a
(B)(3)	remove the ending semicolon and add a period	c
(B)(4)	remove "implementing" and add "implementation of"	b
	remove the ending semicolon and add a period	c
(B)(5)	remove the ending semicolon and add a period	c
(B)(6)	remove "must" and add "shall"	a
	remove the ending semicolon and add a period	c
(B)(7)	remove the ending semicolon and add a period	c
(B)(8)	remove "must" and add "shall"	a
	remove the ending semicolon and add a period	c
(B)(9)	remove "he" and add "the permittee"	b
	remove the ending semicolon and add a period	c
(B)(10)	remove "must" and add "shall"	a
	remove the ending semicolon and add a period	c
(B)(11)	remove the ending semicolon and add a period	c
(B)(12)	after "generator or" add "the"	b
	remove the ending semicolon and add a period	c
(B)(13)	remove the ending semicolon and add a period	c
(B)(14)	after "generator or" add "the"	b
	remove the ending semicolon and add a period	c

RSFA Attachment A

Rule 3745-54-73 is amended as follows:		
Location	Change	Reason
(B)(15)	remove the ending semicolon and add a period	c
(B)(16)	remove the ending semicolon and add a period	c
(B)(17)	remove the ending semicolon and add a period	c
(B)(18)	remove “3745-57-45” and add “3745-57-47”	d
	remove “must” and add “shall”	a
	remove the ending “; and” and add a period	c, e
(B)(19)	remove “must” and add “shall”	a
Appendix Amendments		
intro	in 1 st paragraph: -remove “must” and add “shall”	a
	-remove “his” and add “the”	b
	in 2 nd paragraph: -remove “must” and add “shall”	a
	-remove “it” and add “the information”	b
	in 3 rd paragraph, add “all of” before “the following”	f
in (1), 1 st paragraph	-remove “number(s)” and add “numbers” -remove “it” and add “the waste”	b
	[2 times] remove “must” and add “shall”	a
in (1), 2 nd paragraph	-remove “defined” and add “identified” -remove “it” and add “the hazardous waste”	b
	after the 2 nd “Code” remove the comma	c
	[2 times] remove “must” and add “shall”	a
in Table 1	in the “Btu’s” row: -before the existing acronym, add “British thermal units” -add parentheses around the existing acronym	c, g, h
in (2)	after “Table 1” add “of this appendix”	d, h
	remove the ending semicolon and add a period	c

RSFA Attachment A

Rule 3745-54-73 is amended as follows:		
Location	Change	Reason
in (3)	-remove “method(s)” and add “methods” -remove “code(s)” and add “codes” -remove “date(s)” and add “dates”	b
	after “Table 1” add “of this appendix”	d, h
in Table 2	in header row: -remove “code(s)” and add “codes” -remove “technique(s)” and add “techniques”	b
	in 4. row X01, remove “burning/Open” and add “burning or Open”	b

- a The change of “must” to “shall” is an LSC requirement.
- b Word choice correction.
- c Punctuation correction.
- d Cross-reference correction.
- e Unnecessary text is removed.
- f This amendment adds specificity to the rule.
- g This amendment defines the acronym upon its first use.
- h LSC requirement.

This rule is submitted for 5-year review upon proposal. A new review date will be assigned.

The appendix to this rule appears in a different font from most other rules at the request of LSC.

3745-54-73

Operating record.

- (A) The owner or operator ~~must~~shall keep a written operating record at the facility.
- (B) The following information ~~must~~shall be recorded, as it 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 ~~method(s)~~methods and ~~date(s)~~dates of its treatment, storage, or disposal at the facility as required by the appendix to this rule. This information ~~must~~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 ~~must~~shall be recorded on a map or diagram that shows each cell or disposal area. For all facilities, this information ~~must~~shall include cross-references to manifest document numbers if the waste was accompanied by a manifest. This information ~~must~~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 ~~implementing~~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 ~~must~~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 ~~must~~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 ~~he~~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 information ~~must~~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 ~~3745-57-45~~3745-57-47 of the Administrative Code ~~must~~shall be maintained in the operating record for five years; ~~and~~;
- (19) Certifications as required by paragraph (F) of rule 3745-55-96 of the Administrative Code ~~must~~shall be maintained in the operating record until closure of the facility.

Effective:

Five Year Review (FYR) Dates: 07/01/2015

Certification

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, 01/30/1986, 12/30/1989, 02/11/1992, 09/02/1997, 03/13/2002, 12/07/2004, 09/05/2010

RSFA Attachment A

Rule 3745-54-76 is amended as follows:		
Location	Change	Reason
(A)	[2 times] remove “must” and add “shall”	a
	add “all of” before “the following information”	b
(A)(1)	remove the ending semicolon and add a period	c
(A)(2)	remove the ending semicolon and add a period	c
(A)(3)	remove the ending semicolon and add a period	c
(A)(4)	remove the ending semicolon and add a period	c
(A)(5)	remove the ending semicolon and add a period	c
(A)(6)	remove the ending “; and” and add a period	c, d
(A)(6)[Note]	remove “Note” and add “Comment”	e

- a The change of “must” to “shall” is an LSC requirement.
- b This amendment adds specificity to the provision.
- c Punctuation correction.
- d Unnecessary text is removed.
- e Word choice correction. This amendment makes the phrase consistent with other locations of the similar phrase.

This rule is submitted for 5-year review upon proposal. As this rule is considered equivalent to its federal counterpart provision (40 CFR 264.76), we request its exemption from further 5-year review under ORC 106.3 and 106.031 (formerly ORC 119.032).

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 ~~must~~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 ~~must~~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; ~~and~~
- [~~Note~~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:

Five Year Review (FYR) Dates: 07/01/2015 and Exempt

Certification

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, 12/30/1989, 03/13/2002, 12/07/2004,
02/16/2009

RSFA Attachment A

Rule 3745-55-18 is amended as follows:		
Location	Change	Reason
title	after "plan" remove the semicolon and add "and"	a
	after "amendment of" add "post-closure"	b
(A)	after "Written" add "post-closure"	b
	[4 times] remove "must" and add "shall"	c
	remove "from" and add "after"	a
	remove "the requirements of"	d
	in 5 th sentence, after "The" add "post-closure"	b
(B)	remove "the requirements of"	d
	remove "must" and add "shall"	c
	add "shall" before "include"	c, e
(B)(1)	remove "they" and add "the monitoring activities"	e
	remove the ending "; and" and add a period	d, f
(B)(2)	remove "they" and add "the maintenance activities"	e
	add "both" before the colon	b
(B)(2)(a)	remove "the requirements of"	d
	remove the ending "; and" and add a period	d, f
(B)(2)(b)	remove "the requirements of"	d
(B)(4)	remove "and/or" and add "or"	e
	after "containing" remove "those" and add "the alternative"	e
(C)	[2 times] remove "must" and add "shall"	c
(D)	after "Amendment of" add "post-closure"	b
	[2 times] remove "must" and add "shall"	c
(D)(2)	remove "must" and add "shall"	c
	add "any of the following occur" before the colon	b
(D)(2)(a)	remove the ending "; or" and add a period	d, f
(D)(2)(b)	remove the ending "; or" and add a period	d, f

RSFA Attachment A

Rule 3745-55-18 is amended as follows:		
Location	Change	Reason
(D)(2)(c)	remove the ending “; or” and add a period	d, f
(D)(2)(d)	remove “and/or” and add “or”	e
(D)(3)	[3 times] remove “must” and add “shall”	c
	remove “that” and add “who”	e
	-remove “the requirements of” -remove “the procedures in”	d
	after “disapprove” add a comma	f
	after “modify this” add “post-closure”	b
(D)(4)	after “modifications to the” add “post-closure”	b
	remove “must” and add “shall”	c
	after “submit the modified” add “post-closure”	b
	after “no later than ninety days” add “after the director’s request”	b, e
	remove “the procedures in”	d

- a Word choice correction. This amendment makes the phrase consistent with other locations of the similar phrase.
- b This amendment adds specificity to the provision.
- c The change of “must” to “shall” is an LSC requirement.
- d Unnecessary text is removed.
- e Word choice correction.
- f Punctuation correction.

This rule is submitted for 5-year review upon proposal. A new review date will be assigned.

3745-55-18

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

- (A) Written post-closure plan. The owner or operator of a hazardous waste disposal unit ~~must~~shall have a written post-closure plan. In addition, certain surface impoundments and waste piles from which the owner or operator intends to remove or decontaminate the hazardous wastes at partial or final closure are required by paragraph (C)(2) of rule 3745-56-28 and paragraph (C)(1) of rule 3745-56-58 of the Administrative Code to have contingent post-closure plans. Owners or operators of surface impoundments and waste piles not otherwise required to prepare contingent post-closure plans under paragraph (C)(2) of rule 3745-56-28 and paragraph (C)(1) of rule 3745-56-58 of the Administrative Code ~~must~~shall submit a post-closure plan to the director within ninety days ~~from~~after the date that the owner or operator or director determines that the hazardous waste management unit ~~must~~shall be closed as a landfill, subject to ~~the requirements of~~ rules 3745-55-17 to 3745-55-20 of the Administrative Code. The post-closure plan ~~must~~shall be submitted with the permit application, in accordance with paragraph (A)(13) of rule 3745-50-44 of the Administrative Code, and approved by the director as part of the permit issuance procedures under rules 3745-50-40 to 3745-50-235 of the Administrative Code. The approved post-closure plan will become a condition of the Ohio hazardous waste permit.
- (B) For each hazardous waste management unit subject to ~~the requirements of~~ this rule, the post-closure plan ~~must~~shall identify the activities that will be carried on after closure of each disposal unit and the frequency of these activities, and shall include at least:
- (1) A description of the planned monitoring activities and frequencies at which ~~they~~the monitoring activities will be performed to comply with 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, 3745-57-02 to 3745-57-17, and 3745-57-90 to 3745-57-93 of the Administrative Code during the post-closure care period; ~~and~~.
 - (2) A description of the planned maintenance activities, and frequencies at which ~~they~~the maintenance activities will be performed, to ensure both:
 - (a) The integrity of the cap and final cover or other containment systems in accordance with ~~the requirements of~~ 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, 3745-57-02 to 3745-57-17, and 3745-57-90 to 3745-57-93 of the Administrative Code; ~~and~~.

- (b) The function of the monitoring equipment in accordance with ~~the requirements~~ of 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, 3745-57-02 to 3745-57-17, and 3745-57-90 to 3745-57-93 of the Administrative Code.
- (3) The name, address, and telephone number of the person or office to contact about the hazardous waste disposal unit or facility during the post-closure care period.
- (4) For facilities where the director has applied alternative requirements at a regulated unit under paragraph (F) of rule 3745-54-90, paragraph (C) of rule 3745-55-10, ~~and/or~~ paragraph (D) of rule 3745-55-40 of the Administrative Code, either the alternative requirements that apply to the regulated unit, or a reference to the enforceable document containing ~~those~~ the alternative requirements.
- (C) Until final closure of the facility, a copy of the approved post-closure plan ~~must~~ shall be furnished to the director upon request, including request by mail. After final closure has been certified, the person or office specified in paragraph (B)(3) of this rule ~~must~~ shall keep the approved post-closure plan during the remainder of the post-closure period.
- (D) Amendment of post-closure plan. The owner or operator ~~must~~ shall submit a written notification of or request for a permit modification to authorize a change in the approved post-closure plan in accordance with the applicable requirements of rules 3745-50-40 to 3745-50-235 of the Administrative Code. The written notification or request ~~must~~ shall include a copy of the amended post-closure plan for review or approval by the director.
- (1) The owner or operator may submit a written notification or request to the director for a permit modification to amend the post-closure plan at any time during the active life of the facility or during the post-closure care period.
- (2) The owner or operator ~~must~~ shall submit a written notification of or request for a permit modification to authorize a change in the approved post-closure plan whenever any of the following occur:
- (a) Changes in operating plans or facility design affect the approved post-closure plan; ~~or,~~
- (b) There is a change in the expected year of final closure, if applicable; ~~or,~~

- (c) Events which occur during the active life of the facility, including partial and final closures, affect the approved post-closure plan; ~~or.~~
- (d) The owner or operator requests the director to apply alternative requirements to a regulated unit under paragraph (F) of rule 3745-54-90, paragraph (C) of rule 3745-55-10, ~~and/or~~ paragraph (D) of rule 3745-55-40 of the Administrative Code.
- (3) The owner or operator ~~must~~shall submit a written request for a permit modification at least sixty days prior to the proposed change in facility design or operation, or no later than sixty days after an unexpected event has occurred which has affected the post-closure plan. An owner or operator of a surface impoundment or waste pile ~~that~~who intends to remove all hazardous waste at closure and is not otherwise required to submit a contingent post-closure plan under paragraph (C)(2) of rule 3745-56-28 and paragraph (C)(1) of rule 3745-56-58 of the Administrative Code ~~must~~shall submit a post-closure plan to the director no later than ninety days after the date that the owner or operator or director determines that the hazardous waste management unit ~~must~~shall be closed as a landfill, subject to ~~the requirements of~~ rule 3745-57-10 of the Administrative Code. The director will approve, disapprove, or modify this post-closure plan in accordance with ~~the procedures in~~ rules 3745-50-40 to 3745-50-235 of the Administrative Code. The approved post-closure plan will become a permit condition in accordance with the permit issuance process.
- (4) The director may request modifications to the post-closure plan under the conditions described in paragraph (D)(2) of this rule. The owner or operator ~~must~~shall submit the modified post-closure plan no later than sixty days after the director's request, or no later than ninety days after the director's request if the unit is a surface impoundment or waste pile not previously required to prepare a contingent post-closure plan. Any modifications requested by the director will be approved, disapproved, or modified in accordance with ~~the procedures in~~ rules 3745-50-40 to 3745-50-235 of the Administrative Code.

Effective:

Five Year Review (FYR) Dates: 07/01/2015

Certification

Date

Promulgated Under: 119.03
Statutory Authority: 3734.12
Rule Amplifies: 3734.12
Prior Effective Dates: 01/07/1983, 12/28/1987, 02/23/1989, 12/30/1989,
11/11/1999, 03/13/2002, 12/07/2004, 02/16/2009

RSFA Attachment A

Rule 3745-55-43 is amended as follows:		
Location	Change	Reason
Intro	remove "must" and add "shall"	a
	remove "He must" and add "The owner or operator shall"	a, b
(A)(1)	[2 times] remove "must" and add "shall"	a
(A)(2)	[3 times] remove "must" and add "shall"	a
(A)(3)	[2 times] remove "must" and add "shall"	a
	after "shorter" remove "; this" and add ". This"	c
(A)(3)(a)	[5 times] remove "must" and add "shall"	a
(A)(3)(b)	[2 times] remove "must" and add "shall"	a
	remove "defined" and add "described"	b
	remove "the requirements of"	d
(A)(4)	remove "he" and add "the owner or operator"	b
	remove "mount" and add "amount"	e
	remove "he must" and add "the owner or operator shall"	a, b
(A)(5)	remove "his" and add "the owner's or operator's"	b
	remove "must" and add "shall"	a
	remove "specifications of"	d
(A)(6)	[2 times] remove "must" and add "shall"	a
	-remove "it's" and add "the" -after "value" add "of the fund"	b
(A)(8)	remove "he" and add "the owner or operator"	b
(A)(10)	-remove "it's" and add "the" -after "operating life" add "of the facility" -[5 times] remove "he" and add "the director"	b
(A)(11)	add "either" before the colon	f
(A)(11)(a)	remove the ending ", or" and add a period	d, g
(B)(1)	[3 times] remove "must" and add "shall"	a

RSFA Attachment A

Rule 3745-55-43 is amended as follows:		
Location	Change	Reason
(B)(1)[Comment]	[2 times] remove quotation marks around "Federal Register"	g, h
(B)(2)	remove "must" and add "shall"	a
(B)(3)	[2 times] remove "must" and add "shall"	a
(B)(3)(a)	remove "must" and add "shall"	a
(B)(3)(b)	remove "the requirements of"	d
(B)(4)	remove "must" and add "shall"	a
(B)(6)	remove "must" and add "shall"	a
(B)(7)	remove "must" and add "shall"	a
	add "shall" before "obtain"	b, i
(B)(9)	remove "his" and add "the director's"	b
(C)(1)	[3 times] remove "must" and add "shall"	a
(C)(1)[Comment]	[2 times] remove quotation marks around "Federal Register"	g, h
(C)(2)	remove "must" and add "shall"	a
(C)(3)	[2 times] remove "must" and add "shall"	a
(C)(3)(a)	remove "must" and add "shall"	a
(C)(3)(b)	remove "the requirements of"	d
(C)(4)	remove "must" and add "shall"	a
	add "either" before the colon	f
(C)(4)(a)	remove the ending "; or" and add a period	d, g
(C)(5)	after "Section" remove "308" and add "3008"	e
(C)(6)	remove "must" and add "shall"	a
(C)(7)	remove "must" and add "shall"	a
	add "shall" before "obtain"	b, i
(C)(9)	add "either" before the colon	f

RSFA Attachment A

Rule 3745-55-43 is amended as follows:		
Location	Change	Reason
(C)(9)(a)	remove the ending “; or” and add a period	d, g
(D)(1)	[3 times] remove “must” and add “shall”	a
	after “sixty days before” add “the” before “date”	b
(D)(2)	remove “must” and add “shall”	a
(D)(3)	[2 times] remove “must” and add “shall”	a
(D)(3)(a)	remove “must” and add “shall”	a
(D)(3)(b)	remove “the requirements of”	d
(D)(4)	remove “must” and add “shall”	a
	remove “the following information:”	d
(D)(5)	[2 times] remove “must” and add “shall”	a
(D)(6)	remove “must” and add “shall”	a
(D)(7)	remove “must” and add “shall”	a
	remove “it” and add “the amount of the credit”	b
	add “shall” before “obtain”	b, i
(D)(9)	remove “it” and add “the issuing institution”	b
(D)(10)	add “either” before the colon	f
(D)(10)(a)	remove the ending “, or” and add a period	d, g
(E)(1)	[3 times] remove “must” and add “shall”	a
(E)(2)	remove “must” and add “shall”	a
(E)(3)	remove “must” and add “shall”	a
(E)(4)	[2 times] remove “must” and add “shall”	a
(E)(5)	-remove “its” and add “the” -after operating life” add “of the facility” -[5 times] remove “he” and add “the director”	b
(E)(6)	remove “must” and add “shall”	a
(E)(7)	remove “must” and add “shall”	a

RSFA Attachment A

Rule 3745-55-43 is amended as follows:		
Location	Change	Reason
(E)(8)	[2 times] remove “must” and add “shall”	a
(E)(9)	remove “must” and add “shall”	a
	add “shall” before “obtain”	b, i
(E)(10)	remove “he” and add “the owner or operator”	b
	add “either” before the colon	f
(E)(10)(a)	remove the ending “; or” and add a period	d, g
(F)(1)	remove “he” and add “the owner or operator”	b
	after “pass this test” add a comma	g
	remove “must” and add “shall”	a
(F)(1)(a)	remove “must” and add “shall”	a
(F)(1)(b)	remove “must” and add “shall”	a
(F)(1)(b)(i)	remove “his” and add “the owner’s or operator’s”	b
(F)(1)(b)(iv)	after “per cent of” add “the owner’s or operator’s”	f
(F)(2), in last sentence	remove “operators” and add “operator’s”	e
	after “financial officer” add “see” at the beginning of the bracketed phrase	b
(F)(3)	remove “he” and add “the owner or operator”	b
	remove “must” and add “shall”	a
(F)(3)(c)(i)	remove “He” and add “The accountant”	b
(F)(3)(c)(ii)	-remove “his” and add “the accountant’s” -remove “him” and add “the accountant”	b
(F)(4)	remove “must” and add “shall”	a
(F)(5)	[2 times] remove “must” and add “shall”	a
(F)(6)	remove “he must” and add “the owner or operator shall”	a, b
	[2 times] remove “must” and add “shall”	a
(F)(7)	remove “must” and add “shall”	a

RSFA Attachment A

Rule 3745-55-43 is amended as follows:		
Location	Change	Reason
(F)(8)	remove “his” and add “the accountant’s”	b
	remove “must” and add “shall”	a
(F)(9)	add “either” before the colon	f
(F)(9)(a)	remove the ending “; or” and add a period	d, g
(F)(10)	[9 times] remove “must” and add “shall”	a
(F)(10)(b)	in 1 st sentence after “The” add “corporate” before “guarantee”	j *
(G)	[2 times] remove “must” and add “shall”	a
	remove “he” and add “the owner or operator”	b
(H)	[3 times] remove “must” and add “shall”	a
(I)	remove “he” and add “the owner or operator”	b
[Comment 1]	-remove “it” and add “the notice” -remove “him” and add “the owner or operator”	b

- a The change of “must” to “shall” is an LSC requirement.
- b Word choice correction.
- c This sentence is broken into 2 sentences to improve readability.
- d Unnecessary text is removed.
- e Typo correction.
- f This amendment adds specificity to the provision.
- g Punctuation correction.
- h LSC requirement.
- i Grammar correction.

RSFA Attachment A

Rule 3745-55-43 is amended as follows:		
Location	Change	Reason

- j This amendment improves the equivalence of this rule with its federal counterpart provision (40 CFR 264.143).
- * This amendment is made in response to a comment on the Interested Parties draft rule.

This rule is submitted for 5-year review upon proposal. A new review date will be assigned.

3745-55-43

Financial assurance for facility closure.

An owner or operator of each facility ~~must~~shall establish financial assurance for closure of the facility. ~~He must~~The owner or operator shall choose from among the following options:

(A) Closure trust fund.

- (1) An owner or operator may satisfy the requirements of this rule by establishing a closure trust fund which conforms to the requirements of paragraphs (A) to (A)(11)(b) of this rule and submitting an originally signed duplicate of the trust agreement to the director by certified mail. An owner or operator of a new facility ~~must~~shall send the originally signed duplicate of the trust agreement to the director by certified mail at least sixty days before the date on which hazardous waste is first received for treatment, storage, or disposal. The trustee ~~must~~shall be an entity which has the authority to act as a trustee and whose trust operations are regulated and examined by a federal or state agency.
- (2) The wording of the trust agreement ~~must~~shall be identical to the wording specified in paragraph (A)(1) of rule 3745-55-51 of the Administrative Code and the trust agreement ~~must~~shall be accompanied by a formal certification of acknowledgement. [For example, see paragraph (A)(2) of rule 3745-55-51 of the Administrative Code.] "Schedule A" of the trust agreement ~~must~~shall be updated within sixty days after a change in the amount of the current closure cost estimate covered by the agreement.
- (3) Payments to the trust fund ~~must~~shall be made annually by the owner or operator over the term of the initial hazardous waste permit or over the remaining operating life of the facility as estimated in the closure plan, whichever period is shorter; ~~this~~This period is hereafter referred to as the "pay-in period." The payments into the closure trust fund ~~must~~shall be made as follows:
 - (a) For a new facility, the first payment ~~must~~shall be made before the initial receipt of hazardous waste for treatment, storage, or disposal. A receipt from the trustee for this payment ~~must~~shall be submitted by the owner or operator to the director before this initial receipt of hazardous waste. The first payment ~~must~~shall be at least equal to the current closure cost estimate (see rule 3745-55-42 of the Administrative Code) except as provided in paragraph (G) of this rule, divided by the number of years in the pay-in period. Subsequent payments ~~must~~shall be made no later than thirty days after each anniversary date of the first payment. The amount of each subsequent payment ~~must~~shall be determined by this formula:

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

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

- (b) If an owner or operator establishes a trust fund as specified in paragraph (A) of this rule, and the value of that trust fund is less than the current closure cost estimate when a permit is issued to the facility, the amount of the current closure cost estimate still to be paid into the trust fund ~~must~~shall be paid in over the pay-in period as ~~defined~~described in paragraph (A)(3) of this rule. Payments ~~must~~shall continue to be made no later than thirty days after each anniversary date of the first payment made pursuant to ~~the requirements of~~ Chapters 3745-65 to 3745-69 and 3745-256 of the Administrative Code. The amount of each payment must be determined by this formula:

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

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

- (4) The owner or operator may accelerate payments unto the trust fund or ~~he~~the owner or operator may deposit the full ~~mount~~amount of the current closure cost estimate at the time the fund is established. However, ~~he must~~the owner or operator shall maintain the value of the fund at no less than the value the fund would have if annual payments were made as specified in paragraph (A)(3) of this rule.
- (5) If the owner or operator establishes a closure trust fund after having used one or more alternate mechanisms specified in this rule or in rule 3745-66-43 of the Administrative Code, ~~his~~the owner's or operator's first payment ~~must~~shall be in at least the amount that the fund would contain if the trust fund were established initially and annual payments made according to ~~specifications of~~ paragraph (A)(3) of this rule and paragraph (A) of rule 3745-66-43 of the Administrative Code, as applicable.

- (6) After the pay-in period is completed, whenever the current closure cost estimate changes, the owner or operator ~~must~~shall compare the new estimate with the trustee's most recent annual valuation of the trust fund. If the value of the fund is less than the amount of the new estimate, the owner or operator, within sixty days after the change in the cost estimate, ~~must~~shall either deposit an amount into the fund so that ~~its~~the value of the fund after this deposit at least equals the amount of the current closure cost estimate, or obtain other financial assurance as specified in this rule to cover the difference.
- (7) If the value of the trust fund is greater than the total amount of the current closure cost estimate, the owner or operator may submit a written request to the director for release of the amount in excess of the current closure cost estimate.
- (8) If an owner or operator substitutes other financial assurance as specified in this rule for all or part of the trust fund, ~~he~~the owner or operator may submit a written request to the director for release of the amount in excess of the current closure cost estimate covered by the trust fund.
- (9) Within sixty days after receiving a request from the owner or operator for release of funds as specified in paragraph (A)(7) or (A)(8) of this rule, the director will instruct the trustee to release to the owner or operator such funds as the director specifies in writing.
- (10) After beginning partial or final closure, an owner or operator or another person authorized to conduct partial or final closure may request reimbursement for partial or final closure expenditures by submitting itemized bills to the director. The owner or operator may request reimbursements for partial closure only if sufficient funds are remaining in the trust fund to cover the maximum costs of closing the facility over ~~its~~the remaining operating life of the facility. Within sixty days after receiving bills for partial or final closure activities, the director will determine whether the partial or final closure expenditures are in accordance with the approved closure plan or otherwise justified, and if so, ~~he~~the director will instruct the trustee to make reimbursement in such amounts as the director specifies in writing. If the director has reason to believe that the maximum cost of closure over the remaining life of the facility will be significantly greater than the value of the trust fund, ~~he~~the director may withhold reimbursement of such amounts as ~~he~~the director deems prudent until ~~he~~the director determines, in accordance with paragraph (I) of this rule, that the owner or operator is no longer required to maintain financial assurance for final closure of the facility. If the director does not instruct the trustee to make such reimbursements, ~~he~~the

director will provide the owner or operator with a detailed written statement of reasons.

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

(a) The owner or operator substitutes alternate financial assurance as specified in this rule, ~~or,~~

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

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

(1) An owner or operator may satisfy the requirements of this rule by obtaining a surety bond which conforms to the requirements of paragraphs (B) to (B)(9) of this rule and submitting the bond to the director by certified mail. An owner or operator of a new facility ~~must~~shall submit the surety bond to the director by certified mail at least sixty days before the date on which hazardous waste is first received for treatment, storage, or disposal. The bond ~~must~~shall be effective before this initial receipt of hazardous waste. The surety company issuing the bond ~~must~~shall, at a minimum, be among those listed as acceptable sureties on federal bonds in "Circular 570" of the U.S. department of the treasury.

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

(2) The wording of the surety bond ~~must~~shall be identical to the wording specified in paragraph (B) of rule 3745-55-51 of the Administrative Code.

(3) The owner or operator who uses a surety bond to satisfy the requirements of this rule ~~must~~shall also establish a standby trust fund by the time the bond is obtained. Under the terms of the bond, all payments made thereunder will be deposited by the surety directly into the standby trust fund in accordance with instructions from the director. This standby trust fund ~~must~~shall meet the requirements specified in paragraph (A) of this rule, except that:

(a) An originally signed duplicate of the trust agreement ~~must~~shall be submitted to the director with the surety bond; and

- (b) Until the standby trust fund is funded pursuant to ~~the requirements of this rule~~, the following are not required:
- (i) Payments into the trust fund as specified in paragraph (A) of this rule;
 - (ii) Updating of "Schedule A" of the trust agreement [see paragraph (A) of rule 3745-55-51 of the Administrative Code] to show current closure cost estimates;
 - (iii) Annual valuations as required by the trust agreement; and
 - (iv) Notices of nonpayment as required by the trust agreement.
- (4) The bond ~~must~~shall guarantee that the owner or operator will:
- (a) Fund the standby trust fund in an amount equal to the penal sum of the bond before the beginning of final closure of the facility; or
 - (b) Fund the standby trust fund in an amount equal to the penal sum within fifteen days after an order to begin final closure in accordance with rules 3745-55-10 to 3745-55-20 of the Administrative Code is issued by the director, or by an Ohio court, or other court of competent jurisdiction, or by a U.S. district court, or within fifteen days after issuance of a notice or revocation of the permit by the director; or
 - (c) Provide alternate financial assurance as specified in this rule, and obtain the director's written approval of the assurance provided, within ninety days after receipt by both the owner or operator and the director of a notice of cancellation of the bond from the surety.
- (5) Under the terms of the bond, the surety will become liable on the bond obligation when the owner or operator fails to perform as guaranteed by the bond. Following a determination by the director that the owner or operator has failed to perform final closure in accordance with the approved closure plan and other permit requirements when required to do so, under the terms of the bond the surety will perform final closure as guaranteed by the bond, or will deposit the amount of the penal sum into the standby trust fund.

- (6) The penal sum of the bond ~~must~~shall be in an amount at least equal to the current closure cost estimate (see rule 3745-55-42 of the Administrative Code) except as provided in paragraph (G) of this rule.
 - (7) Whenever the current closure cost estimate increases to an amount greater than the penal sum, the owner or operator, within sixty days after the increase, ~~must~~shall either cause the penal sum to be increased to an amount at least equal to the current closure cost estimate and submit evidence of such increase to the director, or shall obtain other financial assurance as specified in this rule to cover the increase. Whenever the current closure cost estimate decreases, the penal sum may be reduced to the amount of the current closure cost estimate following written approval by the director.
 - (8) Under the terms of the bond, the surety may cancel the bond by sending notice of cancellation by certified mail to the owner or operator and to the director. Cancellation may not occur, however, during the one hundred twenty days beginning on the date of receipt of the notice of cancellation by both the owner or operator and the director, as evidenced by the return receipts.
 - (9) The owner or operator may cancel the bond if the director has given prior written consent based on ~~his~~the director's receipt of evidence of alternate financial assurance as specified in this rule.
- (C) Surety bond guaranteeing performance of closure.
- (1) An owner or operator may satisfy the requirements of this rule by obtaining a surety bond which conforms to the requirements of paragraphs (C) to (C)(10) of this rule and submitting the bond to the director by certified mail. An owner or operator of a new facility ~~must~~shall submit the bond to the director by certified mail at least sixty days before the date on which hazardous waste is first received for treatment, storage, or disposal. The bond ~~must~~shall be effective before this initial receipt of hazardous waste. The surety company issuing the bond ~~must~~shall, at a minimum, be among those listed as acceptable sureties on federal bonds in "Circular 570" of the U.S. department of the treasury.

[Comment: "Circular 570" is published in the "Federal Register" annually on July first; interim changes in the circular are also published in the "Federal Register."]
 - (2) The wording of the surety bond ~~must~~shall be identical to the wording specified in paragraph (C) of rule 3745-55-51 of the Administrative Code.

- (3) The owner or operator who uses a surety bond to satisfy the requirements of this rule ~~must~~shall also establish a standby trust fund. Under the terms of the bond, all payments made thereunder will be deposited by the surety directly into the standby trust fund in accordance with instructions from the director. This standby trust ~~must~~shall meet the requirements specified in paragraph (A) of this rule, except that:
- (a) An originally signed duplicate of the trust agreement ~~must~~shall be submitted to the director with the surety bond; and
 - (b) Unless the standby trust fund is funded pursuant to ~~the requirements of~~ this rule, the following are not required:
 - (i) Payments into the trust fund as specified in paragraph (A) of this rule;
 - (ii) Updating of "Schedule A" of the trust agreement [see paragraph (A) of rule 3745-55-51 of the Administrative Code] to show current closure cost estimates;
 - (iii) Annual valuations as required by the trust agreement; and
 - (iv) Notices of nonpayment as required by the trust agreement.
- (4) The bond ~~must~~shall guarantee that the owner or operator will either:
- (a) Perform final closure in accordance with the closure plan and other requirements of the permit for the facility whenever required to do so; ~~or~~
 - (b) Provide alternate financial assurance as specified in this rule, and obtain the director's written approval of the assurance provided, within ninety days after receipt by both the owner or operator and the director of a notice of cancellation of the bond from the surety.
- (5) Under the terms of the bond, the surety will become liable on the bond obligation when the owner or operator fails to perform as guaranteed by the bond. Following a determination pursuant to Chapter 3734. of the Revised Code or Section ~~3083008~~ of RCRA that the owner or operator has failed to perform final closure in accordance with the approved closure plan and other permit requirements when required to do so, under the terms of the bond the

surety will perform final closure as guaranteed by the bond or will deposit the amount of the penal sum into the standby trust fund.

- (6) The penal sum of the bond ~~must~~shall be in an amount at least equal to the amount of the current closure cost estimate (see rule 3745-55-42 of the Administrative Code).
 - (7) Whenever the current closure cost estimate increases to an amount greater than the amount of the penal sum, the owner or operator, within sixty days after the increase, ~~must~~shall either cause the penal sum of the bond to be increased to an amount at least equal to the current closure cost estimate and submit evidence of such increase to the director, or shall obtain other financial assurance as specified in this rule. Whenever the current closure cost estimate decreases, the penal sum may be reduced to the amount of the current closure cost estimate following written approval by the director.
 - (8) Under the terms of the bond, the surety may cancel the bond by sending notice of cancellation by certified mail to the owner or operator and to the director. Cancellation may not occur, however, during the one hundred twenty days beginning on the date of receipt of the notice of cancellation by both the owner or operator and the director, as evidenced by return receipts.
 - (9) The owner or operator may cancel the bond if the director has given prior written consent. The director will provide such written consent when either:
 - (a) An owner or operator provides alternate financial assurance as specified in this rule; ~~or~~.
 - (b) The director releases the owner or operator from the requirements of this rule in accordance with paragraph (I) of this rule.
 - (10) The surety will not be liable for deficiencies in the performance of closure by the owner or operator after the director releases the owner or operator from the requirements of this rule in accordance with paragraph (I) of this rule.
- (D) Closure letter of credit.
- (1) An owner or operator may satisfy the requirements of this rule by obtaining an irrevocable standby letter of credit which conforms to the requirements of paragraphs (D) to (D)(10)(b) of this rule and by submitting the letter to the director by certified mail. An owner or operator of a new facility ~~must~~shall submit the letter of credit to the director by certified mail at least sixty days

before the date on which hazardous waste is first received for treatment, storage, or disposal. The letter of credit ~~must~~shall be effective before this initial receipt of hazardous waste. The issuing institution ~~must~~shall be an entity which has the authority to issue letters of credit and whose letter of credit operations are regulated and examined by a federal or state agency.

- (2) The wording of the letter of credit ~~must~~shall be identical to the wording specified in paragraph (D) of rule 3745-55-51 of the Administrative Code.
- (3) An owner or operator who uses a letter of credit to satisfy the requirements of this rule ~~must~~shall also establish a standby trust fund. Under the terms of the letter of credit, all amounts paid pursuant to a draft by the director will be deposited by the issuing institution directly into the standby trust fund in accordance with instruction from the director. This standby trust fund ~~must~~shall meet the requirements of the trust fund specified in paragraph (A) of this rule, except that:
 - (a) An originally signed duplicate of the trust agreement ~~must~~shall be submitted to the director with the letter of credit; and
 - (b) Unless the standby trust fund is funded pursuant to ~~the requirements of~~ this rule, the following are not required:
 - (i) Payments into the trust fund as specified in paragraph (A) of this rule;
 - (ii) Updating of "Schedule A" of the trust agreement [see paragraph (A) of rule 3745-55-51 of the Administrative Code] to show current closure estimates;
 - (iii) Annual valuations as required by the trust agreement; and
 - (iv) Notices of nonpayment as required by the trust agreement.
- (4) The letter of credit ~~must~~shall be accompanied by a letter from the owner or operator referring to the letter of credit by number, issuing institution, and date, and providing ~~the following information:~~ the U.S. EPA identification number, name, and address of the facility, and the amount of funds assured for closure of the facility by the letter of credit.

- (5) The letter of credit ~~must~~shall be irrevocable and issued for a period of at least one year. The letter of credit ~~must~~shall provide that the expiration date will be automatically extended for a period of at least one year unless, at least one hundred twenty days before the current expiration date, the issuing institution notifies both the owner or operator and the director by certified mail of a decision not to extend the expiration date. Under the terms of the letter of credit, the one hundred twenty days will begin on the date when both the owner or operator and the director have received the notice, as evidenced by the return receipts.
- (6) The letter of credit ~~must~~shall be issued in an amount at least equal to the current closure cost estimate, except as provided in paragraph (G) of this rule.
- (7) Whenever the current closure cost estimate increases to an amount greater than the amount of the credit, the owner or operator, within sixty days after the increase, ~~must~~shall either cause the amount of the credit to be increased so that ~~the amount of the credit~~ at least equals the current closure cost estimate and submit evidence of such increase to the director, or shall obtain other financial assurance as specified in this rule to cover the increase. Whenever the current closure cost estimate decreases, the amount of the letter of credit may be reduced to the amount of the current closure cost estimate following written approval by the director.
- (8) Following a determination pursuant to Chapter 3734. of the Revised Code or Section 3008 of the RCRA that the owner or operator has failed to perform final closure in accordance with the closure plan and other permit requirements when required to do so, the director may draw on the letter of credit.
- (9) If the owner or operator does not establish alternate financial assurance as specified in this rule and obtain written approval of such alternate assurance from the director within ninety days after the receipt by both the owner or operator and the director of a notice from the issuing institution that ~~the~~ issuing institution has decided not to extend the letter of credit beyond the current expiration date, the director will draw on the letter of credit. The director may delay the drawing if the issuing institution grants an extension of the term of the credit. During the last thirty days of any such extension the director will draw on the letter of credit if the owner or operator has failed to provide alternate financial assurance as specified in this rule and obtain written approval of such assurance from the director.
- (10) The director will return the letter of credit to the issuing institution for termination when either:

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

(E) Closure insurance.

- (1) An owner or operator may satisfy the requirements of this rule by obtaining closure insurance which conforms to the requirements of paragraphs (E) to (E)(10)(b) of this rule and submitting a certificate of such insurance to the director. An owner or operator of a new facility ~~must~~shall submit the certificate of insurance to the director at least sixty days before the date on which hazardous waste is first received for treatment, storage, or disposal. The insurance ~~must~~shall be effective before this initial receipt of hazardous waste. At a minimum, the insurer ~~must~~shall be licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer, in one or more states.
- (2) The wording of the certificate of insurance ~~must~~shall be identical to the wording specified in paragraph (E) of rule 3745-55-51 of the Administrative Code.
- (3) The closure insurance policy ~~must~~shall be issued for a face amount at least equal to the current closure cost estimate, except as provided in paragraph (G) of this rule. The term "face amount" means the total amount the insurer is obligated to pay under the policy. Actual payments by the insurer will not change the face amount, although the insurer's future liability will be lowered by the amount of the payments.
- (4) The closure insurance policy ~~must~~shall guarantee that funds will be available to close the facility whenever final closure occurs. The policy ~~must~~shall also guarantee that once final closure begins, the insurer will be responsible for paying out funds, up to an amount equal to the face amount of the policy, upon the direction of the director, to such party or parties as the director specifies.
- (5) After beginning partial or final closure, an owner or operator or any other person authorized to conduct closure may request reimbursement for closure expenditures by submitting itemized bills to the director. The owner or operator may request reimbursement for partial closure only if the remaining value of the policy is sufficient to cover the maximum costs of closing the facility over ~~its~~the remaining operating life of the facility. Within sixty days

after receiving bills for closure activities, the director will determine whether the partial or final closure expenditures are in accordance with the approved closure plan or otherwise justified, and if so, ~~he~~the director will instruct the insurer to make reimbursement in such amounts as the director specifies in writing. If the director has reason to believe that the maximum cost of closure over the remaining life of the facility will be significantly greater than the face amount of the policy, ~~he~~the director may withhold reimbursement of such amounts as ~~he~~the director deems prudent until ~~he~~the director determines, in accordance with paragraph (I) of this rule, that the owner or operator is no longer required to maintain financial assurance for final closure of the facility. If the director does not instruct the insurer to make such reimbursements, ~~he~~the director will provide the owner or operator with a detailed written statement of reasons.

- (6) The owner or operator ~~must~~shall maintain the policy in full force and effect until the director consents to termination of the policy by the owner or operator as specified in paragraph (E)(10) of this rule. Failure to pay the premium, without substitution of alternate financial assurance as specified in this rule, will constitute a significant violation, warranting such remedy as the director deems necessary. Such violation will be deemed to begin upon receipt by the director of a notice of future cancellation, termination, or failure to renew due to nonpayment of the premium, rather than upon the date of expiration.
- (7) Each policy ~~must~~shall contain a provision allowing assignment of the policy to a successor owner or operator. Such assignment may be conditional upon consent of the insurer, provided such consent is not unreasonably refused.
- (8) The policy ~~must~~shall provide that the insurer may not cancel, terminate, or fail to renew the policy except for failure to pay the premium. The automatic renewal of the policy ~~must~~shall, at a minimum, provide the insured with the option of renewal at the face amount of the expiring policy. If there is a failure to pay the premium, the insurer may elect to cancel, terminate, or fail to renew the policy by sending notice by certified mail to the owner or operator and the director. Cancellation, termination, or failure to renew may not occur, however, during the one hundred twenty days beginning with the date of receipt of the notice by both the director and the owner or operator, as evidenced by the return receipts. Cancellation, termination, or failure to renew may not occur and the policy will remain in full force and effect in the event that on or before the date of expiration:
 - (a) The director deems the facility abandoned; or
 - (b) The permit is terminated or revoked or a new permit is denied; or

- (c) Closure is ordered by the director or a U.S. district court or other court of competent jurisdiction; or
 - (d) The owner or operator is named as debtor in a voluntary or involuntary proceeding under Title 11 (bankruptcy), U.S. Code; or
 - (e) The premium due is paid.
- (9) Whenever the current closure cost estimate increases to an amount greater than the face amount of the policy, the owner or operator, within sixty days after the increase, ~~must~~shall either cause the face amount to be increased to an amount at least equal to the current closure cost estimate and submit evidence of such increase to the director, or shall obtain other financial assurance as specified in this rule to cover the increase. Whenever the current closure cost estimate decreases, the face amount may be reduced to the amount of the current closure cost estimate following written approval by the director.
- (10) The director will give written consent to the owner or operator that ~~he~~the owner or operator may terminate the insurance policy when either:
- (a) An owner or operator substitutes alternate financial assurance as specified in this rule; ~~or,~~
 - (b) The director releases the owner or operator from the requirements of this rule in accordance with paragraph (I) of this rule.
- (F) Financial test and corporate guarantee for closure.
- (1) An owner or operator may satisfy the requirements of this rule by demonstrating that ~~he~~the owner or operator passes a financial test as specified in paragraphs (F) to (F)(10)(c) of this rule. To pass this test, the owner or operator ~~must~~shall meet the criteria of either paragraph (F)(1)(a) or (F)(1)(b) of this rule.
- (a) The owner or operator ~~must~~shall have:
 - (i) Two of the following three ratios: a ratio of total liabilities to net worth less than 2.0; a ratio of the sum of net income plus depreciation, depletion, and amortization to total liabilities greater than 0.1; and a ratio of current assets to current liabilities greater than 1.5; and

- (ii) Net working capital and tangible net worth each at least six times the sum of the current closure and post-closure cost estimates and the current plugging and abandonment cost estimates; and
- (iii) Tangible net worth of at least ten million dollars: and
- (iv) Assets located in the United States amounting to at least ninety per cent of total assets or at least six times the sum of the current closure and post-closure cost estimates and the current plugging and abandonment cost estimates.

(b) The owner or operator ~~must~~shall have:

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

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

(3) To demonstrate that ~~he~~the owner or operator meets this test, the owner or operator ~~must~~shall submit the following items to the director:

- (a) A letter signed by the owner's or operator's chief financial officer and worded as specified in paragraph (F) of rule 3745-55-51 of the Administrative Code; and
 - (b) A copy of the independent certified public accountant's report on examination of the owner's or operator's financial statements for the latest completed fiscal year; and
 - (c) A special report from the owner's or operator's independent certified public accountant to the owner or operator stating that:
 - (i) ~~He~~The accountant has compared the data which the letter from the chief financial officer specifies as having been derived from the independently audited year-end financial statements for the latest fiscal year with the amounts in such financial statements; and
 - (ii) In connection with that procedure, no matters came to ~~his~~the accountant's attention which caused ~~him~~the accountant to believe that the specified data should be adjusted.
- (4) An owner or operator of a new facility ~~must~~shall submit the items specified in paragraph (F)(3) of this rule to the director at least sixty days before the date on which hazardous waste is first received for treatment, storage, or disposal.
- (5) After the initial submittal of items specified in paragraph (F)(3) of this rule, the owner or operator ~~must~~shall send updated information to the director within ninety days after the close of each succeeding fiscal year. This information ~~must~~shall consist of all three items specified in paragraph (F)(3) of this rule.
- (6) If the owner or operator no longer meets the requirements of paragraph (F)(1) of this rule, ~~he must~~the owner or operator shall send notice to the director of intent to establish alternate financial assurance as specified in this rule. The notice ~~must~~shall be sent by certified mail within ninety days after the end of the fiscal year for which the year-end financial data show that the owner or operator no longer meets the requirements. The owner or operator ~~must~~shall provide the alternate financial assurance within one hundred twenty days after the end of such fiscal year.
- (7) The director, based on a reasonable belief that the owner or operator may no longer meet the requirements of paragraph (F)(1) of this rule, may require reports of financial condition at any time from the owner or operator in addition to those specified in paragraph (F)(3) of this rule. If the director

finds, on the basis of such reports or other information, that the owner or operator no longer meets the requirements of paragraph (F)(1) of this rule, the owner or operator ~~must~~shall provide alternate financial assurance as specified in this rule within thirty days after notification of such a finding.

- (8) The director may disallow use of this test on the basis of qualifications in the opinion expressed by the independent certified public accountant in ~~his~~the accountant's report on examination of the owner's or operator's financial statements [see paragraph (F)(3)(b) of this rule]. An adverse opinion or a disclaimer of opinion will be cause for disallowance. The director will evaluate other qualifications on an individual basis. The owner or operator ~~must~~shall provide alternate financial assurance as specified in this rule within thirty days after notification of the disallowance.
- (9) The owner or operator is no longer required to submit the items specified in paragraph (F)(3) of this rule when either:
- (a) An owner or operator substitutes alternate financial assurance as specified in this rule; ~~or,~~
 - (b) The director releases the owner or operator from the requirements of this rule in accordance with paragraph (I) of this rule.
- (10) An owner or operator may meet the requirements of this rule by obtaining a written guarantee. The guarantor ~~must~~shall be the direct or higher-tier parent corporation of the owner or operator, a firm whose parent corporation is also the parent corporation of the owner or operator, or a firm with a "substantial business relationship" with the owner or operator. The guarantor ~~must~~shall meet the requirements for owners or operators in paragraphs (F)(1) to (F)(8) of this rule and ~~must~~shall comply with the terms of the guarantee. The wording of the guarantee ~~must~~shall be identical to the wording specified in paragraph (H) of rule 3745-55-51 of the Administrative Code. A certified copy of the guarantee ~~must~~shall accompany the items sent to the director as specified in paragraph (F)(3) of this rule. One of these items ~~must~~shall be the letter from the guarantor's chief financial officer. If the guarantor's parent corporation is also the parent corporation of the owner or operator, the letter ~~must~~shall describe the value received in consideration of the guarantee. If the guarantor is a firm with a "substantial business relationship" with the owner or operator, this letter ~~must~~shall describe this "substantial business relationship" with and the value received in consideration of the guarantee. The terms of the guarantee ~~must~~shall provide that:

- (a) If the owner or operator fails to perform final closure of a facility covered by the corporate guarantee in accordance with the closure plan and other permit requirements whenever required to do so, the guarantor will do so or establish a trust fund as specified in paragraph (A) of this rule in the name of the owner or operator.
 - (b) The corporate guarantee will remain in force unless the guarantor sends notice of cancellation by certified mail to the owner or operator and to the director. Cancellation may not occur, however, during the one hundred twenty days beginning on the date of receipt of the notice of cancellation by both the owner or operator and the director, as evidenced by the return receipts.
 - (c) If the owner or operator fails to provide alternate financial assurance as specified in this rule and obtain the written approval of such alternate assurance from the director within ninety days after receipt by both the owner or operator and the director of a notice of cancellation of the corporate guarantee from the guarantor, the guarantor will provide such alternative financial assurance in the name of the owner or operator.
- (G) Use of multiple financial mechanisms. An owner or operator may satisfy the requirements of this rule by establishing more than one financial mechanism per facility. These mechanisms are limited to trust funds, surety bonds guaranteeing payment into a trust fund, letters of credit, and insurance. The mechanisms ~~must~~shall be as specified in paragraphs (A), (B), (D), and (E) of this rule, except that it is the combination of mechanisms, rather than the single mechanism, which ~~must~~shall provide financial assurance for an amount at least equal to the current closure cost estimate. If an owner or operator uses a trust fund in combination with a surety bond or letter of credit, ~~he~~the owner or operator may use the trust fund as the standby trust fund for the other mechanisms. A single standby trust may be established for two or more mechanisms. The director may use any or all of the mechanisms to provide for closure of the facility.
- (H) Use of a financial mechanism for multiple facilities. An owner or operator may use a financial assurance mechanism specified in this rule to meet the requirements of this rule for more than one facility. Evidence of financial assurance submitted to the director ~~must~~shall include a list showing, for each facility, the U.S. EPA identification number, name, address, and the amount of funds for closure assured by the mechanism. If the facilities covered by the mechanism are in more than one U.S. EPA region, identical evidence of financial assurance ~~must~~shall be submitted to and maintained with the U.S. EPA regional administrators of all such regions or the directors of state programs in states authorized to administer such programs. The amount of funds available through the mechanism ~~must~~shall be no less than the

sum of funds that would be available if a separate mechanism had been established and maintained for each facility. In directing funds available through the mechanism for closure of any of the facilities covered by the mechanism, the director may direct only the amount of funds designated for that facility, unless the owner or operator agrees to the use of additional funds available under the mechanism.

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

[Comment 1: The notice releases the owner or operator only from requirements for financial assurance for closure of the facility; ~~the notice~~ the notice does not release ~~him~~the owner or operator from legal responsibility for meeting the closure standards.]

[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:

Five Year Review (FYR) Dates: 07/01/2015

Certification

Date

Promulgated Under: 119.03
Statutory Authority: 3734.12
Rule Amplifies: 3734.12
Prior Effective Dates: 01/07/1983, 12/28/1987, 02/23/1989, 12/30/1989,
11/11/1999, 03/13/2002, 12/07/2004, 02/16/2009

RSFA Attachment A

Rule 3745-55-96 is amended as follows:		
Location	Change	Reason
intro	remove "must" and add "shall"	a
	remove "must satisfy" and add "shall comply with"	a, b
(A)	remove "must" and add "shall"	a
(B)(1)	remove "owner/operator must" and add "owner or operator shall"	a, b
	remove "owner/operator" and add "owner or operator"	b
(B)(2)	remove "must" and add "shall"	a
(C)	remove "owner/operator must" and add "owner or operator shall"	a, b
	add ", both" before the colon	c
(C)(1)	remove the ending "; and" and add a period	d, e
(D)(1)	remove "must" and add "shall"	a
(D)(2)	remove "the requirements of this paragraph" and add "this requirement"	b, e
	add "both" before the colon	c
(D)(2)(a)	remove the ending "; and" and add a period	d, e
(D)(2)(b)	remove "cleaned-up" [hyphenated] and add "cleaned up" [not hyphenated]	d, f
(D)(3)	add "all of" before "the following"	c
	remove "must" and add "shall"	a
(D)(3)(a)	remove the ending semicolon and add a period	d
(D)(3)(b)	remove the ending semicolon and add a period	d
(D)(3)(c)	after "if available" remove ": if" and add ". If"	d, f
	remove "must" and add "shall"	a
	remove "they" and add "the data"	b
	remove the ending semicolon and add a period	d
(D)(3)(d)	remove the ending "; and" and add a period	d, e
(E)	after "repair" add a comma	d

RSFA Attachment A

Rule 3745-55-96 is amended as follows:		
Location	Change	Reason
(E)(1)	remove “owner/operator satisfies the requirements of” and add “owner or operator complies with”	a, b
	remove “must” and add “shall”	a
(E)(2)	remove “owner/operator” and add “owner or operator”	b
(E)(3)	remove “must” and add “shall”	a
(E)(4)	-remove “owner/operator must” and add “owner or operator shall” -remove “must satisfy the requirements of” and add “shall comply with”	a, b
	-remove “satisfies the requirements of” and add “complies with” -after “as long as” remove “the requirements of” and add “that component is in compliance with” -remove “the requirements of this paragraph” and add “this requirement” -after “components” add “requirements”	b
	remove “can” and add “may”	g
	[2 times] remove “must” and add “shall”	a
	after “paragraph (F) of this rule” remove “are satisfied”	e
(F)	[2 times] remove “owner/operator” and add “owner or operator”	b
	after “internal liner” remove the semicolon and add a comma	d
	[2 times] remove “must” and add “shall”	a
[Comment 2]	remove “national response center” [lower case] and add ‘ “National Response Center” ‘ [upper case in quotes]	h, i

- a The change of “must” to “shall” is an LSC requirement.
- b Word choice correction.
- c This amendment adds specificity to the provision.

RSFA Attachment A

Rule **3745-55-96** is amended as follows:

Location	Change	Reason
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- d Punctuation correction.
- e Unnecessary text is removed.
- f Typo correction.
- g This amendment makes the word choice consistent within this paragraph, and clarifies the difference between the ability to do something and the requirement to do it.
- h Word choice correction. We are making this term upper case in all occurrences in the hazardous waste rules, to better match the federal counterpart locations (see 40 CFR 264.196].
- i Punctuation correction. Quotation marks are required in order to maintain the upper case; LSC requirement.

This rule is submitted for 5-year review upon proposal. A new review date will be assigned.

3745-55-96

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

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

(A) Cessation of use; prevent flow or addition of wastes. The owner or operator ~~must~~shall immediately stop the flow of hazardous waste into the tank system or secondary containment system and inspect the system to determine the cause of the release.

(B) Removal of waste from tank system or secondary containment system.

(1) If the release was from the tank system, the ~~owner/operator must~~owner or operator shall, within twenty-four hours after detection of the leak, or, if the ~~owner/operator~~owner or operator demonstrates that it is not possible, at the earliest practicable time, remove as much of the waste as is necessary to prevent further release of hazardous waste to the environment and to allow inspection and repair of the tank system to be performed.

(2) If the material released was to a secondary containment system, all released materials ~~must~~shall be removed within twenty-four hours or in as timely a manner as is possible to prevent harm to human health and the environment.

(C) Containment of visible releases to the environment. The ~~owner/operator must~~owner or operator shall immediately conduct a visual inspection of the release and, based upon that inspection, both:

(1) Prevent further migration of the leak or spill to soils or surface water; ~~and~~.

(2) Remove, and properly dispose of, any visible contamination of the soil or surface water.

(D) Notifications, reports.

(1) Any release to the environment, except as provided in paragraph (D)(2) of this rule, ~~must~~shall be reported to the director within twenty-four hours after its detection. If the release has been reported pursuant to 40 CFR Part 302, that report will satisfy this requirement.

(2) A leak or spill of hazardous waste is exempted from ~~the requirements of this paragraph~~this requirement if it is both:

- (a) Less than or equal to a quantity of one pound;~~and,~~
 - (b) Immediately contained and ~~cleaned up~~cleaned up.
- (3) Within thirty days after detection of a release to the environment, a report containing all of the following information ~~must~~shall be submitted to the director:
- (a) Likely route of migration of the release;~~;~~
 - (b) Characteristics of the surrounding soil (soil composition, geology, hydrogeology, climate);~~;~~
 - (c) Results of any monitoring or sampling conducted in connection with the release (if available);~~if.~~ If sampling or monitoring data relating to the release are not available within thirty days, these data ~~must~~shall be submitted to the director as soon as ~~they~~the data become available;~~;~~
 - (d) Proximity to downgradient drinking water, surface water, and populated areas;~~and,~~
 - (e) Description of response actions taken or planned.
- (E) Provision of secondary containment, repair, or closure.
- (1) Unless the ~~owner/operator satisfies the requirements of~~owner or operator complies with paragraphs (E)(2) to (E)(4) of this rule, the tank system ~~must~~shall be closed in accordance with rule 3745-55-97 of the Administrative Code.
 - (2) If the cause of the release was a spill that has not damaged the integrity of the system, the ~~owner/operator~~owner or operator may return the system to service as soon as the released waste is removed and repairs, if necessary, are made.
 - (3) If the cause of the release was a leak from the primary tank system into the secondary containment system, the system ~~must~~shall be repaired prior to returning the tank system to service.
 - (4) If the source of the release was a leak to the environment from a component of a tank system without secondary containment, the ~~owner/operator must~~owner

or operator shall provide the component of the system from which the leak occurred with secondary containment that ~~satisfies the requirements of~~ complies with rule 3745-55-93 of the Administrative Code before it ~~can~~ may be returned to service, unless the source of the leak is an aboveground portion of a tank system that can be inspected visually. If the source is an aboveground component that can be inspected visually, the component ~~must~~ shall be repaired and may be returned to service without secondary containment as long as ~~the requirements of that component is in compliance with~~ paragraph (F) of this rule ~~are satisfied~~. If a component is replaced to comply with ~~the requirements of this paragraph~~ this requirement, that component ~~must satisfy the requirements of~~ shall comply with new tank systems or components requirements in rules 3745-55-92 and 3745-55-93 of the Administrative Code. Additionally, if a leak has occurred in any portion of a tank system component that is not readily accessible for visual inspection (e.g., the bottom of an inground or onground tank), the entire component ~~must~~ shall be provided with secondary containment in accordance with rule 3745-55-93 of the Administrative Code prior to being returned to use.

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

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

[Comment 2: See paragraph (C) of rule 3745-65-15 of the Administrative Code for the requirements necessary to remedy a failure. Also, 40 CFR Part 302 may require the owner or operator to notify the ~~national response center~~ "National Response Center" of a release of certain releases.]

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

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Certification

Date

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Statutory Authority: 3734.12
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RSFA Attachment A

Rule 3745-56-27 is amended as follows:		
Location	Change	Reason
title	after "repairs" remove the semicolon and add "and"	a, b
	at the end add "- surface impoundments"	c
(A)	remove "must" and add "shall"	d
(A)(1)	remove "inflow/outflow" and add "inflow or outflow"	b
(B)	remove "must be" and add "is"	b
	remove "must" and add "shall"	d
(C)	remove "must" and add "shall"	d
	remove "the requirements of"	e
(D)	remove "the requirements of"	e
(D)(1)	remove "must" and add "shall"	d
	near the end, remove comma and add a semicolon	a
(D)(2)(a)	remove "must" and add "shall"	d
(D)(2)(b)	remove "must" and add "shall"	d
(E)	-remove "the requirements of"	e
	-remove "the provisions of"	e
	remove "must" and add "shall"	d

- a Punctuation correction.
- b Word choice correction.
- c This amendment sets this rule apart from other hazardous waste rules that have the same title.
- d The change of "must" to "shall" is an LSC requirement.
- e Unnecessary text is removed.

3745-56-27

Emergency repairs; and contingency plans- surface impoundments.

- (A) A surface impoundment ~~must~~shall be removed from service in accordance with paragraph (B) of this rule when:
- (1) The level of liquids in the impoundment suddenly drops and the drop is not known to be caused by changes in the normal flows out of the impoundment through the ~~inflow/outflow~~inflow or outflow devices; or
 - (2) The dike leaks.
- (B) When a surface impoundment ~~must be~~is removed from service as required by paragraph (A) of this rule, the owner or operator ~~must~~shall:
- (1) Immediately shut off the flow or stop the addition of wastes into the impoundment; and
 - (2) Immediately contain any surface leakage which has occurred or is occurring; and
 - (3) Immediately stop the leak; and
 - (4) Take any other necessary steps to stop or prevent catastrophic failure; and
 - (5) If a leak cannot be stopped by any other means, empty the impoundment; and
 - (6) Notify the director of the problem in writing within seven days after detecting the problem.
- (C) As part of the contingency plan required in rules 3745-54-50 to 3745-54-56 of the Administrative Code, the owner or operator ~~must~~shall specify a procedure for complying with ~~the requirements of~~ paragraph (B) of this rule.
- (D) No surface impoundment that has been removed from service in accordance with ~~the requirements of~~ this rule may be restored to service unless the portion of the impoundment which was failing is repaired and the following steps are taken:

- (1) If the impoundment was removed from service as the result of actual or imminent dike failure, the dike's structural integrity ~~must~~shall be recertified in accordance with paragraph (C) of rule 3745-56-26 of the Administrative Code; or
 - (2) If the impoundment was removed from service as a result of a sudden drop in the liquid level, then:
 - (a) For an existing portion of the impoundment, a liner ~~must~~shall be installed in compliance with paragraph (A) of rule 3745-56-21 of the Administrative Code; and
 - (b) For any other portion of the impoundment, the repaired liner system ~~must~~shall be certified by a qualified engineer as meeting the design specifications approved in the permit.
 - (3) The owner or operator shall comply with paragraph (F) of rule 3745-56-21 of the Administrative Code and shall have received approval from the director to restore the surface impoundment to service.
- (E) A surface impoundment that has been removed from service in accordance with ~~the requirements of this rule~~ and that is not being repaired ~~must~~shall be closed in accordance with ~~the provisions of~~ rule 3745-56-28 of the Administrative Code.

Effective:

Five Year Review (FYR) Dates: Exempt

Certification

Date

Promulgated Under: 119.03
Statutory Authority: 3734.12
Rule Amplifies: 3734.12
Prior Effective Dates: 01/07/1983, 08/30/1984, 12/30/1989, 02/11/1992

RSFA Attachment A

Rule 3745-56-59 is amended as follows:		
Location	Change	Reason
title	after "F026" add a comma	a
	at the end add "- waste piles"	b
(A)	remove "must" and add "shall"	c
	add quotation marks around the defined term "enclosed"	d
	after "enclosed" remove the parentheses around the phrase beginning with "as" and ending with "Code" and add brackets in their place	a
	remove "the standards set out in"	e
(A)(1)	-remove "their" and add "the" -after "potential" add "for these wastes"	f
	remove the ending semicolon and add a period	a
(A)(2)	remove the ending semicolon and add a period	a
(A)(3)	remove the ending "; and" and add a period	a, e
(B)	after "F026" add a comma	a

- a Punctuation correction.
- b This amendment sets this rule apart from other hazardous waste rules that have the same title.
- c The change of "must" to "shall" is an LSC requirement.
- d This punctuation correction (adding quotation marks around defined terms) is made in all hazardous waste rules, as they are amended, at locations of defined terms that are designated as such in the text.
- e Unnecessary text is removed.
- f Word choice correction.

3745-56-59

Special requirements for hazardous wastes F020, F021, F022, F023, F026, and F027- waste piles.

- (A) Hazardous wastes F020, F021, F023, F026, and F027 ~~must~~shall not be placed in waste piles that are not "enclosed" ([as defined in paragraph (C) of rule 3745-56-50 of the Administrative Code]) unless the owner or operator operates the waste pile in accordance with a management plan for these wastes that is approved by the director pursuant to ~~the standards set out in~~ paragraphs (A) to (A)(4) of this rule, and in accordance with all other applicable requirements of Chapters 3745-54 to 3745-57 and 3745-205 of the Administrative Code. The factors to be considered are:
- (1) The volume, physical, and chemical characteristics of the wastes, including ~~their~~the potential for these wastes to migrate through soil or to volatilize or escape into the atmosphere; ~~;~~
 - (2) The attenuative properties of underlying and surrounding soils or other materials; ~~;~~
 - (3) The mobilizing properties of other materials co-disposed with these wastes; ~~and,~~
 - (4) The effectiveness of additional treatment, design, or monitoring techniques.
- (B) The director may determine that additional design, operating, and monitoring requirements are necessary for piles managing hazardous wastes F020, F021, F022, F023, F026, and F027 in order to reduce the possibility of migration of these wastes to ground water, surface water, or air so as to protect human health and the environment.

Effective:

Five Year Review (FYR) Dates: Exempt

Certification

Date

Promulgated Under: 119.03
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Rule Amplifies: 3734.12
Prior Effective Dates: 08/30/1984, 01/30/1986, 12/07/2004

RSFA Attachment A

Rule 3745-56-83 is amended as follows:		
Location	Change	Reason
title	remove "FO20, FO21, FO22, FO23, FO26, and FO27" and add "F020, F021, F022, F023, F026, and F027"	a
	at the end add "- land treatment"	b
(A)	remove "FO20, FO21, FO22, FO23, FO26, and FO27 must" and add "F020, F021, F022, F023, F026, and F027 shall"	a, c
	remove "the standards set out in"	d
(A)(1)	-remove "their" and add "the" -after "potential" add "for the wastes"	e
	remove the ending semicolon and add a period	f
(A)(2)	remove the ending semicolon and add a period	f
(A)(3)	remove the ending "; and" and add a period	d, f
(B)	remove "FO20, FO21, FO22, FO23, FO26, and FO27" and add "F020, F021, F022, F023, F026, and F027"	a

- a Typo corrections. These waste codes are shown as upper case letters "FO--" when they should be upper case "F" followed by a zero, then other digits.
- b This amendment sets this rule apart from other hazardous waste rules that have the same title.
- c The change of "must" to "shall" is an LSC requirement.
- d Unnecessary text is removed.
- e Word choice correction.
- f Punctuation correction.

3745-56-83

Special requirements for hazardous wastes ~~FO20, FO21, FO22, FO23, FO26, and FO27~~F020, F021, F022, F023, F026, and F027- land treatment.

- (A) Hazardous wastes ~~FO20, FO21, FO22, FO23, FO26, and FO27~~ F020, F021, F022, F023, F026, and F027 shall not be placed in a land treatment unit unless the owner or operator operates the facility in accordance with a management plan for these wastes that is approved by the director pursuant to ~~the standards set out in~~ paragraphs (A) to (A)(4) of this rule, and in accordance with all other applicable requirements of Chapters 3745-54 to 3745-57 and 3745-205 of the Administrative Code. The factors to be considered are:
- (1) The volume, physical, and chemical characteristics of the wastes, including ~~their~~the potential for the wastes to migrate through soil or to volatilize or escape into the atmosphere;
 - (2) The attenuative properties of underlying and surrounding soils or other materials;
 - (3) The mobilizing properties of other materials co-disposed with these wastes; ~~and,~~
 - (4) The effectiveness of additional treatment, design, or monitoring techniques.
- (B) The director may determine that additional design, operating, and monitoring requirements are necessary for land treatment facilities managing hazardous wastes ~~FO20, FO21, FO22, FO23, FO26, and FO27~~F020, F021, F022, F023, F026, and F027 in order to reduce the possibility of migration of these wastes to ground water, surface water, or air so as to protect human health and the environment.

Effective:

Five Year Review (FYR) Dates: Exempt

Certification

Date

Promulgated Under: 119.03
Statutory Authority: 3734.12
Rule Amplifies: 3734.12
Prior Effective Dates: 01/30/1986, 12/07/2004

RSFA Attachment A

Rule 3745-57-17 is amended as follows:		
Location	Change	Reason
title	after "F026" add a comma	a
	after "F027" add "- landfills"	b
(A)	after "F026" add a comma	a
	remove "must" and add "shall"	c
	remove "the standards set out in"	d
(A)(1)	remove the ending semicolon and add a period	e
(A)(2)	remove the ending semicolon and add a period	e
(A)(3)	remove the ending "; and" and add a period	d, e
(B)	after "F026" add a comma	a

- a Punctuation correction. This change is made so that this common phrase is the same in all its occurrences in the hazardous waste rules.
- b This amendment sets this rule apart from other hazardous waste rules that have the same title.
- c The change of "must" to "shall" is an LSC requirement.
- d Unnecessary text is removed.
- e Punctuation correction.

3745-57-17

Special requirements for hazardous wastes F020, F021, F022, F023, F026, and F027- landfills.

- (A) Hazardous wastes F020, F021, F022, F023, F026, and F027 ~~must~~shall not be placed in a landfill unless the owner or operator operates the landfill in accordance with a management plan for these wastes that is approved by the director pursuant to ~~the standards set out in~~ paragraphs (A) to (A)(4) of this rule, and in accordance with all other applicable requirements of Chapters 3745-54 to 3745-57 and 3745-205 of the Administrative Code. The factors to be considered are:
- (1) The volume, physical, and chemical characteristics of the wastes, including their potential to migrate through soil or to volatilize or escape into the atmosphere;
 - (2) The attenuative properties of underlying and surrounding soils or other materials;
 - (3) The mobilizing properties of other materials co-disposed with these wastes; ~~and,~~
 - (4) The effectiveness of additional treatment, design, or monitoring requirements.
- (B) The director may determine that additional design, operating, and monitoring requirements are necessary for landfills managing hazardous wastes F020, F021, F022, F023, F026, and F027 in order to reduce the possibility of migration of these wastes to ground water, surface water, or air so as to protect human health and the environment.

Effective:

Five Year Review (FYR) Dates: Exempt

Certification

Date

Promulgated Under: 119.03
Statutory Authority: 3734.12
Rule Amplifies: 3734.12
Prior Effective Dates: 01/30/1986, 12/07/2004

RSFA Attachment A

Rule 3745-57-90 is amended as follows:		
Location	Change	Reason
title	after "Applicability" add "- miscellaneous units"	a
text	remove "The requirements of rules" and add "Rules"	b

- a This amendment sets this rule apart from other hazardous waste rules that have the same title.
- b Unnecessary wording is removed. This amendment makes the phrase consistent with other locations of the similar phrase.

3745-57-90

Applicability- miscellaneous units.

~~The requirements of rules~~ Rules 3745-57-90 to 3745-57-93 of the Administrative Code apply to owners or operators of facilities that treat, store, or dispose of hazardous waste in miscellaneous units, except as rule 3745-54-01 of the Administrative Code provides otherwise.

Effective:

Five Year Review (FYR) Dates: Exempt

Certification

Date

Promulgated Under: 119.03
Statutory Authority: 3734.12
Rule Amplifies: 3734.12
Prior Effective Dates: 12/30/1989

RSFA Attachment A

Rule 3745-65-01 is amended as follows:		
Location	Change	Reason
(B)	remove "The standards in"	a
(B)(1)	remove "their" and add "the"	b
(B)(2)	remove "their" and add "the"	b
(C)	remove "The requirements of"	a
(C)(1)	remove the ending semicolon and add a period	c
(C)(2)	remove the ending semicolon and add a period	c
(C)(3)	remove the ending semicolon and add a period	c
(C)(3) [Comment]	remove "the requirements of"	a
(C)(4)	remove the ending semicolon and add a period	c
(C)(5)	remove the ending semicolon and add a period	c
(C)(6)	remove the ending semicolon and add a period	c
(C)(7)	remove "and/or" and add "or"	b
	remove the ending semicolon and add a period	c
(C)(8)	remove the ending semicolon and add a period	c *
(C)(9)	add quotation marks around the defined term "totally enclosed treatment facility," [the existing comma is inside the quotation mark]	d
	remove the ending semicolon and add a period	c
(C)(10)	add quotation marks around the defined terms: -"elementary neutralization unit" -"wastewater treatment unit"	d
	remove "(D001) wastes (other" and add "waste (D001) [other"	b, c, e
	after "D001 high" add "total organic carbon"	f *
	add parentheses around the existing acronym "TOC"	c
	remove "wastes)" and add "waste],"	b
	remove "(D003) waste, in order" and add "waste (D003),"	e
	remove "must" and add "shall"	g
	remove "the requirements in"	a
remove the ending semicolon and add a period	c	

RSFA Attachment A

Rule 3745-65-01 is amended as follows:		
Location	Change	Reason
(C)(11)	add text “Immediate or emergency response situations.”	h
(C)(11)(a)(i)	remove the ending semicolon and add a period	c
(C)(11)(a)(ii)	remove the ending semicolon and add a period	c
(C)(11)(a)(iii)	remove the ending semicolon and add a period	c
(C)(11)(a)(iv)	add quotation marks around the defined term “explosives or munitions emergency response specialist”	d
(C)(11)(b)	remove “must” and add “shall”	g
(C)(11)(d)	remove “his”	a
	remove “must” and add “shall”	g
(C)(12)	remove “meeting the requirements of” and add “that comply with”	b, i
	remove the ending semicolon and add a period	c
(C)(13)	add quotation marks around the defined term “container”	d
(C)(14)	add quotation marks around the defined terms: -“Universal waste handlers” -“universal waste transporters”	d
(C)(14)(a)	remove the ending semicolon and add a period	c
(C)(14)(b)	remove the ending semicolon and add a period	c
(C)(14)(c)	remove the ending “; and” and add a period	a, c
(D)	remove “must” and add “shall”	g
(D)(3)	remove “meet the requirements of” and add “comply with”	a, b
(E)	remove “The requirements of”	a
(F)	in 1 st sentence, remove “the requirements of”	a

- a Unnecessary text is removed.
- b Word choice correction.
- c Punctuation correction.

RSFA Attachment A

Rule **3745-65-01** is amended as follows:

Location	Change	Reason
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- d This punctuation correction (adding quotation marks around defined terms) is made in all hazardous waste rules, as they are amended, at locations of defined terms that are designated as such in the text.
- e The parenthetical waste code (e.g., D001) is relocated in the sentence so that the term being discussed is not interrupted by a parenthetical insertion. This amendment ensures that a search of the hazardous waste rules for this type of waste will include this location in the search results.
- f Text is added to define the acronym upon its first use. LSC requirement.
- g The change of “must” to “shall” is an LSC requirement.
- h This amendment is designed to eliminate the occasion of a paragraph designation that does not contain text.
- i Grammar (verb form) correction.
- * This amendment is made, or changed, in response to a comment on the Interested Parties draft rule.

This rule is submitted for 5-year review upon proposal. A new review date will be assigned.

3745-65-01 **Purpose, scope, and applicability of Chapters 3745-65 to 3745-69 and 3745-256 of the Administrative Code.**

- (A) The purpose of Chapters 3745-65 to 3745-69 and 3745-256 of the Administrative Code is to establish minimum standards which define the acceptable management of hazardous waste during the period of a permit by rule pursuant to paragraph (C) of rule 3745-50-40 of the Administrative Code until certification of final closure and Ohio EPA acceptance through written acknowledgment of the change in facility status, or, if the facility is subject to post-closure requirements, until post-closure responsibilities are fulfilled.
- (B) ~~The standards in~~ Chapters 3745-65 to 3745-69 and 3745-256 and 3745-57-70 to 3745-57-75 of the Administrative Code apply to:
- (1) Owners and operators of facilities that treat, store, or dispose of hazardous waste and are subject to the permit requirements under rules 3745-50-40 to 3745-50-235 of the Administrative Code, until final administrative disposition of ~~their~~the permit application is made pursuant to the "Part B" permit requirements. These standards apply to all treatment, storage, and disposal of hazardous waste at these facilities; and
 - (2) Owners and operators of facilities who have fully complied with the requirements of paragraph (C) of rule 3745-50-40 of the Administrative Code until final administrative disposition of ~~their~~the permit application is made pursuant to the "Part B" permit requirements. These standards apply to all treatment, storage and disposal of hazardous waste at these facilities.
- (C) ~~The requirements of~~ Chapters 3745-65 to 3745-69 and 3745-256 of the Administrative Code do not apply to:
- (1) Reserved;
 - (2) Reserved;
 - (3) The owner or operator of a POTW which treats, stores, or disposes of hazardous waste;

[Comment: The owner or operator of a facility in paragraphs (C)(1) to (C)(3) of this rule is subject to ~~the requirements~~ of Chapters 3745-54 to 3745-57 and 3745-205 of the Administrative Code to the extent they are included in a permit by rule granted to such a person under rule 3745-50-46 of the Administrative Code.]

- (4) Reserved;.
- (5) Reserved;.
- (6) The owner or operator of a facility that manages 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 that the requirements 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);.
- (7) A generator accumulating ~~and/or~~ conducting treatment of hazardous waste that is generated on-site in compliance with rule 3745-52-34 of the Administrative Code, except to the extent the requirements are included in rule 3745-52-34 of the Administrative Code;.
- (8) A farmer disposing of waste pesticides from his own use in compliance with rule 3745-52-70 of the Administrative Code;.
- (9) The owner or operator of a "totally enclosed treatment facility," as defined in rule 3745-50-10 of the Administrative Code;.
- (10) 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) wastes (other waste (D001) [other~~ than the D001 high total organic carbon (TOC) subcategory defined in rule 3745-270-40 of the Administrative Code in the table of treatment standards for hazardous ~~wastes) waste]~~, or reactive ~~(D003) waste, in order~~ waste (D003), to remove the characteristic before land disposal, the owner or operator ~~must~~ shall comply with ~~the requirements in~~ paragraph (B) of rule 3745-65-17 of the Administrative Code;.
- (11) Immediate or emergency response situations.

- (a) Except as provided in paragraph (C)(11)(b) of this rule, a person engaged in treatment or containment activities during the 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 a hazardous waste;
 - (iii) A discharge of a material which, when discharged, becomes a hazardous waste;
 - (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 3745-65 to 3745-69 and 3745-256 of the Administrative Code ~~must~~shall comply with rules 3745-65-30 to 3745-65-37 and 3745-65-50 to 3745-65-56 of the Administrative Code.
- (c) Any person who is covered by paragraph (C)(11)(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 3745-50, 3745-65 to 3745-69, and 3745-256 of the Administrative Code 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 ~~his~~ 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 a U.S. EPA identification number and without the preparation of a manifest. In the case of emergency responses involving military munitions, the responding explosives or munitions emergency response specialist's organizational unit ~~must~~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 its disposition.

- (12) A transporter storing manifested shipments of hazardous waste in containers ~~meeting the requirements of~~ that comply with rule 3745-52-30 of the Administrative Code at a transfer facility for a period of ten days or less;
 - (13) The addition of sorbent material to waste in a "container" (as defined in rule 3745-50-10 of the Administrative Code) or the addition of waste to the sorbent material in a container provided that these actions occur at the time waste is first placed in the containers, and rules 3745-66-71 and 3745-66-72 and paragraph (B) of rule 3745-65-17 of the Administrative Code are complied with.
 - (14) "Universal waste handlers" and "universal waste transporters" (as defined in rule 3745-50-10 of the Administrative Code) handling the wastes listed in paragraphs (C)(14)(a) to (C)(14)(d) of this rule. These handlers and transporters are subject to regulation under Chapter 3745-273 of the Administrative Code when handling the following 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; ~~and~~
 - (d) Lamps as described in rule 3745-273-05 of the Administrative Code.
- (D) Hazardous waste having EPA hazardous waste number F020, F021, F022, F023, F026, or F027 ~~must~~ shall not be managed at facilities subject to regulation under Chapters 3745-65 to 3745-69 and 3745-256 of the Administrative Code unless:
- (1) The wastewater treatment sludge is generated in a surface impoundment as part of the plant's wastewater treatment system;
 - (2) The waste is stored in tanks or containers;
 - (3) The waste is stored or treated in waste piles that ~~meet the requirements of~~ comply with paragraph (C) of rule 3745-56-50 of the Administrative Code as well as all other applicable requirements of rules 3745-67-50 to 3745-67-60 of the Administrative Code;

- (4) The waste is burned in incinerators that are certified pursuant to the standards in rule 3745-68-52 of the Administrative Code; or
 - (5) The waste is burned in facilities that thermally treat the waste in a device other than an incinerator and that are certified pursuant to the standards and procedures in rule 3745-68-83 of the Administrative Code.
- (E) ~~The requirements of~~ Chapters 3745-65 to 3745-69 and 3745-256 of the Administrative Code apply to the owners or operators of all facilities which treat, store, or dispose of hazardous waste referred to in Chapter 3745-270 of the Administrative Code, and the standards in Chapter 3745-270 of the Administrative Code are considered material conditions or requirements in Chapters 3745-65 to 3745-69 and 3745-256 of the Administrative Code.
- (F) Rule 3745-266-205 of the Administrative Code identifies when ~~the requirements of~~ Chapters 3745-65 to 3745-69 and 3745-256 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.

Effective:

Five Year Review (FYR) Dates: 07/01/2015

Certification

Date

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RSFA Attachment A

Rule 3745-65-13 is amended as follows:		
Location	Change	Reason
(A)	add text "The analysis."	a
(A)(1)	remove "he must" and add "the owner or operator shall"	b, c
	[2 times] remove "must" and add "shall"	c
	remove "the requirements of"	d
(A)(3)	[2 times] remove "must" and add "shall"	c
	remove "it" and add "the analysis"	b
	add "both" before the colon	e
(A)(3)(a)	remove the ending "; and" and add a period	d, f
(A)(4)	remove "must" and add "shall"	c
	remove "it" and add "the waste"	b
(B)	[2 times] remove "must" and add "shall"	c
	remove "He must" and add "The owner or operator shall"	b, c
(B)(3)(b)	add quotation marks around the defined term "equivalent method"	g
	remove the comma after "method"	f
	remove "such term is"	d
(B)(7)(c)(ii)	remove the ending semicolon and add a colon	f
(C)	[2 times] remove "must" and add "shall"	c
	remove "it" and add "the waste"	b
ending [Comment]	remove the indented comment and add the same comment not indented	h

- a This amendment is designed to eliminate the occasion of a paragraph designation that contains no text.
- b Word choice correction.
- c The change of "must" to "shall" is an LSC requirement.

RSFA Attachment A

Rule 3745-65-13 is amended as follows:		
Location	Change	Reason

- d Unnecessary text is removed.
- e This amendment adds specificity to the provision.
- f Punctuation correction.
- g This punctuation correction (adding quotation marks around defined terms) is made in all hazardous waste rules, as they are amended, at locations of defined terms that are designated as such in the text.
- h This amendment corrects the format/structure of the rule at this location.

This rule is submitted for 5-year review upon proposal. A new review date will be assigned.

3745-65-13

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 3745-66-13 of the Administrative Code, ~~he must~~the owner or operator shall obtain a detailed chemical and physical analysis of a representative sample of the wastes. At a minimum, this analysis ~~must~~shall contain all the information which ~~must~~must be known to treat, store, or dispose of the waste in accordance with ~~the requirements of~~ Chapters 3745-65 to 3745-69, 3745-256, 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 waste generated from similar processes.

[Comment: For example, the facility's record 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 ~~must~~shall be repeated as necessary to ensure that ~~it~~the analysis is accurate and up to date. At a minimum, the analysis ~~must~~shall be repeated both:
 - (a) When the owner or operator is notified, or has reason to believe, that the process or operation generating the hazardous waste or nonhazardous wastes, if applicable, under paragraph (D) of rule 3745-66-13 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 ~~must~~shall inspect and, if necessary, analyze each hazardous waste movement received at the facility to determine whether ~~it~~the waste matches the identity of the waste specified on the accompanying manifest or shipping paper.
- (B) The owner or operator ~~must~~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. ~~He must~~The owner or operator shall keep this plan at the facility. At a minimum, the plan ~~must~~shall specify:
- (1) The parameters for which each hazardous waste, or nonhazardous wastes if applicable under paragraph (D) of rule 3745-66-13 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; or
 - (b) An "equivalent method;" as ~~such term is~~ 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; and
 - (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 3745-66-100, 3745-67-25, 3745-67-52, 3745-67-73, 3745-68-14, 3745-68-41, 3745-68-75, 3745-69-02, 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 schedule for:
- (a) The sampling of impoundment contents;
 - (b) The analysis of test data; and
 - (c) The annual removal of residues which are not delisted by U.S. EPA pursuant to 40 CFR 260.22 or which exhibit a characteristic of hazardous waste and either:
 - (i) Do not meet applicable treatment standards in rules 3745-270-40 to 3745-270-49 of the Administrative Code; or
 - (ii) Where no treatment standards have been established:
 - (a) Such residues are prohibited from land disposal under section 3004(d) of RCRA; or
 - (b) Reserved.
- (8) Reserved.
- (C) For off-site facilities, the waste analysis plan required in paragraph (B) of this rule ~~must~~shall also 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 waste~~ matches the identity of the waste designated on the accompanying manifest or shipping paper. At a minimum, the plan ~~must~~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.

~~[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:

Five Year Review (FYR) Dates: 07/01/2015

Certification

Date

Promulgated Under: 119.03
Statutory Authority: 3734.12
Rule Amplifies: 3734.12
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12/30/1989, 02/11/1992, 09/02/1997, 12/07/2000,
12/07/2004, 02/16/2009

RSFA Attachment A

Rule 3745-65-15 is amended as follows:		
Location	Change	Reason
(A)	remove "must" and add "shall"	a
	add "either" before the colon	b
(A)(1)	remove the ending "; or" and add a period	c, d
(A)(2)	remove "must" and add "shall"	a
(B)	add text "Inspection schedule."	e
(B)(1)	remove "must" and add "shall"	a
(B)(2)	remove "must" and add "shall"	a
(B)(3)	remove "must" and add "shall"	a
(B)(4)	[2 times] remove "must" and add "shall"	a
	remove "set forth"	d
(C)	[3 times] remove "must" and add "shall"	a
(D)	[2 times] remove "must" and add "shall"	a
	remove "He must" and add "The owner or operator shall"	a, f
	remove "from" and add "after"	f

- a The change of "must" to "shall" is an LSC requirement.
- b This amendment adds specificity to the provision.
- c Punctuation correction.
- d Unnecessary text is removed.
- e This amendment eliminates the occasion of a paragraph designation that contains no text.
- f Word choice correction.

This rule is submitted for 5-year review upon proposal. A new review date will be assigned.

3745-65-15

General inspection requirements.

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

(1) Release of hazardous waste constituents to the environment;~~or,~~

(2) A threat to human health. The owner or operator ~~must~~shall conduct these inspections often enough to identify problems in time to correct them before they harm human health or the environment.

(B) Inspection schedule.

(1) The owner or operator ~~must~~shall develop and follow a written schedule for inspecting all 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 ~~must~~shall keep this schedule at the facility.

(3) The schedule ~~must~~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, etc.).

(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 or malfunction or any operator error goes undetected between inspections. Areas subject to spills, such as loading and unloading areas, ~~must~~shall be inspected daily when in use. At a minimum, the inspection schedule ~~must~~shall include the items and frequencies ~~set forth~~ in rules 3745-66-74, 3745-66-93, 3745-66-95, 3745-67-26, 3745-67-60, 3745-67-78, 3745-68-04, 3745-68-47, 3745-68-77, and 3745-69-03 of the Administrative Code, where applicable.

(5) Reserved.

- (C) The owner or operator ~~must~~shall remedy any deterioration or malfunction of equipment or structures which the inspection reveals. Such remedies ~~must~~shall be 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 ~~must~~shall be taken immediately.
- (D) The owner or operator ~~must~~shall record inspections in an inspection log or summary. ~~He must~~The owner or operator shall keep these records for at least three years ~~from~~after the date of inspection. At a minimum, these records ~~must~~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:

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Certification

Date

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Prior Effective Dates: 04/15/1981, 01/07/1983, 12/08/1988, 04/01/1990,
10/20/1998, 03/13/2002, 12/07/2004, 09/05/2010

RSFA Attachment A

Rule 3745-65-37 is amended as follows:		
Location	Change	Reason
(A)	remove “must” and add “shall”	a
	remove “these” and add “the following”	b
(A)(1)	remove “and Ohio EPA”	b
	remove the ending semicolon and add a period	c
(A)(2)	[2 times] remove “agreements” and add “arrangements”	d
	-after the 2 nd “department” remove the comma -remove the ending semicolon and add a period	c
(A)(3)	remove “Agreements” and add “Arrangements”	d
	-remove “the Ohio EPA” and add “local” -remove “team” and add “teams”	b
	remove the ending “; and” and add a period	c, e
(B)	after “into such” remove “agreements or”	d
	remove “must” and add “shall”	a

- a The change of “must” to “shall” is an LSC requirement.
- b Word choice correction.
- c Punctuation correction.
- d Word choice correction. This amendment makes the use of the words “agreements” and “arrangements” more consistent throughout the hazardous waste management rules.
- e Unnecessary text is removed.

3745-65-37

Arrangements with local authorities.

- (A) The owner or operator ~~must~~shall attempt to make the following 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 ~~and Ohio EPA~~ 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 roads inside the facility, and possible evacuation routes;.
 - (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;.
 - (3) ~~Agreements~~Arrangements with ~~the Ohio EPA~~local emergency response ~~team~~teams, 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 of hazardous waste or hazardous waste constituents at the facility.
- (B) Where local authorities decline to enter into such ~~agreements~~or arrangements, the owner or operator ~~must~~shall document such refusal in the operating record.

Effective:

Five Year Review (FYR) Dates: Exempt

Certification

Date

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

RSFA Attachment A

Rule 3745-65-52 is amended as follows:		
Location	Change	Reason
(A)	[2 times] remove "must" and add "shall"	a
(B)	remove "he" and add "the owner or operator"	b
	remove "the requirements of"	c
(C)	remove "must" and add "shall"	a
	remove "agreed to by" and add "with"	b, d
	remove "Ohio EPA" and add "state"	e
(D)	after "The" add "contingency"	f
	[3 times] remove "must" and add "shall"	a
	after "names," add "home" before "addresses"	g
	remove "phone numbers (office and home)" and add "home or cellular telephone numbers"	f, h
	after "listed, one" remove "must" and add "person shall"	a, b
(E)	[3 times] remove "must" and add "shall"	a
(F)	[2 times] remove "must" and add "shall"	a
	after "This" add "evacuation"	f
	remove "signal(s)" and add "signals"	b

- a The change of "must" to "shall" is an LSC requirement.
- b Word choice correction.
- c Unnecessary text is removed.
- d This amendment makes the phrase consistent with other locations of the similar phrase.
- e The response teams need not include Ohio EPA, as appropriate, so the language is changed to allow that flexibility. The amended language more closely mirrors the federal counterpart provision (40 CFR 265.52).

RSFA Attachment A

Rule **3745-65-52** is amended as follows:

Location	Change	Reason
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- f This amendment adds specificity to the phrase, since several “plans” are discussed in this rule.
- g This amendment adds specificity to the provision.
- h Specific wording is added to clarify the requirement. The location of the telephone being referenced is being removed to allow flexibility, since now most people and businesses use more options than office telephones.

3745-65-52

Content of contingency plan.

- (A) The contingency plan ~~must~~shall describe the actions facility personnel ~~must~~shall take to comply with rules 3745-65-51 and 3745-65-56 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, ~~he~~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 3745-65 to 3745-69 and 3745-256 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 provisions in an integrated contingency plan, the changes do not trigger the need for a hazardous waste permit modification.
- (C) The contingency plan ~~must~~shall describe arrangements ~~agreed to by~~with local police departments, fire departments, hospitals, contractors, and ~~Ohio EPA~~state and local emergency response teams to coordinate emergency services, pursuant to rule 3745-65-37 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 3745-65-55 of the Administrative Code), and this list ~~must~~shall be kept up to date. Where more than one person is listed, one ~~must~~person shall be named as primary emergency coordinator and others ~~must~~shall be listed in the order in which they will assume responsibility as alternates.
- (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:

Five Year Review (FYR) Dates: Exempt

Certification

Date

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Rule Amplifies: 3734.12
Prior Effective Dates: 04/15/1981, 01/07/1983, 05/29/1985 (Emer.),
08/29/1985, 12/07/2000, 12/07/2004, 09/05/2010,
03/17/2012

RSFA Attachment A

Rule 3745-65-53 is amended as follows:		
Location	Change	Reason
Intro	add "both" before the colon	a
(A)	Remove the ending "; and" and add a period	b
(B)	-remove "Ohio EPA and" -after "response teams" [before the existing comma] add "described in the contingency plan pursuant to paragraph (C) of rule 3745-65-52 of the Administrative Code"	c
ending [Comment] (new)	add the following bracketed comment after (B): [Comment: The contingency plan need not be submitted to Ohio EPA.]	c

- a This amendment adds specificity to the text.
- b Punctuation correction, and unnecessary language is remove.
- c This language is intended to clarify that the contingency plan document need not be submitted to Ohio EPA.

The addition of language and a comment to this rule make it different enough from its federal counterpart provision (40 CFR 265.53) to make it subject to 5-year review. However, these changes do not make the Ohio rule more stringent, or less stringent, than its federal counterpart. This rule is submitted for 5-year review upon proposal. A new review date will be assigned.

3745-65-53

Copies of contingency plan.

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

(A) Maintained at the facility; ~~and~~.

(B) Submitted to all local police departments, fire departments, hospitals, and ~~Ohio EPA~~ ~~and~~ local emergency response teams described in the contingency plan pursuant to paragraph (C) of rule 3745-65-52 of the Administrative Code, that may be requested to provide emergency services.

[Comment: The contingency plan need not be submitted to Ohio EPA.]

Effective:

Five Year Review (FYR) Dates: 07/01/2015

Certification

Date

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

RSFA Attachment A

Rule 3745-65-56 is amended as follows:		
Location	Change	Reason
(A)	-after the 1 st “coordinator” add a comma -remove the parentheses around the parenthetical phrase	a
	remove “his” and add “the emergency coordinator’s”	b
	remove “must” and add “shall”	c
	add a comma before the new “shall”	a
	add “do both of the following” before the colon	d
(A)(1)	remove the ending “; and” and add a period	a, e
(A)(2)	remove “emergency response team by use of its twenty-four hour toll free telephone number- 1-800-282-9378” and add “Emergency Response Unit” at 800/282-9378, and appropriate local authorities with designated response roles”	f, g
(B)	remove “must” and add “shall”	b, c
(C)	remove “set forth”	e
	[3 times] remove “must” and add “shall”	b, c
(D)	-after “health” remove the comma -after “environment” remove the comma	a
	remove “, he must report his findings as follows”	e
(D)(1)	remove “his” and add “the emergency coordinator’s”	b
	remove “he must” and add “the emergency coordinator shall”	b, c
	after “authorities” remove “. The emergency coordinator must” and add “, and shall”	b, c, h
	remove the ending “; and “ and add a period	a, e
(D)(2)	remove “must” and add “shall”	c
	remove “emergency response team by use of its twenty-four hour toll free telephone number- 1-800-282-9378 and add ‘ “Emergency Response Unit” at 800/282-9378 ‘	f, g
	add “all of the following” before the colon	d

RSFA Attachment A

Rule 3745-65-56 is amended as follows:		
Location	Change	Reason
(D)(2)(a)	remove “reporter;” and add “the emergency coordinator who is making the notification.”	a, b
(D)(2)(b)	remove the ending semicolon and add a period	a
(D)(2)(c)	remove the ending semicolon and add a period	a
(D)(2)(d)	remove “material(s)” and add “material”	b
	remove the ending semicolon and add a period	a
(D)(2)(e)	remove the ending “; and“ and add a period	a, e
(D)(2)(f)	remove both commas from the sentence	a
(E)	[2 times] remove “must” and add “shall”	b, c
(F)	remove “must” and add “shall”	b, c
(G)	remove “must” and add “shall”	b, c
(G)[Comment]	remove “must” and add “shall”	b, c
(H)	remove “must” and add “shall”	b, c
	after “that” remove the comma	a
	remove “area(s)” and add “areas”	b
(H)(1)	remove the ending “; and “ and add a period	a, e
(I)	[3 times] remove “must” and add “shall”	b, c
	-remove “implementing” -after “contingency plan” add “to be implemented”	h
	add “all of the following” before the colon	d
(I)(1)	remove the ending semicolon and add a period	a
(I)(2)	remove the ending semicolon and add a period	a
(I)(3)	remove the ending semicolon and add a period	a
(I)(4)	remove “material(s)” and add “material”	a
	remove the ending semicolon and add a period	a
(I)(5)	remove the ending semicolon and add a period	a
(I)(6)	remove the ending “; and “ and add a period	a, e

RSFA Attachment A

Rule 3745-65-56 is amended as follows:		
Location	Change	Reason

- a Punctuation correction.
- b Word choice correction.
- c The change of “must” to “shall” is an LSC requirement.
- d This amendment adds specificity to the text.
- e Unnecessary text is removed.
- f This amendment corrects the names of the parties to be contacted (update).
- g This amendment corrects the punctuation in the telephone number. LSC requirement.
- h This amendment improves the grammar of the sentence.

This rule is submitted for 5-year review upon proposal. A new review date will be assigned.

3745-65-56

Emergency procedures.

- (A) Whenever there is an emergency situation consisting of imminent or actual harm or hazard to human health or the environment, the emergency coordinator, ~~(or his~~the emergency coordinator's designee when the emergency coordinator is on call) ~~must,~~ shall immediately do both of the following:
- (1) Activate internal facility alarms or communication systems, where applicable, to notify all facility personnel; ~~and,~~
 - (2) Notify the Ohio EPA ~~emergency response team by use of its twenty four hour toll free telephone number 1-800-282-9378~~ "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 ~~must~~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 ~~set forth~~ in paragraphs (A) and (B) of this rule, the emergency coordinator ~~must~~shall assess possible hazards to human health or the environment that may result from the release, fire, or explosion. This assessment ~~must~~shall consider both direct and indirect effects of the release, fire, or explosion, and ~~must~~shall include, but not be limited to, the effects of any toxic, irritating, or asphyxiating gases that are generated, or the effects of any hazardous surface water run-offs 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; ~~he must report his findings as follows~~:
- (1) If ~~his~~the emergency coordinator's assessment indicates that evacuation of local areas may be advisable, ~~he must~~the emergency coordinator shall immediately notify appropriate local authorities. ~~The emergency coordinator must, and shall~~ be available to help appropriate officials decide whether local areas should be evacuated; ~~and,~~

- (2) The emergency coordinator ~~must~~shall immediately notify the Ohio EPA ~~emergency response team by use of its twenty-four hour toll-free telephone number 1-800-282-9378~~ "Emergency Response Unit" at 800/282-9378 and provide all of the following information:
- (a) Name and telephone number of ~~reporter;~~ 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 ~~material(s)~~ materials involved, to the extent known;.
 - (e) The extent of injuries, if any; ~~and.~~
 - (f) The possible hazards to human health; or the environment; outside the facility.
- (E) During an emergency, the emergency coordinator ~~must~~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 ~~must~~shall include, where applicable, stopping processes and operations, collecting and containing released waste, and removing or isolating containers.
- (F) If the facility stops operations in response to a fire, explosion, or release, the emergency coordinator ~~must~~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 ~~must~~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 ~~must~~shall manage such waste in accordance with all applicable requirements of Chapters 3745-52, 3745-53, 3745-65 to 3745-69, and 3745-256 of the Administrative Code.]

(H) The emergency coordinator ~~must~~shall ensure that, in the affected ~~area(s)~~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;~~and~~.
- (2) All emergency equipment listed in the contingency plan is cleaned and fit for its intended use before operations are resumed.

(I) The owner or operator ~~must~~shall note in the operating record the time, date, and details of any incident that requires ~~implementing~~ the contingency plan to be implemented. Within fifteen days after the incident, the owner or operator ~~must~~shall submit a written report on the incident to the director. The report ~~must~~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 ~~material(s)~~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;~~and~~.
- (7) Estimated quantity and disposition of recovered material that resulted from the incident.

Effective:

Five Year Review (FYR) Dates: 07/01/2015

Certification

Date

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12/07/2004, 09/05/2010

RSFA Attachment A

Rule 3745-65-70 is amended as follows:		
Location	Change	Reason
(A)	remove the existing text and add "Applicability."	a
(A)(1) [new]	add paragraph (text is from parent paragraph)	a
(A)(2) [new]	add paragraph (text is from parent paragraph, with corrections)	a, b, c

- a This rule is being re-structured to mirror the similar rule in the new facility standards portion of the hazardous waste rules (see 3745-54-70). Text is added to (A) so that the paragraph designation contains text.
- b Rule cross-reference correction to 3745-65-71, and minor text and punctuation corrections to accommodate the correction. This amendment corrects an error in the federal counterpart rule (40 CFR 265.70).
- c This amendment makes the phrase the same as its federal counterpart phrase (40 CFR 265.70).

This rule is submitted for 5-year review upon proposal. As this rule is considered equivalent to its federal counterpart provision (40 CFR 265.70), we request its exemption from further 5-year review under ORC 106.3 and 106.031 (formerly ORC 119.032).

The state rule's structure in (A) is different from the structure of the federal rule's (a) in that the state rule breaks out the requirements into (A)(1) and (A)(2), but the requirements of the state rule are the same as the requirements in the federal rule.

The state rule's (B) is reserved where the federal rule (b) contains text. The federal language in (b) is date-specific transitional language, and all the dates are past. Dates relevant to the applicability of Ohio's hazardous waste rules are shown in OAC 3745-50-11, and not generally in rule text. The state rule's (B) is maintained as "reserved" as a placeholder.

The state rule has cross-references in (A)(2) that are not exactly the same as the references in the federal language. The state rule contains the correct references; the federal references are errors that Ohio has researched and corrected in the Ohio rule. U.S. EPA has reviewed these corrections and has agreed that the Ohio references are correct; they consider the state rule equivalent to its federal counterpart.

3745-65-70

Applicability- manifest system, recordkeeping, and reporting.

~~(A) Rules 3745-65-70 to 3745-65-77 of the Administrative Code apply to owners and operators of both on-site and off-site facilities, except as rule 3745-65-01 of the Administrative Code provides otherwise. Rules 3745-65-71, 3745-65-72, and 3745-65-76 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.~~Applicability.

(1) Rules 3745-65-70 to 3745-65-77 of the Administrative Code apply to owners and operators of both on-site and off-site facilities, except as rule 3745-65-01 of the Administrative Code provides otherwise.

(2) Rules 3745-65-72, 3745-65-76, and paragraphs (A) and (B) of rule 3745-65-71 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, nor 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.

(B) Reserved.

Effective:

Five Year Review (FYR) Dates: 07/01/2015 and Exempt

Certification

Date

Promulgated Under: 119.03
Statutory Authority: 3734.12
Rule Amplifies: 3734.12
Prior Effective Dates: 04/15/1981, 01/07/1983, 12/07/2004, 02/16/2009

3745-65-73

1

Appendix to rule 3745-65-73 of the Administrative Code

Recordkeeping Instructions

The recordkeeping provisions of rule 3745-65-73 of the Administrative Code specify that an owner or operator ~~must~~shall keep a written operating record at ~~his~~the facility. This appendix provides additional instructions for keeping portions of the operating record. See paragraph (B) of rule 3745-65-73 of the Administrative Code for additional recordkeeping requirements.

The following information ~~must~~shall be recorded, as ~~it~~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 the following:

- (1) A description by its common name and the EPA hazardous waste ~~number(s)~~numbers from Chapter 3745-51 of the Administrative Code which apply to the waste. The waste description also ~~must~~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 ~~must~~shall include the process that produced ~~it~~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 ~~defined~~identified in rules 3745-51-20 to 3745-51-24 of the Administrative Code, has a four-digit EPA hazardous waste number assigned to ~~it~~the hazardous waste. This number ~~must~~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 ~~must~~shall include all applicable EPA hazardous waste numbers.

Unit of measure	Code ¹
Gallons	G
Gallons per hour	E
Gallons per day	U
Liters	L
Liters per hour	H

Table 1	
Unit of measure	Code ¹
Liters per day	V
Short tons per hour	D
Metric tons per hour	W
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
<u>British thermal units (Btu's) per hour</u>	I
Pounds	P
Short tons	T
Kilograms	K
Tons	M
<p>1 Single digit symbols are used here for data processing purposes.</p>	

- (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 ~~method(s)~~ methods [by handling ~~code(s)~~ codes as specified in Table 2 of this appendix] and ~~date(s)~~ dates of treatment, storage, or disposal.

Table 2 Handling Codes for Treatment, Storage, and Disposal Methods	
Enter the handling code(s) <u>codes</u> listed below that most closely represents the technique(s) <u>techniques</u> used at the facility to treat, store, or dispose of each quantity of hazardous waste received.	
1.	<p>Storage</p> <p>S01 Container (barrel, drum, etc.)</p> <p>S02 Tank</p> <p>S03 Waste pile</p> <p>S04 Surface impoundment</p> <p>S05 Other (specify)</p> <p>S06 Containment building (storage)</p> <p>S99 Other storage (specify)</p>
2.	<p>Treatment</p> <p>(a) Thermal Treatment</p> <p>T06 Liquid injection incinerator</p> <p>T07 Rotary kiln incinerator</p> <p>T08 Fluidized bed incinerator</p> <p>T09 Multiple hearth incinerator</p> <p>T10 Infrared furnace incinerator</p> <p>T11 Molten salt destructor</p> <p>T12 Pyrolysis</p> <p>T13 Wet Air oxidation</p> <p>T14 Calcination</p> <p>T15 Microwave discharge</p> <p>T18 Other (specify)</p>
	<p>(b) Chemical Treatment</p> <p>T19 Absorption mound</p> <p>T20 Absorption field</p> <p>T21 Chemical fixation</p> <p>T22 Chemical oxidation</p> <p>T23 Chemical precipitation</p> <p>T24 Chemical reduction</p> <p>T25 Chlorination</p>

Table 2 Handling Codes for Treatment, Storage, and Disposal Methods	
	T26 Chlorinolysis
	T27 Cyanide destruction
	T28 Degradation
	T29 Detoxification
	T30 Ion exchange
	T31 Neutralization
	T32 Ozonation
	T33 Photolysis
	T34 Other (specify)
(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)
	(2) Removal of Specific Components
	T48 Absorption-molecular sieve
	T49 Activated carbon
	T50 Blending
	T51 Catalysis
	T52 Crystallization
	T53 Dialysis

Table 2 Handling Codes for Treatment, Storage, and Disposal Methods	
	T54 Distillation
	T55 Electro dialysis
	T56 Electrolysis
	T57 Evaporation
	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

Table 2 Handling Codes for Treatment, Storage, and Disposal Methods	
	T83 Aggregate kiln
	T84 Phosphate kiln
	T85 Coke oven
	T86 Blast furnace
	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
	X01 Open burning / <u>Open burning or Open detonation</u>
	X02 Mechanical processing
	X03 Thermal unit
	X04 Geologic repository
	X99 Other (specify)

RSFA Attachment A

Rule 3745-65-73 is amended as follows:		
Location	Change	Reason
Text Amendments		
(A)	remove "must" and add "shall"	a
(B)	remove "must" and add "shall"	a
(B)(1)	-remove "method(s) and add "methods -remove "date(s)" and add "dates"	b
	remove "must" and add "shall"	a
	remove the ending semicolon and add a period	c
(B)(2)	[3 times] remove "must" and add "shall"	a
	remove the ending semicolon and add a period	c
(B)(3)	remove the ending semicolon and add a period	c
(B)(4)	in the rule reference remove "(J)" and add "(I)"	d
	remove the ending semicolon and add a period	c
(B)(5)	remove the ending semicolon and add a period	c
(B)(6)	-remove "3745-65-94," [redundant reference] -add "3745-67-22," in sequence -add "3745-67-59," in sequence	d
	remove "must" and add "shall"	a
(B)(6)[Comment]	remove "must" and add "shall"	a
(B)(7)	remove "must" and add "shall"	a
	remove the ending semicolon and add a period	c
(B)(8)	remove "must" and add "shall"	a
(B)(9)	remove the ending semicolon and add a period	c
(B)(10)	remove the ending semicolon and add a period	c
(B)(11)	remove the ending semicolon and add a period	c
(B)(13)	remove the ending "; and" and add a period	c, e
(B)(15)	remove "must" and add "shall"	a

RSFA Attachment A

Rule 3745-65-73 is amended as follows:		
Location	Change	Reason
	Appendix Amendments	
instructions, 1 st paragraph	remove “must” and add “shall”	a
	remove “his” and add “the”	b
instructions, 2 nd paragraph	remove “must” and add “shall”	a
	remove “it” and add “the information”	b
(1), 1 st paragraph	remove “number(s) and add “numbers”	b
	[2 times] remove “must” and add “shall”	a
	remove “it” and add “the waste”	b
(1), 2 nd paragraph	remove “defined” and add “identified”	b
	after the 2 nd “Code” remove the comma	c
	remove “it” and add “the hazardous waste”	b
	[2 times] remove “must” and add “shall”	a
Table 1, in Btu’s row	-add “British thermal units” before “Btu’s” -add parentheses around the existing “Btu’s”	a, c, f
(2)	remove the ending period	c
	after “Table 1” add “of this appendix.”	a, c, g
(3)	-remove “method(s)” and add “methods” -remove “code(s)” and add “codes” -remove “date(s)” and add “dates”	b
	after “Table 2” add “of this appendix.”	a, c, g
Table 2, in instructions	-remove “code(s)” and add “codes” -remove “technique(s)” and add “techniques”	b
Table 2, row 4. X01	remove “burning/Open” and add “burning or Open”	b

a LSC requirement.

b Word choice correction.

RSFA Attachment A

Rule 3745-65-73 is amended as follows:		
Location	Change	Reason

- c Punctuation correction.
- d Cross-reference correction.
- e Unnecessary text is removed.
- f Text is added to define the acronym at its first use.
- g Text is added to complete the location reference.

This rule is submitted for 5-year review upon proposal. A new review date will be assigned.

The appendix to this rule appears in a different font from most other rules at the request of LSC.

3745-65-73

Operating record.

- (A) The owner or operator ~~must~~shall keep a written operating record at the facility.
- (B) The following information ~~must~~shall be recorded, as it becomes available, and maintained in the operating record for three years unless otherwise noted:
- (1) A description and the quantity of each hazardous waste received, and the ~~method(s)~~methods and ~~date(s)~~dates of its treatment, storage, or disposal at the facility as required by the appendix to this rule. This information ~~must~~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 ~~must~~shall be recorded on a map or diagram of each cell or disposal area. For all facilities, this information ~~must~~shall include cross-references to specific manifest document numbers, if the waste was accompanied by a manifest. This information ~~must~~shall be maintained in the operating record until closure of the facility;.
- [Comment: See rules 3745-66-19, 3745-67-79, and 3745-68-09 of the Administrative Code for related requirements.]
- (3) Records and results of waste analyses and trial tests performed as specified in paragraph (A) of rule 3745-270-04 and rules 3745-65-13, 3745-66-100, 3745-67-25, 3745-67-52, 3745-67-73, 3745-68-14, 3745-68-41, 3745-68-75, 3745-69-02, and 3745-270-07 of the Administrative Code;.
 - (4) Summary reports and details of all incidents that require implementing the contingency plan as specified in paragraph ~~(J)~~(I) of rule 3745-65-56 of the Administrative Code;.
 - (5) Records and results of inspections as required by paragraph (D) of rule 3745-65-15 of the Administrative Code (except this data need be kept only three years);.

- (6) Monitoring, testing or analytical data, and corrective action where required by rules 3745-65-90 to 3745-65-94 of the Administrative Code, and rules 3745-65-19, ~~3745-65-94~~, 3745-66-91, 3745-66-93, 3745-66-95, 3745-67-22, 3745-67-24, 3745-67-26, 3745-67-55, 3745-67-59, 3745-67-60, 3745-67-76, 3745-67-78, 3745-68-02 to 3745-68-04, 3745-68-47, 3745-68-77, and paragraph (D)(1) of rule 3745-67-80 of the Administrative Code. Maintain in the operating record for three years, except for records and results pertaining to ground water monitoring and cleanup, and response action plans for surface impoundments, waste piles, and landfills, which ~~must~~shall be maintained in the operating record until closure of the facility.

[Comment: As required by rule 3745-65-94 of the Administrative Code, monitoring data at disposal facilities ~~must~~shall be kept throughout the post-closure period.]

- (7) All closure cost estimates under rule 3745-66-42 of the Administrative Code and for disposal facilities all post-closure cost estimates under rule 3745-66-44 of the Administrative Code ~~must~~shall be maintained in the operating record until closure of the facility;.
- (8) 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, monitoring data required pursuant to a petition under 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. All of this information ~~must~~shall be maintained in the operating record until closure of the facility.
- (9) 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;.
- (10) 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;.
- (11) 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;.

- (12) For an on-site land disposal facility, the information contained in the notice (except the manifest number) required by the generator or the owner or operator of a treatment facility under rule 3745-270-07 of the Administrative Code.
- (13) 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; ~~and~~.
- (14) 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 of a treatment facility under rule 3745-270-07 of the Administrative Code.
- (15) Monitoring, testing or analytical data, and corrective action where required by rule 3745-65-90, paragraph (D)(2) of rule 3745-65-93, and paragraph (D)(5) of rule 3745-65-93 of the Administrative Code, and the certification as required by paragraph (F) of rule 3745-66-96 of the Administrative Code, ~~must~~shall be maintained in the operating record until closure of the facility.

Effective:

Five Year Review (FYR) Dates: 07/01/2015

Certification

Date

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08/29/1985, 01/30/1986, 12/08/1988, 12/30/1989,
02/11/1992, 09/02/1997, 12/07/2000, 12/07/2004,
09/05/2010

RSFA Attachment A

Rule 3745-65-76 is amended as follows:		
Location	Change	Reason
(A)	[2 times] remove “must” and add “shall”	a
	add “all of” before “the following information”	b
(A)(1)	remove the ending semicolon and add a period	c
(A)(2)	remove the ending semicolon and add a period	c
(A)(3)	remove the ending semicolon and add a period	c
(A)(4)	remove the ending semicolon and add a period	c
(A)(5)	remove the ending semicolon and add a period	c
(A)(6)	remove “his” and add “the owner’s or operator’s”	d
	remove the ending “; and” and add a period	c, e
(A)(6)[Note]	remove “Note” and add “Comment”	f

- a The change of “must” to “shall” is an LSC requirement.
- b This amendment adds specificity to the provision.
- c Punctuation correction.
- d Word choice correction.
- e Unnecessary text is removed.
- f Word choice correction. This amendment makes the phrase consistent with other locations of the similar phrase.

This rule is submitted for 5-year review upon proposal. As this rule is considered equivalent to its federal counterpart provision (40 CFR 265.76), we request its exemption from further 5-year review under ORC 106.3 and 106.031 (formerly ORC 119.032).

3745-65-76

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 Chapters 3745-65 to 3745-69 and 3745-256 of the Administrative Code, then the owner or operator ~~must~~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 unmanifested waste report ~~must~~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~~the owner's or operator's authorized representative; ~~and~~.
- [~~Note~~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:

Five Year Review (FYR) Dates: 07/01/2015 and Exempt

Certification

Date

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Prior Effective Dates: 04/15/1981, 01/07/1983, 12/30/1989, 12/07/2000,
12/07/2004, 02/16/2009

RSFA Attachment A

Rule 3745-66-41 is amended as follows:		
Location	Change	Reason
title	-after "Definitions" add a dash -remove "pertaining to"	a
(A)(1)	remove "the requirements of"	b
(A)(2)	after "estimate" remove the colon and add the quotation mark	c
	after "in accordance with" add "paragraphs (A), (B), and (C) of"	d
(A)(3)	after "in accordance with" add "paragraphs (A), (B), and (C) of"	d
(A)(5)	remove "the requirements of"	b
	remove "rule 3745-66-18" and add "rules 3745-66-17 to 3745-66-20"	d
(B)(4)	remove "cost-estimate" [hyphenated] and add "cost estimate" [not hyphenated]	c
(C)	in 3 rd sentence, remove "The agency" and add "Ohio EPA"	e
(C)(2)	after "conditions of" remove "a" and add "an"	f
(D)	remove "must arise" and add "arises"	f, g

- a These amendments put the rule title into a format more similar to other "definitions" rules in the hazardous waste management program.
- b Unnecessary text is removed.
- c Punctuation (typo) correction.
- d Rule cross-reference correction. This amendment improves the equivalence of the phrase to its federal counterpart phrase in 40 CFR 265.141.
- e This amendment adds specificity to the rule.
- f Word choice correction.

RSFA Attachment A

Rule 3745-66-41 is amended as follows:		
Location	Change	Reason

g The removal of “must” is an LSC requirement.

This rule is submitted for 5-year review upon proposal. As this rule is considered equivalent to its federal counterpart provision (40 CFR 265.141), we request its exemption from further 5-year review under ORC 106.3 and 106.031 (formerly ORC 119.032).

3745-66-41

Definitions- ~~pertaining to~~ financial requirements.

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

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

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

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

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

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

Effective:

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Date

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08/29/1985, 11/13/1987, 06/29/1990, 12/07/2000,
02/16/2009

RSFA Attachment A

Rule 3745-66-93 is amended as follows:		
Location	Change	Reason
title	at the end add "- tanks" before the period	a
(A)	remove "meets the requirements of" and add "complies with"	b
	remove "must" and add "shall"	c
(B)	remove "must" and add "shall"	c
(C)	remove "meet the requirements of" and add "comply with"	b
	remove "must" and add "shall"	c
(C)(1)	remove "waste(s)" and add "wastes"	b
	after "tank system" add a comma	d
	remove "must" and add "shall"	c
(C)(4)	remove "must" and add "shall"	c
(C)(4)[Comment]	[2 times] remove "the requirements of"	e
(D)	remove "must" and add "shall"	c
(E)	remove "the requirements of"	e
	remove "must" and add "shall"	c
(E)(1)	remove "must" and add "shall"	c
(E)(1)(b)	remove "must" and add "shall"	c
(E)(1)(d)	remove "tank(s)" and add "tanks"	b
(E)(2)	remove "must" and add "shall"	c
(E)(2)(b)	remove "must" and add "shall"	c
(E)(2)(e)(i)	remove "definition" and add "description"	b
(E)(2)(e)(ii)	remove "definition" and add "description"	b
(E)(3)	remove "must" and add "shall"	c
(E)(3)(c)	after "to the director" add a comma	d

RSFA Attachment A

Rule 3745-66-93 is amended as follows:		
Location	Change	Reason
(F)	remove “must” and add “shall”	c
	remove “meets the requirements of” and add “complies with”	b
(G), last sentence	remove “compliance with the requirements of” and add “the requirement to comply with”	b
(G)(3)	remove “the requirements of”	e
	remove “must” and add “shall”	c
(G)(3)(a)	remove “the requirements of”	e
(G)(3)(c)	remove “the requirements of”	e
(G)(4)	remove “the requirements of”	e
	remove “must” and add “shall”	c
(G)(4)(a)	remove “the requirements of”	e
(G)(4)(b)	remove “must” and add “shall”	c
	remove “the requirements of”	e
(G)(4)(c)	remove “the requirements of”	e
	remove “must” and add “shall”	c
(H)	remove “must” and add “shall”	c
(H)(1)	remove “must” and add “shall”	c
	remove “he” and add “the owner or operator”	b
(H)(1)(a)	remove “must” and add “shall”	c
(H)(2)	-after “operator” remove “must” -after “also” add “shall” -remove “must” and add “shall”	c
(H)(3)	remove “must” and add “shall”	c
(H)(4)	[2 times] remove “must” and add “shall”	c
	remove “his own” and add “the director’s”	b

RSFA Attachment A

Rule 3745-66-93 is amended as follows:		
Location	Change	Reason
(I)	remove “meeting the requirements of” and add “that complies with”	b
	remove “must” and add “shall”	c
(I)(1)	remove “meets the requirements of” and add “complies with”	b
	remove “must” and add “shall”	c
(I)(2)	[2 times] remove “must” and add “shall”	c
(I)(3)	remove “must” and add “shall”	c
(I)(4)	remove “must” and add “shall”	c
	remove “the requirements of”	e

- a This amendment is designed to distinguish the title of this rule from similar rule titles in the hazardous waste program.
- b Word choice correction.
- c The change of “must” to “shall” is an LSC requirement.
- d Punctuation correction.
- e Unnecessary text is removed.

This rule is submitted for 5-year review upon proposal. A new review date will be assigned.

3745-66-93

Containment and detection of releases- tanks.

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

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

(B) Secondary containment systems ~~must~~shall be:

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

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

- (1) Constructed of or lined with materials that are compatible with the ~~waste(s)~~wastes to be placed in the tank system, and ~~must~~shall have sufficient strength and thickness to prevent failure due to pressure gradients (including static head and external hydrological forces), physical contact with the waste to which they are exposed, climatic conditions, the stress of installation, and the stress of daily operation (including stresses from nearby vehicular traffic);
- (2) Placed on a foundation or base capable of providing support to the secondary containment system and resistance to pressure gradients above and below the system and capable of preventing failure due to settlement, compression, or uplift;

- (3) Provided with a leak detection system that is designed and operated so that it will detect the failure of either the primary and secondary containment structure or any release of hazardous waste or accumulated liquid in the secondary containment system within twenty-four hours, or at the earliest practicable time if the existing detection technology or site conditions will not allow detection of a release within twenty-four hours;
- (4) Sloped or otherwise designed or operated to drain and remove liquids resulting from leaks, spills, or precipitation. Spilled or leaked waste and accumulated precipitation ~~must~~shall be removed from the secondary containment system within twenty-four hours, or in as timely a manner as is possible to prevent harm to human health or the environment, if removal of the released waste or accumulated precipitation cannot be accomplished within twenty-four hours.

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

- (D) Secondary containment for tanks ~~must~~shall include one or more of the following devices:
 - (1) A liner (external to the tank);
 - (2) A vault;
 - (3) A double-walled tank; or
 - (4) An equivalent device as approved by the director.
- (E) In addition to ~~the requirements of~~ paragraphs (B), (C), and (D) of this rule, secondary containment systems ~~must~~shall satisfy the following requirements:
 - (1) External liner systems ~~must~~shall be:

- (a) Designed or operated to contain one hundred per cent of the capacity of the largest tank within its boundary;
 - (b) Designed or operated to prevent run-on or infiltration of precipitation into the secondary containment system unless the collection system has sufficient excess capacity to contain run-on or infiltration. Such additional capacity ~~must~~shall be sufficient to contain precipitation from a twenty-five-year, twenty-four-hour rainfall event;
 - (c) Free of cracks or gaps;
 - (d) Designed and installed to completely surround the tank and to cover all surrounding earth likely to come into contact with the waste if released from the ~~tank(s)~~tanks (i.e., capable of preventing lateral as well as vertical migration of the waste); and
 - (e) Constructed with chemical-resistant water stops in place at all joints, if any (for concrete liners only); and
 - (f) Provided with an impermeable interior coating or lining that is compatible with the stored waste and that will prevent migration of waste into the concrete (for concrete liners only).
- (2) Vault systems ~~must~~shall be:
- (a) Designed or operated to contain one hundred per cent of the capacity of the largest tank within its boundary;
 - (b) Designed or operated to prevent run-on or infiltration of precipitation into the secondary containment system unless the collection system has sufficient excess capacity to contain run-on or infiltration. Such additional capacity ~~must~~shall be sufficient to contain precipitation from a twenty-five-year, twenty-four-hour rainfall event;
 - (c) Constructed with chemical-resistant water stops in place at all joints (if any);
 - (d) Provided with an impermeable interior coating or lining that is compatible with the stored waste and that will prevent migration of waste into the concrete;

- (e) Provided with means to protect against the formation of and ignition of vapors within the vault, if the waste being stored or treated:
 - (i) Meets the ~~definition~~description of ignitable waste under rule 3745-51-21 of the Administrative Code; or
 - (ii) Meets the ~~definition~~description of reactive waste under rule 3745-51-23 of the Administrative Code and may form an ignitable or explosive vapor; and
- (f) Provided with an exterior moisture barrier or be otherwise designed or operated to prevent migration of moisture into the vault if the vault is subject to hydraulic pressure.

(3) Double-walled tanks ~~must~~shall be:

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

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

- (F) Ancillary equipment ~~must~~shall be provided with full secondary containment (e.g., trench, jacketing double-walled piping) that ~~meets the requirements of~~complies with paragraphs (B) and (C) of this rule, except for:
 - (1) Aboveground piping (exclusive of flanges, joints, valves, and connections) that are visually inspected for leaks on a daily basis;

- (2) Welded flanges, welded joints, and welded connections that are visually inspected for leaks on a daily basis;
 - (3) Sealless or magnetic coupling pumps and sealless valves that are visually inspected for leaks on a daily basis; and
 - (4) Pressurized aboveground piping systems with automatic shut-off devices (e.g., excess flow check valves, flow metering shutdown devices, loss of pressure-actuated shut-off devices) that are visually inspected for leaks on a daily basis.
- (G) The owner or operator may obtain a variance from the requirements of this rule if the director finds, as a result of a demonstration by the owner or operator, either: that alternative design and operating practices, together with location characteristics, will prevent the migration of hazardous waste or hazardous constituents into the ground water or surface water at least as effectively as secondary containment during the active life of the tank system; or that in the event of a release that does migrate to ground water or surface water, no substantial present or potential hazard will be posed to human health or the environment. New underground tank systems may not, per a demonstration in accordance with paragraph (G)(2) of this rule, be exempted from the secondary containment requirements of this rule. Application for a variance as allowed in this paragraph does not waive ~~compliance with the requirements of~~ the requirement to comply with rules 3745-66-90 to 3745-66-101 of the Administrative Code for new tank systems.
- (1) In deciding whether to grant a variance based on a demonstration of equivalent protection of ground water and surface water, the director will consider:
 - (a) The nature and quantity of the waste;
 - (b) The proposed alternate design and operation;
 - (c) The hydrogeologic setting of the facility, including the thickness of soils between the tank system and ground water; and
 - (d) All other factors that would influence the quality and mobility of the hazardous constituents and the potential for them to migrate to ground water or surface water.
 - (2) In deciding whether to grant a variance, based on a demonstration of no substantial or present or potential hazard, the director will consider:

- (a) The potential adverse effects on ground water, surface water, and land quality taking into account:
 - (i) The physical and chemical characteristics of the waste in the tank system, including its potential for migration;
 - (ii) The hydrogeological characteristics of the facility and surrounding land;
 - (iii) The potential for health risks caused by human exposure to waste constituents;
 - (iv) The potential for damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents; and
 - (v) The persistence and permanence of the potential adverse effects.
- (b) The potential adverse effects of a release on ground water quality, taking into account:
 - (i) The quantity and quality of ground water and the direction of ground water flow;
 - (ii) The proximity and withdrawal rates of water in the area;
 - (iii) The current and future uses of ground water in the area; and
 - (iv) The existing quality of ground water, including other sources of contamination and their cumulative impact on the ground water quality; and
- (c) The potential adverse effects of a release on surface water quality, taking into account:
 - (i) The quantity and quality of ground water and the direction of ground water flow;
 - (ii) The patterns of rainfall in the region;

- (iii) The proximity of the tank system to surface waters;
 - (iv) The current and future uses of surface waters in the area and any water quality standards established for those surface waters; and
 - (v) The existing quality of surface water, including other sources of contamination and the cumulative impact on surface water quality; and
- (d) The potential adverse effects of a release on the land surrounding the tank system, taking into account:
 - (i) The patterns of rainfall in the region; and
 - (ii) The current and future uses of the surrounding land.
- (3) The owner or operator of a tank system, for which a variance from secondary containment had been granted in accordance with ~~the requirements of~~ paragraph (G)(1) of this rule, at which a release of hazardous waste has occurred from the primary tank system but has not migrated beyond the zone of engineering control (as established in the variance), ~~must~~shall:
 - (a) Comply with ~~the requirements of~~ paragraphs (A), (B), (C), (E), and (F) of rule 3745-66-96 of the Administrative Code; and
 - (b) Decontaminate or remove contaminated soil to the extent necessary to:
 - (i) Enable the tank system, for which the variance was granted, to resume operation with the capability for the detection of and response to releases at least equivalent to the capability it had prior to the release; and
 - (ii) Prevent the migration of hazardous waste or hazardous constituents to ground water or surface water; and
 - (c) If contaminated soil cannot be removed or decontaminated in accordance with paragraph (G)(3)(b) of this rule, comply with ~~the requirements of~~ paragraph (B) of rule 3745-66-97 of the Administrative Code;

- (4) The owner or operator of a tank system, for which a variance from secondary containment had been granted in accordance with ~~the requirements of~~ paragraph (G)(1) of this rule, at which a release of hazardous waste has occurred from the primary tank system and has migrated beyond the zone of engineering control (as established in the variance), ~~must~~shall:
- (a) Comply with ~~the requirements of~~ paragraphs (A), (B), (C), and (D) of rule 3745-66-96 of the Administrative Code; and
 - (b) Prevent the migration of hazardous waste or hazardous constituents to ground water or surface water, if possible, and decontaminate or remove contaminated soil. If contaminated soil cannot be decontaminated or removed, or if ground water has been contaminated, the owner or operator ~~must~~shall comply with ~~the requirements of~~ paragraph (B) of rule 3745-66-97 of the Administrative Code;
 - (c) If repairing, replacing, or reinstalling the tank system, provide secondary containment in accordance with ~~the requirements of~~ paragraphs (A) to (F) of this rule or reapply for a variance from secondary containment and meet the requirements for new tank systems in rule 3745-66-92 of the Administrative Code if the tank system is replaced. The owner or operator ~~must~~shall comply with these requirements even if contaminated soil can be decontaminated or removed, and ground water or surface water has not been contaminated.
- (H) The following procedures ~~must~~shall be followed in order to request a variance from secondary containment.
- (1) The director ~~must~~shall be notified in writing by the owner or operator that ~~he~~the owner or operator intends to conduct and submit a demonstration for a variance from secondary containment as allowed in paragraph (G) of this rule according to the following schedule:
 - (a) For existing tank systems, at least twenty-four months prior to the date that the secondary containment ~~must~~shall be provided in accordance with paragraph (A) of this rule; and
 - (b) For new tank systems, at least thirty days prior to entering into a contract for installation of the tank system.

- (2) As part of the notification, the owner or operator ~~must~~ also shall submit to the director a description of the steps necessary to conduct the demonstration and a timetable for completing each of the steps. The demonstration ~~must~~shall address each of the factors listed in paragraph (G)(1) or (G)(2) of this rule.
 - (3) The demonstration for a variance ~~must~~shall be completed and submitted to the director within one hundred eighty days after notifying the director of intent to conduct the demonstration.
 - (4) The director will inform the public, through a newspaper notice, of the availability of the demonstration for a variance. The notice ~~must~~shall be placed in a daily or weekly major local newspaper of general circulation and ~~must~~shall provide at least thirty days from the date of the notice for the public to review and comment on the demonstration for a variance. The director will also hold a public hearing in response to a request or at ~~his own~~the director's discretion, whenever such a hearing might clarify one or more issues concerning the demonstration for a variance. Public notice of the hearing will be given at least thirty days prior to the date of the hearing and may be given at the same time as notice of the opportunity for the public to review and comment on the demonstration. These two notices may be combined.
 - (5) The director will approve or disapprove the request for a variance within ninety days after receipt of the demonstration from the owner or operator and will notify in writing the owner or operator and each person who submitted written comments or requested notice of the variance decision. If the demonstration for a variance is incomplete or does not include sufficient information, the ninety-day time period will begin when the director receives a complete demonstration, including all information necessary to make a final determination. If the public comment period in paragraph (H)(4) of this rule is extended, the ninety-day time period will be similarly extended.
- (I) All tank systems, until such time as secondary containment ~~meeting the requirements of that complies with~~ this rule is provided, ~~must~~shall comply with the following:
- (1) For non-enterable underground tanks, a leak test that ~~meets the requirements of complies with~~ paragraph (B)(5) of rule 3745-66-91 of the Administrative Code ~~must~~shall be conducted at least annually;

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

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

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

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

Effective:

Five Year Review (FYR) Dates: 07/01/2015

Certification

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,
02/11/1992, 12/07/2000, 12/07/2004, 09/05/2010

RSFA Attachment A

Rule 3745-66-95 is amended as follows:		
Location	Change	Reason
title	after "Inspections" add "- tank systems"	a
(A)	remove "must" and add "shall"	b
	remove "it's" and add "the tank system's"	c
(B)	remove "must" and add "shall"	b
	add "all of the following" before the colon	d
(B)(1)	remove "Overfill/spill" and add "Overfill or spill"	c
	remove the ending semicolon and add a period	e
(B)(2)	remove the ending "; and" and add a period	e, f
(B)(3)[Comment]	-remove "he finds" and add "that is found" -remove "of" and add "after"	c
(C)	[3 times] remove "must" and add "shall"	b
(E)	remove "must" and add "shall"	b
(F)	remove "must" and add "shall"	b
	remove "they" and add "the cathodic protection systems"	c
(F)(1)	remove "must" and add "shall"	b
	remove the ending "; and" and add a period	e, f
(F)(2)	remove "must" and add "shall"	b
	remove "and/or" and add "or"	c
(G)	remove "must" and add "shall"	b

- a This amendment sets this rule apart from other hazardous waste rules that have the same title.
- b The change of "must" to "shall" is an LSC requirement.
- c Word choice correction.
- d This amendment adds specificity to the provision.

RSFA Attachment A

Rule **3745-66-95** is amended as follows:

Location	Change	Reason
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- e Punctuation correction.
- f Unnecessary text is removed.

This rule is submitted for 5-year review upon proposal. A new review date will be assigned.

3745-66-95

Inspections- tank systems.

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

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

(1) ~~Overfill/spill~~Overfill or spill control equipment (e.g., waste-feed cutoff systems, bypass systems, and drainage systems) to ensure that it is in good working order~~;~~.

(2) Above ground portions of the tank system, if any, to detect corrosion or releases of waste~~; and~~.

(3) The construction materials and the area immediately surrounding the externally accessible portion of the tank system including secondary containment structures (e.g., dikes) to detect erosion or signs of releases of hazardous waste (e.g., wet spots, dead vegetation).

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

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

(D) Reserved.

- (E) Ancillary equipment that is not provided with secondary containment, as described in paragraphs (F)(1) to (F)(4) of rule 3745-66-93 of the Administrative Code, ~~must~~shall be inspected at least once each operating day.
- (F) The owner or operator ~~must~~shall inspect cathodic protection systems, if present, according to, at a minimum, the following schedule, to ensure that ~~they~~the cathodic protection systems are functioning properly:
- (1) The proper operation of the cathodic protection system ~~must~~shall be confirmed within six months after initial installation and annually thereafter; ~~and~~.
 - (2) All sources of impressed current ~~must~~shall be inspected ~~and/or~~ tested, as appropriate, at least bimonthly (i.e., every other month).

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

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

Effective:

Five Year Review (FYR) Dates: 07/01/2015

Certification

Date

Promulgated Under: 119.03
Statutory Authority: 3734.12
Rule Amplifies: 3734.12
Prior Effective Dates: 04/15/1981, 01/07/1983, 12/08/1988, 12/30/1989,
09/05/2010

RSFA Attachment A

Rule 3745-66-96 is amended as follows:		
Location	Change	Reason
Intro	[2 times] remove "must" and add "shall"	a
	add "all of" before "the following requirements"	b
(A)	remove "must" and add "shall"	a
(B)(1)	remove "must" and add "shall"	a
	after "time" add a comma	c
(B)(2)	remove "must" and add "shall"	a
(C)	remove "must" and add "shall"	a
	add ", both" before the colon	b
(C)(1)	remove the ending "; and" and add a period	c, d
(D)(1)	remove "must" and add "shall"	a
(D)(2)	remove "is" and add "satisfies both of the following requirements"	b
	add "is exempted from the requirements of paragraphs (D) to (D)(3) of this rule"	e
(D)(2)(a)	remove the ending "; and" and add a period	c, d
(D)(2)(b)	remove "cleaned-up" [hyphenated] and add "cleaned up" [not hyphenated]	c, f
	remove "is exempted from the requirements of paragraphs (D) to (D)(3)(e) of this rule"	d, e
(D)(3)	remove "containing" and add "that contains"	f
	add "all of" before "the following information"	b
	remove "must" and add "shall"	a
(D)(3)(a)	remove the ending semicolon and add a period	c
(D)(3)(b)	remove the ending semicolon and add a period	c
(D)(3)(c)	remove "must" and add "shall"	a
	remove the ending colon and add a period	c
(D)(3)(d)	remove the ending "; and" and add a period	c, d

RSFA Attachment A

Rule 3745-66-96 is amended as follows:		
Location	Change	Reason
(E)(1)	remove “must” and add “shall”	a
(E)(2)	remove “owner/operator” and add “owner or operator”	c
(E)(3)	remove “must” and add “shall”	a
(E)(4)	remove “owner/operator must” and add “owner or operator shall”	a, f
	[3 times] remove “must” and add “shall”	a
	remove “the requirements of”	d
(F)	[2 times] remove “must” and add “shall”	a
	remove “owner/operator” and add “owner or operator”	f
[Comment 2]	remove “national response center” [lower case] and add ‘ ”National Response Center” ‘ [upper case in quotes]	c, g

- a The change of “must” to “shall” is an LSC requirement.
- b This amendment adds specificity to the provision.
- c Punctuation correction.
- d Unnecessary language is removed.
- e This sentence is re-written to clarify the requirement by re-locating some text.
- f Word choice correction.
- g Use of upper case is corrected. Quotation marks are added to maintain the upper case; LSC requirement.

This rule is submitted for 5-year review upon proposal. A new review date will be assigned.

3745-66-96

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

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

(A) Cessation of use; prevent flow or addition of wastes. The owner or operator ~~must~~shall immediately stop the flow of hazardous waste into the tank system or secondary containment system and inspect the system to determine the cause of the release.

(B) Removal of waste from tank system or secondary containment system.

(1) If the release was from the tank system, the owner or operator ~~must~~shall, within twenty-four hours after detection of the leak or, if the owner or operator demonstrates that that is not possible, at the earliest practicable time, remove as much of the waste as is necessary to prevent further release of hazardous waste to the environment and to allow inspection and repair of the tank system to be performed.

(2) If the release was to a secondary containment system, all released materials ~~must~~shall be removed within twenty-four hours or in as timely a manner as is possible to prevent harm to human health and the environment.

(C) Containment of visible releases to the environment. The owner or operator ~~must~~shall immediately conduct a visual inspection of the release and, based upon that inspection, both:

(1) Prevent further migration of the leak or spill to soils or surface water; ~~and~~.

(2) Remove, and properly dispose of, any visible contamination of the soil or surface water.

(D) Notifications, reports.

(1) Any release to the environment, except as provided in paragraph (D)(2) of this rule, ~~must~~shall be reported to the director within twenty-four hours after detection. If the release has been reported pursuant to 40 CFR Part 302, that report will satisfy this requirement.

(2) A leak or spill of hazardous waste that ~~is~~satisfies both of the following requirements is exempted from the requirements of paragraphs (D) to (D)(3) of this rule:

- (a) Less than or equal to a quantity of one pound; ~~and,~~
 - (b) Immediately contained and ~~cleaned up is exempted from the requirements of paragraphs (D) to (D)(3)(e) of this rule~~ cleaned up.
- (3) Within thirty days after detection of a release to the environment, a report ~~containing that contains~~ contains all of the following information ~~must~~ shall be submitted to the director:
- (a) Likely route of migration of the release; ~~and,~~
 - (b) Characteristics of the surrounding soil (soil composition, geology, hydrogeology, climate); ~~and,~~
 - (c) Results of any monitoring or sampling conducted in connection with the release, (if available). If sampling or monitoring data relating to the release are not available within thirty days, these data ~~must~~ shall be submitted to the director as soon as they become available; ~~and,~~
 - (d) Proximity to downgradient drinking water, surface water, and population areas; ~~and,~~
 - (e) Description of response actions taken or planned.
- (E) Provision of secondary containment, repair, or closure.
- (1) Unless the owner or operator satisfies the requirements of paragraphs (E)(2) to (E)(4) of this rule, the tank system ~~must~~ shall be closed in accordance with rule 3745-66-97 of the Administrative Code.
 - (2) If the cause of the release was a spill that has not damaged the integrity of the system, the ~~owner/operator~~ owner or operator may return the system to service as soon as the released waste is removed and repairs, if necessary, are made.

- (3) If the cause of the release was a leak from the primary tank system into the secondary containment system, the system ~~must~~shall be repaired prior to returning the tank system to service.
- (4) If the source of the release was a leak to the environment from a component of a tank system without secondary containment, the ~~owner/operator must~~owner or operator shall provide the component of the system from which the leak occurred with secondary containment that satisfies the requirements of rule 3745-66-93 of the Administrative Code before it can be returned to service, unless the source of the leak is an aboveground portion of a tank system. If the source is an aboveground component that can be inspected visually, the component ~~must~~shall be repaired and may be returned to service without secondary containment as long as the requirements of paragraph (F) of this rule are satisfied. If a component is replaced to comply with ~~the requirements of~~ this paragraph, that component ~~must~~shall satisfy the requirements for new tank systems or components in rules 3745-66-92 and 3745-66-93 of the Administrative Code. Additionally, if a leak has occurred in any portion of a tank system component that is not readily accessible for visual inspection (e.g., the bottom of an inground or onground tank), the entire component ~~must~~shall be provided with secondary containment in accordance with rule 3745-66-93 of the Administrative Code prior to being returned to use.
- (F) Certification of major repairs. If the owner or operator has repaired a tank system in accordance with paragraph (E) of this rule, and the repair has been extensive (e.g., installation of an internal liner, repair of a ruptured primary containment or secondary containment vessel), the tank system ~~must~~shall not be returned to service unless the ~~owner/operator~~owner or operator has obtained a certification by an independent, qualified professional engineer in accordance with paragraph (D) of rule 3745-50-42 of the Administrative Code that the repaired system is capable of handling hazardous wastes without release for the intended life of the system. This certification ~~must~~shall be submitted to the director within seven days after returning the tank system to use.

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

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

[Comment 3: For dates of non-regulatory government publications, publications of

recognized organizations and associations, federal rules, and federal statutory provisions referenced in this rule, see rule 3745-50-11 of the Administrative Code titled "Incorporated by reference."]

Effective:

Five Year Review (FYR) Dates: 07/01/2015

Certification

Date

Promulgated Under: 119.03
Statutory Authority: 3734.12
Rule Amplifies: 3734.12
Prior Effective Dates: 12/08/1988, 12/07/2004, 09/05/2010

RSFA Attachment A

Rule 3745-69-40 is amended as follows:		
Location	Change	Reason
title	remove "pad rules" and add "pads	a
(A)	remove "The requirements of rules" and add "Rules"	b
	remove "and/or" and add "or"	a
	[5 times] remove "the first effective date of this rule" and add "September 2, 1997"	c
(C)	remove "The requirements of rules" and add "Rules"	b
	in last sentence after "will do" add "all of"	c
(C)(1)	remove the ending semicolon and add a period	d
(C)(2)	remove the ending semicolon and add a period	d
(C)(3)	remove ", and" and add a period	b, d

- a Word choice correction.
- b Unnecessary wording is removed.
- c This amendment adds specificity to the rule.
- d Punctuation correction.

3745-69-40

Applicability- drip pad rulespads.

- (A) ~~The requirements of rules~~ Rules 3745-69-40 to 3745-69-45 of the Administrative Code apply to owners and operators of facilities that use new or existing drip pads to convey treated wood drippage, precipitation, ~~and/or~~ surface water run-on to an associated collection system. Existing drip pads are those constructed before ~~the first effective date of this rule~~ September 2, 1997, and those for which the owner or operator has generated a design and has entered into binding financial or other agreements for construction prior to ~~the first effective date of this rule~~ September 2, 1997. All other drip pads are new drip pads. The requirement at paragraph (B)(3) of rule 3745-69-43 of the Administrative Code to install a leak collection system applies to only those drip pads that are constructed after ~~the first effective date of this rule~~ September 2, 1997 except for those constructed after ~~the first effective date of this rule~~ September 2, 1997 for which the owner or operator has a design and has entered into binding financial or other agreements for construction prior to ~~the first effective date of this rule~~ September 2, 1997.
- (B) The owner or operator of any drip pad that is inside or under a structure that provides protection from precipitation so that neither run-off nor run-on is generated is not subject to regulation under paragraph (E) or (F) of rule 3745-69-43 of the Administrative Code, as appropriate.
- (C) ~~The requirements of rules~~ Rules 3745-69-40 to 3745-69-45 of the Administrative Code are not applicable to the management of infrequent and incidental drippage in storage yards provided that the owner or operator maintains and complies with a written contingency plan that describes how the owner or operator will respond immediately to the discharge of such infrequent and incidental drippage. At a minimum, the contingency plan shall describe how the owner or operator will do all of the following:
- (1) Clean up the drippage;
 - (2) Document the cleanup of the drippage;
 - (3) Retain documents regarding cleanup for three years, ~~and~~
 - (4) Manage the contaminated media in a manner consistent with the Revised Code and the Administrative Code.

Effective:

Five Year Review (FYR) Dates: Exempt

Certification

Date

Promulgated Under: 119.03
Statutory Authority: 3734.12
Rule Amplifies: 3734.12
Prior Effective Dates: 09/02/1997

RSFA Attachment A

Rule 3745-256-100 is amended as follows:		
Location	Change	Reason
title	remove "rules"	a
(A)	-remove "man made" [no hyphen] and add "man-made" [hyphenated] -remove "themselves" and add "the materials"	a
	after "within the unit" remove the semicolon and add a comma	b
	-remove "the following:" -after "contact with the" add "hazardous"	c
	remove "they" and add "the materials"	d
	remove the ending semicolon and add a period	b
(B)	remove the ending semicolon and add a period	b
(C)	add "all of the following" before the colon	e
(C)(1)	remove the ending semicolon and add a period	b
(C)(2)	remove the ending "; and" and add a period	b, f
(D)	remove the ending "; and" and add a period	b, f

- a Word choice correction. This amendment makes the phrase consistent with other locations of the similar phrase.
- b Punctuation correction.
- c Text and punctuation change to better match the federal counterpart provision (40 CFR 265.1100).
- d Word choice correction.
- e This amendment adds specificity to the provision.
- f Unnecessary text is removed.

This rule is submitted for 5-year review upon proposal. A new review date will be assigned.

3745-256-100 **Applicability- containment buildings ~~rules~~.**

Rules 3745-256-100 to 3745-256-102 of the Administrative Code apply to owners or operators who store or treat hazardous waste in units designed and operated under rule 3745-256-101 of the Administrative Code. The owner or operator is not subject to the definition of "land disposal" in rule 3745-270-02 of the Administrative Code provided that the unit:

- (A) Is a completely enclosed, self-supporting structure that is designed and constructed of ~~man-made~~man-made materials of sufficient strength and thickness to support ~~themselves~~the materials, the waste contents, and any personnel and heavy equipment that operate within the unit; ~~and to prevent failure due to the following:~~ pressure gradients, settlement, compression, uplift, physical contact with the hazardous wastes to which ~~they~~the materials are exposed, climatic conditions, and the stresses of daily operation (including the movement of heavy equipment within the unit and contact of such equipment with containment walls); ~~and~~
- (B) Has a primary barrier that is designed to be sufficiently durable to withstand the movement of personnel and handling equipment within the unit; ~~and~~
- (C) If used to manage a hazardous waste containing free liquids (the presence of which is determined by the paint filter test, a visual examination, or other appropriate means), has all of the following:
- (1) A primary barrier designed and constructed of materials to prevent migration of hazardous constituents into the barrier; ~~and~~
 - (2) A liquid collection system designed and constructed of materials to minimize the accumulation of liquid on the primary barrier; ~~and~~
 - (3) A secondary containment system designed and constructed of materials to prevent migration of hazardous constituents into the barrier, with a leak detection and liquid collection system capable of detecting, collecting, and removing leaks of hazardous constituents at the earliest possible time, unless the unit has been granted a variance from the secondary containment system requirements under paragraph (B)(4) of rule 3745-256-101 of the Administrative Code.
- (D) Has controls as needed to prevent fugitive dust emissions to meet the no visible emission standard in paragraph (C)(1)(d) of rule 3745-256-101 of the Administrative Code; ~~and~~
- (E) Is designed and operated to ensure containment and prevent the tracking of materials from the unit by personnel or equipment.

Effective:

Five Year Review (FYR) Dates: 07/01/2015

Certification

Date

Promulgated Under: 119.03
Statutory Authority: 3734.12
Rule Amplifies: 3734.12
Prior Effective Dates: 12/07/2000, 12/07/2004, 02/16/2009

RSFA Attachment A

Rule 3745-256-101 is amended as follows:		
Location	Change	Reason
(A)	remove "must" and add "shall"	a
	add "all of" before "the following design standards"	b
(A)(1)	remove "must" and add "shall"	a
(A)(2)	[3 times] remove "must" and add "shall"	a
	-remove "man made [no hyphen] and add "man-made" [hyphenated] -remove "themselves" and add "the materials"	c
	at the end, after "that meet" add " both of" before "these criteria"	b
(A)(2)(a)	remove "They" and add "The light-weight doors and windows"	c
	remove the ending "; and" and add a period	d, e
(A)(3)	remove "must" and add "shall"	a
	-remove "it's" and add "the unit's" -remove "they" and add "the incompatible hazardous wastes or treatment reagents"	c
(A)(4)	remove "must" and add "shall"	a
(B)	remove "must" and add "shall"	a
	add "all of the following" before the colon	b
(B)(2)(a)	remove "must" and add "shall"	a
	remove the ending "; and" and add a period	d, e
(B)(2)(b)	remove "must" and add "shall"	a
(B)(3)(a)	add ", both" before the colon	b
(B)(3)(a)(i)	remove the ending "; and" and add a period	d, e
(B)(3)(b)	remove "must" and add "shall"	a
(B)(3)(c)	remove "must" and add "shall"	a

RSFA Attachment A

Rule 3745-256-101 is amended as follows:		
Location	Change	Reason
(B)(3)(c) [Comment]	remove “it meets the requirements of” and add “the containment building complies with”	c
	remove “must meet the requirements of” and add “shall comply with”	a, c
(B)(4)	remove “must” and add “shall”	a
	add “do all of the following” before the colon	b
(B)(4)(a)	remove “their” and add “the owner’s or operator’s”	c
	remove “must” and add “shall”	a
	remove the ending semicolon and add a period	d
(B)(4)(b)	remove the ending “; and” and add a period	d, e
(C)	remove “must” and add “shall”	a
	add “do all of the following” before the colon	b
(C)(1)	after “unit” remove the semicolon and add a comma	d
(C)(1)(a)	remove the ending semicolon and add a period	d
(C)(1)(b)	remove “stored/treated” and add “stored or treated”	c
	remove the ending semicolon and add a period	d
(C)(1)(c)	[2 times] remove “must” and add “shall”	a
	remove the ending “; and” and add a period	d, e
(C)(1)(d)	[2 times] remove “must” and add “shall”	a
(C)(2)	remove “meets the requirements of” and add “complies with”	c
(C)(3)	remove “must” and add “shall”	a
(C)(3)(a)	remove “must” and add “shall”	a
	add “do all of the following” before the colon	b
(C)(3)(a)(i)	remove the ending semicolon and add a period	d
(C)(3)(a)(ii)	remove the ending semicolon and add a period	d
(C)(3)(a)(iii)	remove “must” and add “shall”	a
	remove the ending “; and” and add a period	d, e

RSFA Attachment A

Rule 3745-256-101 is amended as follows:		
Location	Change	Reason
(C)(3)(b)	remove “must” and add “shall”	a
(C)(3)(c)	remove “must” and add “shall”	a
(D)	remove “must” and add “shall”	a
	add “do all of the following” before the colon	b
(D)(1)	remove “the requirements in”	e
	remove the ending semicolon and add a period	d
(D)(2)	remove the ending “; and” and add a period	d, e

- a The change of “must” to “shall” is an LSC requirement.
- b This amendment adds specificity to the provision.
- c Word choice correction.
- d Punctuation correction.
- e Unnecessary text is removed.

This rule is submitted for 5-year review upon proposal. A new review date will be assigned.

3745-256-101

Design and operating standards for containment buildings.

(A) All containment buildings ~~must~~shall comply with all of the following design standards:

(1) The containment building ~~must~~shall be completely enclosed with a floor, walls, and a roof to prevent exposure to the elements, (e.g., precipitation, wind, run-on), and to assure containment of managed wastes.

(2) The floor and containment walls of the unit, including the secondary containment system if required under paragraph (B) of this rule, ~~must~~shall be designed and constructed of ~~man-made~~man-made materials of sufficient strength and thickness to support ~~themselves~~the materials, the waste contents, and any personnel and heavy equipment that operate within the unit, and to prevent failure due to pressure gradients, settlement, compression, uplift, physical contact with the wastes to which they are exposed, climatic conditions, and the stresses of daily operation, including the movement of heavy equipment within the unit and contact of such equipment with containment walls. The unit ~~must~~shall be designed so that it has sufficient structural strength to prevent collapse or other failure. All surfaces to be in contact with hazardous wastes ~~must~~shall be chemically compatible with those wastes. Ohio EPA will consider standards established by professional organizations generally recognized by the industry such as the American concrete institute (ACI) and the American society of testing materials (ASTM) in judging the structural integrity requirements of paragraphs (A) to (A)(4) of this rule. If appropriate to the nature of the waste management operation to take place in the unit, an exception to the structural strength requirement may be made for light-weight doors and windows that meet both of these criteria:

(a) ~~They~~The light-weight doors and windows provide an effective barrier against fugitive dust emissions under paragraph (C)(1)(d) of this rule; ~~and,~~

(b) The unit is designed and operated in a fashion that assures that wastes will not actually come in contact with these openings.

(3) Incompatible hazardous wastes or treatment reagents ~~must~~shall not be placed in the unit or ~~its~~the unit's secondary containment system if ~~they~~the incompatible hazardous wastes or treatment reagents could cause the unit or secondary containment system to leak, corrode, or otherwise fail.

(4) A containment building ~~must~~shall have a primary barrier designed to withstand the movement of personnel, waste, and handling equipment in the unit during

the operating life of the unit and appropriate for the physical and chemical characteristics of the waste to be managed.

(B) For a containment building used to manage hazardous wastes containing free liquids or treated with free liquids (the presence of which is determined by the paint filter test, a visual examination, or other appropriate means), the owner or operator ~~must~~shall include all of the following:

(1) A primary barrier designed and constructed of materials to prevent the migration of hazardous constituents into the barrier (e.g. a geomembrane covered by a concrete wear surface).

(2) A liquid collection and removal system to prevent the accumulation of liquid on the primary barrier of the containment building:

(a) The primary barrier ~~must~~shall be sloped to drain liquids to the associated collection system; ~~and,~~

(b) Liquids and waste ~~must~~shall be collected and removed to minimize hydraulic head on the containment system at the earliest practicable time that protects human health and the environment.

(3) A secondary containment system including a secondary barrier designed and constructed to prevent migration of hazardous constituents into the barrier, and a leak detection system that is capable of detecting failure of the primary barrier and collecting accumulated hazardous wastes and liquids at the earliest practicable time.

(a) The requirements of the leak detection component of the secondary containment system are satisfied by installation of a system that is, at a minimum, both:

(i) Constructed with a bottom slope of one per cent or more; ~~and,~~

(ii) Constructed of a granular drainage material with a hydraulic conductivity of 1×10^{-2} centimeters per second or more and a thickness of twelve inches (30.5 centimeters) or more, or constructed of synthetic or geonet drainage materials with a transmissivity of 3×10^{-5} meters squared per second or more.

(b) If treatment is to be conducted in the building, an area in which such treatment will be conducted ~~must~~shall be designed to prevent the

release of liquids, wet materials, or liquid aerosols to other portions of the building.

- (c) The secondary containment system ~~must~~shall be constructed of materials that are chemically resistant to the waste and liquids managed in the containment building and of sufficient strength and thickness to prevent collapse under the pressure exerted by overlaying materials and by any equipment used in the containment building.

[Comment: Containment buildings can serve as secondary containment systems for tanks placed within the building under certain conditions. A containment building can serve as an external liner system for a tank, provided ~~it meets the requirements of the containment building~~ complies with paragraph (E)(1) of rule 3745-66-93 of the Administrative Code. In addition, the containment building ~~must meet the requirements of~~ shall comply with paragraphs (B) and (C) of rule 3745-66-93 of the Administrative Code to be considered an acceptable secondary containment system for a tank.]

- (4) For existing units other than ninety-day generator units, the director may delay the secondary containment requirement for up to two years, based on a demonstration by the owner or operator that the unit substantially meets the standards of rules 3745-256-100 to 3745-256-102 of the Administrative Code. In making this demonstration, the owner or operator ~~must~~shall do all of the following:

- (a) Provide written notice to the director of ~~their~~the owner's or operator's request. This notification ~~must~~shall describe the unit and its operating practices with specific reference to the performance of existing containment systems, and specific plans for retrofitting the unit with secondary containment;;
- (b) Respond within thirty days to any comments from the director on these plans;~~and~~;
- (c) Fulfill the terms of the revised plans, if such plans are approved by the director.

(C) Owners or operators of all containment buildings ~~must~~shall do all of the following:

- (1) Use controls and practices to ensure containment of the hazardous waste within the unit;; and, at a minimum:

- (a) Maintain the primary barrier to be free of significant cracks, gaps, corrosion, or other deterioration that could cause hazardous waste to be released from the primary barrier;.
 - (b) Maintain the level of the ~~stored/treated~~stored or treated hazardous waste within the containment walls of the unit so that the height of any containment wall is not exceeded;.
 - (c) Take measures to prevent the tracking of hazardous waste out of the unit by personnel or by equipment used in handling the waste. An area ~~must~~shall be designated to decontaminate equipment and any rinsate ~~must~~shall be collected and properly managed; ~~and~~.
 - (d) Take measures to control fugitive dust emissions such that any openings (doors, windows, vents, cracks, etc.) exhibit no visible emissions. In addition, all associated particulate collection devices (e.g., fabric filter, electrostatic precipitator) ~~must~~shall be operated and maintained with sound air pollution control practices. This state of no visible emissions ~~must~~shall be maintained effectively at all times during normal operating conditions, including when vehicles and personnel are entering and exiting the unit.
- (2) Obtain and keep on-site a certification by a qualified professional engineer that the containment building design ~~meets the requirements of~~complies with paragraphs (A) to (C)(4) of this rule.
- (3) Throughout the active life of the containment building, if the owner or operator detects a condition that could lead to or has caused a release of hazardous waste, the owner or operator ~~must~~shall repair the condition promptly, in accordance with the following procedures:
- (a) Upon detection of a condition that has led to a release of hazardous waste (e.g., upon detection of leakage from the primary barrier) the owner or operator ~~must~~shall do all of the following:
 - (i) Enter a record of the discovery in the facility operating record;.

- (ii) Immediately remove from service the portion of the containment building affected by the condition;~~;~~
 - (iii) Determine what steps ~~must~~shall be taken to repair the containment building, remove any leakage from the secondary collection system, and establish a schedule for accomplishing the cleanup and repairs;~~and~~.
 - (iv) Within seven days after the discovery of the condition, notify the director of the condition, and within fourteen working days, provide a written plan to the director with a description of the steps taken to repair the containment building, and the schedule for accomplishing the work.
 - (b) The director will review the information submitted, make a determination regarding whether the containment building ~~must~~shall be completely or partially removed from service until repairs and cleanup are complete, and notify the owner or operator in writing of the determination and the underlying rationale.
 - (c) Upon completing all repairs and cleanup the owner or operator ~~must~~shall notify the director in writing and provide a verification, signed by a qualified professional engineer, that the repairs and cleanup have been completed according to the written plan submitted in accordance with paragraph (C)(3)(a)(iv) of this rule.
 - (4) Inspect and record in the facility's operating record, at least once every seven days, data gathered from monitoring equipment, leak detection equipment, the containment building, and the area immediately surrounding the containment building, to detect signs of releases of hazardous waste.
- (D) For a containment building that contains both areas with and without secondary containment, the owner or operator ~~must~~shall do all of the following:
- (1) Design and operate each area in accordance with ~~the requirements in~~ paragraphs (A) to (C)(4) of this rule;~~;~~
 - (2) Take measures to prevent the release of liquids or wet materials into areas without secondary containment;~~and~~.

- (3) Maintain in the facility's operating log a written description of the operating procedures used to maintain the integrity of areas without secondary containment.

- (E) Notwithstanding any other provision of rules 3745-256-100 to 3745-256-102 of the Administrative Code, the director may waive requirements for secondary containment for a permitted containment building where the owner or operator demonstrates that the only free liquids in the unit are limited amounts of dust suppression liquids required to meet occupational health and safety requirements, and where containment of managed wastes and liquids can be assured without a secondary containment system.

Effective:

Five Year Review (FYR) Dates: 07/01/2015

Certification

Date

Promulgated Under: 119.03
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RSFA Attachment A

Rule 3745-266-23 is amended as follows:		
Location	Change	Reason
(B)[Note]	remove "Note" and add "Comment"	a

- a Word choice correction. This amendment makes the phrase consistent with other locations of the similar phrase.

This rule is submitted for 5-year review upon proposal. A new review date will be assigned.

3745-266-23

Standards applicable to users of materials that are used in a manner that constitutes disposal.

- (A) Owners or operators of facilities that use recyclable materials in a manner that constitutes disposal are regulated under all applicable provisions of Chapters 3745-54, 3745-55, 3745-56, 3745-65, 3745-66, 3745-67, and 3745-270, and rules 3745-50-39, 3745-50-40 to 3745-50-235, 3745-57-02 to 3745-57-17, and 3745-68-01 to 3745-68-16 of the Administrative Code, 40 CFR Part 124, and the requirement to notify Ohio EPA or U.S. EPA of regulated waste activity. [These requirements do not apply to products which contain these recyclable materials under the provisions of paragraph (B) of rule 3745-266-20 of the Administrative Code.]
- (B) The use of waste or used oil or other material which is contaminated with dioxin or any other hazardous waste (other than a waste identified solely on the basis of ignitability) for dust suppression or road treatment is prohibited.

[~~Note~~Comment: See rules 3745-279-80 to 3745-279-82 of the Administrative Code for requirements regarding used oil used for dust suppression.]

Effective:

Five Year Review (FYR) Dates: 07/01/2015

Certification

Date

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Rule Amplifies: 3734.12
Prior Effective Dates: 01/30/1986, 12/30/1989, 12/07/2000, 12/07/2004,
02/16/2009

3745-266-100

1

Appendix ~~IA~~ IA to ~~Rule~~ rule 3745-266-100 of the Administrative Code

Lead-Bearing Materials That May Be Processed in Exempt Lead Smelters:

A. Exempt Lead-Bearing Materials When Generated Or Originally Produced By Lead-Associated Industries *

Acid ~~dump/fill~~dump or fill solids
Sump mud
Materials from laboratory analyses
Acid filters
Baghouse bags
Clothing (e.g., coveralls, aprons, shoes, hats, gloves)
Sweepings
Air filter bags and cartridges
Respiratory cartridge filters
Shop abrasives
Stacking boards
Waste shipping containers (e.g., cartons, bags, drums, cardboard)
Paper hand towels
Wiping rags and sponges
Contaminated pallets
Water treatment sludges, filter cakes, residues, and solids
Emission control dusts, sludges, filter cakes, residues, and solids from lead-associated industries (e.g., K069 and D008 wastes)
Spent grids, posts, and separators
Spent batteries
Lead oxide and lead oxide residues
Lead plates and groups
Spent battery cases, covers, and vents
Pasting belts
Water filter media
Cheesecloth from pasting rollers
Pasting additive bags
Asphalt paving materials

B. Exempt Lead-Bearing Materials When Generated or Originally Produced By Any Industry

Charging jumpers and clips
Platen abrasive
Fluff from lead wire and cable casings
Lead-based pigments and compounding pigment dust

- * Lead-associated industries are lead smelters, lead- acid battery manufacturing, and lead chemical manufacturing (e.g., manufacturing of lead oxide or other lead compounds).

~~{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."}~~

3745-266-100

1

Appendix ~~HB~~ to ~~Rule~~rule 3745-266-100 of the Administrative CodeNickel or Chromium-Bearing Materials That May Be Processed in
Exempt Nickel-Chromium Recovery Furnaces

- A. Exempt Nickel or Chromium-Bearing Materials when Generated by Manufacturers or Users of Nickel, Chromium, or Iron
- Baghouse bags
 - Raney nickel catalyst
 - Floor sweepings
 - Air filters
 - Electroplating bath filters
 - Wastewater filter media
 - Wood pallets
 - Disposable clothing (coveralls, aprons, hats, and gloves)
 - Laboratory samples and spent chemicals
 - Shipping containers and plastic liners from containers or vehicles used to transport nickel or chromium-containing wastes
 - Respirator cartridge filters
 - Paper hand towels
- B. Exempt Nickel or Chromium-Bearing Materials when Generated by Any Industry
- Electroplating wastewater treatment sludges (F006)
 - Nickel ~~and/or~~solutions and chromium-containing solutions
 - Nickel, chromium, and iron catalysts
 - Nickel-cadmium and nickel-iron batteries
 - Filter cake from wet scrubber system water treatment plants in the specialty steel industry*
 - Filter cake from nickel-chromium alloy pickling operations *

* If a hazardous waste under an authorized ~~State~~state program. (Ohio's program is authorized.)

~~{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."}~~

3745-266-100

1

Appendix ~~HHC~~ to ~~Rule~~rule 3745-266-100 of the Administrative CodeMercury Bearing Wastes That May Be Processed
in Exempt Mercury Recovery Units

These are exempt mercury-bearing materials with less than ~~500 ppm~~ five hundred parts per million of organic constituents in the appendix to rule 3745-51-11 of the Administrative Code when generated by manufacturers or users of mercury or mercury products.

1. Activated carbon
2. Decomposer graphite
3. Wood
4. Paper
5. Protective clothing
6. Sweepings
7. Respiratory cartridge filters
8. Cleanup articles
9. Plastic bags and other contaminated containers
10. Laboratory and process control samples
11. K106 and other wastewater treatment plant sludge and filter cake
12. Mercury cell sump and tank sludge
13. Mercury cell process solids
14. Recoverable levels of mercury contained in soil

~~[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."]~~

RSFA Attachment A

Rule 3745-266-100 is amended as follows:		
Location	Change	Reason
Text Amendments		
(A)	-add quotation marks around the defined term "boiler" -add quotation marks around the defined term "industrial furnace"	a
	in the parenthetical after "as" add "those terms are" before "defined"	b
(B)(1)	[2 times] remove "the standards of"	c
	remove "do" and add "does"	d
	remove "the effective date of this amendment;" and add "February 16, 2009,"	e
	-remove "apply" and add "applies" -remove "documenting" and add "that documents"	d
	remove "the requirements of"	c
(B)(2)(a) *	remove "you elect" and add "the owner or operator elects"	d, f
	-remove "requiring operations in accordance" and add "that requires compliance" -remove "requiring" and add "that requires"	c, d
	-remove "If you own or operate a boiler" and add "Boilers" -remove "furnace is an area source" and add "furnaces are area sources" -remove "and you" and add "for which owners or operators"	d, f
(B)(3)	after "chlorine" remove ", you also"	c, f, g
	remove the ending colon and add a semicolon [outside the quotation mark]	g
(B)(3)(a)	remove the ending colon and add a semicolon [outside the quotation mark]	g
(B)(3)(b)	after "emissions" add the closing quotation mark	g
(B)(3)(c)	-after "gas" add a period before the closing quotation mark -remove the period after the closing quotation mark	g, h
	remove "that" and add "for which owners or operators"	d
(C)(1)	remove the ending semicolon and add a period	g
(C)(2)	remove the ending semicolon and add a period	g

RSFA Attachment A

Rule 3745-266-100 is amended as follows:		
Location	Change	Reason
(C)(3)	remove the ending “; and” and add a period	c, g
(D)(1)	[3 times] remove “must” and add “shall”	i
	[2 times] remove “the requirements of”	c
(D)(1)(a)	remove “indicating” and add “that indicates”	d
(D)(1)(a)(ii)	remove “the provisions of”	c
(D)(1)(b)	remove “the requirements of”	c
(D)(1)(c)	remove “the provisions of”	c
	-after “toxic organic constituents and” add “British thermal unit” -add parentheses around the existing abbreviation “Btu”	g, h
(D)(2)	remove “meeting” and add “that meets”	d
(D)(2)(a)	remove “exceeding” and add “that exceeds”	d
	-after “five hundred” add “parts per million” -add parentheses around the existing abbreviation “ppm”	g, h
	remove “must” and add “shall”	i
(D)(2)(b)	remove “must” and add “shall”	i
(D)(3)	[3 times] remove “must” and add “shall”	i
	-remove “identifying” and add “that identifies” -remove “specifying” and add “that specifies”	d
	-remove “the requirements of” -remove “the requirements in”	c
(D)(3)(a)	after “appendices”: -remove “I” and add “A” -remove “II” and add “B” -remove “III” and add “C”	J
	remove “the requirements of”	c
(D)(3)(a)(i)	-after “appendix” remove “I” and add “A” -after “appendix” remove “II” and add “B” -after “appendix” remove “III” and add “C”	J
	[4 times] remove “must” and add “shall”	i

RSFA Attachment A

Rule 3745-266-100 is amended as follows:		
Location	Change	Reason
(D)(3)(a)(iv)	remove “the provisions of”	c
	[2 times] remove “must” and add “shall”	i
(D)(3)(b)	after “appendix”: -remove “I” and add “A” -remove “II” and add “B” -remove “III” and add “C”	J
	[2 times] remove “the requirements of”	c
(D)(3)(b)(i)	at the end remove “; and” and add a period	c, g
(D)(3)(b)(ii)	remove the ending “; and” and add a period	c, g
(D)(3)(b)(iii)	after “established in”: -remove “appendices I” and add “appendix A” -after “or” remove “II” and add “B”	J
(F)	remove “burning” and add “that burns”	d
(G)	remove “must” and add “shall”	i
(G)(1)	remove “indicating” and add “that indicates”	d
(H)	[2 times] remove “must” and add “shall”	i
	-remove “identifying” and add “that identifies” -remove “specifying” and add “that specifies”	d
	after “appendix” remove “I” and add “A”	J
text ending [Comment]	remove existing indented bracketed comment and add same comment not indented	k
Appendices’ Amendments		
Appendix I	in the appendix heading: -remove “I” and add “A” so that the title of the appendix is “Appendix A” -after “to” remove “Rule” [upper case] and add “rule” [lower case]	h
	in A. , 1 st row, after “Acid” remove “dump/fill” and add “dump or fill”	b
	remove the ending [Comment]	c

RSFA Attachment A

Rule 3745-266-100 is amended as follows:		
Location	Change	Reason
Appendix II	in the appendix heading: -remove "II" and add "B" so that the title of the appendix is "Appendix B" -after "to" remove "Rule" [upper case] and add "rule" [lower case]	h
	in B., after "Nickel" remove "and/or" and add "solutions and"	b, d
	in the footnote, remove "State" [upper case] and add "state" [lower case]	h
	remove the ending [Comment]	c
Appendix III	in the appendix heading: -remove "III" and add "C" so that the title of the appendix is "Appendix C" -after "to" remove "Rule" [upper case] and add "rule" [lower case]	h
	in the intro, remove "500 ppm" and add "five hundred parts per million"	h
	remove the ending [Comment]	c

- a This punctuation correction (adding quotation marks around defined terms) is made in all hazardous waste rules, as they are amended, at locations of defined terms that are designated as such in the text.
- b Word choice correction.
- c Unnecessary text is removed.
- d Grammar or sentence structure correction.
- e This amendment adds specificity to the rule.
- f This purpose of this amendment is to remove the term "you" from the text.
- g Punctuation correction.

RSFA Attachment A

Rule **3745-266-100** is amended as follows:

Location	Change	Reason
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- h LSC requirement.
- i The change of “must” to “shall” is an LSC requirement.
- J Cross-reference correction.
- k This amendment corrects the format/structure of the rule at this location.
- * This amendment is made, or changed, in response to a comment on the Interested Parties draft rule. In (B)(2)(a), the last sentence is not amended.

This rule is submitted for 5-year review upon proposal. A new review date will be assigned.

The appendices to this rule appear in a different font from most other rules at the request of LSC.

3745-266-100

Applicability- boilers and industrial furnaces.

(A) Rules 3745-266-100 to 3745-266-112 of the Administrative Code apply to hazardous waste burned or processed in a "boiler" or "industrial furnace" (as those terms are defined in rule 3745-50-10 of the Administrative Code) irrespective of the purpose of burning or processing, except as provided by paragraphs (B), (C), (D), (G), and (H) of this rule. In rules 3745-266-100 to 3745-266-112 of the Administrative Code, the term "burn" means burning for energy recovery or destruction, or processing for materials recovery or as an ingredient. The emissions standards of rules 3745-266-104, 3745-266-105, 3745-266-106, and 3745-266-107 of the Administrative Code apply to facilities operating under permit by rule or under an Ohio hazardous waste permit as specified in rules 3745-266-102 and 3745-266-103 of the Administrative Code.

(B) Integration of the MACT standards.

(1) Except as provided by paragraphs (B)(2), (B)(3), and (B)(4) of this rule, ~~the standards of Chapter 3745-266 of the Administrative Code do~~does not apply to a new hazardous waste boiler or industrial furnace unit that becomes subject to regulation under the hazardous waste permit requirements after ~~the effective date of this amendment~~February 16, 2009; or no longer ~~apply~~applies when an owner or operator of an existing hazardous waste boiler or industrial furnace unit demonstrates compliance with the maximum achievable control technology (MACT) requirements of 40 CFR Part 63 subpart EEE by conducting a comprehensive performance test and submitting to the director a notification of compliance under 40 CFR 63.1207(j) and 40 CFR 63.1210(d) ~~documenting that documents~~ compliance with the requirements of 40 CFR Part 63 subpart EEE. Nevertheless, even after this demonstration of compliance with the MACT standards, hazardous waste installation and operation permit conditions that were based on the standards of Chapter 3745-266 of the Administrative Code will continue to be in effect until they are removed from the permit, or the permit is revoked, unless the permit expressly provides otherwise.

(2) The following standards continue to apply:

(a) ~~If you elect~~the owner or operator elects to comply with paragraph (A)(1)(a) of rule 3745-50-235 of the Administrative Code to minimize emissions of toxic compounds from startup, shutdown, and malfunction events, paragraph (E)(1) of rule 3745-266-102 of the Administrative Code ~~requiring operations in accordance that requires compliance~~ with the operating requirements specified in the permit at all times that hazardous waste is in the unit, and paragraph (E)(2)(c) of rule 3745-266-102 of the Administrative Code ~~requiring that requires~~ compliance with the emission standards and operating requirements

during startup and shutdown if hazardous waste is in the combustion chamber, except for particular hazardous wastes. These provisions apply only during startup, shutdown, and malfunction events;

- (b) The closure requirements of paragraph (E)(11) of rule 3745-266-102 and paragraph (L) of rule 3745-266-103 of the Administrative Code;
 - (c) The standards for direct transfer of rule 3745-266-111 of the Administrative Code;
 - (d) The standards for regulation of residues of rule 3745-266-112 of the Administrative Code; and
 - (e) The applicable requirements of Chapters 3745-54 and 3745-65 and rules 3745-55-10 to 3745-55-20, 3745-55-40 to 3745-55-51, 3745-66-10 to 3745-66-21, and 3745-66-40 to 3745-66-48 of the Administrative Code, 40 CFR Part 264 subparts BB and CC, and 40 CFR Part 265 subparts BB and CC.
- (3) ~~If you own or operate a boiler~~ Boilers or hydrochloric acid production ~~furnace~~ furnaces that are area sources ~~that is an area source~~ and you for which owners or operators elect not to comply with the emission standards under 40 CFR 63.1216, 40 CFR 63.1217, and 40 CFR 63.1218 for particulate matter, semivolatile and low volatile metals, and total chlorine; ~~you also~~ remain subject to:
- (a) Rule 3745-266-105 of the Administrative Code titled "Standards to control particulate matter";
 - (b) Rule 3745-266-106 of the Administrative Code titled "Standards to control metal emissions_ except for mercury"; and
 - (c) Rule 3745-266-107 of the Administrative Code titled "Standards to control hydrogen chloride and chlorine gas";
- (4) The particulate matter standard of rule 3745-266-105 of the Administrative Code remains in effect for boilers ~~that~~ for which owners or operators elect to comply with the alternative to the particulate matter standard under 40 CFR 63.1216(e) and 40 CFR 63.1217(e).
- (C) The following hazardous wastes and facilities are not subject to regulation under rules 3745-266-100 to 3745-266-112 of the Administrative Code:

- (1) Used oil burned for energy recovery that is also a hazardous waste solely because it exhibits a characteristic of hazardous waste identified in rules 3745-51-20 to 3745-51-24 of the Administrative Code. Such used oil is subject to regulation under Chapter 3745-279 of the Administrative Code; ~~and~~.
 - (2) Gas recovered from hazardous or solid waste landfills when such gas is burned for energy recovery; ~~and~~.
 - (3) Hazardous wastes that are exempt from regulation under rule 3745-51-04 and paragraphs (A)(3)(c) and (A)(3)(d) of rule 3745-51-06 of the Administrative Code; ~~and~~.
 - (4) Coke ovens, if the only hazardous waste burned is EPA hazardous waste number K087, decanter tank tar sludge from coking operations.
- (D) Owners and operators of smelting, melting, and refining furnaces (including pyrometallurgical devices such as cupolas, sintering machines, roasters, and foundry furnaces, but not including cement kilns, aggregate kilns, or halogen acid furnaces burning hazardous waste) that process hazardous waste solely for metal recovery are conditionally exempt from regulation under rules 3745-266-100 to 3745-266-112 of the Administrative Code, except for rules 3745-266-101 and 3745-266-112 of the Administrative Code.
- (1) To be exempt from rules 3745-266-102 to 3745-266-111 of the Administrative Code, an owner or operator of a metal recovery furnace or mercury recovery furnace ~~must~~shall comply with the following requirements, except that an owner or operator of a lead or a nickel-chromium recovery furnace, or a metal recovery furnace that burns baghouse bags used to capture metallic dusts emitted by steel manufacturing, ~~must~~shall comply with ~~the requirements of~~ paragraph (D)(3) of this rule, and owners or operators of lead recovery furnaces that are subject to regulation under the secondary lead smelting "National Emissions Standards for Hazardous Air Pollutants" (NESHAP) ~~must~~shall comply with ~~the requirements of~~ paragraph (H) of this rule.
 - (a) Provide a one-time written notice to the director ~~indicating that indicates~~ all of the following:
 - (i) The owner or operator claims exemption under paragraph (D)(1) of this rule;
 - (ii) The hazardous waste is burned solely for metal recovery consistent with ~~the provisions of~~ paragraph (D)(2) of this rule;

- (iii) The hazardous waste contains recoverable levels of metals; and
 - (iv) The owner or operator will comply with the sampling and analysis and recordkeeping requirements of paragraphs (D) to (D)(3)(b)(iii) of this rule;
- (b) Sample and analyze the hazardous waste and other feedstocks as necessary to comply with ~~the requirements of~~ paragraphs (D) to (D)(3)(b)(iii) of this rule by using appropriate methods; and
 - (c) Maintain at the facility for at least three years records to document compliance with ~~the provisions of~~ paragraphs (D) to (D)(3)(b)(iii) of this rule including limits on levels of toxic organic constituents and British thermal unit (Btu) value of the waste, and levels of recoverable metals in the hazardous waste compared to normal nonhazardous waste feedstocks.
- (2) A hazardous waste ~~meeting that meets~~ either of the following criteria is not processed solely for metal recovery:
- (a) The hazardous waste has a total concentration of organic compounds listed in the appendix to rule 3745-51-11 of the Administrative Code ~~exceeding that exceeds~~ five hundred parts per million (ppm) by weight, as-fired, and so is considered to be burned for destruction. The concentration of organic compounds in a waste as-generated may be reduced to the five hundred ppm limit by bona fide treatment that removes or destroys organic constituents. Blending for dilution to meet the five hundred ppm limit is prohibited and documentation that the waste has not been impermissibly diluted ~~must~~shall be retained in the records required by paragraph (D)(1)(c) of this rule; or
 - (b) The hazardous waste has a heating value of five thousand Btu per pound or more, as-fired, and so is considered to be burned as fuel. The heating value of a waste as-generated may be reduced to below the five thousand Btu per pound limit by bona fide treatment that removes or destroys organic constituents. Blending for dilution to meet the five thousand Btu per pound limit is prohibited and documentation that the waste has not been impermissibly diluted ~~must~~shall be retained in the records required by paragraph (D)(1)(c) of this rule.
- (3) To be exempt from rules 3745-266-102 to 3745-266-111 of the Administrative Code, an owner or operator of a lead or nickel-chromium or mercury

recovery furnace (except for owners or operators of lead recovery furnaces subject to regulation under the secondary lead smelting NESHP) or a metal recovery furnace that burns baghouse bags used to capture metallic dusts emitted by steel manufacturing, mustshall provide a one-time written notice to the director ~~identifying that identifies~~ each hazardous waste burned and ~~specifying that specifies~~ whether the owner or operator claims an exemption for each waste under this paragraph or paragraph (D)(1) of this rule. The owner or operator mustshall comply with ~~the requirements of~~ paragraph (D)(1) of this rule for those wastes claimed to be exempt under paragraph (D)(1) of this rule and mustshall comply with ~~the requirements in~~ paragraphs (D)(3)(a) and (D)(3)(b) of this rule for those wastes claimed to be exempt under paragraphs (D)(3) to (D)(3)(b)(iii) of this rule.

- (a) The hazardous wastes listed in appendices IA, HB, and HIC to this rule and baghouse bags used to capture metallic dusts emitted by steel manufacturing are exempt from ~~the requirements of~~ paragraph (D)(1) of this rule, provided that:
- (i) A waste listed in appendix IA to this rule mustshall contain recoverable levels of lead, a waste listed in appendix HB to this rule mustshall contain recoverable levels of nickel or chromium, a waste listed in appendix HIC to this rule mustshall contain recoverable levels of mercury and contain less than five hundred ppm of organic constituents in the appendix to rule 3745-51-11 of the Administrative Code, and baghouse bags used to capture metallic dusts emitted by steel manufacturing mustshall contain recoverable levels of metal; and
 - (ii) The waste does not exhibit the toxicity characteristic of rule 3745-51-24 of the Administrative Code for an organic constituent; and
 - (iii) The waste is not a hazardous waste listed in rules 3745-51-30 to 3745-51-35 of the Administrative Code because it is listed for an organic constituent as identified in the appendix to rule 3745-51-30 of the Administrative Code; and

- (iv) The owner or operator certifies in the one-time notice that hazardous waste is burned under ~~the provisions of~~ paragraph (D)(3) of this rule and that sampling and analysis will be conducted or other information will be obtained as necessary to ensure continued compliance with these requirements. Sampling and analysis ~~must~~shall be conducted according to paragraph (D)(1)(b) of this rule and records to document compliance with paragraph (D)(3) of this rule ~~must~~shall be kept for at least three years.

- (b) The director may decide on a case-by-case basis that the toxic organic constituents in a material listed in appendix ~~IA, HB, or HC~~ to this rule that contains a total concentration of more than five hundred ppm toxic organic compounds listed in the appendix to rule 3745-51-11 of the Administrative Code, may pose a hazard to human health and the environment when burned in a metal recovery furnace exempt from ~~the requirements of~~ rules 3745-266-100 to 3745-266-112 of the Administrative Code. In that situation, after adequate notice and opportunity for comment, the metal recovery furnace will become subject to ~~the requirements of~~ rules 3745-266-100 to 3745-266-112 of the Administrative Code when burning that material. In making the hazard determination, the director will consider the following factors:
 - (i) The concentration and toxicity of organic constituents in the material;~~and,~~

 - (ii) The level of destruction of toxic organic constituents provided by the furnace;~~and,~~

 - (iii) Whether the acceptable ambient levels established in ~~appendices~~ Appendix A or HB to rule 3745-266-109 of the Administrative Code may be exceeded for any toxic organic compound that may be emitted based on dispersion modeling to predict the maximum annual average off-site ground level concentration.

- (E) The standards for direct transfer operations under rule 3745-266-111 of the Administrative Code apply only to facilities subject to the permit standards of rule 3745-266-102 of the Administrative Code or the interim standards of rule 3745-266-103 of the Administrative Code.

- (F) The management standards for residues under rule 3745-266-112 of the Administrative Code apply to any boiler or industrial furnace ~~burning~~that burns hazardous waste.
- (G) Owners and operators of smelting, melting, and refining furnaces (including pyrometallurgical devices such as cupolas, sintering machines, roasters, and foundry furnaces) that process hazardous waste for recovery of economically significant amounts of the precious metals gold, silver, platinum, palladium, iridium, osmium, rhodium, or ruthenium, or any combination of these are conditionally exempt from regulation under rules 3745-266-100 to 3745-266-112 of the Administrative Code, except for rule 3745-266-112 of the Administrative Code. To be exempt from rules 3745-266-101 to 3745-266-111 of the Administrative Code, an owner or operator ~~must~~shall:
- (1) Provide a one-time written notice to the director ~~indicating~~that indicates the following:
 - (a) The owner or operator claims exemption under paragraphs (G) to (G)(3) of this rule;
 - (b) The hazardous waste is burned for legitimate recovery of precious metal; and
 - (c) The owner or operator will comply with the sampling and analysis and recordkeeping requirements of paragraphs (G) to (G)(3) of this rule; and
 - (2) Sample and analyze the hazardous waste as necessary to document that the waste contains economically significant amounts of the metals and that the treatment recovers economically significant amounts of precious metals; and
 - (3) Maintain at the facility for at least three years records to document that all hazardous wastes burned are burned for recovery of economically significant amounts of precious metal.
- (H) Owners or operators of lead recovery furnaces that process hazardous waste for recovery of lead and that are subject to regulation under the secondary lead smelting NESHAP, are conditionally exempt from regulation under rules 3745-266-100 to 3745-266-112 of the Administrative Code, except for rule 3745-266-101 of the Administrative Code. To be exempt, an owner or operator ~~must~~shall provide a one-time notice to the director ~~identifying~~that identifies each hazardous waste burned and ~~specifying~~that specifies that the owner or operator

claims an exemption under this paragraph. The notice also ~~must~~shall state that the waste burned has a total concentration of non-metal compounds listed in the appendix to rule 3745-51-11 of the Administrative Code of less than five hundred ppm by weight, as fired and as provided in paragraph (D)(2)(a) of this rule, or is listed in appendix ~~I~~A to this rule.

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

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

Effective:

Five Year Review (FYR) Dates: 07/01/2015

Certification

Date

Promulgated Under: 119.03
Statutory Authority: 3734.12
Rule Amplifies: 3734.12
Prior Effective Dates: 12/07/2004, 02/16/2009

RSFA Attachment A

Rule 3745-266-102 is amended as follows:		
Location	Change	Reason
(A)(1)	remove "must" and add "shall"	a
	remove "the requirements of"	b
(A)(2)(a)	remove the ending semicolon and add a period	c
(A)(2)(b)	remove "3745-54-19" and add "3745-54-18"	d
	remove the ending semicolon and add a period	c
(A)(2)(c)	remove the ending semicolon and add a period	c
(A)(2)(d)	remove the ending semicolon and add a period	c
(A)(2)(e)	remove the ending semicolon and add a period	c
(A)(2)(f)	remove the ending semicolon and add a period	c
(A)(2)(g)	remove the ending semicolon and add a period	c
(A)(2)(h)	remove "the requirements of"	b
	remove the ending "; and" and add a period	b, c
(B)(1)	[6 times] remove "must" and add "shall"	a
	in 6 th sentence, remove "provisions of"	b
(B)(2)	remove "must" and add "shall"	a
(C)	remove "must" and add "shall"	a
	remove "provided by" and add "in"	e
(D)(3)	remove "procedures provided by"	b
(D)(4)	remove "must" and add "shall"	a
(D)(4)(a)	[2 times] remove "must" and add "shall"	a
(D)(4)(b)	[2 times] remove "must" and add "shall"	a
	remove the ending semicolon and add a period	c
(D)(4)(c)	remove "must" and add "shall"	a
(D)(4)(d)	remove "must" and add "shall"	a

RSFA Attachment A

Rule 3745-266-102 is amended as follows:		
Location	Change	Reason
(E)(1)	remove “must be operated in accordance” and add shall comply”	a, e
(E)(2)(a)	in 2 nd sentence, remove “provided by” and add “in”	e
(E)(2)(b)	remove “must” and add “shall”	a
(E)(2)(b)(i)	at the end, after “hundred” add “parts per million by volume	f
	-add parentheses around the existing acronym “(ppmv)”	c
	-remove the ending semicolon and add a period	
(E)(2)(b)(ii)	remove “defined” and add “described”	e
(E)(2)(c)	remove “chloride/chlorine” and add “chloride or chlorine”	e *
	remove “must” and add “shall”	a
(E)(3)(a)	remove “must” and add “shall”	a
(E)(3)(b)	remove “must” and add “shall”	a
(E)(3)(c)	remove “must” and add “shall”	a
(E)(4)(a)	remove “must” and add “shall”	a
(E)(4)(a)(i)	remove “provisions of”	b
(E)(4)(b)	remove “must” and add “shall”	a
(E)(6)(a)	[2 times] remove “must” and add “shall”	a
(E)(6)(a)(ii)(b)	remove “must” and add “shall”	a
(E)(6)(b)(i)	remove “must” and add “shall”	a
(E)(6)(b)(ii)	remove “must” and add “shall”	a
(E)(6)(b)(ii)(b)	after “selected averaging period is” remove “defined as”	b
(E)(6)(b)(iii)	remove “must” and add “shall”	a
(E)(6)(c)	remove “chloride/chlorine” and add “chloride or chlorine”	e *
	remove “must” and add “shall”	a
(E)(6)(d)(i)	remove “must” and add “shall”	a

RSFA Attachment A

Rule 3745-266-102 is amended as follows:		
Location	Change	Reason
(E)(6)(d)(ii)	remove “must” and add “shall”	a
(E)(6)(d)(iii)	[3 times] remove “must” and add “shall”	a
	remove “pollutant(s)” and add “pollutants”	e
	remove “chloride/chlorine” and add “chloride or chlorine”	e *
(E)(7)(a)	remove “must” and add “shall”	a
(E)(7)(b)	remove “must” and add “shall”	a
(E)(7)(b)(i)	remove “must” and add “shall”	a
(E)(7)(b)(ii)	remove “must” and add “shall”	a
(E)(7)(b)(iii)	[3 times] remove “must” and add “shall”	a
(E)(7)(c)	remove “must” and add “shall”	a
(E)(8)(a)	remove “must” and add “shall”	a
(E)(8)(a)(i)	remove the ending semicolon and add a period	c
(E)(8)(a)(ii)	remove “must” and add “shall”	a
(E)(8)(a)(iii)	remove “must” and add “shall”	a
(E)(8)(b)	remove “must” and add “shall”	a
(E)(8)(c)	remove “must” and add “shall”	a
(E)(8)(d)	[2 times] remove “must” and add “shall”	a
(E)(8)(e)	[2 times] remove “must” and add “shall”	a
(E)(9)	remove “must” and add “shall”	a
(E)(10)	remove “must” and add “shall”	a
(E)(11)	remove “must” and add “shall”	a

a LSC requirement.

b Unnecessary text is removed.

RSFA Attachment A

Rule **3745-266-102** is amended as follows:

Location	Change	Reason
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- c Punctuation correction.
- d Cross-reference correction.
- e Word choice correction.
- f The acronym is defined at its first use.
- * This amendment was made in response to a comment on the Interested Parties draft rule.

This rule is submitted for 5-year review upon proposal. A new review date will be assigned.

3745-266-102 **Permit standards for burners.**

(A) Applicability.

- (1) General. Owners and operators of boilers and industrial furnaces burning hazardous waste and not operating under permit by rule ~~must~~shall comply with ~~the requirements of~~ this rule, rule 3745-50-66, and paragraphs (C)(9) to (C)(9)(f) of rule 3745-50-44 of the Administrative Code, unless exempt under the small quantity burner exemption of rule 3745-266-108 of the Administrative Code.
- (2) Applicability of Chapters 3745-54 to 3745-57 and 3745-205 of the Administrative Code. Owners and operators of boilers and industrial furnaces that burn hazardous waste are subject to the following provisions, except as provided otherwise by rules 3745-266-100 to 3745-266-112 of the Administrative Code:
 - (a) Reserved;.
 - (b) Rules 3745-54-11 to ~~3745-54-19~~3745-54-18 of the Administrative Code (general facility standards);.
 - (c) Rules 3745-54-31 to 3745-54-37 of the Administrative Code (preparedness and prevention);.
 - (d) Rules 3745-54-51 to 3745-54-56 of the Administrative Code (contingency plan and emergency procedures);.
 - (e) The applicable provisions of rules 3745-54-71 to 3745-54-77 of the Administrative Code (manifest system, recordkeeping, and reporting);.
 - (f) Rules 3745-54-90 and 3745-54-101 of the Administrative Code (releases from waste management units);.
 - (g) Rules 3745-55-11 to 3745-55-15 of the Administrative Code (closure and post-closure);.

(h) Rules 3745-55-41, 3745-55-42, 3745-55-43, and 3745-55-47 to 3745-55-51 of the Administrative Code, except that states and the federal government are exempt from ~~the requirements of~~ rules 3745-55-40 to 3745-55-51 of the Administrative Code (financial requirements); ~~and~~.

(i) Reserved.

(B) Hazardous waste analysis.

(1) The owner or operator ~~must~~shall provide an analysis of the hazardous waste that quantifies the concentration of any constituent identified in the appendix to rule 3745-51-11 of the Administrative Code that may reasonably be expected to be in the waste. Such constituents ~~must~~shall be identified and quantified if present, at levels detectable by using appropriate analytical procedures. Alternative methods that meet or exceed the method performance capabilities of U.S. EPA publication SW-846 methods may be used. If U.S. EPA publication SW-846 does not prescribe a method for a particular determination, the owner or operator ~~must~~shall use the best available method. The constituents in the appendix to rule 3745-51-11 of the Administrative Code that are excluded from this analysis ~~must~~shall be identified and the basis for their exclusion explained. This analysis will be used to provide all information required by rules 3745-50-66 and 3745-266-100 to 3745-266-112 and paragraphs (C)(9) to (C)(9)(f) of rule 3745-50-44 of the Administrative Code and to enable the permit writer to prescribe such permit conditions as necessary to protect human health and the environment. Such analysis ~~must~~shall be included as a portion of the "Part B" permit application, or, for facilities operating under the interim standards of rules 3745-266-100 to 3745-266-112 of the Administrative Code, as a portion of the trial burn plan that may be submitted before the "Part B" application under ~~provisions of~~ paragraph (G) of rule 3745-50-66 of the Administrative Code as well as any other analysis required by the permit authority in preparing the permit. Owners and operators of boilers and industrial furnaces not operating under the interim standards ~~must~~shall provide the information required by paragraphs (C)(9) to (C)(9)(f) of rule 3745-50-44 or paragraph (C) of rule 3745-50-66 of the Administrative Code in the "Part B" application to the greatest extent possible.

(2) Throughout normal operation, the owner or operator ~~must~~shall conduct sampling and analysis as necessary to ensure that the hazardous waste, other fuels, and industrial furnace feedstocks fired into the boiler or industrial furnace are within the physical and chemical composition limits specified in the permit.

(C) Emissions standards. Owners and operators ~~must~~shall comply with emissions standards ~~provided by~~in rules 3745-266-104 to 3745-266-107 of the Administrative Code.

(D) Permits.

(1) The owner or operator may burn only hazardous wastes specified in the facility permit and only under the operating conditions specified under paragraph (E) of this rule, except in approved trial burns under the conditions specified in rule 3745-50-66 of the Administrative Code.

(2) Hazardous wastes not specified in the permit may not be burned until operating conditions have been specified under a new permit or permit modification, as applicable. Operating requirements for new wastes may be based on either trial burn results or alternative data included with "Part B" of a permit application under paragraphs (C)(9) to (C)(9)(f) of rule 3745-50-44 of the Administrative Code.

(3) Boilers and industrial furnaces operating under the interim standards of rule 3745-266-103 of the Administrative Code are permitted under ~~procedures provided by~~ paragraph (G) of rule 3745-50-66 of the Administrative Code.

(4) A permit for a new boiler or industrial furnace (those boilers and industrial furnaces not operating under the interim standards) ~~must~~shall establish appropriate conditions for each of the applicable requirements of this rule, including but not limited to allowable hazardous waste firing rates and operating conditions necessary to meet the requirements of paragraph (E) of this rule, in order to comply with the following standards:

(a) For the period beginning with initial introduction of hazardous waste and ending with initiation of the trial burn, and only for the minimum time required to bring the device to a point of operational readiness to conduct a trial burn, not to exceed a duration of seven hundred twenty hours operating time when burning hazardous waste, the operating requirements ~~must~~shall be those most likely to ensure compliance with the emission standards of rules 3745-266-104 to 3745-266-107 of the Administrative Code, based on Ohio EPA's engineering judgment. If the applicant is seeking a waiver from a trial burn to demonstrate conformance with a particular emission standard, the operating requirements during this initial period of operation ~~must~~shall include those specified by the applicable provisions of rule 3745-266-104, 3745-266-105, 3745-266-106, or 3745-266-107 of the Administrative

Code. The director may extend the duration of this period for up to seven hundred twenty additional hours when good cause for the extension is demonstrated by the applicant.

- (b) For the duration of the trial burn, the operating requirements ~~must~~shall be sufficient to demonstrate compliance with the emissions standards of rules 3745-266-104 to 3745-266-107 of the Administrative Code and ~~must~~shall be in accordance with the approved trial burn plan.
- (c) For the period immediately following completion of the trial burn, and only for the minimum period sufficient to allow sample analysis, data computation, submittal of the trial burn results by the applicant, review of the trial burn results and modification of the facility permit by the director to reflect the trial burn results, the operating requirements ~~must~~shall be those most likely to ensure compliance with the emission standards rules 3745-266-104 to 3745-266-107 of the Administrative Code based on Ohio EPA's engineering judgment.
- (d) For the remaining duration of the permit, the operating requirements ~~must~~shall be those demonstrated in a trial burn or by alternative data specified in paragraphs (C)(9) to (C)(9)(f) of rule 3745-50-44 of the Administrative Code, as sufficient to ensure compliance with the emissions standards of rules 3745-266-104 to 3745-266-107 of the Administrative Code.

(E) Operating requirements.

- (1) General. A boiler or industrial furnace burning hazardous waste ~~must be operated in accordance with~~shall comply with the operating requirements specified in the permit at all times there is hazardous waste in the unit.
- (2) Requirements to ensure compliance with the organic emissions standards.
 - (a) Destruction and removal efficiency (DRE) standard. Operating conditions will be specified either on a case-by-case basis for each hazardous waste burned as those demonstrated [in a trial burn or by alternative data as specified in paragraphs (C)(9) to (C)(9)(f) of rule 3745-50-44 of the Administrative Code] to be sufficient to comply with the DRE performance standard of paragraph (A) of rule 3745-266-104 of the Administrative Code or as those special operating requirements ~~provided by~~in paragraph (A)(4) of rule 3745-266-104 of the Administrative Code for the waiver of the DRE trial burn. When the DRE trial burn is not waived under paragraph (A)(4) of rule

3745-266-104 of the Administrative Code, each set of operating requirements will specify the composition of the hazardous waste (including acceptable variations in the physical and chemical properties of the hazardous waste which will not affect compliance with the DRE performance standard) to which the operating requirements apply. For each such hazardous waste, the permit will specify acceptable operating limits including, but not limited to, the following conditions as appropriate:

- (i) Feed rate of hazardous waste and other fuels measured and specified as prescribed in paragraph (E)(6) of this rule;
 - (ii) Minimum and maximum device production rate when producing normal product expressed in appropriate units, measured and specified as prescribed in paragraph (E)(6) of this rule;
 - (iii) Appropriate controls of the hazardous waste firing system;
 - (iv) Allowable variation in boiler and industrial furnace system design or operating procedures;
 - (v) Minimum combustion gas temperature measured at a location indicative of combustion chamber temperature, measured and specified as prescribed in paragraph (E)(6) of this rule;
 - (vi) An appropriate indicator of combustion gas velocity, measured and specified as prescribed in paragraph (E)(6) of this rule, unless documentation is provided under rule 3745-50-66 of the Administrative Code demonstrating adequate combustion gas residence time; and
 - (vii) Such other operating requirements as are necessary to ensure that the DRE performance standard paragraph (A) of rule 3745-266-104 of the Administrative Code is met.
- (b) Carbon monoxide and hydrocarbon standards. The permit ~~must~~shall incorporate a carbon monoxide limit and, as appropriate, a hydrocarbon limit as provided by paragraphs (B), (C), (D), (E), and (F) of rule 3745-266-104 of the Administrative Code. The permit limits will be specified as follows:

- (i) When complying with the carbon monoxide standard of paragraph (B)(1) of rule 3745-266-104 of the Administrative Code, the permit limit is one hundred parts per million by volume (ppmv).
 - (ii) When complying with the alternative carbon monoxide standard under paragraph (C) of rule 3745-266-104 of the Administrative Code, the permit limit for carbon monoxide is based on the trial burn and is established as the average over all valid runs of the highest hourly rolling average carbon monoxide level of each run, and the permit limit for hydrocarbon is twenty ppmv [as ~~defined~~described in paragraph (C)(1) of rule 3745-266-104 of the Administrative Code], except as provided in paragraph (F) of rule 3745-266-104 of the Administrative Code.
 - (iii) When complying with the alternative hydrocarbon limit for industrial furnaces under paragraph (F) of rule 3745-266-104 of the Administrative Code, the permit limit for hydrocarbon and carbon monoxide is the baseline level when hazardous waste is not burned as specified by paragraph (F) of rule 3745-266-104 of the Administrative Code.
- (c) Start-up and shut-down. During start-up and shut-down of the boiler or industrial furnace, hazardous waste [except waste fed solely as an ingredient under the "Tier I" (or "Adjusted Tier I") feed rate screening limits for metals and ~~chloride/chlorine~~chloride or chlorine, and except low risk waste exempt from the trial burn requirements under paragraph (A)(5) of rule 3745-266-104 and rules 3745-266-105, 3745-266-106, and 3745-266-107 of the Administrative Code] ~~must~~shall not be fed into the device unless the device is operating within the conditions of operation specified in the permit.

(3) Requirements to ensure conformance with the particulate standard.

- (a) Except as provided in paragraphs (E)(3)(b) and (E)(3)(c) of this rule, the permit ~~must~~shall specify the following operating requirements to ensure conformance with the particulate standard specified in rule 3745-266-105 of the Administrative Code:
 - (i) Total ash feed rate to the device from hazardous waste, other fuels, and industrial furnace feedstocks, measured and specified as prescribed in paragraph (E)(6) of this rule;

- (ii) Maximum device production rate when producing normal product expressed in appropriate units, and measured and specified as prescribed in paragraph (E)(6) of this rule;
 - (iii) Appropriate controls on operation and maintenance of the hazardous waste firing system and any air pollution control system;
 - (iv) Allowable variation in boiler and industrial furnace system design including any air pollution control system or operating procedures; and
 - (v) Such other operating requirements as are necessary to ensure that the particulate standard in paragraph (A) of rule 3745-266-105 of the Administrative Code is met.
- (b) Permit conditions to ensure conformance with the particulate matter standard ~~must~~shall not be provided for facilities exempt from the particulate matter standard under paragraph (B) of rule 3745-266-105 of the Administrative Code;
- (c) For cement kilns and light-weight aggregate kilns, permit conditions to ensure compliance with the particulate standard ~~must~~shall not limit the ash content of hazardous waste or other feed materials.
- (4) Requirements to ensure conformance with the metals emissions standard.
- (a) For conformance with the "Tier I" (or "Adjusted Tier I") metals feed rate screening limits of paragraph (B) or (E) of rule 3745-266-106 of the Administrative Code, the permit ~~must~~shall specify the following operating requirements:
- (i) Total feed rate of each metal in hazardous waste, other fuels, and industrial furnace feedstocks measured and specified under ~~provisions of~~ paragraph (E)(6) of this rule;
 - (ii) Total feed rate of hazardous waste measured and specified as prescribed in paragraph (E)(6) of this rule;
 - (iii) A sampling and metals analysis program for the hazardous waste, other fuels, and industrial furnace feedstocks;

- (b) For conformance with the "Tier II" metals emission rate screening limits under paragraph (C) of rule 3745-266-106 of the Administrative Code and the "Tier III" metals controls under paragraph (D) of rule 3745-266-106 of the Administrative Code, the permit ~~must~~shall specify the following operating requirements:
- (i) Maximum emission rate for each metal specified as the average emission rate during the trial burn;
 - (ii) Feed rate of total hazardous waste and pumpable hazardous waste, each measured and specified as prescribed in paragraph (E)(6)(a) of this rule;
 - (iii) Feed rate of each metal in the following feedstreams, measured and specified as prescribed in paragraph (E)(6) of this rule:
 - (a) Total feedstreams;
 - (b) Total hazardous waste feed; and
 - (c) Total pumpable hazardous waste feed;
 - (iv) Total feed rate of chlorine and chloride in total feedstreams measured and specified as prescribed in paragraph (E)(6) of this rule;
 - (v) Maximum combustion gas temperature measured at a location indicative of combustion chamber temperature, and measured and specified as prescribed in paragraph (E)(6) of this rule;
 - (vi) Maximum flue gas temperature at the inlet to the particulate matter air pollution control system measured and specified as prescribed in paragraph (E)(6) of this rule;
 - (vii) Maximum device production rate when producing normal product expressed in appropriate units and measured and specified as prescribed in paragraph (E)(6) of this rule;

- (viii) Appropriate controls on operation and maintenance of the hazardous waste firing system and any air pollution control system;
 - (ix) Allowable variation in boiler and industrial furnace system design including any air pollution control system or operating procedures; and
 - (x) Such other operating requirements as are necessary to ensure that the metals standards under paragraph (C) or (D) of rule 3745-266-106 of the Administrative Code are met.
- (c) For conformance with an alternative implementation approach approved by the director under paragraph (F) of rule 3745-266-106 of the Administrative Code, the permit will specify the following operating requirements:
- (i) Maximum emission rate for each metal specified as the average emission rate during the trial burn~~;~~
 - (ii) Feed rate of total hazardous waste and pumpable hazardous waste, each measured and specified as prescribed in paragraph (E)(6)(a) of this rule~~;~~
 - (iii) Feed rate of each metal in the following feedstreams, measured and specified as prescribed in paragraph (E)(6) of this rule:
 - (a) Total hazardous waste feed~~;~~~~and~~
 - (b) Total pumpable hazardous waste feed~~;~~
 - (iv) Total feed rate of chlorine and chloride in total feedstreams measured and specified prescribed in paragraph (E)(6) of this rule~~;~~
 - (v) Maximum combustion gas temperature measured at a location indicative of combustion chamber temperature, and measured and specified as prescribed in paragraph (E)(6) of this rule;

- (vi) Maximum flue gas temperature at the inlet to the particulate matter air pollution control system measured and specified as prescribed in paragraph (E)(6) of this rule;
 - (vii) Maximum device production rate when producing normal product expressed in appropriate units and measured and specified as prescribed in paragraph (E)(6) of this rule;
 - (viii) Appropriate controls on operation and maintenance of the hazardous waste firing system and any air pollution control system;
 - (ix) Allowable variation in boiler and industrial furnace system design including any air pollution control system or operating procedures; and
 - (x) Such other operating requirements as are necessary to ensure that the metals standards under paragraph (C) or (D) of rule 3745-266-106 of the Administrative Code are met.
- (5) Requirements to ensure conformance with the hydrogen chloride and chlorine gas standards.
- (a) For conformance with the "Tier I" total chloride and chlorine feed rate screening limits of paragraph (B)(1) of rule 3745-266-107 of the Administrative Code, the permit will specify the following operating requirements:
 - (i) Feed rate of total chloride and chlorine in hazardous waste, other fuels, and industrial furnace feedstocks measured and specified as prescribed in paragraph (E)(6) of this rule;
 - (ii) Feed rate of total hazardous waste measured and specified as prescribed in paragraph (E)(6) of this rule;
 - (iii) A sampling and analysis program for total chloride and chlorine for the hazardous waste, other fuels, and industrial furnace feedstocks;

(b) For conformance with the "Tier II" hydrogen chloride and chlorine gas, emission rate screening limits under paragraph (B)(2) of rule 3745-266-107 of the Administrative Code and the "Tier III" hydrogen chloride and chlorine gas controls under paragraph (C) of rule 3745-266-107 of the Administrative Code, the permit will specify the following operating requirements:

- (i) Maximum emission rate for hydrogen chloride and chlorine gas specified as the average emission rate during the trial burn;
- (ii) Feed rate of total hazardous waste measured and specified as prescribed in paragraph (E)(6) of this rule;
- (iii) Total feed rate of chlorine and chloride in total feedstreams, measured and specified as prescribed in paragraph (E)(6) of this rule;
- (iv) Maximum device production rate when producing normal product expressed in appropriate units, measured and specified as prescribed in paragraph (E)(6) of this rule;
- (v) Appropriate controls on operation and maintenance of the hazardous waste firing system and any air pollution control system;
- (vi) Allowable variation in boiler and industrial furnace system design including any air pollution control system or operating procedures; and
- (vii) Such other operating requirements as are necessary to ensure that the hydrogen chloride and chlorine gas standards under paragraph (B)(2) or (C) of rule 3745-266-107 of the Administrative Code are met.

(6) Measuring parameters and establishing limits based on trial burn data.

- (a) General requirements. As specified in paragraphs (E)(2) to (E)(5) of this rule, each operating parameter ~~must~~shall be measured, and permit limits on the parameter ~~must~~shall be established, according to either of the following procedures:

- (i) Instantaneous limits. A parameter may be measured and recorded on an instantaneous basis (i.e., the value that occurs at any time) and the permit limit specified as the time-weighted average during all valid runs of the trial burn; or
- (ii) Hourly rolling average.
 - (a) The limit for a parameter may be established and continuously monitored on an hourly rolling average basis defined as follows:
 - (i) A continuous monitor is one which continuously samples the regulated parameter without interruption, and evaluates the detector response at least once each fifteen seconds, and computes and records the average value at least every sixty seconds.
 - (ii) An hourly rolling average is the arithmetic mean of the sixty most recent one-minute average values recorded by the continuous monitoring system.
 - (b) The permit limit for the parameter ~~must~~shall be established based on trial burn data as the average over all valid test runs of the highest hourly rolling average value for each run.
- (b) Rolling average limits for carcinogenic metals and lead. Feed rate limits for the carcinogenic metals (i.e., arsenic, beryllium, cadmium, and chromium) and lead may be established either on an hourly rolling average basis as prescribed by paragraph (E)(6)(a) of this rule or on (up to) a twenty-four hour rolling average basis. If the owner or operator elects to use an average period from two to twenty-four hours:
 - (i) The feed rate of each metal ~~must~~shall be limited at any time to ten times the feed rate that would be allowed on an hourly rolling average basis;
 - (ii) The continuous monitor ~~must~~shall meet the following specifications:

- (a) A continuous monitor is one which continuously samples the regulated parameter without interruption, and evaluates the detector response at least once each fifteen seconds, and computes and records the average value at least every sixty seconds.
- (b) The rolling average for the selected averaging period is ~~defined as~~ the arithmetic mean of one hour block averages for the averaging period. A one hour block average is the arithmetic mean of the one minute averages recorded during the sixty-minute period beginning at one minute after the beginning of the preceding clock hour; and
- (iii) The permit limit for the feed rate of each metal ~~must~~shall be established based on trial burn data as the average over all valid test runs of the highest hourly rolling average feed rate for each run.
- (c) Feed rate limits for metals, total chloride and chlorine, and ash. Feed rate limits for metals, total chlorine and chloride, and ash are established and monitored by knowing the concentration of the substance i.e., metals, ~~chloride/chlorine~~chloride or chlorine, and ash) in each feedstream and the flow rate of the feedstream. To monitor the feed rate of these substances, the flow rate of each feedstream ~~must~~shall be monitored under the continuous monitoring requirements of paragraphs (E)(6)(a) and (E)(6)(b) of this rule.
- (d) Conduct of trial burn testing.
- (i) If compliance with all applicable emissions standards of rules 3745-266-104 to 3745-266-107 of the Administrative Code is not demonstrated simultaneously during a set of test runs, the operating conditions of additional test runs required to demonstrate compliance with remaining emissions standards ~~must~~shall be as close as possible to the original operating conditions.
- (ii) Prior to obtaining test data for purposes of demonstrating compliance with the emissions standards of rules 3745-266-104 to 3745-266-107 of the Administrative Code or establishing limits on operating parameters under this rule, the facility ~~must~~shall operate under trial burn conditions for a sufficient period to reach

steady-state operations. The director may determine, however, that industrial furnaces that recycle collected particulate matter back into the furnace and that comply with an alternative implementation approach for metals under paragraph (F) of rule 3745-266-106 of the Administrative Code need not reach steady state conditions with respect to the flow of metals in the system prior to beginning compliance testing for metals emissions.

- (iii) Trial burn data on the level of an operating parameter for which a limit ~~must~~shall be established in the permit ~~must~~shall be obtained during emissions sampling for the ~~pollutant(s)~~pollutants (i.e., metals, particulate matter, hydrogen ~~chloride~~/~~chlorine~~chloride or chlorine gas, organic compounds) for which the parameter ~~must~~shall be established as specified by paragraph (E) of this rule.

(7) General requirements.

- (a) Fugitive emissions. Fugitive emissions ~~must~~shall be controlled by:

- (i) Keeping the combustion zone totally sealed against fugitive emissions; or
- (ii) Maintaining the combustion zone pressure lower than atmospheric pressure; or
- (iii) An alternate means of control demonstrated (with "Part B" of the permit application) to provide fugitive emissions control equivalent to maintenance of combustion zone pressure lower than atmospheric pressure.

- (b) Automatic waste feed cutoff. A boiler or industrial furnace ~~must~~shall be operated with a functioning system that automatically cuts off the hazardous waste feed when operating conditions deviate from those established under this rule. The director may limit the number of cutoffs per an operating period on a case-by-case basis. In addition:

- (i) The permit limit for (the indicator of) minimum combustion chamber temperature ~~must~~shall be maintained while hazardous waste or hazardous waste residues remain in the combustion chamber;

- (ii) Exhaust gases ~~must~~shall be ducted to the air pollution control system operated in accordance with the permit requirements while hazardous waste or hazardous waste residues remain in the combustion chamber; and
 - (iii) Operating parameters for which permit limits are established ~~must~~shall continue to be monitored during the cutoff, and the hazardous waste feed ~~must~~shall not be restarted until the levels of those parameters comply with the permit limits. For parameters that may be monitored on an instantaneous basis, the director will establish a minimum period of time after a waste feed cutoff during which the parameter ~~must~~shall not exceed the permit limit before the hazardous waste feed may be restarted.
- (c) Changes. A boiler or industrial furnace ~~must~~shall cease burning hazardous waste when changes in combustion properties, or feed rates of the hazardous waste, other fuels, or industrial furnace feedstocks, or changes in the boiler or industrial furnace design or operating conditions deviate from the limits as specified in the permit.
- (8) Monitoring and inspections.
- (a) The owner or operator ~~must~~shall monitor and record the following, at a minimum, while burning hazardous waste:
 - (i) If specified by the permit, feed rates and composition of hazardous waste, other fuels, and industrial furnace feedstocks, and feed rates of ash, metals, and total chloride and chlorine;
 - (ii) If specified by the permit, carbon monoxide, hydrocarbons, and oxygen on a continuous basis at a common point in the boiler or industrial furnace downstream of the combustion zone and prior to release of stack gases to the atmosphere in accordance with operating requirements specified in paragraph (E)(2)(b) of this rule. Carbon monoxide, hydrocarbons, and oxygen monitors ~~must~~shall be installed, operated, and maintained in accordance with methods specified in the appendix to rule 3745-266-103 of the Administrative Code.

- (iii) Upon the request of the director, sampling and analysis of the hazardous waste (and other fuels and industrial furnace feedstocks as appropriate), residues, and exhaust emissions mustshall be conducted to verify that the operating requirements established in the permit achieve the applicable standards of rules 3745-266-104, 3745-266-105, 3745-266-106, and 3745-266-107 of the Administrative Code.
 - (b) All monitors mustshall record data in units corresponding to the permit limit unless otherwise specified in the permit.
 - (c) The boiler or industrial furnace and associated equipment (pumps, valves, pipes, fuel storage tanks, etc.) mustshall be subjected to thorough visual inspection when it contains hazardous waste, at least daily for leaks, spills, fugitive emissions, and signs of tampering.
 - (d) The automatic hazardous waste feed cutoff system and associated alarms mustshall be tested at least once every seven days when hazardous waste is burned to verify operability, unless the applicant demonstrates to the director that weekly testing will unduly restrict or upset operations and that less frequent inspections will be adequate. At a minimum, operational testing mustshall be conducted at least once every thirty days.
 - (e) These monitoring and inspection data mustshall be recorded and the records mustshall be placed in the operating record required by rule 3745-54-73 of the Administrative Code.
- (9) Direct transfer to the burner. If hazardous waste is directly transferred from a transport vehicle to a boiler or industrial furnace without the use of a storage unit, the owner and operator mustshall comply with rule 3745-266-111 of the Administrative Code.
- (10) Recordkeeping. The owner or operator mustshall maintain in the operating record of the facility all information and data required by this rule for five years.
- (11) Closure. At closure, the owner or operator mustshall remove all hazardous waste and hazardous waste residues (including, but not limited to, ash, scrubber waters, and scrubber sludges) from the boiler or industrial furnace.

[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:

Five Year Review (FYR) Dates: 07/01/2015

Certification

Date

Promulgated Under: 119.03
Statutory Authority: 3734.12
Rule Amplifies: 3734.12
Prior Effective Dates: 12/07/2004, 02/16/2009, 09/05/2010

RSFA Attachment A

Rule 3745-266-104 is amended as follows:		
Location	Change	Reason
(A)(1)	[2 times] remove "must" and add "shall"	a
	remove "destruction and removal efficiency" [the acronym is defined in (A)]	b
	remove the parentheses around "DRE"	c
(A)(2)	[3 times] remove "must" and add "shall"	a
(A)(3)	[3 times] remove "must" and add "shall"	a
(A)(5)	remove "the requirements of"	b
(B)(2)	remove "must" and add "shall"	a
(B)(3)	[2 times] remove "must" and add "shall"	a
(C)(2)	remove "must" and add "shall"	a
(C)(3)	[2 times] remove "must" and add "shall"	a
(D)	remove "must" and add "shall"	a
(E)	remove "must" and add "shall"	a
(E)(1)	in the parenthetical, remove "CDDs/CDFs" and add "CDDs and CDFs"	d
(E)(2)	-in 1 st sentence, remove "CDDs/CDFs" and add "CDDs and CDFs"	d
	-in 2 nd sentence remove "CDD/CDF" and add "CDD and CDF"	
(E)(3)	remove "must" and add "shall"	a
(E)(4)	after "appendix" remove "II" and add "B"	e
	remove "must" and add "shall"	a
(F)	add "both" before the colon	f
(F)(1)	remove the ending "; and" and add a period	b, c
(G)	remove "the requirements of"	b
	[2 times] remove "must" and add "shall"	a
	remove "CDD/CDF" and add "CDD and CDF"	d

RSFA Attachment A

Rule 3745-266-104 is amended as follows:		
Location	Change	Reason
(H)	remove “the requirements of”	b

- a The change of “must” to “shall” is an LSC requirement.
- b Unnecessary text is removed.
- c Punctuation correction.
- d Word choice correction.
- e Cross-reference correction.
- f This amendment adds specificity to the provision.

This rule appears in a different font than most other rules at the request of LSC.

This rule is submitted for 5-year review upon proposal. A new review date will be assigned.

3745-266-104

Standards to control organic emissions.

(A) Destruction and removal efficiency (DRE) standard.

- (1) General. Except as provided in paragraph (A)(3) of this rule, a boiler or industrial furnace burning hazardous waste ~~must~~shall achieve a ~~destruction and removal efficiency (DRE)~~DRE of 99.99 per cent for all organic hazardous constituents in the waste feed. To demonstrate conformance with this requirement, 99.99 per cent DRE ~~must~~shall be demonstrated during a trial burn for each principal organic hazardous constituent (POHC) designated [under paragraph (A)(2) of this rule] in its permit for each waste feed. DRE is determined for each POHC from the following equation:

$$DRE = 1 [1 - (W_{out} / W_{in})] \times 100$$

where:

Win = mass feed rate of one POHC in the hazardous waste fired to the boiler or industrial furnace; and

Wout = mass emission rate of the same POHC present in stack gas prior to release to the atmosphere.

- (2) Designation of POHCs. POHCs are those compounds for which compliance with the DRE requirements of this rule ~~must~~ shall be demonstrated in a trial burn in conformance with procedures prescribed in rule 3745-50-66 of the Administrative Code. One or more POHCs ~~must~~shall be designated by the director for each waste feed to be burned. POHCs ~~must~~shall be designated based on the degree of difficulty of destruction of the organic constituents in the waste and on their concentrations or mass in the waste feed considering the results of waste analyses submitted with "Part B" of the permit application. POHCs are most likely to be selected from among those compounds listed in the appendix to rule 3745-51-11 of the Administrative Code that are also present in the normal waste feed. However, if the applicant demonstrates to the director's satisfaction that a compound not listed in the appendix to rule 3745-51-11 of the Administrative Code or not present in the normal waste feed is a suitable indicator of compliance with the DRE requirements of this rule, that compound may be designated as a POHC. Such POHCs need not be toxic or organic compounds.

- (3) Dioxin-listed waste. A boiler or industrial furnace burning hazardous waste containing (or derived from) EPA hazardous waste numbers F020, F021, F022, F023, F026, or F027 ~~must~~shall achieve a DRE of 99.9999 per cent for each POHC designated [under paragraph (A)(2) of this rule] in its permit. This performance ~~must~~shall be demonstrated on POHCs that are more difficult to burn than tetra-, penta-, and hexachlorodibenzo-p-dioxins and dibenzofurans. DRE is determined for each POHC from the equation in paragraph (A)(1) of this rule. In addition, the owner or operator of the boiler or industrial furnace ~~must~~shall notify the director of intent to burn EPA hazardous waste numbers F020, F021, F022, F023, F026, or F027.
- (4) Automatic waiver of DRE trial burn. Owners and operators of boilers operated under the special operating requirements provided by rule 3745-266-110 of the Administrative Code are considered to be in compliance with the DRE standard of paragraph (A)(1) of this rule and are exempt from the DRE trial burn.
- (5) Low risk waste. Owners and operators of boilers or industrial furnaces that burn hazardous waste in compliance with ~~the requirements of~~ paragraph (A) of rule 3745- 266-109 of the Administrative Code are considered to be in compliance with the DRE standard of paragraph (A)(1) of this rule and are exempt from the DRE trial burn.

(B) Carbon monoxide standard.

- (1) Except as provided in paragraph (C) of this rule, the stack gas concentration of carbon monoxide from a boiler or industrial furnace burning hazardous waste cannot exceed one hundred parts per million by volume (ppmv) on an hourly rolling average basis (i.e., over any sixty minute period), continuously corrected to seven per cent oxygen, dry gas basis.
- (2) Carbon monoxide and oxygen ~~must~~shall be continuously monitored in conformance with "Performance Specifications for Continuous Emission Monitoring of Hydrocarbons for Incinerators, Boilers, and Industrial Furnaces Burning Hazardous Waste" in the appendix to rule 3745-266-103 of the Administrative Code.

- (3) Compliance with the one hundred ppmv carbon monoxide limit ~~must~~shall be demonstrated during the trial burn (for new facilities or a permit by rule facility applying for a permit) or the compliance test (for permit by rule facilities). To demonstrate compliance, the highest hourly rolling average carbon monoxide level during any valid run of the trial burn or compliance test ~~must~~shall not exceed one hundred ppmv.

(C) Alternative carbon monoxide standard.

- (1) The stack gas concentration of carbon monoxide from a boiler or industrial furnace burning hazardous waste may exceed the one hundred ppmv limit provided that stack gas concentrations of hydrocarbons do not exceed twenty ppmv, except as provided by paragraph (F) of this rule for certain industrial furnaces.
 - (2) Hydrocarbon limits ~~must~~shall be established under this rule on an hourly rolling average basis (i.e., over any sixty minute period), reported as propane, and continuously corrected to seven per cent oxygen, dry gas basis.
 - (3) Hydrocarbons ~~must~~shall be continuously monitored in conformance with "Performance Specifications for Continuous Emission Monitoring of Hydrocarbons for Incinerators, Boilers, and Industrial Furnaces Burning Hazardous Waste" in the appendix to rule 3745-266-103 of the Administrative Code. Carbon monoxide and oxygen ~~must~~shall be continuously monitored in conformance with paragraph (B)(2) of this rule.
 - (4) The alternative carbon monoxide standard is established based on carbon monoxide data during the trial burn (for a new facility) and the compliance test (for a permit by rule facility). The alternative carbon monoxide standard is the average over all valid runs of the highest hourly average carbon monoxide level for each run. The carbon monoxide limit is implemented on an hourly rolling average basis, and continuously corrected to seven per cent oxygen, dry gas basis.
- (D) Special requirements for furnaces. Owners and operators of industrial furnaces (e.g., kilns, cupolas) that feed hazardous waste for a purpose other than solely as an ingredient [see paragraph (A)(5)(b) of rule 3745-266-103 of the Administrative Code] at any location other than the end where products are normally discharged and where fuels are normally fired ~~must~~shall comply with the hydrocarbon limits provided by paragraph (C) or (F) of this rule irrespective of whether stack gas carbon monoxide concentrations meet the one hundred ppmv limit of paragraph (B) of this rule.

- (E) Controls for dioxins and furans. Owners and operators of boilers and industrial furnaces that are equipped with a dry particulate matter control device that operates within the temperature range of four hundred fifty to seven hundred fifty degrees Fahrenheit, and industrial furnaces operating under an alternative hydrocarbon limit established under paragraph (F) of this rule ~~must~~shall conduct a site-specific risk assessment as follows to demonstrate that emissions of chlorinated dibenzo-p-dioxins and dibenzofurans do not result in an increased lifetime cancer risk to the hypothetical maximum exposed individual exceeding one in one hundred thousand:
- (1) During the trial burn (for new facilities or a permit by rule facility applying for a permit) or compliance test (for permit by rule facilities), determine emission rates of the tetra- to octa- congeners of chlorinated dibenzo-p-dioxins and dibenzofurans (~~CDDs/CDFs~~)(CDDs and CDFs) using method 0023A, "Sampling Method for Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans Emissions from Stationary Sources," U.S. EPA publication SW-846.
 - (2) Estimate the 2,3,7,8-TCDD toxicity equivalence of the tetra- to octa- ~~CDDs/CDFs~~CDDs and CDFs congeners using "Procedures for Estimating the Toxicity Equivalence of Chlorinated Dibenzo-p-dioxin and Dibenzofuran Congeners" in the appendix to rule 3745-266- 103 of the Administrative Code. Multiply the emission rates of ~~CDD/CDF~~CDD and CDF congeners with a toxicity equivalence greater than zero (see the procedure) by the calculated toxicity equivalence factor to estimate the equivalent emission rate of 2,3,7,8-TCDD;
 - (3) Conduct dispersion modeling using methods recommended in 40 CFR Part 51 appendix W ["Guideline on Air Quality Models (Revised)" and its supplements], the "Hazardous Waste Combustion Air Quality Screening Procedure," provided in the appendix to rule 3745-266-103 of the Administrative Code, or in "Screening Procedures for Estimating the Air Quality Impact of Stationary Sources, Revised" to predict the maximum annual average off-site ground level concentration of 2,3,7,8-TCDD equivalents determined under paragraph (E)(2) of this rule. The maximum annual average concentration ~~must~~shall be used when a person resides on-site; and
 - (4) The ratio of the predicted maximum annual average ground level concentration of 2,3,7,8-TCDD equivalents to the risk-specific dose for 2,3,7,8-TCDD provided in appendix ~~HB~~ to rule 3745-266-109 of the Administrative Code (2.2×10^{-7}) ~~must~~shall not exceed 1.0.

- (F) Monitoring carbon monoxide and hydrocarbons in the by-pass duct of a cement kiln. Cement kilns may comply with the carbon monoxide and hydrocarbon limits provided by paragraphs (B), (C), and (D) of this rule by monitoring in the by-pass duct provided that both:
- (1) Hazardous waste is fired only into the kiln and not at any location downstream from the kiln exit relative to the direction of gas flow; ~~and~~.
 - (2) The by-pass duct diverts a minimum of ten per cent of kiln off-gas into the duct.
- (G) Use of emissions test data to demonstrate compliance and establish operating limits. Compliance with ~~the requirements of~~ this rule ~~must~~shall be demonstrated simultaneously by emissions testing or during separate runs under identical operating conditions. Further, data to demonstrate compliance with the carbon monoxide and hydrocarbon limits of this rule or to establish alternative carbon monoxide or hydrocarbon limits under this rule ~~must~~shall be obtained during the time that DRE testing, and where applicable, ~~CDD/CDF~~CDD and CDF testing under paragraph (E) of this rule and comprehensive organic emissions testing under paragraph (F) of this rule is conducted.
- (H) Enforcement. For the purposes of permit enforcement, compliance with the operating requirements specified in the permit (under rule 3745-266-102 of the Administrative Code) will be regarded as compliance with this rule. However, evidence that compliance with those permit conditions is insufficient to ensure compliance with ~~the requirements of~~ this rule may be information justifying modification of a permit under rule 3745-50-51 of the Administrative Code.

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

Effective:

Five Year Review (FYR) Dates: 07/01/2015

Certification

Date

Promulgated Under: 119.03
Statutory Authority: 3734.12
Rule Amplifies: 3734.12
Prior Effective Dates: 12/07/2004, 09/05/2010, 03/17/2012

RSFA Attachment A

Rule 3745-266-105 is amended as follows:		
Location	Change	Reason
(B)	remove "meeting the requirements of" and add "in compliance with"	a
(C)(1)	remove "must" and add "shall"	b
	-in the "Pc is" line, remove the ending comma and add a period -in the "Pm is" line, remove the ending comma and add a period	c
	in the "E is" line, remove the ending ", and" and add a period	c, d
(C)(3)	remove "must" and add "shall"	b
(D)	remove "the requirements of"	d

- a This sentence is slightly re-written to correct the verb and to make the wording more consistent with the same phrase throughout the hazardous waste rules.
- b The change of "must" to "shall" is an LSC requirement.
- c Punctuation correction.
- d Unnecessary text is removed.

This rule is submitted for 5-year review upon proposal. A new review date will be assigned.

3745-266-105

Standards to control particulate matter.

(A) A boiler or industrial furnace burning hazardous waste may not emit particulate matter in excess of one hundred eighty milligrams per dry standard cubic meter (0.08 grains per dry standard cubic foot) after correction to a stack gas concentration of seven per cent oxygen, using procedures prescribed in 40 CFR Part 60, appendix A, methods 1 to 5, and the appendix to rule 3745-266-103 of the Administrative Code.

(B) An owner or operator ~~meeting the requirements of~~ in compliance with paragraph (B) of rule 3745-266-109 of the Administrative Code for the low risk waste exemption is exempt from the particulate matter standard.

(C) Oxygen correction.

(1) Measured pollutant levels ~~must~~shall be corrected for the amount of oxygen in the stack gas according to the formula:

$$P_c = P_m \times 14 / (E - Y)$$

where:

P_c is the corrected concentration of the pollutant in the stack gas,

P_m is the measured concentration of the pollutant in the stack gas,

E is the oxygen concentration on a dry basis in the combustion air fed to the device, ~~and~~

Y is the measured oxygen concentration on a dry basis in the stack.

(2) For devices that feed normal combustion air, E will equal twenty-one per cent. For devices that feed oxygen-enriched air for combustion (that is, air with an oxygen concentration exceeding twenty-one per cent), the value of E will be the concentration of oxygen in the enriched air.

(3) Compliance with all emission standards provided by rules 3745-266-100 to 3745-266-112 of the Administrative Code ~~must~~shall be based on correcting to seven per cent oxygen using this procedure.

(D) For the purposes of permit enforcement, compliance with the operating requirements specified in the permit (under rule 3745-266-102 of the Administrative Code) will be regarded as compliance with this rule. However, evidence that compliance with those permit conditions is insufficient to ensure compliance with ~~the requirements~~ of this rule may be information justifying modification of a permit under rule 3745-50-51 of the Administrative Code.

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

Effective:

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Statutory Authority: 3734.12
Rule Amplifies: 3734.12
Prior Effective Dates: 12/07/2004

3745-266-106

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Appendix IA to rule 3745-266-106 of the Administrative Code

Stack Plume Rise

Estimated Plume Rise (in Meters) Based on Stack Exit Flow Rate and Gas Temperature

Flow rate (m ³ /s)	Exhaust Temperature (KE)										
	< 325	325- 349	350- 399	400- 449	450- 499	500- 599	600- 699	700- 799	800- 999	1000- 1499	> 1499
< 0.5	0	0	0	0	0	0	0	0	0	0	0
0.5 - 0.9	0	0	0	0	0	0	0	0	1	1	1
1.0 - 1.9	0	0	0	0	1	1	2	3	3	3	4
2.0 - 2.9	0	0	1	3	4	4	6	6	7	8	9
3.0 - 3.9	0	1	2	5	6	7	9	10	11	12	13
4.0 - 4.9	1	2	4	6	8	10	12	13	14	15	17
5.0 - 7.4	2	3	5	8	10	12	14	16	17	19	21
7.5 - 9.9	3	5	8	12	15	17	20	22	22	23	24
10.0 - 12.4	4	6	10	15	19	21	23	24	25	26	27
12.5 - 14.9	4	7	12	18	22	23	25	26	27	28	29
15.0 - 19.9	5	8	13	20	23	24	26	27	28	29	31
20.0 - 24.9	6	10	17	23	25	27	29	30	31	32	34
25.0 - 29.9	7	12	20	25	27	29	31	32	33	35	36
30.0 - 34.9	8	14	22	26	29	31	33	35	36	37	39
35.0 - 39.9	9	16	23	28	30	32	35	36	37	39	41
40.0 - 44.9	10	17	24	29	32	34	36	38	39	41	42
50.0 - 59.9	12	21	26	31	34	36	39	41	42	44	46
60.0 - 69.9	14	22	27	33	36	39	42	43	45	47	49
70.0 - 79.9	16	23	29	35	38	41	44	46	47	49	51
80.0 - 89.9	17	25	30	36	40	42	46	48	49	51	54
90.0 - 99.9	19	26	31	38	42	44	48	50	51	53	56
100.0 - 119.9	21	26	32	39	43	46	49	52	53	55	58
120.0 - 139.9	22	28	35	42	46	49	52	55	56	59	61
140.0 - 159.9	23	30	36	44	48	51	55	58	59	62	65
160.0 - 179.9	25	31	38	46	50	54	58	60	62	65	67
180.0 - 199.0	26	32	40	48	52	56	60	63	65	67	70
> 199.9	26	33	41	49	54	58	62	65	67	69	73

[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."]

3745-266-106

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Appendix ~~HB~~ to rule 3745-266-106 of the Administrative Code
Tier I and Tier II Feed Rate and Emissions Screening Limits for Metals

Table I-A Tier I and Tier II Feed Rate and Emissions Screening Limits for Noncarcinogenic Metals for Facilities in Noncomplex Terrain- Values for Urban Areas						
Terrain adjusted eff. stack ht. (m)	Antimony (g/hr)	Barium (g/hr)	Lead (g/hr)	Mercury (g/hr)	Silver (g/hr)	Thallium (g/hr)
4	6.0E+01	1.0E+04	1.8E+01	6.0E+01	6.0E+02	6.0E+01
6	6.8E+01	1.1E+04	2.0E+01	6.8E+01	6.8E+02	6.8E+01
8	7.6E+01	1.3E+04	2.3E+01	7.6E+01	7.6E+02	7.6E+01
10	8.6E+01	1.4E+04	2.6E+01	8.6E+01	8.6E+02	8.6E+01
12	9.6E+01	1.7E+04	3.0E+01	9.6E+01	9.6E+02	9.6E+01
14	1.1E+02	1.8E+04	3.4E+01	1.1E+02	1.1E+03	1.1E+02
16	1.3E+02	2.1E+04	3.6E+01	1.3E+02	1.3E+03	1.3E+02
18	1.4E+02	2.4E+04	4.3E+01	1.4E+02	1.4E+03	1.4E+02
20	1.6E+02	2.7E+04	4.6E+01	1.6E+02	1.6E+03	1.6E+02
22	1.8E+02	3.0E+04	5.4E+01	1.8E+02	1.8E+03	1.8E+02
24	2.0E+02	3.4E+04	6.0E+01	2.0E+02	2.0E+03	2.0E+02
26	2.3E+02	3.9E+04	6.8E+01	2.3E+02	2.3E+03	2.3E+02
28	2.6E+02	4.3E+04	7.8E+01	2.6E+02	2.6E+03	2.6E+02
30	3.0E+02	5.0E+04	9.0E+01	3.0E+02	3.0E+03	3.0E+02
35	4.0E+02	6.6E+04	1.1E+02	4.0E+02	4.0E+03	4.0E+02
40	4.6E+02	7.8E+04	1.4E+02	4.6E+02	4.6E+03	4.6E+02
45	6.0E+02	1.0E+05	1.8E+02	6.0E+02	6.0E+03	6.0E+02
50	7.8E+02	1.3E+05	2.3E+02	7.8E+02	7.8E+03	7.8E+02
55	9.6E+02	1.7E+05	3.0E+02	9.6E+02	9.6E+03	9.6E+02
60	1.2E+03	2.0E+05	3.6E+02	1.2E+03	1.2E+04	1.2E+03
65	1.5E+03	2.5E+05	4.3E+02	1.5E+03	1.5E+04	1.5E+03
70	1.7E+03	2.8E+05	5.0E+02	1.7E+03	1.7E+04	1.7E+03
75	1.9E+03	3.2E+05	5.8E+02	1.9E+03	1.9E+04	1.9E+03
80	2.2E+03	3.6E+05	6.4E+02	2.2E+03	2.2E+04	2.2E+03
85	2.5E+03	4.0E+05	7.6E+02	2.5E+03	2.5E+04	2.5E+03
90	2.8E+03	4.6E+05	8.2E+02	2.8E+03	2.8E+04	2.8E+03
95	3.2E+03	5.4E+05	9.6E+02	3.2E+03	3.2E+04	3.2E+03
100	3.6E+03	6.0E+05	1.1E+03	3.6E+03	3.6E+04	3.6E+03
105	4.0E+03	6.8E+05	1.2E+03	4.0E+03	4.0E+04	4.0E+03
110	4.6E+03	7.8E+05	1.4E+03	4.6E+03	4.6E+04	4.6E+03
115	5.4E+03	8.6E+05	1.6E+03	5.4E+03	5.4E+04	5.4E+03
120	6.0E+03	1.0E+06	1.8E+03	6.0E+03	6.0E+04	6.0E+03

Table I-B Tier I and Tier II Feed Rate and Emissions Screening Limits for Noncarcinogenic Metals for Facilities in Noncomplex Terrain- Values for Rural Areas						
Terrain adjusted eff. stack ht. (m)	Antimony (g/hr)	Barium (g/hr)	Lead (g/hr)	Mercury (g/hr)	Silver (g/hr)	Thallium (g/hr)
4	3.1E+01	5.2E+03	9.4E+00	3.1E+01	3.1E+02	3.1E+01
6	3.6E+01	6.0E+03	1.1E+01	3.6E+01	3.6E+02	3.6E+01
8	4.0E+01	6.8E+03	1.2E+01	4.0E+01	4.0E+02	4.0E+01
10	4.6E+01	7.8E+03	1.4E+01	4.6E+01	4.6E+02	4.6E+01
12	5.8E+01	9.6E+03	1.7E+01	5.8E+01	5.8E+02	5.8E+01
14	6.8E+01	1.1E+04	2.1E+01	6.8E+01	6.8E+02	6.8E+01
16	8.6E+01	1.4E+04	2.6E+01	8.6E+01	8.6E+02	8.6E+01
18	1.1E+02	1.8E+04	3.2E+01	1.1E+02	1.1E+03	1.1E+02
20	1.3E+02	2.2E+04	4.0E+01	1.3E+02	1.3E+03	1.3E+02
22	1.7E+02	2.8E+04	5.0E+01	1.7E+02	1.7E+03	1.7E+02
24	2.2E+02	3.6E+04	6.4E+01	2.2E+02	2.2E+03	2.2E+02
26	2.8E+02	4.6E+04	8.2E+01	2.8E+02	2.8E+03	2.8E+02
28	3.5E+02	5.8E+04	1.0E+02	3.5E+02	3.5E+03	3.5E+02
30	4.3E+02	7.6E+04	1.3E+02	4.3E+02	4.3E+03	4.3E+02
35	7.2E+02	1.2E+05	2.1E+02	7.2E+02	7.2E+03	7.2E+02
40	1.1E+03	1.8E+05	3.2E+02	1.1E+03	1.1E+04	1.1E+03
45	1.5E+03	2.5E+05	4.6E+02	1.5E+03	1.5E+04	1.5E+03
50	2.0E+03	3.3E+05	6.0E+02	2.0E+03	2.0E+04	2.0E+03
55	2.6E+03	4.4E+05	7.8E+02	2.6E+03	2.6E+04	2.6E+03
60	3.4E+03	5.8E+05	1.0E+03	3.4E+03	3.4E+04	3.4E+03
65	4.6E+03	7.6E+05	1.4E+03	4.6E+03	4.6E+04	4.6E+03
70	5.4E+03	9.0E+05	1.6E+03	5.4E+03	5.4E+04	5.4E+03
75	6.4E+03	1.1E+06	1.9E+03	6.4E+03	6.4E+04	6.4E+03
80	7.6E+03	1.3E+06	2.3E+03	7.6E+03	7.6E+04	7.6E+03
85	9.4E+03	1.5E+06	2.8E+03	9.4E+03	9.4E+04	9.4E+03
90	1.1E+04	1.8E+06	3.3E+03	1.1E+04	1.1E+05	1.1E+04
95	1.3E+04	2.2E+06	3.9E+03	1.3E+04	1.3E+05	1.3E+04
100	1.5E+04	2.6E+06	4.6E+03	1.5E+04	1.5E+05	1.5E+04
105	1.8E+04	3.0E+06	5.4E+03	1.8E+04	1.8E+05	1.8E+04
110	2.2E+04	3.6E+06	6.6E+03	2.2E+04	2.2E+05	2.2E+04
115	2.6E+04	4.4E+06	7.8E+03	2.6E+04	2.6E+05	2.6E+04
120	3.1E+04	5.0E+06	9.2E+03	3.1E+04	3.1E+05	3.1E+04

Table I-C Tier I and Tier II Feed Rate and Emissions Screening Limits for Noncarcinogenic Metals for Facilities in Complex Terrain- Values for Urban and Rural Areas						
Terrain adjusted eff. stack ht. (m)	Antimony (g/hr)	Barium (g/hr)	Lead (g/hr)	Mercury (g/hr)	Silver (g/hr)	Thallium (g/hr)
4	1.4E+01	2.4E+03	4.3E+00	1.4E+01	1.4E+02	1.4E+01
6	2.1E+01	3.5E+03	6.2E+00	2.1E+01	2.1E+02	2.1E+01
8	3.0E+01	5.0E+03	9.2E+00	3.0E+01	3.0E+02	3.0E+01
10	4.3E+01	7.6E+03	1.3E+01	4.3E+01	4.3E+02	4.3E+01
12	5.4E+01	9.0E+03	1.7E+01	5.4E+01	5.4E+02	5.4E+01
14	6.8E+01	1.1E+04	2.0E+01	6.8E+01	6.8E+02	6.8E+01
16	7.8E+01	1.3E+04	2.4E+01	7.8E+01	7.8E+02	7.8E+01
18	8.6E+01	1.4E+04	2.6E+01	8.6E+01	8.6E+02	8.6E+01
20	9.6E+01	1.6E+04	2.9E+01	9.6E+01	9.6E+02	9.6E+01
22	1.0E+02	1.8E+04	3.2E+01	1.0E+02	1.0E+03	1.0E+02
24	1.2E+02	1.9E+04	3.5E+01	1.2E+02	1.2E+03	1.2E+02
26	1.3E+02	2.2E+04	3.6E+01	1.3E+02	1.3E+03	1.3E+02
28	1.4E+02	2.4E+04	4.3E+01	1.4E+02	1.4E+03	1.4E+02
30	1.6E+02	2.7E+04	4.6E+01	1.6E+02	1.6E+03	1.6E+02
35	2.0E+02	3.3E+04	5.8E+01	2.0E+02	2.0E+03	2.0E+02
40	2.4E+02	4.0E+04	7.2E+01	2.4E+02	2.4E+03	2.4E+02
45	3.0E+02	5.0E+04	9.0E+01	3.0E+02	3.0E+03	3.0E+02
50	3.6E+02	6.0E+04	1.1E+02	3.6E+02	3.6E+03	3.6E+02
55	4.6E+02	7.6E+04	1.4E+02	4.6E+02	4.6E+03	4.6E+02
60	5.8E+02	9.4E+04	1.7E+02	5.8E+02	5.8E+03	5.8E+02
65	6.8E+02	1.1E+05	2.1E+02	6.8E+02	6.8E+03	6.8E+02
70	7.8E+02	1.3E+05	2.4E+02	7.8E+02	7.8E+03	7.8E+02
75	8.6E+02	1.4E+05	2.6E+02	8.6E+02	8.6E+03	8.6E+02
80	9.6E+02	1.6E+05	2.9E+02	9.6E+02	9.6E+03	9.6E+02
85	1.1E+03	1.8E+05	3.3E+02	1.1E+03	1.1E+04	1.1E+03
90	1.2E+03	2.0E+05	3.6E+02	1.2E+03	1.2E+04	1.2E+03
95	1.4E+03	2.3E+05	4.0E+02	1.4E+03	1.4E+04	1.4E+03
100	1.5E+03	2.6E+05	4.6E+02	1.5E+03	1.5E+04	1.5E+03
105	1.7E+03	2.8E+05	5.0E+02	1.7E+03	1.7E+04	1.7E+03
110	1.9E+03	3.2E+05	5.8E+02	1.9E+03	1.9E+04	1.9E+03
115	2.1E+03	3.6E+05	6.4E+02	2.1E+03	2.1E+04	2.1E+03
120	2.4E+03	4.0E+05	7.2E+02	2.4E+03	2.4E+04	2.4E+03

Terrain adjusted eff. stack ht. (m)	Values for use in urban areas				Values for use in rural areas			
	Arsenic (g/hr)	Cadmium (g/hr)	Chromium (g/hr)	Beryllium (g/hr)	Arsenic (g/hr)	Cadmium (g/hr)	Chromium (g/hr)	Beryllium (g/hr)
4	4.6E-01	1.1E+00	1.7E-01	8.2E-01	2.4E-01	5.8E-01	8.6E-02	4.3E-01
6	5.4E-01	1.3E+00	1.9E-01	9.4E-01	2.8E-01	6.6E-01	1.0E-01	5.0E-01
8	6.0E-01	1.4E+00	2.2E-01	1.1E+00	3.2E-01	7.6E-01	1.1E-01	5.6E-01
10	6.8E-01	1.6E+00	2.4E-01	1.2E+00	3.6E-01	8.6E-01	1.3E-01	6.4E-01
12	7.6E-01	1.8E+00	2.7E-01	1.4E+00	4.3E-01	1.1E+00	1.6E-01	7.8E-01
14	8.6E-01	2.1E+00	3.1E-01	1.5E+00	5.4E-01	1.3E+00	2.0E-01	9.6E-01
16	9.6E-01	2.3E+00	3.5E-01	1.7E+00	6.8E-01	1.6E+00	2.4E-01	1.2E+00
18	1.1E+00	2.6E+00	4.0E-01	2.0E+00	8.2E-01	2.0E+00	3.0E-01	1.5E+00
20	1.2E+00	3.0E+00	4.4E-01	2.2E+00	1.0E+00	2.5E+00	3.7E-01	1.9E+00
22	1.4E+00	3.4E+00	5.0E-01	2.5E+00	1.3E+00	3.2E+00	4.8E-01	2.4E+00
24	1.6E+00	3.9E+00	5.8E-01	2.8E+00	1.7E+00	4.0E+00	6.0E-01	3.0E+00
26	1.8E+00	4.3E+00	6.4E-01	3.2E+00	2.1E+00	5.0E+00	7.6E-01	3.9E+00
28	2.0E+00	4.8E+00	7.2E-01	3.6E+00	2.7E+00	6.4E+00	9.8E-01	5.0E+00
30	2.3E+00	5.4E+00	8.2E-01	4.0E+00	3.5E+00	8.2E+00	1.2E+00	6.2E+00
35	3.0E+00	6.8E+00	1.0E+00	5.4E+00	5.4E+00	1.3E+01	1.9E+00	9.6E+00
40	3.6E+00	9.0E+00	1.3E+00	6.8E+00	8.2E+00	2.0E+01	3.0E+00	1.5E+01
45	4.6E+00	1.1E+01	1.7E+00	8.6E+00	1.1E+01	2.8E+01	4.2E+00	2.1E+01
50	6.0E+00	1.4E+01	2.2E+00	1.1E+01	1.5E+01	3.7E+01	5.4E+00	2.8E+01
55	7.6E+00	1.8E+01	2.7E+00	1.4E+01	2.0E+01	5.0E+01	7.2E+00	3.6E+01
60	9.4E+00	2.2E+01	3.4E+00	1.7E+01	2.7E+01	6.4E+01	9.6E+00	4.8E+01
65	1.1E+01	2.8E+01	4.2E+00	2.1E+01	3.6E+01	8.6E+01	1.3E+01	6.4E+01
70	1.3E+01	3.1E+01	4.6E+00	2.4E+01	4.3E+01	1.0E+02	1.5E+01	7.6E+01
75	1.5E+01	3.6E+01	5.4E+00	2.7E+01	5.0E+01	1.2E+02	1.8E+01	9.0E+01
80	1.7E+01	4.0E+01	6.0E+00	3.0E+01	6.0E+01	1.4E+02	2.2E+01	1.1E+02
85	1.9E+01	4.6E+01	6.8E+00	3.4E+01	7.2E+01	1.7E+02	2.6E+01	1.3E+02
90	2.2E+01	5.0E+01	7.8E+00	3.9E+01	8.6E+01	2.0E+02	3.0E+01	1.5E+02
95	2.5E+01	5.8E+01	9.0E+00	4.4E+01	1.0E+02	2.4E+02	3.6E+01	1.8E+02
100	2.8E+01	6.8E+01	1.0E+01	5.0E+01	1.2E+02	2.9E+02	4.3E+01	2.2E+02
105	3.2E+01	7.6E+01	1.1E+01	5.6E+01	1.4E+02	3.4E+02	5.0E+01	2.6E+02
110	3.6E+01	8.6E+01	1.3E+01	6.4E+01	1.7E+02	4.0E+02	6.0E+01	3.0E+02
115	4.0E+01	9.6E+01	1.5E+01	7.2E+01	2.0E+02	4.8E+02	7.2E+01	3.6E+02
120	4.6E+01	1.1E+02	1.7E+01	8.2E+01	2.4E+02	5.8E+02	8.6E+01	4.3E+02

Terrain adjusted eff. stack ht. (m)	Arsenic (g/hr)	Cadmium (g/hr)	Chromium (g/hr)	Beryllium (g/hr)
4	1.1E-01	2.6E-01	4.0E-02	2.0E-01
6	1.6E-01	3.9E-01	5.8E-02	2.9E-01
8	2.4E-01	5.8E-01	8.6E-02	4.3E-01
10	3.5E-01	8.2E-01	1.3E-01	6.2E-01
12	4.3E-01	1.0E+00	1.5E-01	7.6E-01
14	5.0E-01	1.3E+00	1.9E-01	9.4E-01
16	6.0E-01	1.4E+00	2.2E-01	1.1E+00
18	6.8E-01	1.6E+00	2.4E-01	1.2E+00
20	7.6E-01	1.8E+00	2.7E-01	1.3E+00
22	8.2E-01	1.9E+00	3.0E-01	1.5E+00
24	9.0E-01	2.1E+00	3.3E-01	1.6E+00
26	1.0E+00	2.4E+00	3.6E-01	1.8E+00
28	1.1E+00	2.7E+00	4.0E-01	2.0E+00
30	1.2E+00	3.0E+00	4.4E-01	2.2E+00
35	1.5E+00	3.7E+00	5.4E-01	2.7E+00
40	1.9E+00	4.6E+00	6.8E-01	3.4E+00
45	2.4E+00	5.4E+00	8.4E-01	4.2E+00
50	2.9E+00	6.8E+00	1.0E+00	5.0E+00
55	3.5E+00	8.4E+00	1.3E+00	6.4E+00
60	4.3E+00	1.0E+01	1.5E+00	7.8E+00
65	5.4E+00	1.3E+01	1.9E+00	9.6E+00
70	6.0E+00	1.4E+01	2.2E+00	1.1E+01
75	6.8E+00	1.6E+01	2.4E+00	1.2E+01
80	7.6E+00	1.8E+01	2.7E+00	1.3E+01
85	8.2E+00	2.0E+01	3.0E+00	1.5E+01
90	9.4E+00	2.3E+01	3.4E+00	1.7E+01
95	1.0E+01	2.5E+01	4.0E+00	1.9E+01
100	1.2E+01	2.8E+01	4.3E+00	2.1E+01
105	1.3E+01	3.2E+01	4.8E+00	2.4E+01
110	1.5E+01	3.5E+01	5.4E+00	2.7E+01
115	1.7E+01	4.0E+01	6.0E+00	3.0E+01
120	1.9E+01	4.4E+01	6.4E+00	3.3E+01

[~~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."~~]

RSFA Attachment A

Rule 3745-266-106 is amended as follows:		
Location	Change	Reason
(A)	remove “must” and add “shall”	a
(B)	after “appendix” remove “ll of” and add “B to”	b, c
(B)(1)	remove “must” and add “shall”	a
	after “appendix” remove “ll of” and add “B to”	b, c
(B)(1)(a)(i)	remove “defined” and add “described”	d
(B)(1)(b)(i)	remove “defined” and add “described”	d
(B)(1)(b)(ii)	remove “defined” and add “described”	d
(B)(2)(a)	[2 times] remove “must” and add “shall”	a
	-[2 times] after “appendix” remove “ll of” and add “B to” -in FRSL line after “appendix” remove “ll of” and add “B to”	b, c
	in FRSL line, remove the ending period	e
(B)(2)(b)(ii)	remove “defined” and add “described”	d
(B)(3)(a)	in H1 line after “appendix” remove “l of” and add “A to”	b, c
	-in H1 line, remove the ending period -in Tr line, remove the ending period	e
(B)(3)(b)	after “practice” add “stack height”	f
	remove “specified” and add “defined”	d
	add quotation marks around the defined term “good engineering practice stack height”	g
(B)(3)(c)	[2 times] remove “table in the appendices” and add “tables in appendix B”	b
	[2 times] remove “must” and add “shall”	a
(B)(5)	remove “must” and add “shall”	a

RSFA Attachment A

Rule 3745-266-106 is amended as follows:		
Location	Change	Reason
(B)(6)	remove “must” and add “shall”	a
	-in K line, remove the ending semicolon -in H line, remove the ending semicolon	e
	in V line, remove the ending “; and”	e, h
	in T line, remove “K” and add “Kelvin”	i
	in T line, remove the ending period	e
(B)(7)	remove “must” and add “shall”	a
(B)(8)	remove “must” and add “shall”	a
(C)	after “appendix” remove “II of” and add “B to”	b, c
(C)(1)	remove “must” and add “shall”	a
	after “appendix” remove “II of” and add “B to”	b, c
(C)(2)	[2 times] remove “must” and add “shall”	a
	-[2 times] after “appendix” remove “II of” and add “B to” -[2 times] after “appendix” remove “II of” and add “B to” - in ERS� line after “appendix” remove “II of” and add “B to”	b, c
	in ERS� line, remove the ending period	e
(C)(3)	[2 times] remove “must” and add “shall”	a
(C)(4)	-remove “Definitions” and add “Descriptions” -remove “definitions” and add “descriptions”	d
(C)(5)(a)	remove “must” and add “shall”	a
(C)(5)(b)	remove “provided”	h
(C)(5)(c)	remove “must” and add “shall”	a
(D)	remove “The requirements of paragraphs” and add “Paragraphs”	h
(D)(1)	[2 times] remove “must” and add “shall”	a
(D)(2)	-after “Appendices” remove “I” and add “A” -after “and” remove “II” and add “B”	b
(D)(3)	[2 times] remove “must” and add “shall”	a
(D)(4)	remove “must” and add “shall”	a

RSFA Attachment A

Rule 3745-266-106 is amended as follows:		
Location	Change	Reason
(D)(5)	remove “must” and add “shall”	a
(D)(6)	[2 times] remove “must” and add “shall”	a
(E)	-after “appendix” remove “II of” and add “B to” -after “appendices” remove “I” and add “A” -after “and” remove “II of” and add “B to”	b, c
(F)(2)	remove “must” and add “shall”	a
(F)(2)(a)	after “appendix” remove “I of” and add “A to”	b, c
(F)(2)(b)(i)	after “appendix” remove “II” and add “B”	b
(G)(1)	remove “must” and add “shall”	a
	after “Emissions,” add “U.S.” before “EPA”	j
(G)(2)	after “Sources,” add “U.S.” before “EPA”	j
(H)	[2 times] remove “must” and add “shall”	a
	after “appendix” remove “of” and add “to”	c
(I)	remove “the requirements of”	h
Appendix I	in the heading, remove “I” and add “A” so it is “Appendix A”	k
	at the end, remove the bracketed comment	h
Appendix II	in the heading, remove “II” and add “B” so it is “Appendix B”	k
Table I-A	in the table title remove “I-“ so the table title is “Table A...”	L
Table I-B	in the table title remove “I-“ so the table title is “Table B...”	L
Table I-C	in the table title remove “I-“ so the table title is “Table C...”	L
Table I-D	in the table title remove “I-“ so the table title is “Table D...”	L
Table I-E	in the table title remove “I-“ so the table title is “Table E...”	L
after Table E	remove the bracketed comment	h

- a The change of “must” to “shall” is an LSC requirement.
- b Cross-reference correction.

RSFA Attachment A

Rule 3745-266-106 is amended as follows:		
Location	Change	Reason

- c The change of “of” to “to” in the appendix reference is an LSC requirement.
- d Word choice correction.
- e Punctuation correction.
- f These text and punctuation amendments are designed to make this text match exactly the defined term at the location that is indicated.
- g This punctuation correction (adding quotation marks around defined terms) is made in all hazardous waste rules, as they are amended, at locations of defined terms that are designated as such.
- h Unnecessary text is removed.
- i This amendment removes the abbreviation and uses the entire term, which does not appear again in this rule.
- j This amendment clarifies the source of the document being referenced.
- k LSC requirement.
- L This amendment removes the “I” from the table titles. The “I” appeared in these titles because this appendix is equivalent to its federal counterpart 40 CFR Part 266 Appendix I, and as such, its tables contained the “I” to indicate the federal appendix location. That designation is not necessary in the Ohio rule.

This rule is submitted for 5-year review upon proposal. A new review date will be assigned.

This rule and its appendices appear in a different font from most other rules at the request of LSC.

3745-266-106 Standards to control metals emissions.

- (A) General. The owner or operator ~~must~~shall comply with the metals standards provided by paragraph (B), (C), (D), (E), or (F) of this rule for each metal listed in paragraph (B) of this rule that is present in the hazardous waste at detectable levels by using appropriate analytical procedures.
- (B) "Tier I" feed rate screening limits. Feed rate screening limits for metals are specified in appendix ~~H of B~~H of B to this rule as a function of terrain-adjusted effective stack height and terrain and land use in the vicinity of the facility. Criteria for facilities that are not eligible to comply with the screening limits are provided in paragraph (B)(7) of this rule.
- (1) Noncarcinogenic metals. The feed rates of antimony, barium, lead, mercury, thallium, and silver in all feed streams, including hazardous waste, fuels, and industrial furnace feed stocks ~~must~~shall not exceed the screening limits specified in appendix ~~H of B~~H of B to this rule.
- (a) The feed rate screening limits for antimony, barium, mercury, thallium, and silver are based on either:
- (i) An hourly rolling average as ~~defined~~described in paragraph (E)(6)(a)(ii) of rule 3745-266-102 of the Administrative Code; or
- (ii) An instantaneous limit not to be exceeded at any time.
- (b) The feed rate screening limit for lead is based on one of the following:
- (i) An hourly rolling average as ~~defined~~described in paragraph (E)(6)(a)(ii) of rule 3745-266-102 of the Administrative Code;
- (ii) An averaging period of two to twenty-four hours as ~~defined~~described in paragraph (E)(6)(b) of rule 3745-266-102 of the Administrative Code with an instantaneous feed rate limit not to exceed ten times the feed rate that would be allowed on an hourly rolling average basis; or
- (iii) An instantaneous limit not to be exceeded at any time.
- (2) Carcinogenic metals.

- (a) The feed rates of arsenic, cadmium, beryllium, and chromium in all feed streams, including hazardous waste, fuels, and industrial furnace feed stocks ~~must~~shall not exceed values derived from the screening limits specified in appendix ~~H-of-B~~ to this rule. The feed rate of each of these metals is limited to a level such that the sum of the ratios of the actual feed rate to the feed rate screening limit specified in appendix ~~H-of-B~~ to this rule ~~must~~shall not exceed 1.0, as provided by the following equation:

$$\sum_{i=1}^n \frac{AFR_{(i)}}{FRSL_{(i)}} \leq 1.0$$

where:

- n = number of carcinogenic metals
 AFR = actual feed rate to the device for metal "i"
 FRSL = feed rate screening limit provided by appendix ~~H-of-B~~ to this rule for metal "i":

- (b) The feed rate screening limits for the carcinogenic metals are based on either:
- (i) An hourly rolling average; or
 - (ii) An averaging period of two to twenty-four hours as ~~defined~~described in paragraph (E)(6)(b) of rule 3745-266-102 of the Administrative Code with an instantaneous feed rate limit not to exceed ten times the feed rate that would be allowed on an hourly rolling average basis.

(3) Terrain-adjusted effective stack height (TESH).

- (a) The terrain-adjusted effective stack height is determined according to the following equation:

$$TESH = H_a + H_1 - Tr$$

where:

- H_a = actual physical stack height
 H₁ = plume rise as determined from appendix ~~I-of-A~~ to this rule as a function of stack flow rate and stack gas exhaust temperature;
 Tr = terrain rise within five kilometers of the stack-

- (b) The stack height (H_a) may not exceed “good engineering practice stack height” as ~~specified~~defined in 40 CFR 51.100(ii).
- (c) If the TESH for a particular facility is not listed in the ~~table in the appendix~~tables in appendix B to this rule, the nearest lower TESH listed in the ~~table in the appendix~~tables in appendix B to this rule ~~must~~shall be used. If the TESH is four meters or less, a value of four meters ~~must~~shall be used.
- (4) Terrain type. The screening limits are a function of whether the facility is located in noncomplex or complex terrain. A device located where any part of the surrounding terrain within five kilometers of the stack equals or exceeds the elevation of the physical stack height (H_a) is considered to be in complex terrain and the screening limits for complex terrain apply. Terrain measurements are to be made from U.S. geological survey 7.5-minute topographic maps of the area surrounding the facility.
- (5) Land use. The screening limits are a function of whether the facility is located in an area where the land use is urban or rural. To determine whether land use in the vicinity of the facility is urban or rural, procedures provided in the appendix to rule 3745-266-103 of the Administrative Code ~~must~~shall be used.
- (6) Multiple stacks. Owners and operators of facilities with more than one on-site stack from a boiler, industrial furnace, incinerator, or other thermal treatment unit subject to controls of metals emissions under a hazardous waste installation and operation permit or interim standards controls ~~must~~shall comply with the screening limits for all such units assuming all hazardous waste is fed into the device with the worst-case stack based on dispersion characteristics. The worst-case stack is determined from the following equation as applied to each stack:

$$K = HVT$$

where:

K = a parameter accounting for relative influence of stack height and plume rise;

H = physical stack height (meters);

V = stack gas flow rate (m^3 /second); ~~and~~

T = exhaust temperature (degrees ~~K~~Kelvin);

The stack with the lowest value of K is the worst-case stack.

- (7) Criteria for facilities not eligible for screening limits. If any criteria in paragraphs (B)(7)(a) to (B)(7)(e) of this rule are met, the "Tier I" and "Tier II" screening limits do not apply. Owners and operators of such facilities ~~must~~shall comply with either the "Tier III" standards provided by paragraph (D) of this rule or with the "Adjusted Tier I" feed rate screening limits provided by paragraph (E) of this rule.
- (a) The device is located in a narrow valley less than one kilometer wide;
 - (b) The device has a stack taller than twenty meters and is located such that the terrain rises to the physical height within one kilometer of the facility;
 - (c) The device has a stack taller than twenty meters and is located within five kilometers of a shoreline of a large body of water such as an ocean or large lake;
 - (d) The physical stack height of any stack is less than 2.5 times the height of any building within five building heights or five projected building widths of the stack and the distance from the stack to the closest boundary is within five building heights or five projected building widths of the associated building; or
 - (e) The director determines that standards based on site-specific dispersion modeling are required.
- (8) Implementation. The feed rate of metals in each feedstream ~~must~~shall be monitored to ensure that the feed rate screening limits are not exceeded.
- (C) "Tier II" emission rate screening limits. Emission rate screening limits are specified in appendix ~~H-øfB~~H-øfB to this rule as a function of terrain-adjusted effective stack height and terrain and land use in the vicinity of the facility. Criteria for facilities that are not eligible to comply with the screening limits are provided in paragraph (B)(7) of this rule.
- (1) Noncarcinogenic metals. The emission rates of antimony, barium, lead, mercury, thallium, and silver ~~must~~shall not exceed the screening limits specified in appendix ~~H-øfB~~H-øfB to this rule.
 - (2) Carcinogenic metals. The emission rates of arsenic, cadmium, beryllium, and chromium ~~must~~shall not exceed values derived from the screening limits specified in appendix ~~H-øfB~~H-øfB to this rule. The emission rate of each of these metals is limited to a level such that the sum of the ratios of the actual emission rate to the emission rate screening limit specified in appendix ~~H-øfB~~H-øfB to this rule ~~must~~shall not exceed 1.0, as provided by the following equation:

$$\sum_{i=1}^n \frac{\text{AER}_{(i)}}{\text{ERSL}_{(i)}} \leq 1.0$$

where:

n = number of carcinogenic metals

AER = actual emission rate for metal "i"

ERSL = emission rate screening limit provided by appendix ~~H of B~~ B to this rule for metal "i".

- (3) ~~Implementation.~~ Implementation. The emission rate limits ~~must~~shall be implemented by limiting feed rates of the individual metals to levels during the trial burn (for new facilities or a permit by rule facility applying for a permit) or the compliance test (for permit by rule facilities). The feed rate averaging periods are the same as provided by paragraphs (B)(1)(a) and (B)(1)(b) and (B)(2)(b) of this rule. The feed rate of metals in each feedstream ~~must~~shall be monitored to ensure that the feed rate limits for the feedstreams specified in rule 3745-266-102 or 3745-266-103 of the Administrative Code are not exceeded.
- (4) ~~Definitions~~Descriptions and limitations. The ~~definitions~~descriptions and limitations provided by paragraph (B) of this rule for the following terms also apply to the "Tier II" emission rate screening limits provided by paragraph (C) of this rule: "terrain-adjusted effective stack height," "good engineering practice stack height," "terrain type," "land use," and "criteria for facilities not eligible to use the screening limits."
- (5) Multiple stacks.
- (a) Owners and operators of facilities with more than one on-site stack from a boiler, industrial furnace, incinerator, or other thermal treatment unit subject to controls on metals emissions under a hazardous waste installation and operation permit or interim standards controls ~~must~~shall comply with the emissions screening limits for any such stacks assuming all hazardous waste is fed into the device with the worst-case stack based on dispersion characteristics.
- (b) The worst-case stack is determined by procedures ~~provided~~ in paragraph (B)(6) of this rule.
- (c) For each metal, the total emissions of the metal from those stacks ~~must~~shall not exceed the screening limit for the worst-case stack.

(D) "Tier III" and "Adjusted Tier I" site-specific risk assessment. ~~The requirements of paragraphs~~ Paragraphs (D) to (D)(6) of this rule apply to facilities complying with either the "Tier III" or "Adjusted Tier I" controls, except where specified otherwise.

- (1) General. Conformance with the "Tier III" metals controls ~~must~~shall be demonstrated by emissions testing to determine the emission rate for each metal. In addition, conformance with either the "Tier III" or "Adjusted Tier I" metals controls ~~must~~shall be demonstrated by air dispersion modeling to predict the maximum annual average off-site ground level concentration for each metal, and a demonstration that acceptable ambient levels are not exceeded.
- (2) Acceptable ambient levels. Appendices ~~I~~A and ~~H~~B to rule 3745-266-109 of the Administrative Code list the acceptable ambient levels for purposes of this rule. Reference air concentrations (RACs) are listed for the noncarcinogenic metals and 10^{-5} risk-specific doses (RSDs) are listed for the carcinogenic metals. The RSD for a metal is the acceptable ambient level for that metal provided that only one of the four carcinogenic metals is emitted. If more than one carcinogenic metal is emitted, the acceptable ambient level for the carcinogenic metals is a fraction of the RSD as described in paragraph (D)(3) of this rule.
- (3) Carcinogenic metals. For the carcinogenic metals, arsenic, cadmium, beryllium, and chromium, the sum of the ratios of the predicted maximum annual average off-site ground level concentrations (except that on-site concentrations ~~must~~shall be considered if a person resides on site) to the RSD for all carcinogenic metals emitted ~~must~~shall not exceed 1.0, as determined by the following equation:

$$\sum_{i=1}^n \frac{\text{Predicted Ambient Concentration}_{(i)}}{\text{Risk-Specific Dose}_{(i)}} \leq 1.0$$

where: n = number of carcinogenic metals

- (4) Noncarcinogenic metals. For the noncarcinogenic metals, the predicted maximum annual average off-site ground level concentration for each metal ~~must~~shall not exceed the reference air concentration.

- (5) Multiple stacks. Owners and operators of facilities with more than one on-site stack from a boiler, industrial furnace, incinerator, or other thermal treatment unit subject to controls on metals emissions under a hazardous waste installation and operation permit or interim standards controls ~~must~~shall conduct emissions testing (except that facilities complying with "Adjusted Tier I" controls need not conduct emissions testing) and dispersion modeling to demonstrate that the aggregate emissions from all such on-site stacks do not result in an exceedance of the acceptable ambient levels.
 - (6) Implementation. Under "Tier III", the metals controls ~~must~~shall be implemented by limiting feed rates of the individual metals to levels during the trial burn (for new facilities or a permit by rule facility applying for a permit) or the compliance test (for permit by rule facilities). The feed rate averaging periods are the same as provided by paragraphs (B)(1)(a) and (B)(1)(b) and (B)(2)(b) of this rule. The feed rate of metals in each feedstream ~~must~~shall be monitored to ensure that the feed rate limits for the feedstreams specified in rule 3745-266-102 or 3745-266-103 of the Administrative Code are not exceeded.
- (E) "Adjusted Tier I" feed rate screening limits. The owner or operator may adjust the feed rate screening limits provided by appendix ~~H of B to~~ this rule to account for site-specific dispersion modeling. Under this approach, the adjusted feed rate screening limit for a metal is determined by back-calculating from the acceptable ambient level provided by appendices ~~I A and H of B to~~ rule 3745-266-109 of the Administrative Code using dispersion modeling to determine the maximum allowable emission rate. This emission rate becomes the "Adjusted Tier I" feed rate screening limit. The feed rate screening limits for carcinogenic metals are implemented as prescribed in paragraph (B)(2) of this rule.
- (F) Alternative implementation approaches.
- (1) The director may approve on a case-by-case basis approaches to implement the "Tier II" or "Tier III" metals emission limits provided by paragraph (C) or (D) of this rule alternative to monitoring the feed rate of metals in each feedstream.
 - (2) The emission limits provided by paragraph (D) of this rule ~~must~~shall be determined as follows:
 - (a) For each noncarcinogenic metal, by back-calculating from the reference air concentration provided in appendix ~~I of A to~~ rule 3745-266-109 of the Administrative Code to determine the allowable emission rate for each metal using the dilution factor for the maximum annual average ground level concentration predicted by dispersion modeling in conformance with paragraph (H) of this rule; and

- (b) For each carcinogenic metal by:
- (i) Back-calculating from the RSD provided in appendix ~~HB~~ to rule 3745-266-109 of the Administrative Code to determine the allowable emission rate for each metal if that metal were the only carcinogenic metal emitted using the dilution factor for the maximum annual average ground level concentration predicted by dispersion modeling in conformance with paragraph (H) of this rule; and
 - (ii) If more than one carcinogenic metal is emitted, selecting an emission limit for each carcinogenic metal not to exceed the emission rate determined by paragraph (F)(2)(b)(i) of this rule such that the sum for all carcinogenic metals of the ratios of the selected emission limit to the emission rate determined by that paragraph does not exceed 1.0.
- (G) Emission testing.
- (1) General. Emission testing for metals ~~must~~shall be conducted using method 0060, "Determinations of Metals in Stack Emissions," U.S. EPA publication SW-846.
 - (2) Hexavalent chromium. Emissions of chromium are assumed to be hexavalent chromium unless the owner or operator conducts emissions testing to determine hexavalent chromium emissions using procedures prescribed in method 0061, "Determination of Hexavalent Chromium Emissions from Stationary Sources," U.S. EPA publication SW-846.
- (H) Dispersion modeling. Dispersion modeling required by this rule ~~must~~shall be conducted according to methods recommended in 40 CFR Part 51, appendix W ("Guideline on Air Quality Models- Revised," and its supplements), the "Hazardous Waste Combustion Air Quality Screening Procedure", provided in the appendix ~~of~~to rule 3745-266-103 of the Administrative Code, or in "Screening Procedures for Estimating the Air Quality Impact of Stationary Sources, Revised" to predict the maximum annual average off-site ground level concentration. However, on-site concentrations ~~must~~shall be considered when a person resides on-site.
- (I) Enforcement. For the purposes of permit enforcement, compliance with the operating requirements specified in the permit (under rule 3745-266-102 of the Administrative Code) will be regarded as compliance with this rule. However, evidence that compliance with those permit conditions is insufficient to ensure compliance with ~~the requirements of this rule~~ may be information justifying modification of a permit under rule 3745-50-51 of the Administrative Code.

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

Effective:

Five Year Review (FYR) Dates: 07/01/2015

Certification

Date

Promulgated Under: 119.03
Statutory Authority: 3734.12
Rule Amplifies: 3734.12
Prior Effective Dates: 12/07/2004, 02/16/2009

3745-266-107

1

Appendix IA to rule 3745-266-107 of the Administrative Code

Tier I Feed Rate Screening Limits for Total Chlorine			
Terrain-adjusted effective stack height (meters)	Noncomplex Terrain		Complex Terrain
	Urban (grams/hour) (g/hr)	Rural (g/hr)	(g/hr)
4	8.2E+01	4.2E+01	1.9E+01
6	9.1E+01	4.8E+01	2.8E+01
8	1.0E+02	5.3E+01	4.1E+01
10	1.2E+02	6.2E+01	5.8E+01
12	1.3E+02	7.7E+01	7.2E+01
14	1.5E+02	9.1E+01	9.1E+01
16	1.7E+02	1.2E+02	1.1E+02
18	1.9E+02	1.4E+02	1.2E+02
20	2.1E+02	1.8E+02	1.3E+02
22	2.4E+02	2.3E+02	1.4E+02
24	2.7E+02	2.9E+02	1.6E+02
26	3.1E+02	3.7E+02	1.7E+02
28	3.5E+02	4.7E+02	1.9E+02
30	3.9E+02	5.8E+02	2.1E+02
35	5.3E+02	9.6E+02	2.6E+02
40	6.2E+02	1.4E+03	3.3E+02
45	8.2E+02	2.0E+03	4.0E+02
50	1.1E+03	2.6E+03	4.8E+02
55	1.3E+03	3.5E+03	6.2E+02
60	1.6E+03	4.6E+03	7.7E+02
65	2.0E+03	6.2E+03	9.1E+02
70	2.3E+03	7.2E+03	1.1E+03
75	2.5E+03	8.6E+03	1.2E+03
80	2.9E+03	1.0E+04	1.3E+03
85	3.3E+03	1.2E+04	1.4E+03
90	3.7E+03	1.4E+04	1.6E+03
95	4.2E+03	1.7E+04	1.8E+03
100	4.8E+03	2.1E+04	2.0E+03
105	5.3E+03	2.4E+04	2.3E+03
110	6.2E+03	2.9E+04	2.5E+03
115	7.2E+03	3.5E+04	2.8E+03
120	8.2E+03	4.1E+04	3.2E+03

[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."]

3745-266-107

1

Appendix HB to rule 3745-266-107 of the Administrative Code

Tier II Emission Rate Screening Limits for Free Chlorine and Hydrogen Chloride						
Terrain-adjusted effective stack ht. (meters)	Noncomplex terrain				Complex terrain	
	Values for urban areas		Values for rural areas		Values for use in urban and rural areas	
	Cl ₂ (grams per hour) (g/hr)	HCl (g/hr)	Cl ₂ (g/hr)	HCl (g/hr)	Cl ₂ (g/hr)	HCl (g/hr)
4	8.2E+01	1.4E+03	4.2E+01	7.3E+02	1.9E+01	3.3E+02
6	9.1E+01	1.6E+03	4.8E+01	8.3E+02	2.8E+01	4.9E+02
8	1.0E+02	1.8E+03	5.3E+01	9.2E+02	4.1E+01	7.1E+02
10	1.2E+02	2.0E+03	6.2E+01	1.1E+03	5.8E+01	1.0E+03
12	1.3E+02	2.3E+03	7.7E+01	1.3E+03	7.2E+01	1.3E+03
14	1.5E+02	2.6E+03	9.1E+01	1.6E+03	9.1E+01	1.6E+03
16	1.7E+02	2.9E+03	1.2E+02	2.0E+03	1.1E+02	1.8E+03
18	1.9E+02	3.3E+03	1.4E+02	2.5E+03	1.2E+02	2.0E+03
20	2.1E+02	3.7E+03	1.8E+02	3.1E+03	1.3E+02	2.3E+03
22	2.4E+02	4.2E+03	2.3E+02	3.9E+03	1.4E+02	2.4E+03
24	2.7E+02	4.8E+03	2.9E+02	5.0E+03	1.6E+02	2.8E+03
26	3.1E+02	5.4E+03	3.7E+02	6.5E+03	1.7E+02	3.0E+03
28	3.5E+02	6.0E+03	4.7E+02	8.1E+03	1.9E+02	3.4E+03
30	3.9E+02	6.9E+03	5.8E+02	1.0E+04	2.1E+02	3.7E+03
35	5.3E+02	9.2E+03	9.6E+02	1.7E+04	2.6E+02	4.6E+03
40	6.2E+02	1.1E+04	1.4E+03	2.5E+04	3.3E+02	5.7E+03
45	8.2E+02	1.4E+04	2.0E+03	3.5E+04	4.0E+02	7.0E+03
50	1.1E+03	1.8E+04	2.6E+03	4.6E+04	4.8E+02	8.4E+03
55	1.3E+03	2.3E+04	3.5E+03	6.1E+04	6.2E+02	1.1E+04
60	1.6E+03	2.9E+04	4.6E+03	8.1E+04	7.7E+02	1.3E+04
65	2.0E+03	3.4E+04	6.2E+03	1.1E+05	9.1E+02	1.6E+04
70	2.3E+03	3.9E+04	7.2E+03	1.3E+05	1.1E+03	1.8E+04
75	2.5E+03	4.5E+04	8.6E+03	1.5E+05	1.2E+03	2.0E+04
80	2.9E+03	5.0E+04	1.0E+04	1.8E+05	1.3E+03	2.3E+04
85	3.3E+03	5.8E+04	1.2E+04	2.2E+05	1.4E+03	2.5E+04
90	3.7E+03	6.6E+04	1.4E+04	2.5E+05	1.6E+03	2.9E+04
95	4.2E+03	7.4E+04	1.7E+04	3.0E+05	1.8E+03	3.2E+04
100	4.8E+03	8.4E+04	2.1E+04	3.6E+05	2.0E+03	3.5E+04
105	5.3E+03	9.2E+04	2.4E+04	4.3E+05	2.3E+03	3.9E+04
110	6.2E+03	1.1E+05	2.9E+04	5.1E+05	2.5E+03	4.5E+04
115	7.2E+03	1.3E+05	3.5E+04	6.1E+05	2.8E+03	5.0E+04
120	8.2E+03	1.4E+05	4.1E+04	7.2E+05	3.2E+03	5.6E+04

~~[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."]~~

RSFA Attachment A

Rule 3745-266-107 is amended as follows:		
Location	Change	Reason
Text Amendments		
(A)	remove “must” and add “shall”	a
(B)(1)	after “appendix” remove “I” and add “A”	a, b
	remove “must” and add “shall”	a
(B)(2)	after “appendix” remove “II” and add “B”	a, b
	remove “must” and add “shall”	a
(B)(3)	-remove “Definitions” and add “Descriptions” -remove “definitions” and add “descriptions”	c
	after “not eligible” remove “to use the” and add “for”	d
(B)(4)	remove “must” and add “shall”	a
(B)(4)(b)	-add a comma inside the quotation mark after "Tier I" -remove the comma that is outside the quotation mark	a, e
	remove “must” and add “shall”	a
(B)(4)(c)	-add a comma inside the quotation mark after "Tier II" -remove the comma that is outside the quotation mark	a, e
	remove “must” and add “shall”	a
(C)(1)	remove “must” and add “shall”	a
(C)(2)	after “appendix” remove “I” and add “A”	a, b
(C)(3)	remove “must” and add “shall”	a
(D)	-add a comma inside the quotation mark after "Tier I" -remove the comma that is outside the quotation mark -add a comma inside the quotation mark after "Tier III" -remove the comma that is outside the quotation mark	a, e
(D)(1)	remove “defined” and add “described”	c
	remove the ending “; or” and add a period	e, f
(E)	[2 times] after “appendix” remove “I” and add “A”	a, b
(F)	remove “must” and add “shall”	a

RSFA Attachment A

Rule 3745-266-107 is amended as follows:		
Location	Change	Reason
(G)	remove “must” and add “shall”	a
	remove “the provisions of”	f
(H)	remove “the requirements of”	f
Appendices’ Amendments		
Appendix I	in the appendix heading remove “I” and add “A” so it is titled “Appendix A”	a
	in the table heading: -in Terrain-adjusted effective stack height column, within the parentheses, remove “m” and add “meters” -in Urban column add “(grams/hour)” before the existing “(g/hr)”	g *
	remove the ending bracketed comment	f
Appendix II	in the heading remove “II” and add “B” so it is titled “Appendix B”	a
	in the table heading: -in Terrain-adjusted effective stack height column, within the parentheses, remove “m” and add “meters” -in Cl ₂ column add “(grams/hour)” before the existing “(g/hr)”	g *
	remove the ending bracketed comment	f

- a LSC requirement.
- b Cross-reference correction
- c Word choice correction.
- d This amendment makes this term the same as is used elsewhere.
- e Punctuation correction.
- f Unnecessary text is removed.
- g The units abbreviations are defined (or replaced) by text.

RSFA Attachment A

Rule **3745-266-107** is amended as follows:

Location	Change	Reason
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- * This amendment is made in response to a comment on the Interested Parties draft rule.

This rule is submitted for 5-year review upon proposal. A new review date will be assigned.

The appendices to this rule appear in a different font from most other rules at the request of LSC.

3745-266-107

Standards to control hydrogen chloride and chlorine gas emissions.

(A) General. The owner or operator ~~must~~shall comply with the hydrogen chloride and chlorine gas controls provided by paragraph (B), (C), or (E) of this rule.

(B) Screening limits.

- (1) "Tier I" feed rate screening limits. Feed rate screening limits are specified for total chlorine in appendix ~~IA~~ to this rule as a function of terrain-adjusted effective stack height and terrain and land use in the vicinity of the facility. The feed rate of total chlorine and chloride, both organic and inorganic, in all feed streams, including hazardous waste, fuels, and industrial furnace feed stocks ~~must~~shall not exceed the levels specified.
- (2) "Tier II" emission rate screening limits. Emission rate screening limits for hydrogen chloride and chlorine gas are specified in appendix ~~HB~~ to this rule as a function of terrain-adjusted effective stack height and terrain and land use in the vicinity of the facility. The stack emission rates of hydrogen chloride and chlorine gas ~~must~~shall not exceed the levels specified.
- (3) ~~Definitions~~Descriptions and limitations. The ~~definitions~~descriptions and limitations provided by paragraph (B) of rule 3745-266-106 of the Administrative Code for the following terms also apply to the screening limits provided by paragraphs (B) to (B)(4)(c) of this rule: terrain-adjusted effective stack height, good engineering practice stack height, terrain type, land use, and criteria for facilities not eligible ~~to use the~~for screening limits.
- (4) Multiple stacks. Owners and operators of facilities with more than one on-site stack from a boiler, industrial furnace, incinerator, or other thermal treatment unit subject to controls on hydrogen chloride or chlorine gas emissions under a hazardous waste facility installation and operation permit or interim standards controls ~~must~~shall comply with the "Tier I" and "Tier II" screening limits for those stacks assuming all hazardous waste is fed into the device with the worst-case stack based on dispersion characteristics.
 - (a) The worst-case stack is determined by procedures provided in paragraph (B)(6) of rule 3745-266-106 of the Administrative Code.

(b) Under "Tier I₁"; the total feed rate of chlorine and chloride to all subject devices ~~must~~shall not exceed the screening limit for the worst-case stack.

(c) Under "Tier II₁"; the total emissions of hydrogen chloride and chlorine gas from all subject stacks ~~must~~shall not exceed the screening limit for the worst-case stack.

(C) "Tier III" site-specific risk assessments.

(1) General. Conformance with the "Tier III" controls ~~must~~shall be demonstrated by emissions testing to determine the emission rate for hydrogen chloride and chlorine gas, air dispersion modeling to predict the maximum annual average off-site ground level concentration for each compound, and a demonstration that acceptable ambient levels are not exceeded.

(2) Acceptable ambient levels. Appendix ~~IA~~ to rule 3745-266-109 of the Administrative Code lists the reference air concentrations for hydrogen chloride (seven micrograms per cubic meter) and chlorine gas (0.4 micrograms per cubic meter).

(3) Multiple stacks. Owners and operators of facilities with more than one on-site stack from a boiler, industrial furnace, incinerator, or other thermal treatment unit subject to controls on hydrogen chloride or chlorine gas emissions under a hazardous waste facility installation and operation permit or interim standards controls ~~must~~shall conduct emissions testing and dispersion modeling to demonstrate that the aggregate emissions from all such on-site stacks do not result in an exceedance of the acceptable ambient levels for hydrogen chloride and chlorine gas.

(D) Averaging periods. The hydrogen chloride and chlorine gas controls are implemented by limiting the feed rate of total chlorine and chloride in all feedstreams, including hazardous waste, fuels, and industrial furnace feed stocks. Under "Tier I₁"; the feed rate of total chloride and chlorine is limited to the "Tier I" screening limits. Under "Tier II" and "Tier III₁"; the feed rate of total chloride and chlorine is limited to the feed rates during the trial burn (for new facilities or a permit by rule facility applying for a permit) or the compliance test (for permit by rule facilities). The feed rate limits are based on either:

(1) An hourly rolling average as ~~defined~~described in paragraph (E)(6) of rule 3745-266-102 of the Administrative Code; ~~or~~

- (2) An instantaneous basis not to be exceeded at any time.
- (E) "Adjusted Tier I" feed rate screening limits. The owner or operator may adjust the feed rate screening limit provided by appendix ~~IA~~ to this rule to account for site-specific dispersion modeling. Under this approach, the adjusted feed rate screening limit is determined by back-calculating from the acceptable ambient level for chlorine gas provided by appendix ~~IA~~ to rule 3745-266-109 of the Administrative Code using dispersion modeling to determine the maximum allowable emission rate. This emission rate becomes the "Adjusted Tier I" feed rate screening limit.
- (F) Emissions testing. Emissions testing for hydrogen chloride and chlorine gas ~~must~~shall be conducted using the procedures described in method 0050 or 0051, U.S. EPA publication SW-846.
- (G) Dispersion modeling. Dispersion modeling ~~must~~shall be conducted according to ~~the provisions of~~ paragraph (H) of rule 3745-266-106 of the Administrative Code.
- (H) Enforcement. For the purposes of permit enforcement, compliance with the operating requirements specified in the permit (under rule 3745-266-102 of the Administrative Code) will be regarded as compliance with this rule. However, evidence that compliance with those permit conditions is insufficient to ensure compliance with ~~the requirements of~~ this rule may be "information" justifying modification of a permit under rule 3745-50-51 of the Administrative Code.
- [Comment: For dates of non-regulatory government publications, publications of recognized organizations and associations, federal rules, and federal statutory provisions referenced in this rule, see rule 3745-50-11 of the Administrative Code titled "Incorporated by reference."]

Effective:

Five Year Review (FYR) Dates: 07/01/2015

Certification

Date

Promulgated Under: 119.03
Statutory Authority: 3734.12
Rule Amplifies: 3734.12
Prior Effective Dates: 12/07/2004, 09/05/2010

RSFA Attachment A

Rule 3745-266-108 is amended as follows:		
Location	Change	Reason
(A)	remove "the requirements of"	a
	add "all of the following" before the colon	b
(A)(1)	remove "provided"	a
	remove "Table 1 of" [upper case, numbered] and add "the table in"	c
	remove "defined" and add "determined"	d
Table	in heading, after "Table" remove "1"	c
	in Allowable hazardous waste burning rate column heading, within the parentheses, remove "gallons/month" and add "gallons per month"	d
	The table has been re-configured to be 2 columns, instead of 4 columns with a repeated heading. The content of the table was not amended other than in the Table heading rows as indicated above.	
(A)(3)	after "five thousand" add "British thermal units"	e, f
	add quotation marks around the existing "Btu"	g
	remove the ending "; and" and add a period	a, g
(C)	after the equation, in "Allowable Quantity Burned = " remove "Table 1" [upper case, numbered] and add "the table"	c
	-in N line, remove the ending semicolon -in Actual Quantity Burned line, remove the ending semicolon -in Allowable Quantity Burned line, remove the ending period	g
	(C)[Note]	remove "Note" and add "Comment"
(D)	remove "must" and add "shall"	e
	remove "indicating" and add "that indicates all of the following"	b, d
(D)(1)	remove the ending semicolon and add a period	g

RSFA Attachment A

Rule 3745-266-108 is amended as follows:		
Location	Change	Reason
(D)(2)	remove “the requirements of”	a
	remove the ending “; and” and add a period	a, g
(E)	[2 times] remove “must” and add “shall”	e

- a Unnecessary text is removed.
- b This amendment adds specificity to the text.
- c This rule contains only 1 table, so the reference to “Table 1” is being changed to “the table”
- d Word choice correction.
- e LSC requirement.
- f The acronym is defined upon its initial use.
- g Punctuation correction.
- h Word choice correction. This amendment makes the phrase consistent with other locations of the similar phrase.

This rule appears in a different font from most other rules at the request of LSC.

3745-266-108 Small quantity on-site burner exemption.

- (A) Exempt quantities. Owners and operators of facilities that burn hazardous waste in an on-site boiler or industrial furnace are exempt from ~~the requirements of rules 3745-266-100 to 3745-266-112 of the Administrative Code~~ provided that all of the following:
- (1) The quantity of hazardous waste burned in a device for a calendar month does not exceed the limits ~~provided in Table 1 of the table in this rule~~ based on the terrain-adjusted effective stack height as ~~defined~~ determined in paragraph (B)(3) of rule 3745-266-106 of the Administrative Code:

Terrain-adjusted effective stack height of device (meters)	Allowable hazardous waste burning rate (gallons/monthgallons per month)
0 to 3.9	0
4.0 to 5.9	13
6.0 to 7.9	18
8.0 to 9.9	27
10.0 to 11.9	40
12.0 to 13.9	48
14.0 to 15.9	59
16.0 to 17.9	69
18.0 to 19.9	76
20.0 to 21.9	84
22.0 to 23.9	93
24.0 to 25.9	100
26.0 to 27.9	110
28.0 to 29.9	130
30.0 to 34.9	140
35.0 to 39.9	170
40.0 to 44.9	210
45.0 to 49.9	260
50.0 to 54.9	330
55.0 to 59.9	400
60.0 to 64.9	490
65.0 to 69.9	610
70.0 to 74.9	680

Terrain-adjusted effective stack height of device (meters)	Allowable hazardous waste burning rate (gallons/month/gallons per month)
75.0 to 79.9	760
80.0 to 84.9	850
85.0 to 89.9	960
90.0 to 94.9	1,100
95.0 to 99.9	1,200
100.0 to 104.9	1,300
105.0 to 109.9	1,500
110.0 to 114.9	1,700
115.0 or greater	1,900

- (2) The maximum hazardous waste firing rate does not exceed at any time one per cent of the total fuel requirements for the device (hazardous waste plus other fuel) on a total heat input or mass input basis, whichever results in the lower mass feed rate of hazardous waste.
- (3) The hazardous waste has a minimum heating value of five thousand British thermal units (Btu) per pound, as generated; ~~and~~.
- (4) The hazardous waste fuel does not contain (and is not derived from) EPA hazardous waste numbers F020, F021, F022, F023, F026, or F027.
- (B) Mixing with nonhazardous fuels. If hazardous waste fuel is mixed with a nonhazardous fuel, the quantity of hazardous waste before such mixing is used to comply with paragraph (A) of this rule.
- (C) Multiple stacks. If an owner or operator burns hazardous waste in more than one on-site boiler or industrial furnace exempt under this rule, the quantity limits provided by paragraph (A)(1) of this rule are implemented according to the following equation:

$$\sum_{i=1}^n \frac{\text{Actual Quantity Burned (i)}}{\text{Allowable Quantity Burned (i)}} \leq 1.0$$

where:

n = the number of stacks;

Actual Quantity Burned = the waste quantity burned per month in device "i";

Allowable Quantity Burned = the maximum allowable exempt quantity for stack "i" from ~~Table 4~~ the table in this rule.

[~~Note~~Comment: Hazardous wastes that are subject to the special requirements for small quantity generators under rule 3745-51-05 of the Administrative Code may be burned in an off-site device under the exemption provided by this rule, but ~~must~~shall be included in the quantity determination for the exemption.]

- (D) Notification requirements. The owner or operator of facilities qualifying for the small quantity burner exemption under this rule ~~must~~shall provide a one-time signed, written notice to Ohio EPA ~~indicating~~that indicates all of the following:
- (1) The combustion unit is operating as a small quantity burner of hazardous waste;
 - (2) The owner and operator are in compliance with ~~the requirements of this rule; and,~~
 - (3) The maximum quantity of hazardous waste that the facility may burn per month as provided by paragraph (A)(1) of this rule.
- (E) Recordkeeping requirements. The owner or operator ~~must~~shall maintain at the facility for at least three years sufficient records documenting compliance with the hazardous waste quantity, firing rate, and heating value limits of this rule. At a minimum, these records ~~must~~shall indicate the quantity of hazardous waste and other fuel burned in each unit per calendar month, and the heating value of the hazardous waste.

Effective:

Five Year Review (FYR) Dates: Exempt

Certification

Date

Promulgated Under: 119.03
Statutory Authority: 3734.12
Rule Amplifies: 3734.12
Prior Effective Dates: 12/07/2004

3745-266-109

1

Appendix IA to rule 3745-266-109 of the Administrative Code

Reference Air Concentrations*		
Constituent	CAS No.	RAC ($\mu\text{g}/\text{m}^3$)
Acetaldehyde	75-07-0	10.0
Acetonitrile	75-05-8	10.0
Acetophenone	98-86-2	100.0
Acrolein	107-02-8	20.0
Aldicarb	116-06-3	1.0
Aluminum Phosphide	20859-73-8	0.3
Allyl Alcohol	107-18-6	5.0
Antimony	7440-36-0	0.3
Barium	7440-39-3	50.0
Barium Cyanide	542-62-1	50.0
Bromomethane	74-83-9	0.8
Calcium Cyanide	592-01-8	30.0
Carbon Disulfide	75-15-0	200.0
Chloral	75-87-6	2.0
Chlorine (free)	----	0.4
2-Chloro-1,3-butadiene	126-99-8	3.0
Chromium III	16065-83-1	1000.0
Copper Cyanide	544-92-3	5.0
Cresols	1319-77-3	50.0
Cumene	98-82-8	1.0
Cyanide (free)	57-12-15	20.0
Cyanogen	460-19-5	30.0
Cyanogen Bromide	506-68-3	80.0
Di-n-butyl Phthalate	84-74-2	100.0
o-Dichlorobenzene	95-50-1	10.0
p-Dichlorobenzene	106-46-7	10.0
Dichlorodifluoromethane	75-71-8	200.0
2,4-Dichlorophenol	120-83-2	3.0
Diethyl Phthalate	84-66-2	800.0

Reference Air Concentrations*		
Constituent	CAS No.	RAC ($\mu\text{g}/\text{m}^3$)
Dimethoate	60-51-5	0.8
2,4-Dinitrophenol	51-28-5	2.0
Dinoseb	88-85-7	0.9
Diphenylamine	122-39-4	20.0
Endosulfan	115-29-1	0.05
Endrin	72-20-8	0.3
Fluorine	7782-41-4	50.0
Formic Acid	64-18-6	2000.0
Glycidyaldehyde	765-34-4	0.3
Hexachlorocyclopentadiene	77-47-4	5.0
Hexachlorophene	70-30-4	0.3
Hydrocyanic Acid	74-90-8	20.0
Hydrogen Chloride	7647-01-1	7.0
Hydrogen Sulfide	7783-06-4	3.0
Isobutyl Alcohol	78-83-1	300.0
Lead	7439-92-1	0.09
Maleic Anhydride	108-31-6	100.0
Mercury	7439-97-6	0.3
Methacrylonitrile	126-98-7	0.1
Methomyl	16752-77-5	20.0
Methoxychlor	72-43-5	50.0
Methyl Chlorocarbonate	79-22-1	1000.0
Methyl Ethyl Ketone	78-93-3	80.0
Methyl Parathion	298-00-0	0.3
Nickel Cyanide	557-19-7	20.0
Nitric Oxide	10102-43-9	100.0
Nitrobenzene	98-95-3	0.8
Pentachlorobenzene	608-93-5	0.8
Pentachlorophenol	87-86-5	30.0
Phenol	108-95-2	30.0
M-Phenylenediamine	108-45-2	5.0

Reference Air Concentrations*		
Constituent	CAS No.	RAC ($\mu\text{g}/\text{m}^3$)
Phenylmercuric Acetate	62-38-4	0.075
Phosphine	7803-51-2	0.3
Phthalic Anhydride	85-44-9	2000.0
Potassium Cyanide	151-50-8	50.0
Potassium Silver Cyanide	506-61-6	200.0
Pyridine	110-86-1	1.0
Selenious Acid	7783-60-8	3.0
Selenourea	630-10-4	5.0
Silver	7440-22-4	3.0
Silver Cyanide	506-64-9	100.0
Sodium Cyanide	143-33-9	30.0
Strychnine	57-24-9	0.3
1,2,4,5-Tetrachlorobenzene	95-94-3	0.3
2,3,4,6-Tetrachlorophenol	58-90-2	30.0
Tetraethyl Lead	78-00-2	0.0001
Tetrahydrofuran	109-99-9	10.0
Thallic Oxide	1314-32-5	0.3
Thallium	7440-28-0	0.5
Thallium (I) Acetate	563-68-8	0.5
Thallium (I) Carbonate	6533-73-9	0.3
Thallium (I) Chloride	7791-12-0	0.3
Thallium (I) Nitrate	10102-45-1	0.5
Thallium Selenite	12039-52-0	0.5
Thallium (I) Sulfate	7446-18-6	0.075
Thiram	137-26-8	5.0
Toluene	108-88-3	300.0
1,2,4-Trichlorobenzene	120-82-1	20.0
Trichloromonofluoromethane	75-69-4	300.0
2,4,5-Trichlorophenol	95-95-4	100.0
Vanadium Pentoxide	1314-62-1	20.0
Warfarin	81-81-2	0.3

Reference Air Concentrations*		
Constituent	CAS No.	RAC ($\mu\text{g}/\text{m}^3$)
Xylenes	1330-20-7	80.0
Zinc Cyanide	557-21-1	50.0
Zinc Phosphide	1314-84-7	0.3
<p>* The RAC for other constituents that are found in the appendix to rule 3745-51-11 of the Administrative Code that are not listed herein or in appendix HB to this rule is $0.1 \text{ ug}/\text{m}^3$.</p>		

3745-266-109

1

Appendix ~~HB~~ to rule 3745-266-109 of the Administrative Code

Risk Specific Doses (10^{-5})			
Constituent	CAS Number	Unit risk ($m^3/\mu g$)	R_sDRSD ($\mu g/m^3$)
Acrylamide	79-06-1	1.3E-03	7.7E-03
Acrylonitrile	107-13-1	6.8E-05	1.5E-01
Aldrin	309-00-2	4.9E-03	2.0E-03
Aniline	62-53-3	7.4E-06	1.4E+00
Arsenic	7440-38-2	4.3E-03	2.3E-03
Benz(a)anthracene	56-55-3	8.9E-04	1.1E-02
Benzene	71-43-2	8.3E-06	1.2E+00
Benzidine	92-87-5	6.7E-02	1.5E-04
Benzo(a)pyrene	50-32-8	3.3E-03	3.0E-03
Beryllium	7440-41-7	2.4E-03	4.2E-03
Bis(2-chloroethyl)ether	111-44-4	3.3E-04	3.0E-02
Bis(chloromethyl)ether	542-88-1	6.2E-02	1.6E-04
Bis(2-ethylhexyl)phthalate	117-81-7	2.4E-07	4.2E+01
1,3-Butadiene	106-99-0	2.8E-04	3.6E-02
Cadmium	7440-43-9	1.8E-03	5.6E-03
Carbon Tetrachloride	56-23-5	1.5E-05	6.7E-01
Chlordane	57-74-9	3.7E-04	2.7E-02
Chloroform	67-66-3	2.3E-05	4.3E-01
Chloromethane	74-87-3	3.6E-06	2.8E+00
Chromium VI	7440-47-3	1.2E-02	8.3E-04
DDT	50-29-3	9.7E-05	1.0E-01
Dibenz(a,h)anthracene	53-70-3	1.4E-02	7.1E-04
1,2-Dibromo-3-chloropropane	96-12-8	6.3E-03	1.6E-03
1,2-Dibromoethane	106-93-4	2.2E-04	4.5E-02
1,1-Dichloroethane	75-34-3	2.6E-05	3.8E-01
1,2-Dichloroethane	107-06-2	2.6E-05	3.8E-01
1,1-Dichloroethylene	75-35-4	5.0E-05	2.0E-01

Risk Specific Doses (10^{-5})			
Constituent	CAS Number	Unit risk ($m^3/\mu g$)	$R_s \text{DRSD}$ ($\mu g/m^3$)
1,3-Dichloropropene	542-75-6	3.5E-01	2.9E-05
Dieldrin	60-57-1	4.6E-03	2.2E-03
Diethylstilbestrol	56-5-1	1.4E-01	7.1E-05
Dimethylnitrosamine	62-75-9	1.4E-02	7.1E-04
2,4-Dinitrotoluene	121-14-2	8.8E-05	1.1E-01
1,2-Diphenylhydrazine	122-66-7	2.2E-04	4.5E-02
1,4-Dioxane	123-91-1	1.4E-06	7.1E+00
Epichlorohydrin	106-89-8	1.2E-06	8.3E+00
Ethylene Oxide	75-21-8	1.0E-04	1.0E-01
Ethylene Dibromide	106-93-4	2.2E-04	4.5E-02
Formaldehyde	50-00-0	1.3E-05	7.7E-01
Heptachlor	76-44-8	1.3E-03	7.7E-03
Heptachlor Epoxide	1024-57-3	2.6E-03	3.8E-03
Hexachlorobenzene	118-74-1	4.9E-04	2.0E-02
Hexachlorobutadiene	87-68-3	2.0E-05	5.0E-01
Alpha-hexachlorocyclohexane	319-84-6	1.8E-03	5.6E-03
Beta-hexachlorocyclohexane	319-85-7	5.3E-04	1.9E-02
Gamma-hexachlorocyclohexane	58-89-9	3.8E-04	2.6E-02
Hexachlorocyclohexane, Technical	----	5.1E-04	2.0E-02
Hexachlorodibenzo-p-dioxin (1,2 Mixture)	----	1.3E+0	7.7E-06
Hexachloroethane	67-72-1	4.0E-06	2.5E+00
Hydrazine	302-01-2	2.9E-03	3.4E-03
Hydrazine Sulfate	302-01-2	2.9E-03	3.4E-03
3-Methylcholanthrene	56-49-5	2.7E-03	3.7E-03
Methyl Hydrazine	60-34-4	3.1E-04	3.2E-02
Methylene Chloride	75-09-2	4.1E-06	2.4E+00
4,4'-Methylene-bis-2-chloroaniline	101-14-4	4.7E-05	2.1E-01
Nickel	7440-02-0	2.4E-04	4.2E-02
Nickel Refinery Dust	7440-02-0	2.4E-04	4.2E-02

Risk Specific Doses (10^{-5})			
Constituent	CAS Number	Unit risk ($m^3/\mu g$)	$R_s \text{DRSD}$ ($\mu g/m^3$)
Nickel Subsulfide	12035-72-2	4.8E-04	2.1E-02
2-Nitropropane	79-46-9	2.7E-02	3.7E-04
N-Nitroso-n-butylamine	924-16-3	1.6E-03	6.3E-03
N-Nitroso-n-methylurea	684-93-5	8.6E-02	1.2E-04
N-Nitrosodiethylamine	55-18-5	4.3E-02	2.3E-04
N-Nitrosopyrrolidine	930-55-2	6.1E-04	1.6E-02
Pentachloronitrobenzene	82-68-8	7.3E-05	1.4E-01
PCBs	1336-36-3	1.2E-03	8.3E-03
Pronamide	23950-58-5	4.6E-06	2.2E+00
Reserpine	50-55-5	3.0E-03	3.3E-03
2,3,7,8-Tetrachloro-dibenzo-p-dioxin	1746-01-6	4.5E+01	2.2E-07
1,1,2,2-Tetrachloroethane	79-34-5	5.8E-05	1.7E-01
Tetrachloroethylene	127-18-4	4.8E-07	2.1E+01
Thiourea	62-56-6	5.5E-04	1.8E-02
1,1,2-Trichloroethane	79-005	1.6E-05	6.3E-01
Trichloroethylene	79-01-6	1.3E-06	7.7E+00
2,4,6-Trichlorophenol	88-06-2	5.7E-06	1.8E+00
Toxaphene	8001-35-2	3.2E-04	3.1E-02
Vinyl Chloride	75-01-4	7.1E-06	1.4E+00

RSFA Attachment A

Rule 3745-266-109 is amended as follows:		
Location	Change	Reason
Text Amendments		
(A)(1)	remove "must" and add "shall"	a
(A)(1)(a)	[2 times] remove "must" and add "shall"	a
(A)(1)(b)	remove "must" and add "shall"	a
	after "thousand" add "British thermal units" Btu	b
	add parentheses around "Btu"	c
(A)(2)(a)	remove "must" and add "shall"	a
	remove "their" and add "the"	d
	after "exclusion" add "of such constituents shall be"	e
(A)(2)(c)(i)	remove "must" and add "shall"	a
(A)(2)(c)(ii)	remove "must" and add "shall"	a
(A)(2)(d)	remove "must" and add "shall"	a
(A)(2)(d)(i)	[2 times] after "appendix" remove "I" and add "A"	f
(A)(2)(d)(ii)	[2 times] after "appendix" remove "II" and add "B"	f *
(A)(2)(d)(iii)	-after "appendix" remove "I" and add "A"	f
	-after "appendix" remove "II" and add "B"	
Appendices' Amendments		
Appendix I	in heading, remove "I" and add "A" so it is "Appendix A"	g
	in table footnote, after "appendix" remove "II" and add "B"	f
Appendix II	in heading, remove "II" and add "B" so it is "Appendix B"	g
	in table heading, right column, remove "RsD" and add "RSD"	h *

a The change of "must" to "shall" is an LSC requirement.

RSFA Attachment A

Rule **3745-266-109** is amended as follows:

Location	Change	Reason
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- b LSC requirement. Acronyms must be defined at their first use.
- c Punctuation correction.
- d Word choice correction.
- e This sentence is slightly re-written to correct the sentence structure and improve readability.
- f Cross-reference correction.
- g LSC requirement.
- h Typo correction.
- * This amendment is made, or changed, in response to a comment on the Interested Parties draft rule.

The appendices to this rule appear in a different font from most other rules at the request of LSC.

3745-266-109

Low risk waste exemption.

(A) Waiver of the destruction and removal efficiency standard. The destruction and removal efficiency standard of paragraph (A) of rule 3745-266-104 of the Administrative Code does not apply if the boiler or industrial furnace is operated in conformance with paragraph (A)(1) of this rule and the owner or operator demonstrates by procedures prescribed in paragraph (A)(2) of this rule that the burning will not result in unacceptable adverse health effects.

(1) The device ~~must~~shall be operated as follows:

- (a) A minimum of fifty per cent of fuel fired to the device ~~must~~shall be fossil fuel, fuels derived from fossil fuel, tall oil, or, if approved by the director on a case-by-case basis, other nonhazardous fuel with combustion characteristics comparable to fossil fuel. Such fuels are termed "primary fuel" for purposes of this rule. (Tall oil is a fuel derived from vegetable and rosin fatty acids.) The fifty per cent primary fuel firing rate ~~must~~shall be determined on a total heat or mass input basis, whichever results in the greater mass feed rate of primary fuel fired;
- (b) Primary fuels and hazardous waste fuels ~~must~~shall have a minimum as-fired heating value of eight thousand British thermal units (Btu) per pound;
- (c) The hazardous waste is fired directly into the primary fuel flame zone of the combustion chamber; and
- (d) The device operates in conformance with the carbon monoxide controls provided by paragraph (B)(1) of rule 3745-266-104 of the Administrative Code. Devices subject to the exemption provided by this rule are not eligible for the alternative carbon monoxide controls provided by paragraph (C) of rule 3745-266-104 of the Administrative Code.

(2) Procedures to demonstrate that the hazardous waste burning will not pose unacceptable adverse public health effects are as follows:

- (a) Identify and quantify those nonmetal compounds listed in the appendix to rule 3745-51-11 of the Administrative Code that could reasonably be expected to be present in the hazardous waste. The constituents excluded from analysis ~~must~~shall be identified and the basis for ~~their~~the exclusion of such constituents shall be explained;
- (b) Calculate reasonable, worst case emission rates for each constituent identified in paragraph (A)(2)(a) of this rule by assuming the device achieves 99.9 per cent destruction and removal efficiency. That is, assume that 0.1 per cent of the mass weight of each constituent fed to the device is emitted.
- (c) For each constituent identified in paragraph (A)(2)(a) of this rule, use emissions dispersion modeling to predict the maximum annual average ground level concentration of the constituent.
 - (i) Dispersion modeling ~~must~~shall be conducted using methods specified in paragraph (H) of rule 3745-266-106 of the Administrative Code.
 - (ii) Owners and operators of facilities with more than one on-site stack from a boiler or industrial furnace that is exempt under this rule ~~must~~shall conduct dispersion modeling of emissions from all stacks exempt under this rule to predict ambient levels prescribed by paragraphs (A) to (A)(2)(d)(iii) of this rule.
- (d) Ground level concentrations of constituents predicted under paragraph (A)(2)(c) of this rule ~~must~~shall not exceed the following levels:
 - (i) For the noncarcinogenic compounds listed in appendix ~~IA~~ to this rule, the levels established in appendix ~~IA~~ to this rule;
 - (ii) For the carcinogenic compounds listed in appendix ~~HB~~ to this rule, the sum for all constituents of the ratios of the actual ground level concentration to the level established in appendix ~~HB~~ to this rule cannot exceed 1.0; and
 - (iii) For constituents not listed in appendix ~~IA~~ or appendix ~~HB~~ to this rule, 0.1 micrograms per cubic meter.

(B) Waiver of particulate matter standard. The particulate matter standard of rule 3745-266-105 of the Administrative Code does not apply if:

- (1) The destruction and removal efficiency standard is waived under paragraph (A) of this rule; and
- (2) The owner or operator complies with the "Tier I" or "Adjusted Tier I" metals feed rate screening limits provided by paragraph (B) or (E) of rule 3745-266-106 of the Administrative Code.

Effective:

Five Year Review (FYR) Dates: Exempt

Certification

Date

Promulgated Under: 119.03
Statutory Authority: 3734.12
Rule Amplifies: 3734.12
Prior Effective Dates: 12/07/2004, 09/05/2010

RSFA Attachment A

Rule 3745-266-111 is amended as follows:		
Location	Change	Reason
(B)(1)	remove “these” and add “the following”	a
(B)(2)	remove “provided”	b
(C)(2)	[2 times] remove “must” and add “shall”	c
(C)(3)	remove “must” and add “shall”	c
	add “do any of the following” before the colon	d
(C)(3)(a)	remove the ending semicolon and add a period	e
(C)(3)(b)	remove the ending semicolon and add a period	e
(C)(3)(c)	remove the ending semicolon and add a period	e
(C)(3)(d)	remove the ending semicolon and add a period	e
(C)(3)(e)	remove “provided by” and add “in”	a
	remove the ending “; or” and add a period	b, e
(C)(4)	remove “must” and add “shall”	c
(C)(5)	remove “must” and add “shall”	c
	after “include” add a comma	e
	add “, both of the following” before the colon	d, e
(C)(5)(a)	remove the ending “; and” and add a period	b, e
(D)	remove “must” and add “shall”	c
	add “all of” before “the following”	d
	remove “requirements”	b
(D)(1)	remove the ending semicolon and add a period	e
(D)(2)	after “ignitable” add “waste”	f
	remove “tables 2.3.2.1.1(a) and 2.3.2.1.1(b) and tables 2.3.2.1.2 to 2.3.2.1.5 of”	g
	remove “must” and add “shall”	c
	remove the ending “; and” and add a period	b, e

RSFA Attachment A

Rule 3745-266-111 is amended as follows:		
Location	Change	Reason
(E)	remove “must” and add “shall”	c
	add “all of” before “the following”	d
	remove “requirements”	b
(E)(1)	remove “must” and add “shall”	c
(E)(1)(a)	remove “their” and add “the equipment”	a
	remove the ending “; and” and add a period	b, e
(E)(1)(b)	after “equipment” add a comma	e
(E)(2)(a)	[2 times] remove “must” and add “shall”	c
(E)(2)(b)	[2 times] remove “must” and add “shall”	c
	remove “waste(s)” and add “wastes”	a
	add “all of” before “the following”	d
(E)(2)(b)(i)	remove “standard(s)” and add “standards”	a
	remove the ending semicolon and add a period	e
(E)(2)(b)(ii)	remove “waste(s)” and add “wastes”	a
	remove the ending semicolon and add a period	e
(E)(2)(b)(iii)	remove the ending semicolon and add a period	e
(E)(2)(b)(iv)	remove the ending “; and” and add a period	b, e
(E)(2)(c)	remove “must” and add “shall”	c
	remove “the requirements of”	b
(E)(3)(a)	remove “must” and add “shall”	c
	add “all of the following” before the colon	d
(E)(3)(a)(i)	remove “Overfill/spill” and add “Overfill or spill”	a
	remove the ending semicolon and add a period	e
(E)(3)(a)(ii)	remove the ending “; and” and add a period	b, e

RSFA Attachment A

Rule 3745-266-111 is amended as follows:		
Location	Change	Reason
(E)(3)(b)	remove “must” and add “shall”	c
	remove “they” and add “the systems”	a
	remove the ending colon and add a period	e
(E)(3)(c)	remove “must” and add “shall”	c
	remove “from” and add “after”	a
(E)(4)	remove “must” and add “shall”	c
	remove “the requirements of”	b
(E)(5)	remove “must” and add “shall”	c
	remove “the requirements of”	b
(E)(6)	remove “must” and add “shall”	c
	remove “the requirements of”	b

- a Word choice correction.
- b Unnecessary text is removed.
- c The change of “must” to “shall” is an LSC requirement.
- d This amendment adds specificity to the provision.
- e Punctuation correction.
- f Word choice correction, to complete the term. This amendment ensures that a search of the hazardous waste rules for this type of waste will include this location in the search results.
- g Cross-reference correction.

This rule is submitted for 5-year review upon proposal. A new review date will be assigned.

3745-266-111 **Standards for direct transfer.**

(A) **Applicability.** This rule applies to owners and operators of boilers and industrial furnaces subject to rule 3745-266-102 or 3745-266-103 of the Administrative Code if hazardous waste is directly transferred from a transport vehicle to a boiler or industrial furnace without the use of a storage unit.

(B) **Definitions.**

(1) When used in this rule, the following terms have ~~these~~ the following meanings:

(a) "Direct transfer equipment" means any device (including but not limited to, such devices as piping, fittings, flanges, valves, and pumps) that is used to distribute, meter, or control the flow of hazardous waste between a container (i.e., transport vehicle) and a boiler or industrial furnace.

(b) "Container" means any portable device in which hazardous waste is transported, stored, treated, or otherwise handled, and includes transport vehicles that are containers themselves (e.g., tank trucks, tanker-trailers, and rail tank cars), and containers placed on or in a transport vehicle.

(2) This rule references several requirements ~~provided~~ in rules 3745-55-70 to 3745-55-78, 3745-55-90 to 3745-55-99, 3745-66-70 to 3745-66-77, and 3745-66-90 to 3745-66-101 of the Administrative Code. For purposes of this rule, the term "tank systems" in those referenced requirements means "direct transfer equipment" as defined in paragraph (B)(1)(a) of this rule.

(C) **General operating requirements.**

(1) No direct transfer of a pumpable hazardous waste shall be conducted from an open-top container to a boiler or industrial furnace.

(2) Direct transfer equipment used for pumpable hazardous waste ~~must~~shall always be closed, except when necessary to add or remove the waste, and ~~must~~shall not be opened, handled, or stored in a manner that may cause any rupture or leak.

(3) The direct transfer of hazardous waste to a boiler or industrial furnace ~~must~~shall be conducted so that it does not do any of the following:

(a) Generate extreme heat or pressure, fire, explosion, or violent reaction;

- (b) Produce uncontrolled toxic mists, fumes, dusts, or gases in sufficient quantities to threaten human health;_
 - (c) Produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosions;_
 - (d) Damage the structural integrity of the container or direct transfer equipment containing the waste;_
 - (e) Adversely affect the capability of the boiler or industrial furnace to meet the standards ~~provided by~~in rules 3745-266-104 to 3745-266-107 of the Administrative Code; ~~or~~ _
 - (f) Threaten human health or the environment.
- (4) Hazardous waste ~~must~~shall not be placed in direct transfer equipment, if it could cause the equipment or its secondary containment system to rupture, leak, corrode, or otherwise fail.
- (5) The owner or operator of the facility ~~must~~shall use appropriate controls and practices to prevent spills and overflows from the direct transfer equipment or its secondary containment systems. These include, at a minimum, both of the following:
- (a) Spill prevention controls (e.g., check valves, dry discount couplings); ~~and~~ _
 - (b) Automatic waste feed cutoff to use if a leak or spill occurs from the direct transfer equipment.
- (D) Areas where direct transfer vehicles (containers) are located. Applying the definition of "container" under this rule, owners and operators ~~must~~shall comply with all of the following requirements:
- (1) The containment requirements of rule 3745-55-75 of the Administrative Code;_

- (2) The use and management requirements of rules 3745-66-70 to 3745-66-77 of the Administrative Code, except for rules 3745-66-70 and 3745-66-74 of the Administrative Code, and except that in lieu of the special requirements of rule 3745-66-76 of the Administrative Code for ignitable waste or reactive waste, the owner or operator may comply with the requirements for the maintenance of protective distances between the waste management area and any public ways, streets, alleys, or an adjacent property line that can be built upon as required in ~~tables 2.3.2.1.1(a) and 2.3.2.1.1(b) and tables 2.3.2.1.2 to 2.3.2.1.5~~ of the national fire protection association's (NFPA) "Flammable and Combustible Liquids Code." The owner or operator ~~must~~shall obtain and keep on file at the facility a written certification by the local fire marshal that the installation meets the subject NFPA codes;~~and.~~
- (3) The closure requirements of rule 3745-55-78 of the Administrative Code.
- (E) Direct transfer equipment. Direct transfer equipment ~~must~~shall meet all of the following requirements:
- (1) Secondary containment. Owners and operators ~~must~~shall comply with the secondary containment requirements of rule 3745-66-93 of the Administrative Code, except for paragraphs (A), (D), (E), and (I) of rule 3745-66-93 of the Administrative Code, as follows:
- (a) For all new direct transfer equipment, prior to ~~their~~the equipment being put into service;~~and.~~
- (b) For existing direct transfer equipment, within two years after December 7, 2004.
- (2) Requirements prior to meeting secondary containment requirements.
- (a) For existing direct transfer equipment that does not have secondary containment, the owner or operator ~~must~~shall determine whether the equipment is leaking or is unfit for use. The owner or operator ~~must~~shall obtain and keep on file at the facility a written assessment reviewed and certified by a qualified professional engineer in accordance with paragraph (D) of rule 3745-50-41 of the Administrative Code that attests to the equipment's integrity.

- (b) This assessment ~~must~~shall determine whether the direct transfer equipment is adequately designed and has sufficient structural strength and compatibility with the ~~waste(s)~~wastes to be transferred to ensure that it will not collapse, rupture, or fail. At a minimum, this assessment ~~must~~shall consider all of the following:
- (i) Design ~~standard(s)~~standards, if available, according to which the direct transfer equipment was constructed~~;~~;
 - (ii) Hazardous characteristics of the ~~waste(s)~~wastes that have been or will be handled~~;~~;
 - (iii) Existing corrosion protection measures~~;~~;
 - (iv) Documented age of the equipment, if available, (otherwise, an estimate of the age)~~;~~; ~~and~~.
 - (v) Results of a leak test or other integrity examination such that the effects of temperature variations, vapor pockets, cracks, leaks, corrosion, and erosion are accounted for.
- (c) If, as a result of the assessment specified in paragraphs (E)(2)(a) to (E)(2)(b)(v) of this rule, the direct transfer equipment is found to be leaking or unfit for use, the owner or operator ~~must~~shall comply with ~~the requirements of~~ paragraphs (A) and (B) of rule 3745-66-96 of the Administrative Code.

(3) Inspections and recordkeeping.

- (a) The owner or operator ~~must~~shall inspect at least once each operating hour when hazardous waste is being transferred from the transport vehicle (container) to the boiler or industrial furnace all of the following:
- (i) ~~Overfill/spill~~Overfill or spill control equipment (e.g., waste-feed cutoff systems, bypass systems, and drainage systems) to ensure that it is in good working order~~;~~;
 - (ii) The above ground portions of the direct transfer equipment to detect corrosion, erosion, or releases of waste (e.g., wet spots, dead vegetation)~~;~~; ~~and~~.

- (iii) Data gathered from monitoring equipment and leak-detection equipment, (e.g., pressure and temperature gauges) to ensure that the direct transfer equipment is being operated according to its design.
- (b) The owner or operator ~~must~~shall inspect cathodic protection systems, if used, to ensure that ~~they~~the systems are functioning properly according to the schedule provided by paragraph (B) of rule 3745-66-95 of the Administrative Code.
- (c) Records of inspections made under paragraphs (E)(3) to (E)(3)(c) of this rule ~~must~~shall be maintained in the operating record at the facility, and available for inspection for at least three years ~~from~~after the date of the inspection.
- (4) Design and installation of new ancillary equipment. Owners and operators ~~must~~shall comply with ~~the requirements of~~ rule 3745-66-92 of the Administrative Code.
- (5) Response to leaks or spills. Owners and operators ~~must~~shall comply with ~~the requirements of~~ rule 3745-66-96 of the Administrative Code.
- (6) Closure. Owners and operators ~~must~~shall comply with ~~the requirements of~~ rule 3745-66-97 of the Administrative Code, except for paragraphs (C)(2) to (C)(4) of rule 3745-66-97 of the Administrative Code.

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

Effective:

Five Year Review (FYR) Dates: 07/01/2015

Certification

Date

Promulgated Under: 119.03
Statutory Authority: 3734.12
Rule Amplifies: 3734.12
Prior Effective Dates: 12/07/2004, 09/05/2010

RSFA Attachment A

This is rule **3745-266-200** that is being submitted for review without amendment as a no-change rule. A new review date will be assigned.

3745-266-200 **Applicability- military munitions.**

- (A) Rules 3745-266-200 to 3745-266-206 of the Administrative Code identify when military munitions become a waste, and, if these wastes are also hazardous under rules 3745-266-200 to 3745-266-206 or Chapter 3745-51 of the Administrative Code, the management standards that apply to these wastes.
- (B) Unless otherwise specified in rules 3745-266-200 to 3745-266-206 of the Administrative Code, all applicable requirements 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 apply to waste military munitions.

Five Year Review (FYR) Dates: 07/01/2015 and 11/23/2019

CERTIFIED ELECTRONICALLY

Certification

07/01/2015

Date

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Rule Amplifies: 3734.12
Prior Effective Dates: 12/07/2004

RSFA Attachment A

Rule 3745-266-201 is amended as follows:		
Location	Change	Reason
title	-after "Definitions" add a dash -remove "pertaining to"	a
(B)	after "50 U.S.C." remove "Section"	b
(E)	-remove "their" and add "the" -after "use and handling" add "of such devices"	c

- a These amendments put the rule title into a format more similar to other "definitions" rules in the hazardous waste management program.
- b LSC requirement; cross-reference format correction.
- c This amendment is designed to eliminate the pronoun.

This rule is submitted for 5-year review upon proposal. A new review date will be assigned.

3745-266-201

Definitions- ~~pertaining to~~ military munitions.

In addition to the definitions in rule 3745-50-10 of the Administrative Code, the following definitions apply to rules 3745-266-200 to 3745-266-206 of the Administrative Code:

- (A) "Active range" means a military range that is currently in service and is being regularly used for range activities.
- (B) "Chemical agents" and "munitions" are defined as in 50 U.S.C. ~~Section~~ 1521(j)(1).
- (C) "Inactive range" means a military range that is not currently being used, but that is still under military control and considered by the military to be a potential range area, and that has not been put to a new use that is incompatible with range activities.
- (D) "Military" means the department of defense (DOD), the armed services, coast guard, national guard, department of energy (DOE), or other parties under contract or acting as an agent for the foregoing, who handle military munitions.
- (E) "Military range" means designated land and water areas set aside, managed, and used to conduct research on, develop, test, and evaluate military munitions and explosives, other ordnance, or weapon systems, or to train military personnel in ~~their~~the use and handling of such devices. Ranges include firing lines and positions, maneuver areas, firing lanes, test pads, detonation pads, impact areas, and buffer zones with restricted access and exclusionary areas.
- (F) "Unexploded ordnance" means military munitions that have been primed, fused, armed, or otherwise prepared for action, and have been fired, dropped, launched, projected, or placed in such a manner as to constitute a hazard to operations, installation, personnel, or material and remain unexploded either by malfunction, design, or any other cause.

[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:

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RSFA Attachment A

Rule 3745-266-202 is amended as follows:		
Location	Change	Reason
(A)(1)	remove "Used" and add "A military munition is used"	a
(A)(2)	[2 times] remove "defined" and add "described"	b
(B)(3)	remove "it" and add "the munition"	b
(D)	[2 times] remove "and/or" and add "or"	b
	-after "authorities under" remove "Sections" and add "Section" -after "3004(u)," add "Section" -after "3004(v), and" add "Section"	c
	[3 times] remove "must" and add "shall"	d
	in last sentence: -remove "its" and add "the" -after "location" add "of the munition"	b

- a Sentence structure repair.
- b Word choice correction.
- c Cross-reference format correction.
- d The change of "must" to "shall" is an LSC requirement.

This rule is submitted for 5-year review upon proposal. A new review date will be assigned.

3745-266-202

Definition of waste for purposes of military munitions.

(A) A military munition is not a waste when:

(1) ~~Used~~ A military munition is used for its intended purpose, including:

- (a) Use in training military personnel or explosives and munitions emergency response specialists (including training in proper destruction of unused propellant or other munitions); or
- (b) Use in research, development, testing, and evaluation of military munitions, weapons, or weapon systems; or
- (c) Recovery, collection, and on-range destruction of unexploded ordnance and munitions fragments during range clearance activities at active or inactive ranges. However, "use for intended purpose" does not include the on-range disposal or burial of unexploded ordnance and contaminants when the burial is not a result of product use.

(2) An unused munition, or component thereof, is being repaired, reused, recycled, reclaimed, disassembled, reconfigured, or otherwise subjected to materials recovery activities, unless such activities involve use constituting disposal as ~~defined~~ described in paragraph (C)(1) of rule 3745-51-02 of the Administrative Code, or burning for energy recovery as ~~defined~~ described in paragraph (C)(2) of rule 3745-51-02 of the Administrative Code.

(B) An unused military munition is a waste when any of the following occurs:

- (1) The munition is abandoned by being disposed of, burned, detonated [except during intended use as specified in paragraph (A) of this rule], incinerated, or treated prior to disposal; or
- (2) The munition is removed from storage in a military magazine or other storage area for the purpose of being disposed of, burned, or incinerated, or treated prior to disposal; or
- (3) The munition is deteriorated or damaged (e.g., the integrity of the munition is compromised by cracks, leaks, or other damage) to the point that ~~it~~ the munition cannot be put into serviceable condition, and cannot reasonably be recycled or used for other purposes; or
- (4) The munition has been declared a waste by an authorized military official.

(C) A used or fired military munition is a waste:

- (1) When transported off range or from the site of use, where the site of use is not a range, for the purposes of storage, reclamation, treatment, disposal, or treatment prior to disposal; or
- (2) If recovered, collected, and then disposed of by burial, or landfilling either on or off a range.

(D) A used or fired military munition is potentially subject to the cleanup requirements of Chapters 3734. and 6111. of the Revised Code, if the munition lands off-range and is not promptly rendered safe ~~and/or~~ retrieved. For purposes of Section 1004(27) of RCRA, a used or fired military munition is a solid waste, and, therefore, is potentially subject to RCRA corrective action authorities under ~~Sections~~Section 3004(u), Section 3004(v), and Section 3008(h) of RCRA, or imminent and substantial endangerment authorities under Section 7003 of RCRA, if the munition lands off-range and is not promptly rendered safe ~~and/or~~ retrieved. Any imminent and substantial threats associated with any remaining material ~~must~~shall be addressed. If remedial action is infeasible, the operator of the range ~~must~~shall maintain a record of the event for as long as any threat remains. The record ~~must~~shall include the type of munition and ~~its~~the location (to the extent the location of the munition is known).

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Five Year Review (FYR) Dates: 07/01/2015

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Prior Effective Dates: 12/07/2004, 09/05/2010

RSFA Attachment A

Rule 3745-266-203 is amended as follows:		
Location	Change	Reason
(A)(1)(a)	remove the ending semicolon and add a period	a
(A)(1)(b)	remove "must" and add "shall"	b
	after "department of defense" add "(DOD)"	b, c *
	remove the ending semicolon and add a period	a
(A)(1)(c)	remove "must" and add "shall"	b
	remove the ending "; and" and add a period	a, d
(A)(1)(d)	[2 times] remove "must" and add "shall"	b
	remove "oral" and add "verbal"	e
(A)(2)	remove "must" and add "shall"	b
(A)(3)	in 1 st sentence: -after "exemption" remove "in paragraph (A)(1) of this rule" -after "hazardous waste" add "in paragraph (A)(1) of this rule"	f
	in 2 nd sentence: remove "It" and add "The exemption"	e
(B)	remove "its" and add "the"	e
(C) *, in 2 nd sentence	remove "department of defense (DOD)" and add "DOD"	d *
	after "(GBL)" add "[General Services Administration"	c *
	after "(GSA" add the closing parenthesis after the acronym	a *
	after "standard form" remove "1109)" and add "1103]"	a, g *

- a Punctuation correction.
- b LSC requirement.
- c This amendment defines the acronym that is used later in the rule.
- d Unnecessary text is removed.
- e Word choice correction.

RSFA Attachment A

Rule **3745-266-203** is amended as follows:

Location	Change	Reason
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- f Sentence structure repair.
- g This form number is changed to match the same amendment in rule 3745-50-11. Verification research regarding that rule indicates that the existing form number is no longer available, but the new form number is the update. The federal counterpart provisions to 3745-50-11 and this rule (40 CFR 260.11 and 40 CFR 266.203, respectively) have not yet been amended to account for this update.
- * This amendment was made, or changed, in response to a comment on the Interested Parties draft rule.

This rule is submitted for 5-year review upon proposal. A new review date will be assigned.

3745-266-203

Standards applicable to the transportation of waste military munitions.

(A) Criteria for hazardous waste regulation of waste non-chemical military munitions in transportation.

(1) Waste military munitions that are being transported and that exhibit a hazardous waste characteristic or are listed as hazardous waste under Chapter 3745-51 of the Administrative Code, are listed or identified as a hazardous waste (and thus are subject to regulation under 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), unless all the following conditions are met:

(a) The waste military munitions are not chemical agents or chemical munitions~~;~~.

(b) The waste military munitions ~~must~~shall be transported in accordance with the department of defense (DOD) shipping controls applicable to the transport of military munitions~~;~~.

(c) The waste military munitions ~~must~~shall be transported from a military owned or operated installation to a military owned or operated treatment, storage, or disposal facility~~;~~and.

(d) The transporter of the waste ~~must~~shall provide ~~oral~~verbal notice to the director within twenty-four hours after the time the transporter becomes aware of any loss or theft of the waste military munitions, or any failure to meet a condition of paragraph (A)(1) of this rule that may endanger health or the environment. In addition, a written submittal describing the circumstances ~~must~~shall be provided within five days after the time the transporter becomes aware of any loss or theft of the waste military munitions or any failure to meet a condition of paragraph (A)(1) of this rule.

(2) If any waste military munitions shipped under paragraph (A)(1) of this rule are not received by the receiving facility within forty-five days after the day the waste was shipped, the owner or operator of the receiving facility ~~must~~shall report this non-receipt to the director within five days.

- (3) The exemption ~~in paragraph (A)(1) of this rule~~ from regulation as hazardous waste in paragraph (A)(1) of this rule applies only to the transportation of non-chemical waste military munitions. ~~The exemption~~ does not affect the regulatory status of waste military munitions as hazardous wastes with regard to storage, treatment, or disposal.
- (4) The conditional exemption in paragraph (A)(1) of this rule applies only so long as all of the conditions in paragraph (A)(1) of this rule are met.
- (B) Reinstatement of exemption. If any waste military munition loses ~~its~~the exemption under paragraph (A)(1) of this rule, an application may be filed with the director for reinstatement of the exemption from hazardous waste transportation regulation with respect to such munition as soon as the munition is returned to compliance with the conditions of paragraph (A)(1) of this rule. If the director finds that reinstatement of the exemption is appropriate based on factors such as the transporter's provision of a satisfactory explanation of the circumstances of the violation, or a demonstration that the violations are not likely to recur, the director may reinstate the exemption under paragraph (A)(1) of this rule. If the director does not take action on the reinstatement application within sixty days after receipt of the application, then reinstatement is deemed granted, retroactive to the date of the application. However, the director may terminate a conditional exemption reinstated by default in the preceding sentence if the director finds that reinstatement is inappropriate based on factors such as the transporter's failure to provide a satisfactory explanation of the circumstances of the violation, or failure to demonstrate that the violations are not likely to recur. In reinstating the exemption under paragraph (A)(1) of this rule, the director may specify additional conditions as are necessary to ensure and document proper transportation to protect human health and the environment.
- (C) Amendments to DOD shipping controls. The ~~department of defense (DOD)~~DOD shipping controls applicable to the transport of military munitions referenced in paragraph (A)(1)(b) of this rule are government bill of lading (GBL) [General Services Administration (GSA) standard form ~~4409~~1103], requisition tracking form (DD form 1348), the signature and tally record (DD form 1907), special instructions for motor vehicle drivers (DD form 836), and the motor vehicle inspection report (DD form 626).

[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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RSFA Attachment A

Rule 3745-266-205 is amended as follows:		
Location	Change	Reason
(A)(1)(b)	remove “must” and add “shall”	a
(A)(1)(c)	remove “must” and add “shall”	a
(A)(1)(d)	remove “must” and add “shall”	a
(A)(1)(e)	[2 times] remove “must” and add “shall”	a
(A)(1)(f)	[3 times] remove “must” and add “shall”	a
(A)(1)(g)	remove “must” and add “shall”	a
(A)(2)	remove “It” and add “The exemption”	b
(B)	remove “must” and add “shall”	a
(C)	-in 2 nd sentence, remove “its” and add “the” -in 5 th sentence, remove “he” and add “the director”	b
(D)(1)	add quotation marks around the defined term “hazardous waste rules”	c

- a The change of “must” to “shall” is an LSC requirement.
- b Word choice correction.
- c This punctuation correction (adding quotation marks around defined terms) is made in all hazardous waste rules, as they are amended, at locations of defined terms that are designated as such in the text.

This rule is submitted for 5-year review upon proposal. A new review date will be assigned.

3745-266-205 **Standards applicable to the storage of waste military munitions.**

(A) Criteria for hazardous waste regulation of waste non-chemical military munitions in storage.

(1) Waste military munitions in storage that exhibit a hazardous waste characteristic or are listed as hazardous waste in Chapter 3745-51 of the Administrative Code, are listed or identified as a hazardous waste (and thus are subject to regulation under 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, 3745-270, 3745-273, and 3745-279 of the Administrative Code), unless all the following conditions are met:

- (a) The waste military munitions are not chemical agents or chemical munitions.
- (b) The waste military munitions ~~must~~shall be subject to the jurisdiction of the department of defense explosives safety board (DDESB).
- (c) The waste military munitions ~~must~~shall be stored in accordance with the DDESB storage standards applicable to waste military munitions.
- (d) Within ninety days after December 7, 2004 or within ninety days after a storage unit is first used to store waste military munitions, whichever is later, the owner or operator ~~must~~shall notify the director of the location of any waste storage unit used to store waste military munitions for which the conditional exemption in paragraph (A)(1) of this rule is claimed.
- (e) The owner or operator ~~must~~shall provide verbal notice to the director within twenty-four hours after the time the owner or operator becomes aware of any loss or theft of the waste military munitions, or any failure to meet a condition of paragraph (A)(1) of this rule that may endanger health or the environment. In addition, a written submittal describing the circumstances ~~must~~shall be provided within five days after the time the owner or operator becomes aware of any loss or theft of the waste military munitions or any failure to meet a condition of paragraph (A)(1) of this rule.

- (f) The owner or operator ~~must~~shall inventory the waste military munitions at least annually, ~~must~~shall inspect the waste military munitions at least quarterly for compliance with the conditions of paragraph (A)(1) of this rule, and ~~must~~shall maintain records of the findings of these inventories and inspections for at least three years.
- (g) Access to the stored waste military munitions ~~must~~shall be limited to appropriately trained and authorized personnel.
- (2) The conditional exemption in paragraph (A)(1) of this rule from regulation as hazardous waste applies only to the storage of non-chemical waste military munitions. ~~The exemption~~ does not affect the regulatory status of waste military munitions as hazardous wastes with regard to transportation, treatment, or disposal.
- (3) The conditional exemption in paragraph (A)(1) of this rule applies only so long as all of the conditions in paragraph (A)(1) of this rule are met.
- (B) Notice of termination of waste storage. The owner or operator ~~must~~shall notify the director when a storage unit identified in paragraph (A)(1)(d) of this rule will no longer be used to store waste military munitions.
- (C) Reinstatement of conditional exemption. If any waste military munition loses ~~its~~the conditional exemption under paragraph (A)(1) of this rule, an application may be filed with the director for reinstatement of the conditional exemption from hazardous waste storage regulation with respect to such munition as soon as the munition is returned to compliance with the conditions of paragraph (A)(1) of this rule. If the director finds that reinstatement of the conditional exemption is appropriate based on factors such as the owner's or operator's provision of a satisfactory explanation of the circumstances of the violation, or a demonstration that the violations are not likely to recur, the director may reinstate the conditional exemption under paragraph (A)(1) of this rule. If the director does not take action on the reinstatement application within sixty days after receipt of the application, then reinstatement is deemed granted, retroactive to the date of the application. However, the director may terminate a conditional exemption reinstated by default in the preceding sentence if ~~he~~the director finds that reinstatement is inappropriate based on factors such as the owner's or operator's failure to provide a satisfactory explanation of the circumstances of the violation, or failure to demonstrate that the violations are not likely to recur. In reinstating the conditional exemption under paragraph (A)(1) of this rule, the director may specify additional conditions as are necessary to ensure and document proper storage to protect human health and the environment.

(D) Waste chemical munitions.

- (1) Waste military munitions that are chemical agents or chemical munitions and that exhibit a hazardous waste characteristic or are listed as hazardous waste in Chapter 3745-51 of the Administrative Code, are listed or identified as a hazardous waste and are subject to the "hazardous waste rules" as defined in rule 3745-50-10 of the Administrative Code.
- (2) Waste military munitions that are chemical agents or chemical munitions and that exhibit a hazardous waste characteristic or are listed as hazardous waste in Chapter 3745-51 of the Administrative Code, are not subject to the storage prohibition in rule 3745-270-50 of the Administrative Code.

(E) Amendments to DDESB storage standards. The DDESB storage standards applicable to waste military munitions, referenced in paragraph (A)(1)(c) of this rule, are DOD 6055.9-STD ("DOD Ammunition and Explosive Safety Standards").

[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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RSFA Attachment A

Rule 3745-266-210 is amended as follows:		
Location	Change	Reason
title	-add a dash after "Definitions"	a *
	-remove "that apply to the" -remove "rules"	b *
(A)	in Agreement State -after "as amended" add "through the date specified in rule 3745-50-11 of the Administrative Code"	c
	-remove the parentheses around "68 Stat. 919"	a
	-remove "its" and add "that state's" -after "borders" remove "byproduct" [without hyphen] and add "by-product" [with hyphen]	d
	-after the corrected "by-product" add "material" before the existing comma -after "source" add "material" before the existing comma	e
(C)	in Eligible NARM -after "Eligible NARM is" add "naturally occurring or accelerator-produced radioactive material" -after "disposed of at a" add "low-level radioactive waste"	f
	-add parentheses around the existing acronym "NARM" -add parentheses around the existing acronym "LLW"	a
	-remove "It" and add "Eligible NARM"	d
(D)	in Exempted waste -near the end, add quotation marks around the defined term "hazardous waste"	g
	-remove "described"	b
(E)	in Land disposal restriction (LDR) treatment standards -remove "must" and add "is required to" -remove "it can" and add "such hazardous waste may"	d
(F)	in License -remove the quotation marks around "Agreement State," -remove the quotation marks around "Agreement States,"	a

RSFA Attachment A

Rule 3745-266-210 is amended as follows:		
Location	Change	Reason
(G)	in Low-level mixed waste -after “waste” add the closing quotation mark and “or” -add the opening quotation mark around “LLMW” -remove both the parentheses around “LLMW”	a, f
(H)	in Low level radioactive waste -after “waste” add the closing quotation mark and “or” -add the opening quotation mark around “LLW” -remove both the parentheses around “LLW”	a, f
	-remove “source, special nuclear, or byproduct material,” and add ‘ “source material,” “special nuclear material,” or “by-product material” as defined by the AEA, ‘ -remove “high-level radioactive waste, transuranic waste, spent nuclear fuel, or byproduct material” and add ‘ “high-level radioactive waste,” “transuranic waste,” “spent nuclear fuel,” or “by-product material” ‘	e, g
	-remove “in Section 11e.(2) of” and add “by”	b, d
(I)	in Mixed waste -after “source” add “material” before the existing comma -after “special nuclear” add “ material” before the comma -remove “byproduct” [without a hyphen] and add “by-product” [with a hyphen]	e, g
(J)	in Naturally occurring and/or accelerator-produced radioactive material -remove “and/or” and add “or”	d
	-after “material” add the closing quotation mark and “or” -add the opening quotation mark around “NARM” -remove both the parentheses around “NARM”	a, f
	-add “either” before the colon	h

RSFA Attachment A

Rule 3745-266-210 is amended as follows:		
Location	Change	Reason
(J)(1)	in Naturally occurring and/or accelerator-produced radioactive material (1) -remove “source, special nuclear, or byproduct materials” and add ‘ “source material,” “special nuclear material,” or “by-product material” ‘	e, g
	-remove the parentheses around “as defined by the AEA”	a
	-remove the ending “; or” and add a period	a, b
(L)	in We or Us -add quotation marks around the defined term “director”	g

- a Punctuation correction.
- b Unnecessary text is removed.
- c This text is added to clarify that “as amended” refers to past amendments, not future/prospective amendments of the document that is being referenced. “As amended” should not be removed because the statute being referenced may have been amended after its initial promulgation (which is the standard statute notation), and our intent is to include in that citation all the past amendments of that statute, as do the references to statute in the federal RCRA rules (to which the hazardous waste rules must be equivalent), and as does the Ohio Revised Code. Rule 3745-50-11 is the hazardous waste management program’s “Incorporated by reference” rule that establishes date-certain limitations on cross-referenced documents, and ensures that the hazardous waste rules are not referencing statute changes that may occur after the date in 3745-50-11.
- d Word choice correction.
- e This amendment is made in order to use the defined term.
- f This amendment defines the acronym; LSC requirement.
- g This punctuation correction (adding quotation marks around defined terms) is made in all hazardous waste rules, as they are amended, at locations of defined terms that are designated as such in the text.

RSFA Attachment A

Rule **3745-266-210** is amended as follows:

Location	Change	Reason
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- h This amendment adds specificity to the provision.
- * This amendment is made, or changed, in response to a comment on the Interested Parties draft rule.

This rule is submitted for 5-year review upon proposal. A new review date will be assigned.

3745-266-210 **Definitions ~~that apply to the~~ conditional exemption for LLMW storage and disposal rules.**

Rules 3745-266-210 to 3745-266-355 of the Administrative Code use the following special definitions:

- (A) "Agreement State" means a state that has entered into an agreement with the U.S. nuclear regulatory commission (NRC) under Subsection 274(b) of the Atomic Energy Act of 1954, as amended through the date specified in rule 3745-50-11 of the Administrative Code (68 Stat. 919) (AEA), to assume responsibility for regulating within ~~its~~that state's borders ~~by product-by-product material~~, source material, or special nuclear material in quantities not sufficient to form a critical mass.
- (B) "Certified delivery" means certified mail with return receipt requested, or equivalent courier service, or other means, that provides the sender with a receipt confirming delivery.
- (C) "Eligible NARM" is naturally occurring or accelerator-produced radioactive material (NARM) that is eligible for the transportation and disposal conditional exemption. ~~It~~Eligible NARM is a NARM waste that contains hazardous waste, meets the waste acceptance criteria of, and is allowed by state NARM regulations to be disposed of at a low-level radioactive waste (LLW) disposal facility licensed in accordance with 10 CFR Part 61 or NRC "Agreement State" equivalent regulations.
- (D) "Exempted waste" means a waste that meets the eligibility criteria in paragraph (B) of rule 3745-266-220 of the Administrative Code and meets all of the conditions in paragraph (C) of rule 3745-266-220 of the Administrative Code, or meets the eligibility criteria in rule 3745-266-310 of the Administrative Code and complies with all the conditions in paragraph (A) of rule 3745-266-315 of the Administrative Code. Such waste is conditionally exempted from the regulatory definition of "hazardous waste" ~~described~~ in rule 3745-51-03 of the Administrative Code.
- (E) "Land disposal restriction (LDR) treatment standards" means treatment standards, under Chapter 3745-270 of the Administrative Code, that a hazardous waste ~~must~~is required to meet before ~~it can~~such hazardous waste may be disposed of in a hazardous waste land disposal unit.
- (F) "License" means a license issued by the NRC, or NRC "Agreement State," to users that manage radionuclides regulated by NRC, or NRC "Agreement States," under authority of the AEA.
- (G) "Low-level mixed waste" ~~or~~ (LLMW) is a waste that contains both low-level radioactive waste and hazardous waste.

- (H) "Low-level radioactive waste" or "(LLW)" is a radioactive waste which contains ~~source, special nuclear, or byproduct material, "source material," "special material,"~~ or "by-product material" as defined by the AEA, and which is not classified as ~~high-level radioactive waste, transuranic waste, spent nuclear fuel, or byproduct material~~ "high-level radioactive waste," "transuranic waste," "spent nuclear fuel," or "by-product material" as defined ~~in Section 11e.(2) of~~ by the AEA. (See also NRC definition of "waste" at 10 CFR 61.2).
- (I) "Mixed waste" means a waste that contains both hazardous waste and source material, special nuclear material, or ~~byproduct~~ by-product material subject to the AEA.
- (J) "Naturally occurring ~~and/or~~ accelerator-produced radioactive material" or "(NARM)" means radioactive materials that either:
- (1) Are naturally occurring and are not ~~source, special nuclear, or byproduct materials~~ "source material," "special nuclear material," or "by-product material" (as defined by the AEA); ~~or,~~
 - (2) Are produced by an accelerator. NARM is regulated by the states under state law, or by the department of energy (DOE) (as authorized by the AEA) under DOE orders.
- (K) "NRC" means the U.S. nuclear regulatory commission.
- (L) "We" or "us" means the "director" as defined in rule 3745-50-10 of the Administrative Code.
- (M) "You" means a generator, treater, or other handler of LLMW or eligible NARM.

[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:

Five Year Review (FYR) Dates: 07/01/2015

Certification

Date

Promulgated Under: 119.03
Statutory Authority: 3734.12
Rule Amplifies: 3734.12
Prior Effective Dates: 12/07/2004, 09/05/2010

RSFA Attachment A

Rule 3745-266-260 is amended as follows:		
Location	Change	Reason
1 st sentence	remove the sentence (question)	a, b
2 nd sentence	after "only" add ' "low level mixed waste" (LLMW), as defined in rule 3745-266-210 of the Administrative Code, '	c, d
	-after "December 7, 2004 and" remove the comma -after "that date" remove the comma	e

- a This rule is being amended to remove the question/answer format so that it is in the same format as the rest of the hazardous waste management rules. The corresponding federal provision (40 CFR 266.260) has not been similarly amended, but generally U.S. EPA no longer writes rules in the question/answer format.
- b Unnecessary text is removed.
- c Some text is relocated from the question that is being removed, to define the acronym and identify the defined term.
- d This punctuation correction (adding quotation marks around the defined term) is made in all hazardous waste rules, as they are amended, at locations of defined terms that are designated as such in the text.
- e Punctuation correction.

This rule is submitted for 5-year review upon proposal. A new review date will be assigned.

3745-266-260 **LLMW storage unit closure.**

~~Do closure requirements apply to units that stored low level mixed waste (LLMW) (as defined in rule 3745-266-210 of the Administrative Code) prior to December 7, 2004?~~
Permitted storage units that have been used to store only "low level mixed waste" (LLMW), as defined in rule 3745-266-210 of the Administrative Code, prior to December 7, 2004 and, after that date, store only LLMW which becomes exempt under rules 3745-266-210 to 3745-266-355 of the Administrative Code, are not subject to the closure requirements of Chapters 3745-54 to 3745-57 and 3745-205 and 3745-65 to 3745-69 and 3745-256 of the Administrative Code. Storage units (or portions of units) that have been used to store both LLMW and non-mixed hazardous waste prior to December 7, 2004, or are used to store both after that date, remain subject to closure requirements with respect to the non-mixed hazardous waste.

Effective:

Five Year Review (FYR) Dates: 07/01/2015

Certification

Date

Promulgated Under: 119.03
Statutory Authority: 3734.12
Rule Amplifies: 3734.12
Prior Effective Dates: 12/07/2004, 09/05/2010

RSFA Attachment A

Rule 3745-270-38 is amended as follows:		
Location	Change	Reason
(A)	add text "Prohibited from land disposal."	a
(A)(3)	remove "Table 1 of" and add "the table in"	b
	after "numbers" remove the colon	c
	-remove "clean water act" [lower case] and add "Clean Water Act" [upper case] -remove "safe drinking water act" [lower case] and add "Safe Drinking Water Act" [upper case]	d
	add quotation marks around "Class I"	e
(B)	add text: "Radioactive waste prohibitions."	a
(B)(1)	add quotation marks around "Class I"	e
(D)	remove "The requirements of paragraphs" and add "Paragraphs"	f
(D)(1)	remove "specified"	f
	remove the ending semicolon and add a period	c
(D)(2)	remove the ending semicolon and add a period	c
(D)(3)	remove the ending semicolon and add a period	c
(E)	remove "specified"	f

- a This amendment is designed to eliminate to occasion of a paragraph designation that contains no text.
- b Cross-reference correction. There is only one table in the rule referenced and it is not numbered, so the unnecessary numbering is removed and associated text is corrected.
- b Punctuation correction.
- d LSC requirement. Use of upper case is required in this instance so the lower case title is removed and the upper case title is added.

RSFA Attachment A

Rule **3745-270-38** is amended as follows:

Location	Change	Reason
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- e LSC requirement. Quotation marks are required in order to maintain the upper case.
- f Unnecessary text is removed.

3745-270-38

Waste specific prohibitions- newly identified organic toxicity characteristic wastes and newly listed coke by-product and chlorotoluene production wastes.**(A) Prohibited from land disposal.**

- (1) The wastes specified in rule 3745-51-32 of the Administrative Code as EPA hazardous waste numbers K141, K142, K143, K144, K145, K147, K148, K149, K150, and K151 are prohibited from land disposal.
- (2) Debris contaminated with EPA hazardous waste numbers F037, F038, K107 to K112, K117, K118, K123 to K126, K131, K132, K136, U328, U353, U359, and soil and debris contaminated with D012 to D043, K141 to K145, and K147 to K151 are prohibited from land disposal.
- (3) The following wastes that are specified in ~~Table 1 of the table in~~ rule 3745-51-24 of the Administrative Code as EPA hazardous waste numbers: D012, D013, D014, D015, D016, D017, D018, D019, D020, D021, D022, D023, D024, D025, D026, D027, D028, D029, D030, D031, D032, D033, D034, D035, D036, D037, D038, D039, D040, D041, D042, D043 that are not radioactive, or that are managed in systems other than those whose discharge is regulated under the ~~clean water act~~ Clean Water Act (CWA), or that are zero dischargers that do not engage in CWA-equivalent treatment before ultimate land disposal, or that are injected in "Class I" deep wells regulated under the ~~safe drinking water act~~ Safe Drinking Water Act (SDWA), are prohibited from land disposal. CWA-equivalent treatment means biological treatment for organics, alkaline chlorination or ferrous sulfate precipitation for cyanide, precipitation/sedimentation for metals, reduction of hexavalent chromium, or other treatment technology that can be demonstrated to perform equally or better than these technologies.

(B) Radioactive waste prohibitions.

- (1) Radioactive wastes that are mixed with D018 to D043 wastes that are managed in systems other than those whose discharge is regulated under the CWA, or that inject in "Class I" deep wells regulated under the SDWA, or that are zero dischargers that engage in CWA-equivalent treatment before ultimate land disposal, are prohibited from land disposal. CWA-equivalent treatment means biological treatment for organics, alkaline chlorination or ferrous sulfate precipitation for cyanide, precipitation/sedimentation for metals, reduction of hexavalent chromium, or other treatment technology that can be demonstrated to perform equally or greater than these technologies.

(2) Radioactive wastes mixed with K141 to K145 wastes, and K147 to K151 wastes are also prohibited from land disposal.

(3) Soil and debris contaminated with the radioactive mixed wastes indicated in paragraphs (B)(1) and (B)(2) of this rule are prohibited from land disposal.

(C) Reserved.

(D) ~~The requirements of paragraphs~~ Paragraphs (A), (B), and (C) of this rule do not apply if:

(1) The wastes meet the applicable treatment standards ~~specified~~ in rules 3745-270-40 to 3745-270-49 of the Administrative Code;

(2) Persons have been granted an exemption from a prohibition pursuant to a petition under rule 3745-270-06 of the Administrative Code, with respect to those wastes and units covered by the petition;

(3) The wastes meet the applicable alternate treatment standards established pursuant to a petition granted under rule 3745-270-44 of the Administrative Code;

(4) Persons have been granted an extension to the effective date of a prohibition pursuant to rule 3745-270-05 of the Administrative Code, with respect to these wastes covered by the extension.

(E) To determine whether a hazardous waste identified in this rule exceeds the applicable treatment standards ~~specified~~ in rule 3745-270-40 of the Administrative Code, the initial generator shall test a sample of the waste extract or the entire waste, depending on whether the treatment standards are expressed as concentrations in the waste extract or the waste, or the generator may use knowledge of the waste. If the waste contains constituents in excess of the applicable levels in rules 3745-270-40 to 3745-270-49 of the Administrative Code, the waste is prohibited from land disposal, and all requirements of Chapter 3745-270 of the Administrative Code are applicable, except as otherwise specified.

Effective:

Five Year Review (FYR) Dates: Exempt

Certification

Date

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

3745-270-40

1

Appendix to rule 3745-270-40 of the Administrative Code

Extraction Procedure (EP) Toxicity Test Method and
Structural Integrity Test (Method 1310B)

The EP (method 1310B) is published in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," U.S. EPA publication SW-846.

[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."]

RSFA Attachment A

Rule 3745-270-40 is amended as follows:		
Location	Change	Reason
title	not amended	*
(A)	remove "it" and add "the prohibited waste"	a
	remove "found"	b
(A)(1)	remove "must" and add "shall"	c
	remove "found"	b
	remove the ending "; or" and add a period	b, d
(A)(2)	remove "must" and add "shall"	c
	remove "found"	b
	remove the ending "; or" and add a period	b, d
(A)(3)	remove "must" and add "shall"	c
(B)	add text: "For:"	e
(B)(1)	remove "For wastewaters" and add "Wastewaters"	e
(B)(2)	remove "For all" and add "All"	e
(B)(3)	remove "For wastes" and add "Wastes"	e
	remove "found"	b
	after "Physical/Chemical Methods" add a comma inside the quotation mark and remove the comma that is outside the quotation mark	c, d
	remove "must" and add "shall"	c
(B)(4)	remove "For wastes" and add "Wastes"	e
	remove "set forth"	a
(C)	remove "must" and add "shall"	c
(D)	add "all of" before "the following"	f
(D)(1)	remove the ending semicolon and add a period	d
(D)(2)	remove the ending "; and" and add a period	b, d

RSFA Attachment A

Rule 3745-270-40 is amended as follows:		
Location	Change	Reason
(E)	-add quotation marks around the defined term “underlying hazardous constituents”	g
	-add quotation marks around the defined term “land disposal”	
	remove “must” and add “shall”	c
	remove “found”	b
(F)	[2 times] remove “and/or” and add “or”	a
	remove “found”	b
(H)	-remove the comma after “constituents”	d
	-remove the comma after “storage”	
(J)	[5 times] remove “defined” and add “described”	a
Changes to the table		
header row	2 nd column: after “Waste description and” remove “treatment/regulatory” and add “treatment or regulatory”	a
	-5 th column: below “Wastewaters” after “Concentration ³ in” remove “mg/l” and add “mg/L” -6 th column: below “Nonwastewaters” after “Concentration ⁵ in mg/kg unless noted as” remove “mg/l” and add “mg/L”	h
@ D001	in Ignitable characteristic row, Waste description column: -after “Code” add a period	d
	-remove “high” [lower case] and add “High” [upper case]	i
	-after the new “High” add “total organic carbon”	j #
	-add parentheses around the existing acronym “TOC”	c, d
	-after “subcategory” remove the period	d
	-add quotation marks around the phrase “High total organic carbon (TOC)” to maintain the upper case	c #
@ D003	in row Reactive cyanides after “Reactive cyanides subcategory based” add “on”	i
@ D004	in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
@ D005	in Nonwastewaters column, remove “mg/l” and add “mg/L”	h

RSFA Attachment A

Rule 3745-270-40 is amended as follows:		
Location	Change	Reason
@ D006	in row Wastes that exhibit..., in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
@ D007	in Waste description column after “TCLP” remove the closing parenthesis	i
	in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
@ D008	in row Wastes that exhibit..., in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
@ D009	in Nonwastewaters column, cell that begins “0.2 mg/l TCLP...” remove “mg/l” and add “mg/L”	h
	in Nonwastewaters column, cell that begins “0.025 mg/l TCLP...” remove “mg/l” and add “mg/L”	h
@ D010	in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
@ D011	in row Wastes that exhibit..., in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
@ D016	in Wastewaters column, remove “ BIOGD ” and add “ BIODG ”	k
@ F001, F002, F003, F004, and F005	in “Acetone row, Waste description column, remove “and/or” and add “or”	a
	in Common name column in cell that begins with “m-Cresol” after “distinguish from” add “p-“ before “Cresol”	i
	at about the “Nitrobenzene” row, Waste description column, remove “and/or” and add “or”	a
	[2 times] in Waste description column that begins “F003 and/or F005...” remove “and/or” and add “or”	a
	in Carbon disulfide row, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in Cyclohexanone row, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in Methanol row, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in “2-Ethoxyethanol...” row, in Wastewaters column, remove “ BIOGD ” and add “ BIODG ”	k

RSFA Attachment A

Rule 3745-270-40 is amended as follows:		
Location	Change	Reason
@ F006	in row Cadmium, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row Chromium (total), in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row Lead, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in Waste description column at (5) remove “cleaning/stripping” and add “cleaning or stripping”	a
	in row Nickel, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row Silver, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
@ F007	in row Cadmium, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row Chromium (total), in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row Lead, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row Nickel, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row Silver, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
@ F008	in row Cadmium, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row Chromium (total), in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row Lead, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row Nickel, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row Silver, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h

RSFA Attachment A

Rule 3745-270-40 is amended as follows:		
Location	Change	Reason
@ F009	in row Cadmium, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row Chromium (total), in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row Lead, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row Nickel, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row Silver, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
@ F011	in row Cadmium, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row Chromium (total), in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row Lead, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row Nickel, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row Silver, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
@ F012	in row Cadmium, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row Chromium (total), in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row Lead, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row Nickel, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row Silver, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
@ F019	in row Chromium (total), in Nonwastewaters column, remove “mg/l” and add “mg/L”	h

RSFA Attachment A

Rule 3745-270-40 is amended as follows:		
Location	Change	Reason
@ F024	in row Chromium (total), in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row Nickel, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
@ F025	in F025, Spent filters and filter aids portion, in the Waste description column, remove “filters/aids” and add “filters or aids”	a
@ F032	in row 2-4-Dimethyl phenol, remove “2-4-Dimethyl phenol” and add “2,4-Dimethyl phenol”	d
	in the Waste description column near the end of the text, remove “and/or” and add “or”	a
	in row Arsenic, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row Chromium (total), in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
@ F034	in the Waste description column, near the end of the text, remove “and/or” and add “or”	a
	in row Arsenic, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row Chromium (total), in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
@ F035	in row Arsenic, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row Chromium (total), in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in the Waste description column, near the end of the text, remove “and/or” and add “or”	a
@ F037	[3 times] in Waste description column, remove “oil/water/solids” and add “oil or water or solids”	a
	in Waste description column, add quotation marks around the defined term “aggressive biological treatment units”	g
	in row Chromium (total), in Nonwastewaters column, remove “mg/l” and add “mg/L”	h

RSFA Attachment A

Rule 3745-270-40 is amended as follows:		
Location	Change	Reason
	in row Nickel, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
@ F038	-[2 times] in Waste description column, remove “oil/water/solids” and add “oil or water or solids” -[2 times] in Waste description column, remove “and/or” and add “or”	a
	in Waste description column, add quotation marks around the defined term “aggressive biological treatment units”	g
	in row Chromium (total), in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row Nickel, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
@ F039	in Waste description column: -remove “number(s)” and add “numbers” -near the end of sentence, remove “and/or” and add “or”	a
	[after row “Xylenes”] in row Antimony, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row Arsenic, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row Barium, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row Cadmium, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row Chromium (total), in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row Lead, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row Mercury, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row Nickel, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row Selenium, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h

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Rule 3745-270-40 is amended as follows:		
Location	Change	Reason
	in row Silver, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
@ K001	in Waste description column, near the end of the text, remove “and/or” and add “or”	a
	in row Lead, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
@ K002	in row Chromium (total), in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row Lead, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
@ K003	in row Chromium (total), in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row Lead, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
@ K004	in row Chromium (total), in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row Lead, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
@ K005	in row Chromium (total), in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row Lead, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
@ K006	in Wastewater treatment sludge... (anhydrous) , in row Chromium (total), in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in Wastewater treatment sludge... (anhydrous) , in row Lead, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
@ K006	in Wastewater treatment sludge... (hydrated) , in row Chromium (total), in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in Wastewater treatment sludge... (hydrated) , in row Lead, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h

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Rule 3745-270-40 is amended as follows:		
Location	Change	Reason
@ K007	in row Chromium (total), in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row Lead, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
@ K008	in row Chromium (total), in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row Lead, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
@ K015	in row Chromium (total), in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row Nickel, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
@ K021	in row Antimony, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
@ K022	in Waste description column, remove “phenol/acetone” and add “phenol or acetone”	a
	in row Chromium (total), in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row Nickel, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
@ K028	in row Chromium (total), in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row Lead, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row Nickel, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
@ K031	in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
@ K035	in row Indeno..., remove “Indeno(1,2,3- cd)pyrene” and add “Indeno(1,2,3- c,d)pyrene” [to add the comma after the c]	d
@ K046	in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
@ K047	in Waste description column, remove “Pink/red” and add “Pink or red”	a

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Rule 3745-270-40 is amended as follows:		
Location	Change	Reason
@ K048	in row Chromium (total), in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row Nickel, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
@ K049	in row Chromium (total), in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row Nickel, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
@ K050	in row Chromium (total), in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row Nickel, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
@ K051	in row Chromium (total), in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row Nickel, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
@ K052	in row Chromium (total), in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row Nickel, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
@ K061	in Waste description column, remove “dust/sludge” and add “dust or sludge”	a
	in row Antimony, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row Arsenic, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row Barium, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row Beryllium, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row Cadmium, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row Chromium (total), in Nonwastewaters column, remove “mg/l” and add “mg/L”	h

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Rule 3745-270-40 is amended as follows:		
Location	Change	Reason
	in row Lead, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row Mercury, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row Nickel, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row Selenium, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row Silver, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row Thallium, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row Zinc, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
@ K062	in row Chromium (total), in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row Lead, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
@ K069	in row Cadmium, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row Lead, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
@ K071	in row K071...nonwastewaters that are residues, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row K071...nonwastewaters that are not residues, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
@ K083	in row Nickel, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
@ K084	in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
@ K086	in row Chromium (total), in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row Lead, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h

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Rule 3745-270-40 is amended as follows:		
Location	Change	Reason
@ K087	in row Indeno..., remove "Indeno(1,2,3- cd)pyrene" and add "Indeno(1,2,3- c,d)pyrene" [to add the comma after the c]	d
	in row Lead, in Nonwastewaters column, remove "mg/l" and add "mg/L"	h
@ K088	in row Indeno..., remove "Indeno(1,2,3- cd)pyrene" and add "Indeno(1,2,3- c,d)pyrene" [to add the comma after the c]	d
	in row Antimony, in Nonwastewaters column, remove "mg/l" and add "mg/L"	h
	in row Barium, in Nonwastewaters column, remove "mg/l" and add "mg/L"	h
	in row Beryllium, in Nonwastewaters column, remove "mg/l" and add "mg/L"	h
	in row Cadmium, in Nonwastewaters column, remove "mg/l" and add "mg/L"	h
	in row Chromium (total), in Nonwastewaters column, remove "mg/l" and add "mg/L"	h
	in row Lead, in Nonwastewaters column, remove "mg/l" and add "mg/L"	h
	in row Mercury, in Nonwastewaters column, remove "mg/l" and add "mg/L"	h
	in row Nickel, in Nonwastewaters column, remove "mg/l" and add "mg/L"	h
	in row Selenium, in Nonwastewaters column, remove "mg/l" and add "mg/L"	h
	in row Silver in Nonwastewaters column, remove "mg/l" and add "mg/L"	h
@ K100	in Waste description column, remove "dust/sludge" and add "dust or sludge"	a
	in row Cadmium, in Nonwastewaters column, remove "mg/l" and add "mg/L"	h
	in row Chromium (total), in Nonwastewaters column, remove "mg/l" and add "mg/L"	h
	in row Lead, in Nonwastewaters column, remove "mg/l" and add "mg/L"	h

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Rule 3745-270-40 is amended as follows:		
Location	Change	Reason
@ K101	in row Arsenic, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
@ K102	in row Arsenic, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
below K103	in Hazardous Waste Number column, in row below the last K103 row, remove “K014” and add “K104”	i
	in Waste description column after “streams” add “generated from”	a +
	in Waste description column, remove “nitrobenzene/aniline” and add “nitrobenzene or aniline”	a
@ K106	in row K106 (wastewater treatment sludge from the mercury cell process in chlorine production) nonwastewaters that contain less than 260.0 mg/kg..., in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row Other K106 nonwastewaters ..., in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
@ K107	in Wastewaters column, remove “BIOGD” and add “BIODG”	k
@ K108	in Wastewaters column, remove “BIOGD” and add “BIODG”	k
@ K109	in Wastewaters column, remove “BIOGD” and add “BIODG”	k
@ K110	in Wastewaters column, remove “BIOGD” and add “BIODG”	k
@ K112	in Wastewaters column, remove “BIOGD” and add “BIODG”	k
@ K115	in row Nickel, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
@ K123	in Wastewaters column, remove “BIOGD” and add “BIODG”	k
@ K124	in Wastewaters column, remove “BIOGD” and add “BIODG”	k
@ K125	in Wastewaters column, remove “BIOGD” and add “BIODG”	k
@ K126	in Wastewaters column, remove “BIOGD” and add “BIODG”	k
@ K148	in Waste description column, remove “cola” and add “coal”	i, k

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Rule **3745-270-40** is amended as follows:

Location	Change	Reason
@ K156	in Waste description column, remove the parenthetical sentence	FR 06/13/2011
	in row Benomyl: -in Waste description column after “Benomyl” add a superscript footnote 10 -in Wastewaters column, after the existing entry, add “; or CMBST, CHOXD, BIODG or CARBN” -in Nonwastewaters column, after the existing number entry, add “; or CMBST”	FR 06/13/2011
	in row Carbaryl: -in Waste description column after “Carbaryl” add a superscript footnote 10 -in Wastewaters column, after the existing entry, add “; or CMBST, CHOXD, BIODG or CARBN” -in Nonwastewaters column, after the existing number entry, add “; or CMBST”	FR 06/13/2011
	in row Carbenzadim: -in Waste description column after “Carbenzadim” add a superscript footnote 10 -in Wastewaters column, after the existing entry, add “; or CMBST, CHOXD, BIODG or CARBN” -in Nonwastewaters column, after the existing number entry, add “; or CMBST”	FR 06/13/2011
	in row Carbofuran: -in Waste description column after “Carbofuran” add a superscript footnote 10 -in Wastewaters column, after the existing entry, add “; or CMBST, CHOXD, BIODG or CARBN” -in Nonwastewaters column, after the existing number entry, add “; or CMBST”	FR 06/13/2011
	in row Carbosulfan: -in Waste description column after “Carbosulfan” add a superscript footnote 10 -in Wastewaters column, after the existing entry, add “; or CMBST, CHOXD, BIODG or CARBN” -in Nonwastewaters column, after the existing number entry, add “; or CMBST”	FR 06/13/2011
	in row Methomyl: -in Waste description column after “Methomyl” add a superscript footnote 10 -in Wastewaters column, after the existing entry, add “; or CMBST, CHOXD, BIODG or CARBN” -in Nonwastewaters column, after the existing number entry, add “; or CMBST”	FR 06/13/2011

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Rule 3745-270-40 is amended as follows:		
Location	Change	Reason
	in row Triethylamine: -in Wastewaters column, after the existing entry, add “; or CMBST, CHOXD, BIODG or CARBN” -in Nonwastewaters column, after the existing number entry, add “; or CMBST”	FR 06/13/2011
@ K157	in Waste description column, remove the parenthetical sentence	FR 06/13/2011
	in row Methomyl: -in Waste description column after “Methomyl” add a superscript footnote 10 -in Wastewaters column, after the existing entry, add “; or CMBST, CHOXD, BIODG or CARBN” -in Nonwastewaters column, after the existing number entry, add “; or CMBST”	FR 06/13/2011
	in row Triethylamine: -in Wastewaters column, after the existing entry, add “; or CMBST, CHOXD, BIODG or CARBN” -in Nonwastewaters column, after the existing number entry, add “; or CMBST”	FR 06/13/2011
@ K158	in Waste description column, remove “filter/separation” and add “filter or separation”	a
	in Waste description column, remove the parenthetical sentence	FR 06/13/2011
	in row Benomyl, remove row	FR 06/13/2011
	in row Carbenzadim: -in Waste description column after “Carbenzadim” add a superscript footnote 10 -in Wastewaters column, after the existing entry, add “; or CMBST, CHOXD, BIODG or CARBN” -in Nonwastewaters column, after the existing number entry, add “; or CMBST”	FR 06/13/2011
	in row Carbofuran: -in Waste description column after “Carbofuran” add a superscript footnote 10 -in Wastewaters column, after the existing entry, add “; or CMBST, CHOXD, BIODG or CARBN” -in Nonwastewaters column, after the existing number entry, add “; or CMBST”	FR 06/13/2011

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Rule 3745-270-40 is amended as follows:		
Location	Change	Reason
	in row Carbosulfan: -in Waste description column after “Carbosulfan” add a superscript footnote 10 -in Wastewaters column, after the existing entry, add “; or CMBST, CHOXD, BIODG or CARBN” -in Nonwastewaters column, after the existing number entry, add “; or CMBST”	FR 06/13/2011
@ K159	in Waste description column, remove the footnote 10 designation	FR 06/13/2011
	in row Butylate: -in Waste description column after “Butylate” add a superscript footnote 10 -in Wastewaters column, after the existing entry, add “; or CMBST, CHOXD, BIODG or CARBN” -in Nonwastewaters column, after the existing number entry, add “; or CMBST”	FR 06/13/2011
	in row EPTC (Eptam): -in Waste description column after “EPTC (Eptam)” add a superscript footnote 10 -in Wastewaters column, after the existing entry, add “; or CMBST, CHOXD, BIODG or CARBN” -in Nonwastewaters column, after the existing number entry, add “; or CMBST”	FR 06/13/2011
	in row Molinate: -in Waste description column after “Molinate” add a superscript footnote 10 -in Wastewaters column, after the existing entry, add “; or CMBST, CHOXD, BIODG or CARBN” -in Nonwastewaters column, after the existing number entry, add “; or CMBST”	FR 06/13/2011
	in row Pebulate: -in Waste description column after “Pebulate” add a superscript footnote 10 -in Wastewaters column, after the existing entry, add “; or CMBST, CHOXD, BIODG or CARBN” -in Nonwastewaters column, after the existing number entry, add “; or CMBST”	FR 06/13/2011
	in row Vernolate: -in Waste description column after “Vernolate” add a superscript footnote 10 -in Wastewaters column, after the existing entry, add “; or CMBST, CHOXD, BIODG or CARBN” -in Nonwastewaters column, after the existing number entry, add “; or CMBST”	FR 06/13/2011

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Rule 3745-270-40 is amended as follows:		
Location	Change	Reason
@ K161	row Antimony, in Nonwastewaters column: -remove the superscript footnote 11 -add "mg/L TCLP"	FR 06/13/2011
	row Arsenic, in Nonwastewaters column: -remove the superscript footnote 11 -add "mg/L TCLP"	FR 06/13/2011
	row Carbon disulfide, in Nonwastewaters column: -remove the superscript footnote 11 -add "mg/L TCLP"	FR 06/13/2011
	in row Dithiocarbamates (total): -in Waste description column, after "Dithiocarbamates (total)" add a superscript footnote 10 -in CAS number column, remove the existing entry and add "NA"	FR 06/13/2011
	in row Dithiocarbamates (total): -in Wastewaters column, after the existing entry, add "; or CMBST, CHOXD, BIODG or CARBN" -in Nonwastewaters column, after the existing number entry, add "; or CMBST"	FR 06/13/2011
	in Lead row, in Nonwastewaters column, remove the superscript footnote 11 and add (not superscript) "mg/L TCLP"	FR 06/13/2011
	in Nickel row, in Nonwastewaters column, remove the superscript footnote 11 and add (not superscript) "mg/L TCLP"	FR 06/13/2011
	in Selenium row, in Nonwastewaters column, remove the superscript footnote 11 and add (not superscript) "mg/L TCLP"	FR 06/13/2011
@ K169	in row Xylene(s) (total), remove "Xylene(s)" and add "Xylenes"	a
@ K170	in row Xylene(s) (total), remove "Xylene(s)" and add "Xylenes"	a

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Rule 3745-270-40 is amended as follows:		
Location	Change	Reason
@ K171	in row Xylene(s) (total), remove "Xylene(s)" and add "Xylenes"	a
	in row Arsenic, in Nonwastewaters column, remove "mg/l" and add "mg/L"	h
	in row Nickel, in Nonwastewaters column, remove "mg/l" and add "mg/L"	h
	in row Vanadium, in Nonwastewaters column, remove "mg/l" and add "mg/L"	h
@ K172	in row Xylene(s) (total), remove "Xylene(s)" and add "Xylenes"	a
	in row Antimony, in Nonwastewaters column, remove "mg/l" and add "mg/L"	h
	in row Arsenic, in Nonwastewaters column, remove "mg/l" and add "mg/L"	h
	in row Nickel, in Nonwastewaters column, remove "mg/l" and add "mg/L"	h
	in row Vanadium, in Nonwastewaters column, remove "mg/l" and add "mg/L"	h
@ K174	in row Arsenic, in Nonwastewaters column, remove "mg/l" and add "mg/L"	h
@ K175	in row Mercury, in Nonwastewaters column, remove "mg/l" and add "mg/L"	h
@ K176	in row Antimony, in Nonwastewaters column, remove "mg/l" and add "mg/L"	h
	in row Arsenic, in Nonwastewaters column, remove "mg/l" and add "mg/L"	h
	in row Cadmium, in Nonwastewaters column, remove "mg/l" and add "mg/L"	h
	in row Lead, in Nonwastewaters column, remove "mg/l" and add "mg/L"	h
	in row Mercury, in Nonwastewaters column, remove "mg/l" and add "mg/L"	h

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Rule 3745-270-40 is amended as follows:		
Location	Change	Reason
@ K177	in row Antimony, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row Arsenic, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row Lead, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
@ K178	in row TCDDs (all Tetrachlorodibenzofurans), in Common name column, remove “TCDDs” and add “TCDFs”	i, k
	in row Thallium, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
@ K181	in Waste description column, remove “and-or” and add “or”	a
@ P009	in Wastewaters column, remove “ BIOGD ” and add “ BIODG ”	k
@ P010	in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
@ P011	in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
@ P012	in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
@ P013	in row Barium, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
@ P022	in row Carbon disulfide; alternate ⁶ standard for nonwastewaters only, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
@ P036	in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
@ P038	in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
@ P065	in row Mercury fulminate nonwastewaters that are residues from RMERC..., in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row Mercury fulminate nonwastewaters that are incinerator residues..., in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
@ P068	in Wastewaters column, remove “ BIOGD ” and add “ BIODG ”	k
@ P073	in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
@ P074	in row Nickel, in Nonwastewaters column, remove “mg/l” and add “mg/L”	h

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Rule 3745-270-40 is amended as follows:		
Location	Change	Reason
@ P081	in Wastewaters column, remove "BIOGD" and add "BIODG"	k
@ P092	in row Phenyl mercuric acetate nonwastewaters that are residues from RMERC..., in Nonwastewaters column, remove "mg/l" and add "mg/L"	h
	in row Phenyl mercuric acetate nonwastewaters that are incinerator residues..., in Nonwastewaters column, remove "mg/l" and add "mg/L"	h
@ P096	in Wastewaters column, remove "BIOGD" and add "BIODG"	k
@ P099	in row Silver, in Nonwastewaters column, remove "mg/l" and add "mg/L"	h
@ P103	in Nonwastewaters column, remove "mg/l" and add "mg/L"	h
@ P104	in row Silver, in Nonwastewaters column, remove "mg/l" and add "mg/L"	h
@ P105	in Wastewaters column, remove "BIOGD" and add "BIODG"	k
@ P110	in Nonwastewaters column, remove "mg/l" and add "mg/L"	h
@ P112	in Wastewaters column, remove "BIOGD" and add "BIODG"	k
@ P114	in Nonwastewaters column, remove "mg/l" and add "mg/L"	h
@ P127	-in Waste description column, after "Carbofuran" add a superscript footnote 10 -in Wastewaters column, after the existing entry, add "; or CMBST, CHOXD, BIODG or CARBN" -in Nonwastewaters column, after the existing number entry, add "; or CMBST"	FR 06/13/2011
@ P128	-in Waste description column, after "Mexacarbate" add a superscript footnote 10 -in Wastewaters column, after the existing entry, add "; or CMBST, CHOXD, BIODG or CARBN" -in Nonwastewaters column, after the existing number entry, add "; or CMBST"	FR 06/13/2011
@ P185	-in Wastewaters column, after the existing entry add "; or CMBST, CHOXD, BIODG or CARBN" -in Nonwastewaters column, after the existing number entry, add "; or CMBST"	FR 06/13/2011

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Rule 3745-270-40 is amended as follows:		
Location	Change	Reason
@ P188	-in Waste description column, after “Physostigmine salicylate” add a superscript footnote 10 -in Wastewaters column, after the existing entry, add “; or CMBST, CHOXD, BIODG or CARBN” -in Nonwastewaters column, after the existing number entry, add “; or CMBST”	FR 06/13/2011
@ P189	-in Waste description column, after “Carbosulfan” add a superscript footnote 10 -in Wastewaters column, after the existing entry, add “; or CMBST, CHOXD, BIODG or CARBN” -in Nonwastewaters column, after the existing number entry, add “; or CMBST”	FR 06/13/2011
@ P190	-in Waste description column, after “Metolcarb” add a superscript footnote 10 -in Wastewaters column, after the existing entry, add “; or CMBST, CHOXD, BIODG or CARBN” -in Nonwastewaters column, after the existing number entry, add “; or CMBST”	FR 06/13/2011
@ P191	-in Wastewaters column, after the existing entry, add “; or CMBST, CHOXD, BIODG or CARBN” -in Nonwastewaters column, after the existing number entry, add “; or CMBST”	FR 06/13/2011
@ P192	-in Wastewaters column, after the existing entry, add “; or CMBST, CHOXD, BIODG or CARBN” -in Nonwastewaters column, after the existing number entry, add “; or CMBST”	FR 06/13/2011
@ P194	-in Waste description column, after “Oxamyl” add a superscript footnote 10 -in Wastewaters column, after the existing entry, add “; or CMBST, CHOXD, BIODG or CARBN” -in Nonwastewaters column, after the existing number entry, add “; or CMBST”	FR 06/13/2011
@ P196	-in Waste description column, after “Manganese dimethyldithiocarbamate” add a superscript footnote 10 -in Wastewaters column, after the existing entry, add “; or CMBST, CHOXD, BIODG or CARBN” -in Nonwastewaters column, after the existing number entry, add “; or CMBST”	FR 06/13/2011

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Rule 3745-270-40 is amended as follows:		
Location	Change	Reason
@ P197	-in Wastewaters column, after the existing entry, add “; or CMBST, CHOXD, BIODG or CARBN” -in Nonwastewaters column, after the existing number entry, add “; or CMBST”	FR 06/13/2011
@ P198	-in Waste description column, after “Formetanate hydrochloride” add a superscript footnote 10 -in Wastewaters column, after the existing entry, add “; or CMBST, CHOXD, BIODG or CARBN” -in Nonwastewaters column, after the existing number entry, add “; or CMBST”	FR 06/13/2011
@ P199	-in Waste description column, after “Methiocarb” add a superscript footnote 10 -in Wastewaters column, after the existing entry, add “; or CMBST, CHOXD, BIODG or CARBN” -in Nonwastewaters column, after the existing number entry, add “; or CMBST”	FR 06/13/2011
@ P201	-in Waste description column, after “Promecarb” add a superscript footnote 10 -in Wastewaters column, after the existing entry, add “; or CMBST, CHOXD, BIODG or CARBN” -in Nonwastewaters column, after the existing number entry, add “; or CMBST”	FR 06/13/2011
@ P202	-in Waste description column, after “m-Cumenyl methylcarbamate” add a superscript footnote 10 -in Wastewaters column, after the existing entry, add “; or CMBST, CHOXD, BIODG or CARBN” -in Nonwastewaters column, after the existing number entry, add “; or CMBST”	FR 06/13/2011
@ P203	-in Waste description column, after “Aldicarb sulfone” add a superscript footnote 10 -in Wastewaters column, after the existing entry, add “; or CMBST, CHOXD, BIODG or CARBN” -in Nonwastewaters column, after the existing number entry, add “; or CMBST”	FR 06/13/2011

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Rule 3745-270-40 is amended as follows:		
Location	Change	Reason
@ P204	-in Waste description column, after “Physostigmine” add a superscript footnote 10 -in Wastewaters column, after the existing entry, add “; or CMBST, CHOXD, BIODG or CARBN” -in Nonwastewaters column, after the existing number entry, add “; or CMBST”	FR 06/13/2011
@ P205	-in Waste description column, after “Ziram” add a superscript footnote 10 -in Wastewaters column, after the existing entry, add “; or CMBST, CHOXD, BIODG or CARBN” -in Nonwastewaters column, after the existing number entry, add “; or CMBST”	FR 06/13/2011
@ U023	in Wastewaters column, remove “ BIOGD ” and add “ BIODG ”	k
@ U032	in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
@ U049	in Waste Description column, remove “4- Cloro -o-toluidine hydrochloride” and add “4- Chloro -o-toluidine hydrochloride”	k
	in Common Name column, remove “4- Cloro -o-toluidine hydrochloride” and add “4- Chloro -o-toluidine hydrochloride”	k
@ U057	in row Cyclohexanone; alternate standard..., in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
@ U086	in Wastewaters column, remove “ BIOGD ” and add “ BIODG ”	k
@ U096	in Wastewaters column, remove “ BIOGD ” and add “ BIODG ”	k
@ U098	in Wastewaters column, remove “ BIOGD ” and add “ BIODG ”	k
@ U099	in Wastewaters column, remove “ BIOGD ” and add “ BIODG ”	k
@ U103	in Wastewaters column, remove “ BIOGD ” and add “ BIODG ”	k
@ U109	in row 1,2-Diphenylhydrazine, in Wastewaters column, remove “ BIOGD ” and add “ BIODG ”	k
@ U133	in Wastewaters column, remove “ BIOGD ” and add “ BIODG ”	k
@ U136	in Nonwastewaters column, remove “mg/l” and add “mg/L”	h

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Rule 3745-270-40 is amended as follows:		
Location	Change	Reason
@ U137	in row Indeno... in 1 st column, remove “Indeno(1,2,3-cd)pyrene” [with a dash after the 3] and add “Indeno(1,2,3 c,d)pyrene” [to remove the dash]	#
	in row Indeno... in 2 nd column, remove “Indeno(1,2,3-cd)pyrene” and add “Indeno(1,2,3-c,d)pyrene” [to add the comma after the c]	d
@ U144	in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
@ U145	in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
@ U146	in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
@ U151	in row U151 (mercury) nonwastewaters that contain less than 260.0 mg/kg total mercury and that are residues..., in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
	in row U151 (mercury) nonwastewaters that contain less than 260.0 mg/kg total mercury and that are not residues..., in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
@ U154	in row Methanol; alternate standards..., in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
@ U174	-in Waste description column, remove “N-Nitrosodiehtylamine” and add “N-Nitrosodiethylamine” -in Common name column, remove “N-Nitrosodiehtylamine” and add “N-Nitrosodiethylamine”	k
@ U202	remove row	FR 12/17/2010
@ U204	in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
@ U205	in Nonwastewaters column, remove “mg/l” and add “mg/L”	h
@ U248	in Concentration in mg/L column, remove “x” and add “(WETOX or CHOXD) fb CARBN; or CMBST”	i
@ U271	-in Waste description column, after “Benomyl” add a superscript footnote 10 -in Wastewaters column, after the existing entry, add “; or CMBST, CHOXD, BIODG or CARBN” -in Nonwastewaters column, after the existing number entry, add “; or CMBST”	FR 06/13/2011

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Rule 3745-270-40 is amended as follows:		
Location	Change	Reason
@ U278	-in Waste description column, after “Bendiocarb” add a superscript footnote 10 -in Wastewaters column, after the existing entry, add “; or CMBST, CHOXD, BIODG or CARBN” -in Nonwastewaters column, after the existing number entry, add “; or CMBST”	FR 06/13/2011
@ U279	-in Waste description column, after “Carbaryl” add a superscript footnote 10 -in Wastewaters column, after the existing entry, add “; or CMBST, CHOXD, BIODG or CARBN” -in Nonwastewaters column, after the existing number entry, add “; or CMBST”	FR 06/13/2011
@ U280	-in Waste description column, after “Barban” add a superscript footnote 10 -in Wastewaters column, after the existing entry, add “; or CMBST, CHOXD, BIODG or CARBN” -in Nonwastewaters column, after the existing number entry, add “; or CMBST”	FR 06/13/2011
@ U328	[2 times] in Wastewaters column, remove “ BIOGD ” and add “ BIODG ”	k
@ U353	[2 times] in Wastewaters column, remove “ BIOGD ” and add “ BIODG ”	k
@ U359	[2 times] in Wastewaters column, remove “ BIOGD ” and add “ BIODG ”	k
@ U364	-in Wastewaters column, after the existing entry, add “; or CMBST, CHOXD, BIODG or CARBN” -in Nonwastewaters column, after the existing number entry, add “; or CMBST”	FR 06/13/2011
@ U367	-in Waste description column, after “Carbofuran phenol” add a superscript footnote 10 -in Wastewaters column, after the existing entry, add “; or CMBST, CHOXD, BIODG or CARBN” -in Nonwastewaters column, after the existing number entry, add “; or CMBST”	FR 06/13/2011

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Rule 3745-270-40 is amended as follows:		
Location	Change	Reason
@ U372	-in Waste description column, after “Carbenzadim” add a superscript footnote 10 -in Wastewaters column, after the existing entry, add “; or CMBST, CHOXD, BIODG or CARBN” -in Nonwastewaters column, after the existing number entry, add “; or CMBST”	FR 06/13/2011
@ U373	-in Waste description column, after “Propham” add a superscript footnote 10 -in Wastewaters column, after the existing entry, add “; or CMBST, CHOXD, BIODG or CARBN” -in Nonwastewaters column, after the existing number entry, add “; or CMBST”	FR 06/13/2011
@ U387	-in Waste description column, after “Prosulfocarb” add a superscript footnote 10 -in Wastewaters column, after the existing entry, add “; or CMBST, CHOXD, BIODG or CARBN” -in Nonwastewaters column, after the existing number entry, add “; or CMBST”	FR 06/13/2011
@ U389	-in Waste description column, after “Triallate” add a superscript footnote 10 -in Wastewaters column, after the existing entry, add “; or CMBST, CHOXD, BIODG or CARBN” -in Nonwastewaters column, after the existing number entry, add “; or CMBST”	FR 06/13/2011
@ U394	-in Wastewaters column, after the existing entry, add “; or CMBST, CHOXD, BIODG or CARBN” -in Nonwastewaters column, after the existing number entry, add “; or CMBST”	FR 06/13/2011
@ U395	-in Wastewaters column, after the existing entry, add “; or CMBST, CHOXD, BIODG or CARBN” -in Nonwastewaters column, after the existing number entry, add “; or CMBST”	FR 06/13/2011
@ U404	-in Waste description column, after “Triethylamine” add a superscript footnote 10 -in Wastewaters column, after the existing entry, add “; or CMBST, CHOXD, BIODG or CARBN” -in Nonwastewaters column, after the existing number entry, add “; or CMBST”	FR 06/13/2011

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Rule 3745-270-40 is amended as follows:		
Location	Change	Reason
@ U409	-in Waste description column, after “Thiophanate-methyl” add a superscript footnote 10 -in Wastewaters column, after the existing entry, add “; or CMBST, CHOXD, BIODG or CARBN” -in Nonwastewaters column, after the existing number entry, add “; or CMBST”	FR 06/13/2011
@ U410	-in Waste description column, after “Thiocarb” add a superscript footnote 10 -in Wastewaters column, after the existing entry, add “; or CMBST, CHOXD, BIODG or CARBN” -in Nonwastewaters column, after the existing number entry, add “; or CMBST”	FR 06/13/2011
@ U411	-in Waste description column, after “Propoxur” add a superscript footnote 10 -in Wastewaters column, after the existing entry, add “; or CMBST, CHOXD, BIODG or CARBN” -in Nonwastewaters column, after the existing number entry, add “; or CMBST”	FR 06/13/2011
Footnote 1	remove “treatment/regulatory” and add “treatment or regulatory”	a
Footnote 2	[2 times] remove “and/or” and add “or”	a
	after “of a chemical with” remove “it’s” and add “its”	d
Footnote 3	after “expressed in” remove “mg/l” and add “mg/L”	h
Footnote 6	-remove “Treatment/Regulatory” and add “Treatment or Regulatory” -remove “and/or” and add “or”	a
Footnote 7	remove “found”	b
	after “Physical/Chemical Methods” add a comma inside the quotation mark and remove the comma that is outside the quotation mark	c, d
Footnote 10	[5 times] remove “defined” and add “described”	a
	remove “ BIOGD ” and add “ BIODG ”	k
Footnote 12	remove “must” and add “shall”	c
Appendix	The appendix to this rule is not amended.	

RSFA Attachment A

Rule 3745-270-40 is amended as follows:		
Location	Change	Reason

Location	Change	Reason
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- * The title amendment shown in the Interested Parties draft rule is not necessary, so it is not shown in the proposed rule.
- + This amendment was shown in the Interested Parties draft rule (and is maintained in the proposed rule), but its documentation on this cover sheet is added.
- # This amendment was changed in response to a comment on the Interested Parties draft rule.
- a Word choice correction.
- b Unnecessary text is removed.
- c LSC requirement.
- d Punctuation correction.
- e This amendment is designed to eliminate the occasion of a paragraph designation that contains no text. Some text is relocated.
- f This amendment adds specificity to the provision.
- g This punctuation correction (adding quotation marks around defined terms) is made in all hazardous waste rules, as they are amended, at locations of defined terms that are designated as such in the text.
- h The correct symbol for “liter” is an upper case L, so this amendment corrects the term to use the correct symbol. The net change is the lower case L becomes and upper case L.
- i Typo correction.
- j The text is corrected to define the acronym upon its first occurrence.
- k Spelling correction.

This rule and its appendix appear in a different font from most other rules at the request of LSC.

3745-270-40 Applicability- treatment standards.

- (A) A prohibited waste identified in the table in this rule “Treatment Standards for Hazardous Waste” may be land disposed only if ~~the prohibited waste~~ meets the requirements found in the table in this rule. For each waste, the table in this rule identifies one of three types of treatment standard requirements:
- (1) All hazardous constituents in the waste or in the treatment residue ~~must~~ shall be at or below the values ~~found~~ in the table in this rule for that waste (“total waste standards”); ~~or.~~
 - (2) The hazardous constituents in the extract of the waste or in the extract of the treatment residue ~~must~~ shall be at or below the values ~~found~~ in the table in this rule (“waste extract standards”); ~~or.~~
 - (3) The waste ~~must~~ shall be treated using the technology specified in the table in this rule (“technology standard”), which are described in detail in the table in rule 3745-270-42 of the Administrative Code.
- (B) For:
- (1) ~~For wastewaters~~ Wastewaters, compliance with concentration level standards is based on maximums for any one day, except for D004 to D011 wastes for which the previously promulgated treatment standards based on grab samples remain in effect.
 - (2) ~~For all~~ All nonwastewaters, compliance with concentration level standards is based on grab sampling.
 - (3) ~~For wastes~~ Wastes covered by the waste extract standards, the test method 1311, the toxicity characteristic leaching procedure ~~found~~ in “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,”; U.S. EPA publication SW-846, ~~must~~ shall be used to measure compliance. An exception is made for D004 and D008, for which either of two test methods may be used: method 1311, or method 1310B, the extraction procedure toxicity test.
 - (4) ~~For wastes~~ Wastes covered by a technology standard, the wastes may be land disposed after being treated using that specified technology or an equivalent treatment technology approved by the director under the procedures ~~set forth~~ in paragraph (B) of rule 3745-270-42 of the Administrative Code.
- (C) When wastes with differing treatment standards for a constituent of concern are combined for purposes of treatment, the treatment residue ~~must~~ shall meet the lowest treatment standard for the constituent of concern.

- (D) Notwithstanding the prohibitions specified in paragraph (A) of this rule, treatment and disposal facilities may demonstrate [and certify pursuant to paragraph (B)(5) of rule 3745-270-07 of the Administrative Code] compliance with the treatment standards for organic constituents specified by a footnote in the table in this rule, provided all of the following conditions are satisfied:
- (1) The treatment standards for the organic constituents were established based on incineration in units operated in accordance with the technical requirements of rules 3745-57-40 to 3745-57-51 of the Administrative Code, or based on combustion in fuel substitution units operating in accordance with applicable technical requirements in the hazardous waste rules;
 - (2) The treatment or disposal facility has used the methods referenced in paragraph (D)(1) of this rule to treat the organic constituents; ~~and~~.
 - (3) The treatment or disposal facility may demonstrate compliance with organic constituents if good-faith analytical efforts achieve detection limits for the regulated organic constituents that do not exceed by an order of magnitude the treatment standards specified in this rule.
- (E) For characteristic waste (D001 to D043) that are subject to treatment standards in the table in this rule, and are not managed in a wastewater treatment system that is regulated under the Clean Water Act (CWA), that is CWA-equivalent, or that is injected into a “Class I” nonhazardous deep injection well, all “underlying hazardous constituents” (as defined in rule 3745-270-02 of the Administrative Code) ~~must~~shall meet universal treatment standards ~~found~~ in the table in rule 3745-270-48 of the Administrative Code prior to “land disposal” (as defined in rule 3745-270-02 of the Administrative Code).
- (F) The treatment standards for F001 to F005 nonwastewater constituents carbon disulfide, cyclohexanone, ~~and/or~~or methanol apply to wastes which contain only one, two, or three of these constituents. Compliance is measured for these constituents in the waste extract from test method 1311. If the waste contains any of these three constituents along with any of the other twenty-five constituents ~~found~~ in F001 to F005, then compliance with treatment standards for carbon disulfide, cyclohexanone, ~~and/or~~or methanol is not required.
- (G) Reserved.

- (H) Prohibited D004 to D011 mixed radioactive wastes and mixed radioactive listed wastes containing metal constituents; that were previously treated by stabilization to the treatment standards in effect at that time and then put into storage; do not have to be re-treated to meet treatment standards in this rule prior to land disposal.
- (I) Reserved.
- (J) The treatment standards for the wastes specified in rule 3745-51-33 of the Administrative Code as EPA hazardous waste numbers P185, P191, P192, P197, U364, U394, and U395 may be satisfied by either meeting the constituent concentrations presented in the table in this rule, or by treating the waste by the following technologies: combustion, as ~~defined~~described by the technology code CMBST in the table in rule 3745-270-42 of the Administrative Code, for nonwastewaters; and, biodegradation as ~~defined~~described by the technology code BIODG, carbon adsorption as ~~defined~~described by the technology code CARBN, chemical oxidation as ~~defined~~described by the technology code CHOXD, or combustion as ~~defined~~described as technology code CMBST in the table in rule 3745-270-42 of the Administrative Code, for wastewaters.

Table: Treatment Standards for Hazardous Wastes

The treatment standards that previously appeared in tables in rules 3745-59-41, 3745-59-42, and 3745-59-43 of the Administrative Code have been consolidated into this table.

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/L TCLP”; or technology code ⁴
D001 ⁹	Ignitable characteristic wastes, except for the paragraph (A)(1) of rule 3745-51-21 of the Administrative Code, high “High total organic carbon (TOC) subcategory-”	NA	NA	DEACT and meet standards in rule 3745-270-48 of the Administrative Code ⁸ ; or RORGS; or CMBST	DEACT and meet standards in rule 3745-270-48 of the Administrative Code ⁸ ; or RORGS; or CMBST
	High TOC ignitable characteristic liquids subcategory based on paragraph (A)(1) of rule 3745-51-21 of the Administrative Code- greater than or equal to ten per cent total organic carbon. (Comment: This subcategory consists of nonwastewaters only.)	NA	NA	NA	RORGS; CMBST; or POLYM
D002 ⁹	Corrosive characteristic wastes.	NA	NA	DEACT and meet standards in rule 3745-270-48 of the Administrative Code ⁸	DEACT and meet standards in rule 3745-270-48 of the Administrative Code ⁸

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
D002, D004, D005, D006, D007, D008, D009, D010, D011	Radioactive high level wastes generated during the reprocessing of fuel rods. (Comment: This subcategory consists of nonwastewaters only.)	Corrosivity (pH)	NA	NA	HLVIT
		Arsenic	7440-38-2	NA	HLVIT
		Barium	7440-39-3	NA	HLVIT
		Cadmium	7440-43-9	NA	HLVIT
		Chromium (total)	7440-47-3	NA	HLVIT
		Lead	7439-92-1	NA	HLVIT
		Mercury	7439-97-6	NA	HLVIT
		Selenium	7782-49-2	NA	HLVIT
D003 ⁹	Reactive sulfides subcategory based on paragraph (A)(5) of rule 3745-51-23 of the Administrative Code.	NA	NA	DEACT	DEACT
	Explosives subcategory based on paragraphs (A)(6), (A)(7), and (A)(8) of rule 3745-51-23 of the Administrative Code.	NA	NA	DEACT and meet standards in rule 3745-270-48 of the Administrative Code ⁸	DEACT and meet standards in rule 3745-270-48 of the Administrative Code ⁸
	Unexploded ordnance and other explosive devices which have been the subject of an emergency response.	NA	NA	DEACT	DEACT

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
	Other reactivities subcategory based on paragraph (A)(1) of rule 3745-51-23 of the Administrative Code.	NA	NA	DEACT and meet standards in rule 3745-270-48 of the Administrative Code ⁸	DEACT and meet standards in rule 3745-270-48 of the Administrative Code ⁸
	Water reactive subcategory based on paragraphs (A)(2), (A)(3), and (A)(4) of rule 3745-51-23 of the Administrative Code. (Comment: This subcategory consists of nonwastewaters only.)	NA	NA	NA	DEACT and meet standards in rule 3745-270-48 of the Administrative Code ⁸
	Reactive cyanides subcategory based on paragraph (A)(5) of rule 3745-51-23 of the Administrative Code.	Cyanides (total) ⁷	57-12-5	Reserved	590.0
		Cyanides (amenable) ⁷	57-12-5	0.86	30.0
D004 ⁹	Wastes that exhibit, or are expected to exhibit, the characteristic of toxicity for arsenic based on the toxicity characteristic leaching procedure (TCLP) in SW-846.	Arsenic	7440-38-2	1.4 and meet standards in rule 3745-270-48 of the Administrative Code ⁸	5.0 mg/mg/L TCLP and meet standards in rule 3745-270-48 of the Administrative Code ⁸

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
D005 ⁹	Wastes that exhibit, or are expected to exhibit, the characteristic of toxicity for barium based on the extraction procedure (EP) in SW-846.	Barium	7440-39-3	1.2 and meet standards in rule 3745-270-48 of the Administrative Code ⁸	21 mg/mg/L TCLP and meet standards in rule 3745-270-48 of the Administrative Code ⁸
D006 ⁹	Wastes that exhibit, or are expected to exhibit, the characteristic of toxicity for cadmium based on the TCLP in SW-846.	Cadmium	7440-43-9	0.69 and meet standards in rule 3745-270-48 of the Administrative Code ⁸	0.11 mg/mg/L TCLP and meet standards in rule 3745-270-48 of the Administrative Code ⁸
	Cadmium containing-batteries subcategory. (Comment: This subcategory consists of nonwastewaters only.)	Cadmium	7440-43-9	NA	RTHRM
	Radioactively contaminated cadmium-containing batteries. (Comment: This subcategory consists of nonwastewaters only.)	Cadmium	7440-43-9	NA	Macroencapsulation in accordance with rule 3745-270-45 of the Administrative Code
D007 ⁹	Wastes that exhibit, or are expected to exhibit, the characteristic of toxicity for chromium based on the TCLP in SW-846.	Chromium (total)	7440-47-3	2.77 and meet standards in rule 3745-270-48 of the Administrative Code ⁸	0.6 mg/mg/L TCLP and meet standards in rule 3745-270-48 of the Administrative Code ⁸

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
D008 ⁹	Wastes that exhibit, or are expected to exhibit, the characteristic of toxicity for lead based on the TCLP in SW-846.	Lead	7439-92-1	0.69 and meet standards in rule 3745-270-48 of the Administrative Code ⁸	0.75 mg/mg/L TCLP and meet standards in rule 3745-270-48 of the Administrative Code ⁸
	Lead acid batteries subcategory. [Comment: This standard only applies to lead acid batteries that are identified as RCRA hazardous wastes and that are not excluded elsewhere from regulation under Chapter 3745-270 of the Administrative Code or exempted under other rules (see rule 3745-266-80 of the Administrative Code). This subcategory consists of nonwastewaters only.]	Lead	7439-92-1	NA	RLEAD

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
	Radioactive lead solids subcategory. [Comment: These lead solids include, but are not limited to, all forms of lead shielding and other elemental forms of lead. These lead solids do not include treatment residuals such as hydroxide sludges, other wastewater treatment residuals, or incinerator ashes that can undergo conventional pozzolanic stabilization, nor do they include organo-lead materials that can be incinerated and stabilized as ash. This subcategory consists of nonwastewaters only.]	Lead	7439-92-1	NA	MACRO

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
D009 ⁹	Nonwastewaters that exhibit, or are expected to exhibit, the characteristic of toxicity for mercury based on the TCLP in SW-846; and contain greater than or equal to 260.0 mg/kg total mercury that also contains organics and are not incinerator residues. (High mercury- organic subcategory)	Mercury	7439-97-6	NA	IMERC; or RMERC
	Nonwastewaters that exhibit, or are expected to exhibit, the characteristic of toxicity for mercury based on the TCLP in SW-846; and contain greater than or equal to 260.0 mg/kg total mercury that are inorganic, including incinerator residues and residues from RMERC. (High mercury- inorganic subcategory)	Mercury	7439-97-6	NA	RMERC

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
	Nonwastewaters that exhibit, or are expected to exhibit, the characteristic of toxicity for mercury based on the TCLP in SW-846; and contain less than 260.0 mg/kg total mercury and that are residues from RMERC only. (Low mercury subcategory)	Mercury	7439-97-6	NA	0.2 mg/mg/L TCLP and meet standards in rule 3745-270-48 of the Administrative Code ⁸
	All other nonwastewaters that exhibit, or are expected to exhibit, the characteristic of toxicity for mercury based on the TCLP in SW-846; and contain less than 260.0 mg/kg total mercury and that are not residues from RMERC. (Low mercury subcategory)	Mercury	7439-97-6	NA	0.025 mg/mg/L TCLP and meet standards in rule 3745-270-48 of the Administrative Code ⁸
	All D009 wastewaters	Mercury	7439-97-6	0.15 and meet standards in rule 3745-270-48 of the Administrative Code ⁸	NA

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
	Elemental mercury contaminated with radioactive materials. (Comment: This subcategory consists of nonwastewaters only.)	Mercury	7439-97-6	NA	AMLGM
	Hydraulic oil contaminated with mercury radioactive materials subcategory. (Comment: This subcategory consists of nonwastewaters only.)	Mercury	7439-97-6	NA	IMERC
	Radioactively contaminated mercury-containing batteries. (Comment: This subcategory consists of nonwastewaters only.)	Mercury	7439-97-6	NA	Macroencapsulation in accordance with rule 3745-270-45 of the Administrative Code
D010 ⁹	Wastes that exhibit, or are expected to exhibit, the characteristic of toxicity for selenium based on the TCLP in SW-846.	Selenium	7782-49-2	0.82 and meet standards in rule 3745-270-48 of the Administrative Code ⁸	5.7 mg/mg/L TCLP and meet standards in rule 3745-270-48 of the Administrative Code ⁸
D011 ⁹	Wastes that exhibit, or are expected to exhibit, the characteristic of toxicity for silver based on the TCLP in SW-846.	Silver	7440-22-4	0.43 and meet standards in rule 3745-270-48 of the Administrative Code ⁸	0.14 mg/mg/L TCLP and meet standards in rule 3745-270-48 of the Administrative Code ⁸

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
	Radioactively contaminated silver-containing batteries. (Comment: This subcategory consists of nonwastewaters only.)	Silver	7440-22-4	NA	Macroencapsulation in accordance with rule 3745-270-45 of the Administrative Code
D012 ⁹	Wastes that are TC for Endrin based on the TCLP in SW-846 method 1311.	Endrin	72-20-8	BIODG; or CMBST	0.13 and meet standards in rule 3745-270-48 of the Administrative Code ⁸
		Endrin aldehyde	7421-93-4	BIODG; or CMBST	0.13 and meet standards in rule 3745-270-48 of the Administrative Code ⁸
D013 ⁹	Wastes that are TC for Lindane based on the TCLP in SW-846 method 1311.	alpha-BHC	319-84-6	CARBN; or CMBST	0.066 and meet standards in rule 3745-270-48 of the Administrative Code ⁸
		beta-BHC	319-85-7	CARBN; or CMBST	0.066 and meet standards in rule 3745-270-48 of the Administrative Code ⁸

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
		delta-BHC	319-86-8	CARBN; or CMBST	0.066 and meet standards in rule 3745-270-48 of the Administrative Code ⁸
		gamma-BHC (Lindane)	58-89-9	CARBN; or CMBST	0.066 and meet standards in rule 3745-270-48 of the Administrative Code ⁸
D014 ⁹	Wastes that are TC for Methoxychlor based on the TCLP in SW-846 method 1311.	Methoxychlor	72-43-5	WETOX or CMBST	0.18 and meet standards in rule 3745-270-48 of the Administrative Code ⁸
D015 ⁹	Wastes that are TC for Toxaphene based on the TCLP in SW-846 method 1311.	Toxaphene	8001-35-2	BIODG or CMBST	2.6 and meet standards in rule 3745-270-48 of the Administrative Code ⁸
D016 ⁹	Wastes that are TC for 2,4-D (2,4-Dichlorophenoxyacetic acid) based on the TCLP in SW-846 method 1311.	2,4-D (2,4-Dichlorophenoxyacetic acid)	94-75-7	CHOXD, BIODG BIODG, or CMBST	10.0 and meet standards in rule 3745-270-48 of the Administrative Code ⁸

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/lmg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/lmg/L TCLP”; or technology code ⁴
D017 ⁹	Wastes that are TC for 2,4,5-TP (Silvex) based on the TCLP in SW-846 method 1311.	2,4,5-TP (Silvex)	93-72-1	CHOXD or CMBST	7.9 and meet standards in rule 3745-270-48 of the Administrative Code ⁸
D018 ⁹	Wastes that are TC for Benzene based on the TCLP in SW-846 method 1311.	Benzene	71-43-2	0.14 and meet standards in rule 3745-270-48 of the Administrative Code ⁸	10.0 and meet standards in rule 3745-270-48 of the Administrative Code ⁸
D019 ⁹	Wastes that are TC for Carbon tetrachloride based on the TCLP in SW-846 method 1311.	Carbon tetrachloride	56-23-5	0.057 and meet standards in rule 3745-270-48 of the Administrative Code ⁸	6.0 and meet standards in rule 3745-270-48 of the Administrative Code ⁸
D020 ⁹	Wastes that are TC for Chlordane based on the TCLP in SW-846 method 1311.	Chlordane (alpha and gamma isomers)	57-74-9	0.0033 and meet standards in rule 3745-270-48 of the Administrative Code ⁸	0.26 and meet standards in rule 3745-270-48 of the Administrative Code ⁸
D021 ⁹	Wastes that are TC for Chlorobenzene based on the TCLP in SW-846 method 1311.	Chlorobenzene	108-90-7	0.057 and meet standards in rule 3745-270-48 of the Administrative Code ⁸	6.0 and meet standards in rule 3745-270-48 of the Administrative Code ⁸

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/lmg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/lmg/L TCLP”; or technology code ⁴
D022 ⁹	Wastes that are TC for Chloroform based on the TCLP in SW-846 method 1311.	Chloroform	67-66-3	0.046 and meet standards in rule 3745-270-48 of the Administrative Code ⁸	6.0 and meet standards in rule 3745-270-48 of the Administrative Code ⁸
D023 ⁹	Wastes that are TC for o-Cresol based on the TCLP in SW-846 method 1311.	o-Cresol	95-48-7	0.11 and meet standards in rule 3745-270-48 of the Administrative Code ⁸	5.6 and meet standards in rule 3745-270-48 of the Administrative Code ⁸
D024 ⁹	Wastes that are TC for m-Cresol based on the TCLP in SW-846 method 1311.	m-Cresol (difficult to distinguish from p-Cresol)	108-39-4	0.77 and meet standards in rule 3745-270-48 of the Administrative Code ⁸	5.6 and meet standards in rule 3745-270-48 of the Administrative Code ⁸
D025 ⁹	Wastes that are TC for p-Cresol based on the TCLP in SW-846 method 1311.	p-Cresol (difficult to distinguish from m-Cresol)	106-44-5	0.77 and meet standards in rule 3745-270-48 of the Administrative Code ⁸	5.6 and meet standards in rule 3745-270-48 of the Administrative Code ⁸
D026 ⁹	Wastes that are TC for Cresols (total) based on the TCLP in SW-846 method 1311.	Cresol- mixed isomers (Cresylic acid) (sum of o-, m-, and p-cresol concentrations)	1319-77-3	0.88 and meet standards in rule 3745-270-48 of the Administrative Code ⁸	11.2 and meet standards in rule 3745-270-48 of the Administrative Code ⁸

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/lmg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/lmg/L TCLP”; or technology code ⁴
D027 ⁹	Wastes that are TC for p-Dichlorobenzene based on the TCLP in SW-846 method 1311.	p-Dichlorobenzene (1,4-Dichlorobenzene)	106-46-7	0.09 and meet standards in rule 3745-270-48 of the Administrative Code ⁸	6.0 and meet standards in rule 3745-270-48 of the Administrative Code ⁸
D028 ⁹	Wastes that are TC for (1,2-Dichloroethane) based on the TCLP in SW-846 method 1311.	(1,2-Dichloroethane)	107-06-2	0.21 and meet standards in rule 3745-270-48 of the Administrative Code ⁸	6.0 and meet standards in rule 3745-270-48 of the Administrative Code ⁸
D029 ⁹	Wastes that are TC for 1,1-Dichloroethylene based on the TCLP in SW-846 method 1311.	1,1-Dichloroethylene	75-35-4	0.025 and meet standards in rule 3745-270-48 of the Administrative Code ⁸	6.0 and meet standards in rule 3745-270-48 of the Administrative Code ⁸
D030 ⁹	Wastes that are TC for 2,4-Dinitrotoluene based on the TCLP in SW-846 method 1311.	2,4-Dinitrotoluene	121-14-2	0.32 and meet standards in rule 3745-270-48 of the Administrative Code ⁸	140.0 and meet standards in rule 3745-270-48 of the Administrative Code ⁸
D031 ⁹	Wastes that are TC for Heptachlor based on the TCLP in SW-846 method 1311.	Heptachlor	76-44-8	0.0012 and meet standards in rule 3745-270-48 of the Administrative Code ⁸	0.066 and meet standards in rule 3745-270-48 of the Administrative Code ⁸

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/lmg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/lmg/L TCLP”; or technology code ⁴
		Heptachlor epoxide	1024-57-3	0.016 and meet standards in rule 3745-270-48 of the Administrative Code ⁸	0.066 and meet standards in rule 3745-270-48 of the Administrative Code ⁸
D032 ⁹	Wastes that are TC for Hexachlorobenzene based on the TCLP in SW-846 method 1311.	Hexachlorobenzene	118-74-1	0.055 and meet standards in rule 3745-270-48 of the Administrative Code ⁸	10.0 and meet standards in rule 3745-270-48 of the Administrative Code ⁸
D033 ⁹	Wastes that are TC for Hexachlorobutadiene based on the TCLP in SW-846 method 1311.	Hexachlorobutadiene	87-68-3	0.055 and meet standards in rule 3745-270-48 of the Administrative Code ⁸	5.6 and meet standards in rule 3745-270-48 of the Administrative Code ⁸
D034 ⁹	Wastes that are TC for Hexachloroethane based on the TCLP in SW-846 method 1311.	Hexachloroethane	67-72-1	0.055 and meet standards in rule 3745-270-48 of the Administrative Code ⁸	30.0 and meet standards in rule 3745-270-48 of the Administrative Code ⁸
D035 ⁹	Wastes that are TC for Methyl ethyl ketone based on the TCLP in SW-846 method 1311.	Methyl ethyl ketone	78-93-3	0.28 and meet standards in rule 3745-270-48 of the Administrative Code ⁸	36.0 and meet standards in rule 3745-270-48 of the Administrative Code ⁸

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/lmg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/lmg/L TCLP”; or technology code ⁴
D036 ⁹	Wastes that are TC for Nitrobenzene based on the TCLP in SW-846 method 1311.	Nitrobenzene	98-95-3	0.068 and meet standards in rule 3745-270-48 of the Administrative Code ⁸	14.0 and meet standards in rule 3745-270-48 of the Administrative Code ⁸
D037 ⁹	Wastes that are TC for Pentachlorophenol based on the TCLP in SW-846 method 1311.	Pentachlorophenol	87-86-5	0.089 and meet standards in rule 3745-270-48 of the Administrative Code ⁸	7.4 and meet standards in rule 3745-270-48 of the Administrative Code ⁸
D038 ⁹	Wastes that are TC for Pyridine based on the TCLP in SW-846 method 1311.	Pyridine	110-86-1	0.014 and meet standards in rule 3745-270-48 of the Administrative Code ⁸	16.0 and meet standards in rule 3745-270-48 of the Administrative Code ⁸
D039 ⁹	Wastes that are TC for Tetrachloroethylene based on the TCLP in SW-846 method 1311.	Tetrachloroethylene	127-18-4	0.056 and meet standards in rule 3745-270-48 of the Administrative Code ⁸	6.0 and meet standards in rule 3745-270-48 of the Administrative Code ⁸
D040 ⁹	Wastes that are TC for Trichloroethylene based on the TCLP in SW-846 method 1311.	Trichloroethylene	79-01-6	0.054 and meet standards in rule 3745-270-48 of the Administrative Code ⁸	6.0 and meet standards in rule 3745-270-48 of the Administrative Code ⁸

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/lmg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/lmg/L TCLP”; or technology code ⁴
D041 ⁹	Wastes that are TC for 2,4,5-Trichlorophenol based on the TCLP in SW-846 method 1311.	2,4,5-Trichlorophenol	95-95-4	0.18 and meet standards in rule 3745-270-48 of the Administrative Code ⁸	7.4 and meet standards in rule 3745-270-48 of the Administrative Code ⁸
D042 ⁹	Wastes that are TC for 2,4,6-Trichlorophenol based on the TCLP in SW-846 method 1311.	2,4,6-Trichlorophenol	88-06-2	0.035 and meet standards in rule 3745-270-48 of the Administrative Code ⁸	7.4 and meet standards in rule 3745-270-48 of the Administrative Code ⁸
D043 ⁹	Wastes that are TC for Vinyl chloride based on the TCLP in SW-846 method 1311.	Vinyl chloride	75-01-4	0.27 and meet standards in rule 3745-270-48 of the Administrative Code ⁸	6.0 and meet standards in rule 3745-270-48 of the Administrative Code ⁸
F001, F002, F003, F004 and F005	F001, F002, F003, F004, and/or F005 solvent wastes that contain any combination of one or more of the following spent solvents: acetone, benzene, n-butyl alcohol, carbon disulfide, carbon tetrachloride, chlorinated fluorocarbons, chlorobenzene, o-cresol, m-cresol, p-cresol,	Acetone	67-64-1	0.28	160.0
		Benzene	71-43-2	0.14	10.0
		n-Butyl alcohol	71-36-3	5.6	2.6
		Carbon disulfide	75-15-0	3.8	NA
		Carbon tetrachloride	56-23-5	0.057	6.0
		Chlorobenzene	108-90-7	0.057	6.0
		o-Cresol	95-48-7	0.11	5.6

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
	cyclohexanone, o-dichlorobenzene, 2-ethoxyethanol, ethyl acetate, ethyl benzene, ethyl ether, isobutyl alcohol, methanol, cyclohexanone, o-dichlorobenzene, 2-ethoxyethanol, ethyl acetate, ethyl benzene, ethyl ether, isobutyl alcohol, methanol, methylene chloride, methyl ethyl ketone, methyl isobutyl ketone, nitrobenzene, 2-nitropane, pyridine, tetrachloroethylene, toluene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, 1,1,2-trichloro-1,2,2-trifluoroethane, trichloroethane, trichloroethylene, trochloromono-fluoromethane, and/or xylenes (except as	m-Cresol (difficult to distinguish from p-Cresol)	108-39-4	0.77	5.6
		p-Cresol (difficult to distinguish from m-Cresol)	106-44-5	0.77	5.6
		Cresol- mixed isomers (Cresylic acid) (sum of o-, m-, and p-Cresol concentrations)	1319-77-3	0.88	11.2
		Cyclohexanone	108-94-1	0.36	NA
		o-Dichlorobenzene	95-50-1	0.088	6.0
		Ethyl acetate	141-78-6	0.34	33.0
		Ethyl benzene	100-41-4	0.057	10.0
		Ethyl ether	60-29-7	0.12	160.0
		Isobutyl alcohol	78-83-1	5.6	170.0
		Methanol	67-56-1	5.6	NA
		Methylene chloride	75-9-2	0.089	30.0
		Methyl ethyl ketone	78-93-3	0.28	36.0
		Methyl isobutyl ketone	108-10-1	0.14	33.0
		Nitrobenzene	98-95-3	0.068	14.0

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		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
	specifically noted in other subcategories). See further details of these listings in rule 3745-51-31 of the Administrative Code.	Pyridine	110-86-1	0.014	16.0
		Tetrachloroethylene	127-18-4	0.056	6.0
		Toluene	108-88-3	0.08	10.0
		1,1,1-Trichloroethane	71-55-6	0.054	6.0
		1,1,2-Trichloroethane	79-00-5	0.054	6.0
		1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	0.057	30.0
		Trichloroethylene	79-01-6	0.054	6.0
		Trichloromono-fluoromethane	75-69-4	0.02	30.0
		Xylenes- mixed isomers (sum of o-, m-, and p-xylene concentrations)	1330-20-7	0.32	30.0
F003 and/or F005 solvent wastes that contain any combination of one or more of the following three solvents as the only listed F001 to F005 solvents: carbon disulfide, cyclohexanone, and/or methanol. F005 solvent waste	Carbon disulfide	75-15-0	3.8	4.8 mg/mg/L TCLP	
	Cyclohexanone	108-94-1	0.36	0.75 mg/mg/L TCLP	
	Methanol	67-56-1	5.6	0.75 mg/mg/L TCLP	

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/L TCLP”; or technology code ⁴
	containing 2-Nitropropane as the only listed F001 to F005 solvent. F005 solvent waste containing 2-Ethoxyethanol as the only listed F001 to F005 solvent.	2-Nitropropane	79-46-9	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
		2-Ethoxyethanol	110-80-5	BIOD BIODG; or CMBST	CMBST
F006	Wastewater treatment sludges from electroplating operations except from the following processes: (1) sulfuric acid anodizing of aluminum; (2) tin plating on carbon steel; (3) zinc plating (segregated basis) on carbon steel; (4) aluminum or zinc-aluminum plating on carbon steel; (5) cleaning/stripping cleaning or stripping associated with tin, zinc, and aluminum plating on carbon steel; and (6) chemical etching and milling of aluminum	Cadmium	7440-43-9	0.69	0.11 mg/L TCLP
		Chromium (total)	7440-47-3	2.77	0.6 mg/L TCLP
		Cyanides (total) ⁷	57-12-5	1.2	590.0
		Cyanides (amenable) ⁷	57-12-5	0.86	30.0
		Lead	7439-92-1	0.69	0.75 mg/L TCLP
		Nickel	7440-02-0	3.98	11.0 mg/L TCLP
		Silver	7440-22-4	NA	0.14 mg/L TCLP

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/lmg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/lmg/L TCLP”; or technology code ⁴
F007	Spent cyanide plating bath solutions from electroplating operations	Cadmium	7440-43-9	NA	0.11 mg/lmg/L TCLP
		Chromium (total)	7440-47-3	2.77	0.6 mg/lmg/L TCLP
		Cyanides (total) ⁷	57-12-5	1.2	590.0
		Cyanides (amenable) ⁷	57-12-5	0.86	30.0
		Lead	7439-92-1	0.69	0.75 mg/lmg/L TCLP
		Nickel	7440-02-0	3.98	11.0 mg/lmg/L TCLP
		Silver	7440-22-4	NA	0.14 mg/lmg/L TCLP
F008	Plating bath residues from the bottom of plating baths from electroplating operations where cyanides are used in the process	Cadmium	7440-43-9	NA	0.11 mg/lmg/L TCLP
		Chromium (total)	7440-47-3	2.77	0.6 mg/lmg/L TCLP
		Cyanides (total) ⁷	57-12-5	1.2	590.0
		Cyanides (amenable) ⁷	57-12-5	0.86	30.0
		Lead	7439-92-1	0.69	0.75 mg/lmg/L TCLP
		Nickel	7440-02-0	3.98	11.0 mg/lmg/L TCLP
		Silver	7440-22-4	NA	0.14 mg/lmg/L TCLP
F009	Spent stripping and cleaning bath solutions from electroplating operations where cyanides are used in the process	Cadmium	7440-43-9	NA	0.11 mg/lmg/L TCLP
		Chromium (total)	7440-47-3	2.77	0.6 mg/lmg/L TCLP
		Cyanides (total) ⁷	57-12-5	1.2	590.0
		Cyanides (amenable) ⁷	57-12-5	0.86	30.0
		Lead	7439-92-1	0.69	0.75 mg/lmg/L TCLP

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		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
		Nickel	7440-02-0	3.98	11.0 mg/mg/L TCLP
		Silver	7440-22-4	NA	0.14 mg/mg/L TCLP
F010	Quenching bath residues from oil baths from metal heat treating operations where cyanides are used in the process	Cyanides (total) ⁷	57-12-5	1.2	590.0
		Cyanides (amenable) ⁷	57-12-5	0.86	NA
F011	Spent cyanide solutions from salt bath pot cleaning from metal heat treating operations such phosphating is an exclusive conversion coating process	Cadmium	7440-43-9	NA	0.11 mg/mg/L TCLP
		Chromium (total)	7440-47-3	2.77	0.6 mg/mg/L TCLP
		Cyanides (total) ⁷	57-12-5	1.2	590.0
		Cyanides (amenable) ⁷	57-12-5	0.86	30.0
		Lead	7439-92-1	0.69	0.75 mg/mg/L TCLP
		Nickel	7440-02-0	3.98	11.0 mg/mg/L TCLP
		Silver	7440-22-4	NA	0.14 mg/mg/L TCLP
F012	Quenching wastewater treatment sludges from metal heat treating operations where cyanides are used in the process	Cadmium	7440-43-9	NA	0.11 mg/mg/L TCLP
		Chromium (total)	7440-47-3	2.77	0.6 mg/mg/L TCLP
		Cyanides (total) ⁷	57-12-5	1.2	590.0
		Cyanides (amenable) ⁷	57-12-5	0.86	30.0
		Lead	7439-92-1	0.69	0.75 mg/mg/L TCLP
		Nickel	7440-02-0	3.98	11.0 mg/mg/L TCLP
		Silver	7440-22-4	NA	0.14 mg/mg/L TCLP

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
F019	Wastewater treatment sludges from the chemical conversion coating of aluminum except from zirconium phosphating in aluminum can washing when such phosphating is an exclusive conversion coating process	Chromium (total)	7440-47-3	2.77	0.6 mg/mg/L TCLP
		Cyanides (total) ⁷	57-12-5	1.2	590.0
		Cyanides (amenable) ⁷	57-12-5	0.86	30.0
F020, F021, F022, F023, F026	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of: (1) tri- or tetrachlorophenol, or of intermediates used to produce their pesticide derivatives, excluding wastes from the production of Hexachlorophene from highly purified 2,4,5-trichlorophenol (F020); (2) pentachlorophenol, or of	HxCDDs (all Hexachlorodibenzo-p-dioxins)	NA	0.000063	0.001
		HxCDFs (all Hexachlorodibenzo furans)	NA	0.000063	0.001
		PeCDDs (all Pentachlorodibenzo-p-dioxins)	NA	0.000063	0.001
		PeCDFs (all Pentachlorodibenzo furans)	NA	0.000035	0.001

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		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
	intermediates used to produce its derivatives (i.e., F021); (3) tetra-, penta-, or hexachlorobenzenes under alkaline conditions (i.e., F022); and from the production of materials on equipment previously used for the production or manufacturing use (as a reactant, chemical intermediate, or a component in a formulating process) of: (1) tri- or wastes from equipment used only for the production of Hexachlorophene from highly purified 2,4,5-trichlorophenol (F023); (2) tetra-, penta-, or tetrachlorophenols, excluding hexa-chlorobenzenes under alkaline conditions (i.e., F026)	Pentachlorophenol	87-86-5	0.089	7.4
		TCDDs (all Tetrachlorodibenzo-p-dioxins)	NA	0.000063	0.001
		TCDFs (all Tetrachlorodibenzo furans)	NA	0.000063	0.001
		2,4,5-Trichlorophenol	95-95-4	0.18	7.4
		2,4,6-Trichlorophenol	88-06-2	0.035	7.4
		2,3,4,6-Tetrachlorophenol	58-90-2	0.03	7.4

EPA hazardous waste number	Waste description and <u>treatment/regulatory treatment or regulatory subcategory</u> ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
F024	Process wastes, including but not limited to, distillation residues, heavy ends, tars, and reactor clean-out wastes from the production of certain chlorinated aliphatic hydrocarbons by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and positions of chloride substitution (This listing does not include wastewaters, wastewater treatment sludges spent catalysts, or wastes listed in rule 3745-51-31 or 3745-51-32 of the Administrative Code.)	all F024 wastes	NA	CMBST ¹¹	CMBST ¹¹
		2-Chloro-1,3- butadiene	126-99-8	0.057	0.28
		3-Chloropropylene	107-05-1	0.036	30.0
		1,1-Dichloroethane	75-34-3	0.059	6.0
		1,2-Dichloroethane	107-06-2	0.21	6.0
		1,2-Dichloropropane	78-87-5	0.85	18.0
		cis-1,3-Dichloropropylene	10061-01-5	0.036	18.0
		trans-1,3-Dichloropropylene	10061-02-6	0.036	18.0
		bis(2-Ethylhexyl) phthalate	117-81-7	0.28	28.0
		Hexachloroethane	67-72-1	0.055	30.0
		Chromium (total)	7440-47-3	2.77	0.6 mg/mg/L TCLP
		Nickel	7440-02-0	3.98	11.0 mg/mg/L TCLP

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
F025	Condensed light ends from the production of certain chlorinated aliphatic hydrocarbons by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and positions of chlorine substitution. F025- light ends subcategory	Carbon tetrachloride	56-23-5	0.057	6.0
		Chloroform	67-66-3	0.046	6.0
		1,2-Dichloroethane	107-06-2	0.21	6.0
		1,1-Dichloroethylene	75-35-4	0.025	6.0
		Methylene chloride	75-9-2	0.089	30.0
		1,1,2-Trichloroethane	79-00-5	0.054	6.0
		Trichloroethylene	79-01-6	0.054	6.0
	Spent filters and filter aids, and spent dessicant wastes from the production of certain chlorinated aliphatic hydrocarbons by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and	Vinyl chloride	75-01-4	0.27	6.0
		Carbon tetrachloride	56-23-5	0.057	6.0
		Chloroform	67-66-3	0.046	6.0
		Hexachlorobenzene	118-74-1	0.055	10.0
		Hexachlorobutadiene	87-68-3	0.055	5.6
		Hexachloroethane	67-72-1	0.055	30.0
	Methylene chloride	75-9-2	0.089	30.0	

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
	positions of chlorine substitution. F025- spent filters/aids filters or aids and dessicants subcategory.	1,1,2-Trichloroethane	79-00-5	0.054	6.0
		Trichloroethylene	79-01-6	0.054	6.0
		Vinyl chloride	75-01-4	0.27	6.0
F027	Discarded unused formulations containing tri-, tetra-, or pentachlorophenol or discarded unused formulations containing compounds derived from these chlorophenols. (This listing does not include formulations containing hexachlorophene synthesized from prepurified 2,4,5- trichlorophenol as the sole component.)	HxCDDs (all Hexachlorodibenzo-p-dioxins)	NA	0.000063	0.001
		HxCDFs (all Hexachlorodibenzo furans)	NA	0.000063	0.001
		PeCDDs (all Pentachlorodibenzo-p-dioxins)	NA	0.000063	0.001
		PeCDFs (all Pentachlorodibenzo furans)	NA	0.000035	0.001
		Pentachlorophenol	87-86-5	0.089	7.4
		TCDDs (all Tetrachlorodibenzo-p-dioxins)	NA	0.000063	0.001
		TCDFs (all Tetrachlorodibenzo furans)	NA	0.000063	0.001

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
		2,4,5-Trichlorophenol	95-95-4	0.18	7.4
		2,4,6-Trichlorophenol	88-06-2	0.035	7.4
		2,3,4,6-Tetrachlorophenol	58-90-2	0.03	7.4
F028	Residues resulting from the incineration or thermal treatment of soil contaminated with EPA hazardous waste numbers F020, F021, F023, F026, and F027.	HxCDDs (all Hexachlorodibenzo furans)	NA	0.000063	0.001
		HxCDFs (all Hexachlorodibenzo furans)	NA	0.000063	0.001
		PeCDDs (all Pentachlorodibenzo-p-dioxins)	NA	0.000063	0.001
		PeCDFs (all Pentachlorodibenzo furans)	NA	0.000035	0.001
		Pentachlorophenol	87-86-5	0.089	7.4
		TCDDs (all Tetrachlorodibenzo-p-dioxins)	NA	0.000063	0.001

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
		TCDFs (all Tetrachlorodibenzofurans)	NA	0.000063	0.001
		2,4,5-Trichlorophenol	95-95-4	0.18	7.4
		2,4,6-Trichlorophenol	88-06-2	0.035	7.4
		2,3,4,6-Tetrachlorophenol	58-90-2	0.03	7.4
F032	Wastewaters (except those that have not come into contact with process contaminants), process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that currently use or previously used chlorophenolic formulations [except potentially cross-contaminated wastes that have had the F032 EPA hazardous waste number deleted in accordance with rule 3745-51-35]	Acenaphthene	83-32-9	0.059	3.4
		Anthracene	120-12-7	0.059	3.4
		Benz(a)anthracene	56-55-3	0.059	3.4
		Benzo(b)fluoranthene [difficult to distinguish from benzo(k)fluoranthene]	205-99-2	0.11	6.8
		Benzo(k)fluoranthene [difficult to distinguish from benzo(b)fluoranthene]	207-08-9	0.11	6.8
		Benzo(a)pyrene	50-32-8	0.061	3.4
		Chrysene	218-01-9	0.059	3.4
		Dibenz(a,h)anthracene	53-70-3	0.055	8.2

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
	of the Administrative Code or potentially cross-contaminated wastes that are otherwise currently regulated as hazardous wastes (i.e., F034 or F035), and where the generator does not resume or initiate use of chlorophenolic formulations]. This listing does not include K001 bottom sediment sludge from the treatment of wastewater that use creosote and/or pentachlorophenol.	2,4-Dimethyl phenol <u>2,4-Dimethyl phenol</u>	105-67-9	0.036	14.0
		Fluorene	86-73-7	0.059	3.4
		Hexachlorodibenzo-p-dioxins	NA	0.000063 or CMBST ¹¹	0.001 or CMBST ¹¹
		Hexachlorodibenzofurans	NA	0.000063 or CMBST ¹¹	0.001 or CMBST ¹¹
		Indeno(1,2,3-c,d)pyrene	193-39-5	0.0055	3.4
		Naphthalene	91-20-3	0.059	5.6
		Pentachlorodibenzo-p-dioxins	NA	0.000063 or CMBST ¹¹	0.001 or CMBST ¹¹
		Pentachlorodibenzofurans	NA	0.000035 or CMBST ¹¹	0.001 or CMBST ¹¹
		Pentachlorophenol	87-86-5	0.089	7.4
		Phenanthrene	85-01-8	0.059	5.6
		Phenol	108-95-2	0.039	6.2
		Pyrene	129-00-0	0.067	8.2
		Tetrachlorodibenzo-p-dioxins	NA	0.000063 or CMBST ¹¹	0.001 or CMBST ¹¹
		Tetrachlorodibenzofurans	NA	0.000063 or CMBST ¹¹	0.001 or CMBST ¹¹

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/lmg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/lmg/L TCLP”; or technology code ⁴
		2,3,4,6-Tetrachlorophenol	58-90-2	0.03	7.4
		2,4,6-Trichlorophenol	88-06-2	0.035	7.4
		Arsenic	7440-38-2	1.4	5.0 mg/lmg/L TCLP
		Chromium (total)	7440-47-3	2.77	0.6 mg/lmg/L TCLP
F034	Wastewaters (except those that have not come into contact with process contaminants), process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that use creosote formulations. This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol.	Acenaphthene	83-32-9	0.059	3.4
		Anthracene	120-12-7	0.059	3.4
		Benz(a)anthracene	56-55-3	0.059	3.4
		Benzo(b)fluoranthene [difficult to distinguish from benzo(k)fluoranthene]	205-99-2	0.11	6.8
		Benzo(k)fluoranthene [difficult to distinguish from benzo(b)fluoranthene]	207-08-9	0.11	6.8
		Benzo(a)pyrene	50-32-8	0.061	3.4
		Chrysene	218-01-9	0.059	3.4
		Dibenz(a,h)anthracene	53-70-3	0.055	8.2
		Fluorene	86-73-7	0.059	3.4
		Indeno(1,2,3-c,d)pyrene	193-39-5	0.0055	3.4
Naphthalene	91-20-3	0.059	5.6		

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/lmg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/lmg/L TCLP”; or technology code ⁴
		Phenanthrene	85-01-8	0.059	5.6
		Pyrene	129-00-0	0.067	8.2
		Arsenic	7440-38-2	1.4	5.0 mg/lmg/L TCLP
		Chromium (total)	7440-47-3	2.77	0.6 mg/lmg/L TCLP
F035	Wastewaters (except those that have not come into contact with process contaminants), process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that use inorganic preservatives containing arsenic or chromium. This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol.	Arsenic	7440-38-2	1.4	5.0 mg/lmg/L TCLP
		Chromium (total)	7440-47-3	2.77	0.6 mg/lmg/L TCLP

EPA hazardous waste number	Waste description and <u>treatment/regulatory treatment or regulatory subcategory</u> ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
F037	Petroleum refinery primary <u>oil/water/solids</u> or <u>soil or water or solids</u> separation sludge. Any sludge generated from the gravitational separation of <u>oil/water/solids</u> or <u>soil or water or solids</u> during the storage or treatment of process wastewaters and oily cooling wastewaters from petroleum refineries. Such sludges include, but are not limited to, those generated in <u>oil/water/solids</u> or <u>soil or water or solids</u> separators; tanks and impoundments; ditches and other conveyances; sumps; and stormwater units receiving dry weather flow. Sludges generated in stormwater units that do not receive dry weather flow, sludges generated from non-contact	Acenaphthene	83-32-9	0.059	NA
		Anthracene	120-12-7	0.059	3.4
		Benzene	71-43-2	0.14	10.0
		Benz(a)anthracene	56-55-3	0.059	3.4
		Benzo(a)pyrene	50-32-8	0.061	3.4
		bis(2-Ethylhexyl) phthalate	117-81-7	0.28	28.0
		Chrysene	218-01-9	0.059	3.4
		Di-n-butyl phthalate	84-74-2	0.057	28.0
		Ethyl benzene	100-41-4	0.057	10.0
		Fluorene	86-73-7	0.059	NA
	Naphthalene	91-20-3	0.059	5.6	

EPA hazardous waste number	Waste description and <u>treatment/regulatory treatment or regulatory subcategory</u> ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in <u>mg/lmg/L</u> ; or technology code ⁴	Concentration ⁵ in <u>mg/kg</u> unless noted as " <u>mg/lmg/L TCLP</u> "; or technology code ⁴
	once-through cooling waters segregated for treatment from other process or oily cooling waters, sludges generated in "aggressive biological treatment units" as defined in paragraph (B)(2) of rule 3745-51-31 of the Administrative Code (including sludges generated in one or more additional units after wastewaters have been treated in aggressive biological treatment units) and have been treated in aggressive biological treatment units) and K051 wastes are not included in this listing.	Phenanthrene	85-01-8	0.059	5.6
		Phenol	108-95-2	0.039	6.2
		Pyrene	129-00-0	0.067	8.2
		Toluene	108-88-3	0.08	10.0
		Xylenes- mixed isomers (sum of o-, m-, and p-xylene concentrations)	1330-20-7	0.32	30.0
		Chromium (total)	7440-47-3	2.77	0.6 <u>mg/lmg/L</u> TCLP
		Cyanides (total) ⁷	57-12-5	1.2	590.0
		Lead	7439-92-1	0.69	NA
		Nickel	7440-02-0	NA	11.0 <u>mg/lmg/L</u> TCLP
F038	Petroleum refinery secondary (emulsified) <u>oil/water/solids</u> <u>oil or water or solids</u> separation sludge and/or float generated	Benzene	71-43-2	0.14	10.0
		Benzo(a)pyrene	50-32-8	0.061	3.4

EPA hazardous waste number	Waste description and <u>treatment/regulatory treatment or regulatory subcategory</u> ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
	from the physical <u>and/or</u> chemical separation of <u>oil/water/solids</u> or <u>soil or water or solids</u> in process wastewaters and oily cooling wastewaters from petroleum refineries. Such waste include, but are not limited to, all sludges and floats generated in: induced air flotation (IAF) units; tanks and impoundments; and all sludges generated in DAF units. Sludges generated in stormwater units that do not receive dry weather flow, sludges generated from non-contact once-through cooling waters segregated for treatment from other process or oily cooling waters, sludges and floats generated in “aggressive biological treatment units” as	bis(2-Ethylhexyl) phthalate	117-81-7	0.28	28.0
		Chrysene	218-01-9	0.059	3.4
		Di-n-butyl phthalate	84-74-2	0.057	28.0
		Ethylbenzene	100-41-4	0.057	10.0
		Fluorene	86-73-7	0.059	NA
		Naphthalene	91-20-3	0.059	5.6
		Phenanthrene	85-01-8	0.059	5.6
		Phenol	108-95-2	0.039	6.2
		Pyrene	129-00-0	0.067	8.2
Toluene	108-88-3	0.08	10.0		

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
	defined in paragraph (B)(2) of rule 3745-51-31 of the Administrative Code (including sludges and floats generated in one or more additional units after wastewaters have been treated in aggressive biological treatment units) and F037, K048, and K051 wastes are not included in this listing.	Xylenes- mixed isomers (sum of o-, m-, and p-xylene concentrations)	1330-20-7	0.32	30.0
		Chromium (total)	7440-47-3	2.77	0.6 mg/mg/L TCLP
		Cyanides (total) ⁷	57-12-5	1.2	590.0
		Lead	7439-92-1	0.69	NA
		Nickel	7440-02-0	NA	11.0 mg/mg/L TCLP
F039	Leachate (liquids that have percolated through land disposed wastes) resulting from the disposal of more than one restricted waste classified as hazardous under rules 3745-270-40 to 3745-270-49 of the Administrative Code. (Leachate resulting from the disposal of one or more of the	Acenaphthylene	208-96-8	0.059	3.4
		Acenaphthene	83-32-9	0.059	3.4
		Acetone	67-64-1	0.28	160.0
		Acetonitrile	75-05-8	5.6	NA
		Acetophenone	96-86-2	0.01	9.7
		2-Acetylaminofluorine	53-96-3	0.059	140.0
		Acrolein	107-02-8	0.29	NA
		Acrylonitrile	107-13-1	0.24	84.0
		Aldrin	309-00-2	0.021	0.066
4-Aminobiphenyl	92-67-1	0.13	NA		

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/lmg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as "mg/lmg/L TCLP"; or technology code ⁴
	following EPA hazardous wastes and no other hazardous wastes retains its EPA hazardous waste number(s) numbers: F020, F021, F022, F026, F027, and/or F028.)	Aniline	62-53-3	0.81	14.0
		o-Anisidine (2-methoxyaniline)	90-04-0	0.010	0.66
		Anthracene	120-12-7	0.059	3.4
		Aramite	140-57-8	0.36	NA
		alpha-BHC	319-84-6	0.00014	0.066
		beta-BHC	319-85-7	0.00014	0.066
		delta-BHC	319-86-8	0.023	0.066
		gamma-BHC	58-89-9	0.0017	0.066
		Benzene	71-43-2	0.14	10.0
		Benz(a)anthracene	56-55-3	0.059	3.4
		Benzo(b)fluoranthene [difficult to distinguish from benzo(k)fluoranthene]	205-99-2	0.11	6.8
		Benzo(k)fluoranthene [difficult to distinguish from benzo(b)fluoranthene]	207-08-9	0.11	6.8
		Benzo(g,h,i)perylene	191-24-2	0.0055	1.8
		Benzo(a)pyrene	50-32-8	0.061	3.4

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/lmg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/lmg/L TCLP”; or technology code ⁴
		Bromodichloromethane	75-27-4	0.35	15.0
		Methyl bromide (Bromomethane)	74-83-9	0.11	15.0
		4-Bromophenyl phenyl ether	101-55-3	0.055	15.0
		n-Butyl alcohol	71-36-3	5.6	2.6
		Butyl benzyl phthalate	85-68-7	0.017	28.0
		2-sec-Butyl-4,6-dinitrophenol (Dinoseb)	88-85-7	0.066	2.5
		Carbon disulfide	75-15-0	3.8	NA
		Carbon tetrachloride	56-23-5	0.057	6.0
		Chlordane (alpha and gamma isomers)	57-74-9	0.0033	0.26
		p-Chloroaniline	106-47-8	0.46	16.0
		Chlorobenzene	108-90-7	0.057	6.0
		Chlorobenzilate	510-15-6	0.1	NA
		2-Chloro-1,3-butadiene	126-99-8	0.057	NA
		Chlorodibromomethane	124-48-1	0.057	15.0
		Chloroethane	75-00-3	0.27	6.0

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
		bis(2-Chloroethoxy) methane	111-91-1	0.036	7.2
		bis(2-Chloroethyl)ether	111-44-4	0.033	6.0
		Chloroform	67-66-3	0.046	6.0
		bis(2-Chloroisopropyl) ether	39638-32-9	0.055	7.2
		p-Chloro-m-cresol	59-50-7	0.018	14.0
		Chloromethane (Methyl chloride)	74-87-3	0.19	30.0
		2-Chloronaphthalene	91-58-7	0.055	5.6
		2-Chlorophenol	95-57-8	0.044	5.7
		3-Chloropropylene	107-05-1	0.036	30.0
		Chrysene	218-01-9	0.059	3.4
		p-Cresidine	120-71-8	0.010	0.66
		o-Cresol	95-48-7	0.11	5.6
		m-Cresol (difficult to distinguish from p-cresol)	108-39-4	0.77	5.6
		p-Cresol (difficult to distinguish from m-cresol)	106-44-5	0.77	5.6
		Cyclohexanone	108-94-1	0.36	NA

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
		1,2-Dibromo-3-Chloropropane	96-12-8	0.11	15.0
		Ethylene dibromide (1,2-Dibromoethane)	106-93-4	0.028	15.0
		Dibromomethane	74-95-3	0.11	15.0
		2,4-D (2,4- Dichloro phenoxyacetic acid)	94-75-7	0.72	10.0
		o,p'-DDD	53-19-0	0.023	0.087
		p,p'-DDD	72-54-8	0.023	0.087
		o,p'-DDE	3424-82-6	0.031	0.087
		p,p'-DDE	72-55-9	0.031	0.087
		o,p'-DDT	789-02-6	0.0039	0.087
		p,p'-DDT	50-29-3	0.0039	0.087
		Dibenz(a,h)anthracene	53-70-3	0.055	8.2
		Dibenz(a,e)pyrene	192-65-4	0.061	NA
		m-Dichlorobenzene	541-73-1	0.036	6.0
		o-Dichlorobenzene	95-50-1	0.088	6.0
		p-Dichlorobenzene	106-46-7	0.09	6.0
		Dichlorodifluoromethane	75-71-8	0.23	7.2
		1,1-Dichloroethane	75-34-3	0.059	6.0

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
		1,2-Dichloroethane	107-06-2	0.21	6.0
		1,1-Dichloroethylene	75-35-4	0.025	6.0
		trans-1,2-Dichloroethylene	156-60-5	0.054	30.0
		2,4-Dichlorophenol	120-83-2	0.044	14.0
		2,6-Dichlorophenol	87-65-0	0.044	14.0
		1,2-Dichloropropane	78-87-5	0.85	18.0
		cis-1,3-Dichloro propylene	10061-01-5	0.036	18.0
		trans-1,3-Dichloropropylene	10061-02-6	0.036	18.0
		Dieldrin	60-57-1	0.017	0.13
		Diethyl phthalate	84-66-2	0.2	28.0
		2,4-Dimethylaniline (2,4-xylydine)	95-68-1	0.010	0.66
		2,4-Dimethyl phenol	105-67-9	0.036	14.0
		Dimethyl phthalate	131-11-3	0.047	28.0
		Di-n-butyl phthalate	84-74-2	0.057	28.0
		1,4-Dinitrobenzene	100-25-4	0.32	2.3
		4,6-Dinitro-o-cresol	534-52-1	0.28	160.0

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
		2,4-Dinitrophenol	51-28-5	0.12	160.0
		2,4-Dinitrotoluene	121-14-2	0.32	140.0
		2,6-Dinitrotoluene	606-20-2	0.55	28.0
		Di-n-octyl phthalate	117-84-0	0.017	28.0
		Di-n-propylnitrosamine	621-64-7	0.4	14.0
		1,4-Dioxane	123-91-1	12.0	170.0
		Diphenylamine (difficult to distinguish from diphenylnitrosamine)	122-39-4	0.92	NA
		Diphenylnitrosamine (difficult to distinguish from diphenylamine)	86-30-6	0.92	NA
		1,2-Diphenylhydrazine	122-66-7	0.087	NA
		Disulfoton	298-04-4	0.017	6.2
		Endosulfan I	939-98-8	0.023	0.066
		Endosulfan II	33213-6-5	0.029	0.13
		Endosulfan sulfate	1031-07-8	0.029	0.13
		Endrin	72-20-8	0.0028	0.13
		Endrin aldehyde	7421-93-4	0.025	0.13
		Ethyl acetate	141-78-6	0.34	33.0

EPA hazardous waste number	Waste description and <u>treatment/regulatory treatment or regulatory subcategory</u> ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/lmg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/lmg/L TCLP”; or technology code ⁴
		Ethyl cyanide (Propanenitrile)	107-12-0	0.24	360.0
		Ethyl benzene	100-41-4	0.057	10.0
		Ethyl ether	60-29-7	0.12	160.0
		bis(2-Ethylhexyl) phthalate	117-81-7	0.28	28.0
		Ethyl methacrylate	97-63-2	0.14	160.0
		Ethylene oxide	75-21-8	0.12	NA
		Famfur	52-85-7	0.017	15.0
		Fluoranthene	206-44-0	0.068	3.4
		Fluorene	86-73-7	0.059	3.4
		Heptachlor	76-44-8	0.0012	0.066
		Heptachlor epoxide	1024-57-3	0.016	0.066
		1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (1,2,3,4,6,7,8-HpCCD)	35822-46-9	0.000035	0.0025
		1,2,3,4,6,7,8-Heptachlorodibenzofuran (1,2,3,4,6,7,8-HpCDF)	67562-39-4	0.000035	0.0025

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/lmg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/lmg/L TCLP”; or technology code ⁴
		1,2,3,4,7,8,9-Heptachlorodibenzofuran (1,2,3,4,7,8,9-HpCDF)	55673-89-7	0.000035	0.0025
		Hexachlorobenzene	118-74-1	0.055	10.0
		Hexachlorobutadiene	87-68-3	0.055	5.6
		Hexachloro cyclopentadiene	77-47-4	0.057	2.4
		HxCDDs (all Hexachlorodibenzo-p-dioxins)	NA	0.000063	0.001
		HxCDFs (all Hexachlorodibenzo furans)	NA	0.000063	0.001
		Hexachloroethane	67-72-1	0.055	30.0
		Hexachloropropylene	1888-71-7	0.035	30.0
		Indeno(1,2,3-c,d)pyrene	193-39-5	0.0055	3.4
		Iodomethane	74-88-4	0.19	65.0
		Isobutyl alcohol	78-83-1	5.6	170.0
		Isodrin	465-73-6	0.021	0.066
		Isosafrole	120-58-1	0.081	2.6
		Kepone	143-50-8	0.0011	0.13

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/lmg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/lmg/L TCLP”; or technology code ⁴
		Methacrylonitrile	126-98-7	0.24	84.0
		Methanol	67-56-1	5.6	NA
		Methapyrilene	91-80-5	0.081	1.5
		Methoxychlor	72-43-5	0.25	0.18
		3-Methylcholanthrene	56-49-5	0.0055	15.0
		4,4-Methylene bis(2-chloroaniline)	101-14-4	0.5	30.0
		Methylene chloride	75-09-2	0.089	30.0
		Methyl ethyl ketone	78-93-3	0.28	36.0
		Methyl isobutyl ketone	108-10-1	0.14	33.0
		Methyl methacrylate	80-62-6	0.14	160.0
		Methyl methansulfonate	66-27-3	0.018	NA
		Methyl parathion	290-00-0	0.014	4.6
		Naphthalene	91-20-3	0.059	5.6
		2-Naphthylamine	91-59-8	0.52	NA
		p-Nitroaniline	100-01-6	0.028	28.0
		Nitrobenzene	98-95-3	0.068	14.0
		5-Nitro-0-toluidine	99-55-8	0.32	28.0
		p-Nitrophenol	100-02-7	0.12	29.0
		N-Nitrosodiethylamine	55-18-5	0.4	28.0

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
		N-Nitrosodimethylamine	62-75-9	0.4	NA
		N-Nitroso-di-n-butylamine	924-16-3	0.4	17.0
		N-Nitrosomethylethylamine	10595-95-6	0.4	2.3
		N-Nitrosomorpholine	59-89-2	0.4	2.3
		N-Nitrosopiperidine	100-75-4	0.013	35.0
		N-Nitrosopyrrolidine	930-55-2	0.013	35.0
		1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	0.000063	0.0025
		1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	39001-02-0	0.000063	0.005
		Parathion	56-38-2	0.014	4.6
		Total PCBs (sum of all PCB isomers, or all aroclors)	1336-36-3	0.1	10.0
		Pentachlorobenzene	608-93-5	0.055	10.0

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
		PeCDDs (all Pentachlorodibenzo-p-dioxins)	NA	0.000063	0.001
		PeCDFs (all Pentachlorodibenzo furans)	NA	0.000035	0.001
		Pentachloronitrobenzene	82-68-8	0.055	4.8
		Pentachlorophenol	87-86-5	0.089	7.4
		Phenacetin	62-44-2	0.081	16
		Phenanthrene	85-01-8	0.059	5.6
		Phenol	108-95-2	0.039	6.2
		1,3-Phenylenediamine	108-45-2	0.010	0.66
		Phorate	298-02-2	0.021	4.6
		Phthalic anhydride	85-44-9	0.055	NA
		Pronamide	23950-58-5	0.093	1.5
		Pyrene	129-00-0	0.067	8.2
		Pyridine	110-86-1	0.014	16.0
		Safrole	94-59-7	0.081	22.0
		Silvex (2,4,5-TP)	93-72-1	0.72	7.9
		2,4,5-T	93-76-5	0.72	7.9

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
		1,2,4,5-Tetrachlorobenzene	95-94-3	0.055	14.0
		TCDDs (all Tetrachlorodibenzo-p-dioxins)	NA	0.000063	0.001
		TCDFs (all Tetrachlorodibenzo furans)	NA	0.000063	0.001
		1,1,1,2-Tetrachloroethane	630-20-6	0.057	6.0
		1,1,2,2-Tetrachloroethane	79-34-6	0.057	6.0
		Tetrachloroethylene	127-18-4	0.056	6.0
		2,3,4,6-Tetrachlorophenol	58-90-2	0.03	7.4
		Toluene	108-88-3	0.08	10.0
		Toxaphene	8001-35-2	0.0095	2.6
		Bromoform (Tribromomethane)	75-25-2	0.63	15.0
		1,2,4-Trichlorobenzene	120-82-1	0.055	19.0
		1,1,1-Trichloroethane	71-55-6	0.054	6.0
		1,1,2-Trichloroethane	79-00-5	0.054	6.0
		Trichloroethylene	79-01-6	0.054	6.0

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/lmg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/lmg/L TCLP”; or technology code ⁴
		Trichloromono fluoromethane	75-69-4	0.02	30.0
		2,4,5-Trichlorophenol	95-95-4	0.18	7.4
		2,4,6-Trichlorophenol	88-06-2	0.035	7.4
		1,2,3-Trichloropropane	96-18-4	0.85	30.0
		1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	0.057	30.0
		tris(2,3-Dibromopropyl) phosphate	126-72-7	0.11	NA
		Vinyl chloride	75-01-4	0.27	6.0
		Xylenes- mixed isomers (sum of o-, m-, and p-xylene concentrations)	1330-20-7	0.32	30.0
		Antimony	7440-36-0	1.9	1.15 mg/lmg/L TCLP
		Arsenic	7440-38-2	1.4	5.0 mg/lmg/L TCLP
		Barium	7440-39-3	1.2	21.0 mg/lmg/L TCLP
		Beryllium	7440-41-7	0.82	NA
		Cadmium	7440-43-9	0.69	0.11 mg/lmg/L TCLP
		Chromium (total)	7440-47-3	2.77	0.6 mg/lmg/L TCLP
		Cyanides (total) ⁷	57-12-5	1.2	590.0

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		Common name	CAS ² number	Concentration ³ in mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/L TCLP”; or technology code ⁴
		Cyanides (amenable) ⁷	57-12-5	0.86	NA
		Fluoride	16964-48-8	35.0	NA
		Lead	7439-92-1	0.69	0.75 mg/L TCLP
		Mercury	7439-97-6	0.15	0.025 mg/L TCLP
		Nickel	7440-02-0	3.98	11.0 mg/L TCLP
		Selenium	7782-49-2	0.82	5.7 mg/L TCLP
		Silver	7440-22-4	0.43	0.14 mg/L TCLP
		Sulfide	8496-25-8	14.0	NA
		Thallium	7440-28-0	1.4	NA
		Vanadium	7440-62-2	4.3	NA
K001	Bottom sediment sludge from the treatment of wastewaters from wood preserving processes that use creosotes <u>and/or</u> pentachlorophenol	Naphthalene	91-20-3	0.059	5.6
		Pentachlorophenol	87-86-5	0.089	7.4
		Phenanthrene	85-01-8	0.059	5.6
		Pyrene	129-00-0	0.067	8.2
		Toluene	108-88-3	0.08	10.0
		Xylenes- mixed isomers (sum of o-, m-, and p-xylene concentrations)	1330-20-7	0.32	30.0
		Lead	7439-92-1	0.69	0.75 mg/L TCLP

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/lmg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/lmg/L TCLP”; or technology code ⁴
K002	Wastewater treatment sludge from the production of chrome yellow and orange pigments	Chromium (total)	7440-47-3	2.77	0.6 mg/lmg/L TCLP
		Lead	7439-92-1	0.69	0.75 mg/lmg/L TCLP
K003	Wastewater treatment sludge from the production of molybdate orange pigments	Chromium (total)	7440-47-3	2.77	0.6 mg/lmg/L TCLP
		Lead	7439-92-1	0.69	0.75 mg/lmg/L TCLP
K004	Wastewater treatment sludge from the production of zinc yellow pigments	Chromium (total)	7440-47-3	2.77	0.6 mg/lmg/L TCLP
		Lead	7439-92-1	0.69	0.75 mg/lmg/L TCLP
K005	Wastewater treatment sludge from the production of chrome green pigments	Chromium (total)	7440-47-3	2.77	0.6 mg/lmg/L TCLP
		Lead	7439-92-1	0.69	0.75 mg/lmg/L TCLP
		Cyanides (total) ⁷	57-12-5	1.2	590.0
K006	Wastewater treatment sludge from the production of chrome oxide green pigments (anhydrous)	Chromium (total)	7440-47-3	2.77	0.6 mg/lmg/L TCLP
		Lead	7439-92-1	0.69	0.75 mg/lmg/L TCLP
	Wastewater treatment sludge from the production of chrome oxide green pigments (hydrated)	Chromium (total)	7440-47-3	2.77	0.6 mg/lmg/L TCLP
		Lead	7439-92-1	0.69	0.75 mg/lmg/L TCLP
K007	Wastewater treatment sludge from the production of iron blue pigments	Chromium (total)	7440-47-3	2.77	0.6 mg/lmg/L TCLP
		Lead	7439-92-1	0.69	0.75 mg/lmg/L TCLP
		Cyanides (total) ⁷	57-12-5	1.2	590.0

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		Common name	CAS ² number	Concentration ³ in mg/lmg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/lmg/L TCLP”; or technology code ⁴
K008	Oven residues from the production of chrome oxide green pigments	Chromium (total)	7440-47-3	2.77	0.6 mg/lmg/L TCLP
		Lead	7439-92-1	0.69	0.75 mg/lmg/L TCLP
K009	Distillation bottoms from the production of acetaldehyde from ethylene	Chloroform	67-66-3	0.046	6.0
K010	Distillation side cuts from the production of acetaldehyde from ethylene	Chloroform	67-66-3	0.046	6.0
K011	Bottom stream from the wastewater stripper in the production of acrylonitrile	Acetonitrile	75-05-8	5.6	38.0
		Acrylonitrile	107-13-1	0.24	84.0
		Acrylamide	79-06-1	19.0	23.0
		Benzene	71-43-2	0.14	10.0
		Cyanide (total)	57-12-5	1.2	590.0
K013	Bottom stream from the acetonitrile column in the production of acrylonitrile	Acetonitrile	75-05-8	5.6	38.0
		Acrylonitrile	107-13-1	0.24	84.0
		Acrylamide	79-06-1	19.0	23.0
		Benzene	71-43-2	0.14	10.0
		Cyanide (total)	57-12-5	1.2	590.0

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/lmg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/lmg/L TCLP”; or technology code ⁴
K014	Bottoms from the acetonitrile purification column in the production of acrylonitrile	Acetonitrile	75-05-8	5.6	38.0
		Acrylonitrile	107-13-1	0.24	84.0
		Acrylamide	79-06-1	19.0	23.0
		Benzene	71-43-2	0.14	10.0
		Cyanide (total)	57-12-5	1.2	590.0
K015	Still bottoms from the distillation of benzyl chloride	Anthracene	120-12-7	0.059	3.4
		Benzal chloride	98-87-3	0.055	6.0
		Benzo(b)fluoranthene [difficult to distinguish from benzo(k)fluoranthene]	205-99-2	0.11	6.8
		Benzo(k)fluoranthene [difficult to distinguish from benzo(b)fluoranthene]	207-08-9	0.11	6.8
		Phenanthrene	85-01-8	0.059	5.6
		Toluene	108-88-3	0.08	10.0
		Chromium (total)	7440-47-3	2.77	0.6 mg/lmg/L TCLP
		Nickel	7440-02-0	3.98	11.0 mg/lmg/L TCLP

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K016	Heavy ends or distillation residues from the production of carbon tetrachloride	Hexachlorobenzene	118-74-1	0.055	10.0
		Hexachlorobutadiene	87-68-3	0.055	5.6
		Hexachloro cyclopentadiene	77-47-4	0.057	2.4
		Hexachloroethane	67-72-1	0.055	30.0
		Tetrachloroethylene	127-18-4	0.056	6.0
		1,1-Dichloroethane	75-34-3	0.059	6.0
		1,2-Dichloroethane	107-06-2	0.21	6.0
K017	Heavy ends (still bottoms) from the purification column in the production of epichlorohydrin	bis(2-Chloroethyl)ether	111-44-4	0.033	6.0
		1,2-Dichloropropane	78-87-5	0.85	18.0
		1,2,3-Trichloropropane	96-18-4	0.85	30.0
K018	Heavy ends from the fractionation column in ethyl chloride production	Chloroethane	75-00-3	0.27	6.0
		Chloromethane	74-87-3	0.19	NA
		1,1-Dichloroethane	75-34-3	0.059	6.0
		1,2-Dichloroethane	107-06-2	0.21	6.0
		Hexachlorobenzene	118-74-1	0.055	10.0
		Hexachlorobutadiene	87-68-3	0.055	5.6
		Hexachloroethane	67-72-1	0.055	30.0
		Pentachloroethane	76-01-7	NA	6.0
1,1,1-Trichloroethane	71-55-6	0.054	6.0		

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		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
K019	Heavy ends from the distillation of ethylene dichloride in thylene dichloride production	bis(2-Chloroethyl)ether	111-44-4	0.033	6.0
		Chlorobenzene	108-90-7	0.057	6.0
		Chloroform	67-66-3	0.046	6.0
		p-Dichlorobenzene	106-46-7	0.09	NA
		1,2-Dichloroethane	107-06-2	0.21	6.0
		Fluorene	86-73-7	0.059	NA
		Hexachloroethane	67-72-1	0.055	30.0
		Naphthalene	91-20-3	0.059	5.6
		Phenanthrene	85-01-8	0.059	5.6
		1,2,4,5-Tetrachlorobenzene	95-94-3	0.055	NA
		Tetrachloroethylene	127-18-4	0.056	6.0
		1,2,4-Trichloroethane	120-82-1	0.055	19.0
		1,1,1-Trichloroethane	71-55-6	0.054	6.0
K020	Heavy ends from the distillation of vinyl chloride in vinyl chloride monomer production	1,2-Dichloroethane	107-06-2	0.21	6.0
		1,1,2,2-Tetrachloroethane	79-34-6	0.057	6.0
		Tetrachloroethylene	127-18-4	0.056	6.0
K021	Aqueous spent antimony catalyst waste from fluoromethanes production	Carbon tetrachloride	56-23-5	0.057	6.0
		Chloroform	67-66-3	0.046	6.0
		Antimony	7440-36-0	1.9	1.15 mg/mg/L TCLP

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
K022	Distillation bottom tars from the production of phenol/acetone phenol or acetone from cumene	Toluene	108-88-3	0.08	10.0
		Acetophenone	96-86-2	0.01	9.7
		Diphenylamine (difficult to distinguish from diphenylnitrosamine)	122-39-4	0.92	13.0
		Diphenylnitrosamine (difficult to distinguish from diphenylamine)	86-30-6	0.92	13.0
		Phenol	108-95-2	0.039	6.2
		Chromium (total)	7440-47-3	2.77	0.6 mg/mg/L TCLP
		Nickel	7440-02-0	3.98	11.0 mg/mg/L TCLP
K023	Distillation light ends from the production of phthalic anhydride from paphthalene	Phthalic anhydride (measured as phthalic acid or terephthalic acid)	100-21-0	0.055	28.0
		Phthalic anhydride (measured as phthalic acid or terephthalic acid)	85-44-9	0.055	28.0
K024	Distillation bottoms from the production of phthalic anhydride from naphthalene	Phthalic anhydride (measured as phthalic acid or terephthalic acid)	100-21-0	0.055	28.0

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
		Phthalic anhydride (measured as phthalic acid or terephthalic acid)	85-44-9	0.055	28.0
K025	Distillation bottoms from the production of nitrobenzenes by the nitration of benzene	NA	NA	LLEXT fb SSTRP fb CARBN; or CMBST	CMBST
K026	Stripping still tails from the production of methyl ethyl pyridines	NA	NA	CMBST	CMBST
K027	Centrifuge and distillation residues from toluene diisocyanate production	NA	NA	CARBN; or CMBST	CMBST
K028	Spent catalyst from the hydrochlorinator reactor in the production of 1,1,1-trichloroethane	1,1-Dichloroethane	75-34-3	0.059	6.0
		trans-1,2-Dichloroethylene	156-60-5	0.054	30.0
		Hexachlorobutadiene	87-68-3	0.055	5.6
		Hexachloroethane	67-72-1	0.055	30.0
		Pentachloroethane	76-01-7	NA	6.0
		1,1,1,2-Tetrachloroethane	630-20-6	0.057	6.0
		1,1,2,2-Tetrachloroethane	79-34-6	0.057	6.0
		Tetrachloroethylene	127-18-4	0.056	6.0

EPA hazardous waste number	Waste description and <u>treatment/regulatory treatment or regulatory subcategory</u> ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/lmg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/lmg/L TCLP”; or technology code ⁴
		1,1,1-Trichloroethane	71-55-6	0.054	6.0
		1,1,2-Trichloroethane	79-00-5	0.054	6.0
		Cadmium	7440-43-9	0.69	NA
		Chromium (total)	7440-47-3	2.77	0.6 mg/lmg/L TCLP
		Lead	7439-92-1	0.69	0.75 mg/lmg/L TCLP
		Nickel	7440-02-0	3.98	11.0 mg/lmg/L TCLP
K029	Waste from the product steam stripper in the production of 1,1,1-trichloroethane	Chloroform	67-66-3	0.046	6.0
		1,2-Dichloroethane	107-06-2	0.21	6.0
		1,1-Dichloroethylene	75-35-4	0.025	6.0
		1,1,1-Trichloroethane	71-55-6	0.054	6.0
		Vinyl chloride	75-01-4	0.27	6.0
K030	Column bodies or heavy ends from the combined production of trichloroethylene and perchloroethylene	o-Dichlorobenzene	95-50-1	0.088	NA
		p-Dichlorobenzene	106-46-7	0.09	NA
		Hexachlorobutadiene	87-68-3	0.055	5.6
		Hexachloroethane	67-72-1	0.055	30.0
		Hexachloropropylene	1888-71-7	NA	30.0
		Pentachlorobenzene	608-93-5	NA	10.0
		Pentachloroethane	76-01-7	NA	6.0
1,2,4,5-Tetrachlorobenzene	95-94-3	0.055	14.0		

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
		Tetrachloroethylene	127-18-4	0.056	6.0
		1,2,4-Trichlorobenzene	120-82-1	0.055	19.0
K031	By-product salts generated in the production of MSMA and cacodylic acid	Arsenic	7440-38-2	1.4	5.0 mg/mg/L TCLP
K032	Wastewater treatment sludge from the production of chlordane	Hexachloro cyclopentadiene	77-47-4	0.057	2.4
		Chlordane (alpha and gamma isomers)	57-74-9	0.0033	0.26
		Heptachlor	76-44-8	0.0012	0.066
		Heptachlor epoxide	1024-57-3	0.016	0.066
K033	Wastewater and scrub water from the chlorination of cyclopentadiene in the production of chlordane	Hexachloro cyclopentadiene	77-47-4	0.057	2.4
K034	Filter solids from the filtration of hexachlorocyclopentadiene in the production of chlordane	Hexachloro cyclopentadiene	77-47-4	0.057	2.4
K035	Wastewater treatment sludges generated in the production of creosote	Acenaphthene	83-32-9	NA	3.4
		Anthracene	120-12-7	NA	3.4
		Benz(a)anthracene	56-55-3	0.059	3.4

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
		Benzo(a)pyrene	50-32-8	0.061	3.4
		Chrysene	218-01-9	0.059	3.4
		o-Cresol	95-48-7	0.11	5.6
		m-Cresol (difficult to distinguish from p-Cresol)	108-39-4	0.77	5.6
		p-Cresol (difficult to distinguish from m-Cresol)	106-44-5	0.77	5.6
		Dibenz(a,h)anthacene	53-70-3	NA	8.2
		Fluoranthene	206-44-0	0.068	3.4
		Fluorene	86-73-7	NA	3.4
		Indeno(1,2,3-cd)pyrene Indeno(1,2,3-c,d)pyrene	193-39-5	NA	3.4
		Naphthalene	91-20-3	0.059	5.6
		Phenanthrene	85-01-8	0.059	5.6
		Phenol	108-95-2	0.039	6.2
Pyrene	129-00-0	0.067	8.2		
K036	Still bottoms from toluene reclamation distillation in the production of disulfoton	Disulfoton	298-04-4	0.017	6.2

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		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
K037	Wastewater treatment sludges from the production of disulfoton	Disulfoton	298-04-4	0.017	6.2
		Toluene	108-88-3	0.08	10.0
K038	Wastewater from the washing and stripping of phorate production	Phorate	298-02-2	0.021	4.6
K039	Filter cake from the filtration of diethylphosphorodithioic acid in the production of phorate	NA	NA	CARBN; or CMBST	CMBST
K040	Wastewater treatment sludge from the production of phorate	Phorate	298-02-2	0.021	4.6
K041	Wastewater treatment sludge from the production of toxaphene	Toxaphene	8001-35-2	0.0095	2.6
K042	Heavy ends or distillation residues from the distillation of tetrachlorobenzene in the production of 2,4,5-T	o-Dichlorobenzene	95-50-1	0.088	6.0
		p-Dichlorobenzene	106-46-7	0.09	6.0
		Pentachlorobenzene	608-93-5	0.055	10.0
		1,2,4,5-Tetrachlorobenzene	95-94-3	0.055	14.0
		1,2,4-Trichlorobenzene	120-82-1	0.055	19.0
K043	2,6-Dichlorophenol waste from the production of 2,4-D	2,4-Dichlorophenol	120-83-2	0.044	14.0
		2,6-Dichlorophenol	187-65-0	0.044	14.0
		2,4,5-Trichlorophenol	95-95-4	0.18	7.4
		2,4,6-Trichlorophenol	88-06-2	0.035	7.4

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		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
		2,3,4,6-Tetrachlorophenol	58-90-2	0.03	7.4
		Pentachlorophenol	87-86-5	0.089	7.4
		Tetrachloroethylene	127-18-4	0.056	6.0
		HxCDDs (all Hexachlorodibenzo-p-dioxins)	NA	0.000063	0.001
		HxCDFs (all Hexachlorodibenzo furans)	NA	0.000063	0.001
		PeCDDs (all Pentachlorodibenzo-p-dioxins)	NA	0.000063	0.001
		PeCDFs (all Pentachlorodibenzo furans)	NA	0.000035	0.001
		TCDDs (all Tetrachlorodibenzo-p-dioxins)	NA	0.000063	0.001
		TDFs (all Tetrachlorodibenzo furans)	NA	0.000063	0.001

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		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
K044	Wastewater treatment sludges from the manufacturing and processing of explosives	NA	NA	DEACT	DEACT
K045	Spent carbon from the treatment of wastewater containing explosives	NA	NA	DEACT	DEACT
K046	Wastewater treatment sludges from the manufacturing, formulation, and loading of lead-based initiating compounds	Lead	7439-92-1	0.69	0.75 mg/mg/L TCLP
K047	Pink/red Pink or red water from TNT operations	NA	NA	DEACT	DEACT
K048	Dissolved air flotation (DAF) float from the petroleum refining industry	Benzene	71-43-2	0.14	10.0
		Benzo(a)pyrene	50-32-8	0.061	3.4
		bis(2-Ethylhexyl) phthalate	117-81-7	0.28	28.0
		Chrysene	218-01-9	0.059	3.4
		Di-n-butyl phthalate	84-74-2	0.057	28.0
		Ethylbenzene	100-41-4	0.057	10.0
		Fluorene	86-73-7	0.059	NA
		Naphthalene	91-20-3	0.059	5.6

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
		Phenanthrene	85-01-8	0.059	5.6
		Phenol	108-95-2	0.039	6.2
		Pyrene	129-00-0	0.067	8.2
		Toluene	108-88-3	0.08	10.0
		Xylenes- mixed isomers (sum of o-, m-, and p-xylene concentrations)	1330-20-7	0.32	30.0
		Chromium (total)	7440-47-3	2.77	0.6 mg/mg/L TCLP
		Cyanides (total) ⁷	57-12-5	1.2	590.0
		Lead	7439-92-1	0.69	NA
		Nickel	7440-02-0	NA	11.0 mg/mg/L TCLP
K049	Slop oil emulsion solids from the petroleum refining industry	Anthracene	120-12-7	0.059	3.4
		Benzene	71-43-2	0.14	10.0
		Benzo(a)pyrene	50-32-8	0.061	3.4
		bis(2-Ethylhexyl) phthalate	117-81-7	0.28	28.0
		Carbon disulfide	75-15-0	3.8	NA
		Chrysene	218-01-9	0.059	3.4
		2,4-Dimethylphenol	105-67-9	0.036	NA
		Ethylbenzene	100-41-4	0.057	10.0

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		Common name	CAS ² number	Concentration ³ in mg/lmg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/lmg/L TCLP”; or technology code ⁴
		Naphthalene	91-20-3	0.059	5.6
		Phenanthrene	85-01-8	0.059	5.6
		Phenol	108-95-2	0.039	6.2
		Pyrene	129-00-0	0.067	8.2
		Toluene	108-88-3	0.08	10.0
		Xylenes- mixed isomers (sum of o-, m-, and p-xylene concentrations)	1330-20-7	0.32	30.0
		Cyanides (total) ⁷	57-12-5	1.2	590.0
		Chromium (total)	7440-47-3	2.77	0.6 mg/lmg/L TCLP
		Lead	7439-92-1	0.69	NA
		Nickel	7440-02-0	NA	11.0 mg/lmg/L TCLP
K050	Heat exchanger bundle cleaning sludge from the petroleum refining industry	Benzo(a)pyrene	50-32-8	0.061	3.4
		Phenol	108-95-2	0.039	6.2
		Cyanides (total) ⁷	57-12-5	1.2	590.0
		Chromium (total)	7440-47-3	2.77	0.6 mg/lmg/L TCLP
		Lead	7439-92-1	0.69	NA
		Nickel	7440-02-0	NA	11.0 mg/lmg/L TCLP

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		Common name	CAS ² number	Concentration ³ in mg/lmg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/lmg/L TCLP”; or technology code ⁴
K051	API separator sludge from the petroleum refining industry	Acenaphthene	83-32-9	0.059	NA
		Anthracene	120-12-7	0.059	3.4
		Benz(a)anthracene	56-55-3	0.059	3.4
		Benzene	71-43-2	0.14	10.0
		Benzo(a)pyrene	50-32-8	0.061	3.4
		bis(2-Ethylhexyl) phthalate	117-81-7	0.28	28.0
		Chrysene	218-01-9	0.059	3.4
		Di-n-butyl phthalate	105-67-9	0.057	28.0
		Ethylbenzene	100-41-4	0.057	10.0
		Fluorene	86-73-7	0.059	NA
		Naphthalene	91-20-3	0.059	5.6
		Phenanthrene	85-01-8	0.059	5.6
		Phenol	108-95-2	0.039	6.2
		Pyrene	129-00-0	0.067	8.2
		Toluene	108-88-3	0.08	10.0
		Xylenes- mixed isomers (sum of o-, m-, and p-xylene concentrations)	1330-20-7	0.32	30.0
Cyanides (total) ⁷	57-12-5	1.2	590.0		

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
		Chromium (total)	7440-47-3	2.77	0.6 mg/mg/L TCLP
		Lead	7439-92-1	0.69	NA
		Nickel	7440-02-0	NA	11.0 mg/mg/L TCLP
K052	Tank bottoms (leaded) from the petroleum refining industry	Benzene	71-43-2	0.14	10.0
		Benzo(a)pyrene	50-32-8	0.061	3.4
		o-Cresol	95-48-7	0.11	5.6
		m-Cresol (difficult to distinguish from o-Cresol)	108-39-4	0.77	5.6
		p-Cresol (difficult to distinguish from m-Cresol)	106-44-5	0.77	5.6
		2,4-Dimethylphenol	105-67-9	0.36	NA
		Ethylbenzene	100-41-4	0.057	10.0
		Naphthalene	91-20-3	0.059	5.6
		Phenanthrene	85-01-8	0.059	5.6
		Phenol	108-95-2	0.039	6.2
		Toluene	108-88-3	0.08	10.0
		Xylenes- mixed isomers (sum of o-, m-, and p-xylene concentrations)	1330-20-7	0.32	30.0

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		Common name	CAS ² number	Concentration ³ in mg/lmg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/lmg/L TCLP”; or technology code ⁴
		Chromium (total)	7440-47-3	2.77	0.6 mg/lmg/L TCLP
		Cyanides (total) ⁷	57-12-5	1.2	590.0
		Lead	7439-92-1	0.69	NA
		Nickel	7440-02-0	NA	11.0 mg/lmg/L TCLP
K060	Ammonia still lime sludge from coking operations	Benzene	71-43-2	0.14	10.0
		Benzo(a)pyrene	50-32-8	0.061	3.4
		Naphthalene	91-20-3	0.059	5.6
		Phenol	108-95-2	0.039	6.2
		Cyanides (total) ⁷	57-12-5	1.2	590.0
K061	Emission control <u>dust/sludge</u> dust or sludge from the primary production of steel in electric furnaces	Antimony	7440-36-0	NA	1.15 mg/lmg/L TCLP
		Arsenic	7440-38-2	NA	5.0 mg/lmg/L TCLP
		Barium	7440-39-3	NA	21.0 mg/lmg/L TCLP
		Beryllium	7440-41-7	NA	1.22 mg/lmg/L TCLP
		Cadmium	7440-43-9	0.69	0.11 mg/lmg/L TCLP
		Chromium (total)	7440-47-3	2.77	0.6 mg/lmg/L TCLP
		Lead	7439-92-1	0.69	0.75 mg/lmg/L TCLP
		Mercury	7439-97-6	NA	0.025 mg/lmg/L TCLP
		Nickel	7440-02-0	3.98	11.0 mg/lmg/L TCLP
		Selenium	7782-49-2	NA	5.7 mg/lmg/L TCLP

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		Common name	CAS ² number	Concentration ³ in mg/lmg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/lmg/L TCLP”; or technology code ⁴
		Silver	7440-22-4	NA	0.14 mg/lmg/L TCLP
		Thallium	7440-28-0	NA	0.2 mg/lmg/L TCLP
		Zinc	7440-66-6	NA	4.3 mg/lmg/L TCLP
K062	Spent pickle liquor generated by steel finishing operations of facilities within the iron and steel industry (SIC Codes 331X and 332X)	Chromium (total)	7440-47-3	2.77	0.6 mg/lmg/L TCLP
		Lead	7439-92-1	0.69	0.75 mg/lmg/L TCLP
		Nickel	7440-02-0	3.98	NA
K069	Emission control dust/sludge from secondary lead smelting-calcium sulfate (low lead) subcategory	Cadmium	7440-43-9	0.69	0.11 mg/lmg/L TCLP
		Lead	7439-92-1	0.69	0.75 mg/lmg/L TCLP
	Emission control dust/sludge from secondary lead smelting-non-calcium sulfate (high lead) subcategory	NA	NA	NA	RLEAD
K071	K071 (brine purification muds from the mercury cell process in chlorine production, where separate prepurified brine is not used) nonwastewaters that are residues from RMERC	Mercury	7439-97-6	NA	0.2 mg/lmg/L TCLP

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		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
	K071 (brine purification muds from the mercury cell process in chlorine production, where separate prepurified brine is not used) nonwastewaters that are not residues from RMERC	Mercury	7439-97-6	NA	0.2 mg/mg/L TCLP
	All K071 wastewaters	Mercury	7439-97-6	0.15	NA
K073	Chlorinated hydrocarbon waste from the purification step of the diaphragm cell process using graphite anodes in chlorine production	Carbon tetrachloride	56-23-5	0.057	6.0
		Chloroform	67-66-3	0.046	6.0
		Hexachloroethane	67-72-1	0.055	30.0
		Tetrachloroethylene	127-18-4	0.056	6.0
		1,1,1-Trichloroethane	71-55-6	0.054	6.0
K083	Distillation bottoms from aniline production	Aniline	62-53-3	0.81	14.0
		Benzene	71-43-2	0.14	10.0
		Cyclohexanone	108-94-1	0.36	NA
		Diphenylamine (difficult to distinguish from diphenylnitrosamine)	122-39-4	0.92	13.0
		Diphenylnitrosamine (difficult to distinguish from diphenylamine)	86-30-6	0.92	13.0

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		Common name	CAS ² number	Concentration ³ in mg/lmg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/lmg/L TCLP”; or technology code ⁴
		Nitrobenzene	98-95-3	0.068	14.0
		Phenol	108-95-2	0.039	6.2
		Nickel	7440-02-0	3.98	11.0 mg/lmg/L TCLP
K084	Wastewater treatment sludges generated during the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds	Arsenic	7440-38-2	1.4	5.0 mg/lmg/L TCLP
K085	Distillation or fractionation column bottoms from the production of chlorobenzenes	Benzene	71-43-2	0.14	10.0
		Chlorobenzene	108-90-7	0.057	6.0
		m-Dichlorobenzene	541-73-1	0.036	6.0
		o-Dichlorobenzene	95-50-1	0.088	6.0
		p-Dichlorobenzene	106-46-7	0.09	6.0
		Hexachlorobenzene	118-74-1	0.055	10.0
		Total PCBs (sum of all PCB isomers, or all arclors)	1336-36-3	0.1	10.0
		Pentachlorobenzene	608-93-5	0.055	10.0
		1,2,4,5-Tetrachlorobenzene	95-94-3	0.055	14.0
	1,2,4-Trichlorobenzene	120-82-1	0.055	19.0	

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/lmg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/lmg/L TCLP”; or technology code ⁴
K086	Solvent waste and sludges, caustic washes and sludges, or water washes and sludges from cleaning tubs and equipment used in the formulation of ink from pigments, driers, soaps, and stabilizers containing chromium and lead	Acetone	67-64-1	0.28	160.0
		Acetophenone	96-86-2	0.01	9.7
		bis(2-Ethylhexyl) phthalate	117-81-7	0.28	28.0
		n-Butyl alcohol	71-36-3	5.6	2.6
		Butylbenzyl phthalate	85-68-7	0.017	28.0
		Cyclohexanone	108-94-1	0.36	NA
		o-Dichlorobenzene	95-50-1	0.088	6.0
		Diethyl phthalate	84-66-2	0.2	28.0
		Dimethyl phthalate	131-11-3	0.047	28.0
		Di-n-butyl phthalate	84-74-2	0.057	28.0
		Di-n-octyl phthalate	117-84-0	0.017	28.0
		Ethyl acetate	141-78-6	0.34	33.0
		Ethylbenzene	100-41-4	0.057	10.0
		Methanol	67-56-1	5.6	NA
		Methyl ethyl ketone	78-93-3	0.28	36.0
		Methyl isobutyl ketone	108-10-1	0.14	33.0
		Methylene chloride	75-09-2	0.089	30.0
Naphthalene	91-20-3	0.059	5.6		
Nitrobenzene	98-95-3	0.068	14.0		

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/lmg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/lmg/L TCLP”; or technology code ⁴
		Toluene	108-88-33	0.08	10.0
		1,1,1-Trichloroethane	71-55-6	0.054	6.0
		Tetrachloroethylene	79-01-6	0.054	6.0
		Xylenes- mixed isomers (sum of o-, m-, and p-xylene concentrations)	1330-20-7	0.32	30.0
		Chromium (total)	7440-47-3	2.77	0.6 mg/lmg/L TCLP
		Cyanides (total) ⁷	57-12-5	1.2	590.0
		Lead	7439-92-1	0.69	0.75 mg/lmg/L TCLP
K087	Decanter tank tar from coking operations	Acenaphthylene	208-96-8	0.059	3.4
		Benzene	71-43-2	0.14	10.0
		Chrysene	218-01-9	0.059	3.4
		Fluoranthene	206-44-0	0.068	3.4
		Indeno(1,2,3-cd)pyrene Indeno(1,2,3-c,d)pyrene	193-39-5	0.0055	3.4
		Naphthalene	91-20-3	0.059	5.6
		Phenanthrene	85-01-8	0.059	5.6
		Toluene	108-88-3	0.08	10.0

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
		Xylenes- mixed isomers (sum of o-, m-, and p-xylene concentrations)	1330-20-7	0.32	30.0
		Lead	7439-92-1	0.69	0.75 mg/mg/L TCLP
K088	Spent potliners from primary aluminum reduction	Acenaphthene	83-32-9	0.059	3.4
		Anthracene	120-12-7	0.059	3.4
		Benzo(a)anthracene	56-55-3	0.059	3.4
		Benzo(a)pyrene	50-32-8	0.061	3.4
		Benzo(b)fluoranthene	205-99-2	0.11	6.8
		Benzo(k)fluoranthene	207-08-9	0.11	6.8
		Benzo(g,h,i)perylene	191-24-2	0.0055	1.8
		Chrysene	218-01-9	0.059	3.4
		Dibenz(a,h)anthracene	53-70-3	0.055	8.2
		Fluoranthene	206-44-0	0.068	3.4
		Indeno(1,2,3-cd)pyrene Indeno(1,2,3-c,d)pyrene	193-39-5	0.0055	3.4
		Phenanthrene	85-01-8	0.059	5.6
		Pyrene	129-00-0	0.067	8.2
		Antimony	7440-36-0	1.9	1.15 mg/mg/L TCLP
Arsenic	7440-38-2	1.4	26.1		

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/lmg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/lmg/L TCLP”; or technology code ⁴
		Barium	7440-39-3	1.2	21.0 mg/lmg/L TCLP
		Beryllium	7440-41-7	0.82	1.22 mg/lmg/L TCLP
		Cadmium	7440-43-9	0.69	0.11 mg/lmg/L TCLP
		Chromium (total)	7440-47-3	2.77	0.6 mg/lmg/L TCLP
		Lead	7439-92-1	0.69	0.75 mg/lmg/L TCLP
		Mercury	7439-97-6	0.15	0.025 mg/lmg/L TCLP
		Nickel	7440-02-0	3.98	11.0 mg/lmg/L TCLP
		Selenium	7782-49-2	0.82	5.7 mg/lmg/L TCLP
		Silver	7440-22-4	0.43	0.14 mg/lmg/L TCLP
		Cyanides (total) ⁷	57-12-5	1.2	590.0
		Cyanides (amenable) ⁷	57-12-5	0.86	30.0
	Fluoride	16964-48-8	35.0	NA	
K093	Distillation light ends from the production of phthalic anhydride from ortho-xylene	Phthalic anhydride (measured as phthalic acid or terephthalic acid)	100-21-0	0.055	28.0
		Phthalic anhydride (measured as phthalic acid or terephthalic acid)	85-44-9	0.055	28.0

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
K094	Distillation bottoms from the production of phthalic anhydride from ortho-xylene	Phthalic anhydride (measured as phthalic acid or terephthalic acid)	100-21-0	0.055	28.0
		Phthalic anhydride (measured as phthalic acid or terephthalic acid)	85-44-9	0.055	28.0
K095	Distillation bottoms from the production of 1,1,1-trichloroethane	Hexachloroethane	67-72-1	0.055	30.0
		Pentachloroethane	76-01-7	NA	6.0
		1,1,1,2-Tetrachloroethane	630-20-6	0.057	6.0
		1,1,2,2-Tetrachloroethane	79-34-6	0.057	6.0
		Tetrachloroethylene	127-18-4	0.056	6.0
		1,1,2-Trichloroethane	79-00-5	0.054	6.0
K096	Heavy ends from the heavy end production of 1,1,1-trichloroethane	m-Dichlorobenzene	541-73-1	0.036	6.0
		Pentachloroethane	76-01-7	0.055	6.0
		1,1,1,2-Tetrachloroethane	630-20-6	0.057	6.0
		1,1,2,2-Tetrachloroethane	79-34-6	0.057	6.0
		Tetrachloroethylene	127-18-4	0.056	6.0
		1,2,4-Trichlorobenzene	120-82-1	0.055	19.0
		1,1,2-Trichloroethane	79-00-5	0.054	6.0

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as "mg/mg/L TCLP"; or technology code ⁴
		Trichloroethylene	79-01-6	0.054	6.0
K097	Vacuum stripper discharge from the chlordane chlorinator in the production of chlordane	Chlordane (alpha and gamma isomers)	57-74-9	0.0033	0.26
		Heptachlor	76-44-8	0.0012	0.066
		Heptachlor epoxide	1024-57-3	0.016	0.066
		Hexachloro cyclopentadiene	77-47-4	0.057	2.4
K098	Untreated process wastewater from the production of toxaphene	Toxaphene	8001-35-2	0.0095	2.6
K099	Untreated process wastewater from the production of 2,4-D	2,4- Dichloro phenoxyacetic acid	94-75-7	0.72	10.0
		HxCDDs (all Hexachlorodibenzo-p-dioxins)	NA	0.000063	0.001
		HxCDFs (all Hexachlorodibenzo furans)	NA	0.000063	0.001
		PeCDDs (all Pentachlorodibenzo-p-dioxins)	NA	0.000063	0.001

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
		PeCDFs (all Pentachlorodibenzo furans)	NA	0.000063	0.001
		TCDDs (all Tetrachlorodibenzo-p-dioxins)	NA	0.000063	0.001
		TCDFs (all Tetrachlorodibenzo furans)	NA	0.000063	0.001
K100	Waste leaching solution from acid leaching of emission control dust/sludge dust or sludge from secondary lead smelting	Cadmium	7440-43-9	0.69	0.11 mg/mg/L TCLP
		Chromium (total)	7440-47-3	2.77	0.6 mg/mg/L TCLP
		Lead	7439-92-1	0.69	0.75 mg/mg/L TCLP
K101	Distillation tar residues from the distillation of aniline-based compounds in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds	o-Nitroaniline	88-74-4	0.27	14.0
		Arsenic	7440-38-2	1.4	5.0 mg/mg/L TCLP
		Cadmium	7440-43-9	0.69	NA
		Lead	7439-92-1	0.69	NA
		Mercury	7439-97-6	0.15	NA

EPA hazardous waste number	Waste description and <u>treatment/regulatory treatment or regulatory subcategory</u> ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/lmg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/lmg/L TCLP”; or technology code ⁴
K102	Residues from the use of activated carbon for decolonization in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds	o-Nitrophenol	88-75-5	0.028	13.0
		Arsenic	7440-38-2	1.4	5.0 mg/lmg/L TCLP
		Cadmium	7440-43-9	0.69	NA
		Lead	7439-92-1	0.69	NA
		Mercury	7439-97-6	0.15	NA
K103	Process residues from aniline extraction from the production of aniline	Aniline	62-53-3	0.81	14.0
		Benzene	71-43-2	0.14	10.0
		2,4-Dinitrophenol	51-28-5	0.12	160.0
		Nitrobenzene	98-95-3	0.068	14.0
		Phenol	108-95-2	0.039	6.2
K014 K104	Combined wastewater streams generated from <u>nitrobenzene/anilinenitrobenzene or aniline</u> production	Aniline	62-53-3	0.81	14.0
		Benzene	71-43-2	0.14	10.0
		2,4-Dinitrophenol	51-28-5	0.12	160.0
		Nitrobenzene	98-95-3	0.068	14.0
		Phenol	108-95-2	0.039	6.2
		Cyanides (total) ⁷	57-12-5	1.2	590.0
K105	Separated aqueous stream from the reactor product washing step in the production of	Benzene	71-43-2	0.14	10.0
		Chlorobenzene	108-90-7	0.057	6.0
		2-Chlorophenol	95-57-8	0.044	5.7

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
	chlorobenzenes	o-Dichlorobenzene	95-50-1	0.088	6.0
		p-Dichlorobenzene	106-46-7	0.9	6.0
		Phenol	108-95-2	0.039	6.2
		2,4,5-Trichlorophenol	95-95-4	0.18	7.4
		2,4,6-Trichlorophenol	88-06-2	0.035	7.4
K106	K106 (wastewater treatment sludge from the mercury cell process in chlorine production) nonwastewaters that contain greater than or equal to 260.0 mg/kg total mercury	Mercury	7439-97-6	NA	RMERC
	K106 (wastewater treatment sludge from the mercury cell process in chlorine production) nonwastewaters that contain less than 260.0 mg/kg total mercury that are residues from RMERC	Mercury	7439-97-6	NA	0.02 mg/mg/L TCLP
	Other K106 nonwastewaters that contain less than 260.0 mg/kg total mercury that are not residues from RMERC	Mercury	7439-97-6	NA	0.025 mg/mg/L TCLP
	All K106 wastewaters	Mercury	7439-97-6	0.15	NA

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		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
K107	Column bottoms from product separation from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides	NA	NA	CMBST; or CHOXD fb CARBN; or BIODG fb CARBN	CMBST
K108	Condensed column overheads from production separation and condensed reactor vent gases from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides	NA	NA	CMBST; or CHOXD fb CARBN; or BIODG fb CARBN	CMBST
K109	Spent filter cartridges from product purification from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides	NA	NA	CMBST; or CHOXD fb CARBN; or BIODG fb CARBN	CMBST
K110	Condensed column overheads from intermediate separation from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides	NA	NA	CMBST; or CHOXD fb CARBN; or BIODG fb CARBN	CMBST
K111	Product washwaters from the production of dinitrotoluene via nitration of toluene	2,4-Dinitrotoluene	121-14-2	0.32	140.0
		2,6-Dinitrotoluene	606-20-2	0.55	28.0

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		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
K112	Reaction by-product water from the drying column in the production of toluenediamine via hydrogenation of dinitrotoluene	NA	NA	CMBST; or CHOXD fb CARBN; or BIOGD BIOGDG fb CARBN	CMBST
K113	Condensed liquid light ends from the purification of toluenediamine via hydrogenation of dinitrotoluene	NA	NA	CARBN; or CMBST	CMBST
K114	Vicinals from the purification of toluenediamine via hydrogenation of dinitrotoluene	NA	NA	CARBN; or CMBST	CMBST
K115	Heavy ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene	Nickel	7440-02-0	3.98	11.0 mg/mg/L TCLP
		NA	NA	CARBN; or CMBST	CMBST
K116	Organic condensate from the solvent recovery column in the production of toluene diisocyanate via phosgenation of toluenediamine	NA	NA	CARBN; or CMBST	CMBST

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		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
K117	Wastewater from the reactor vent gas scrubber in the production of ethylene dibromide via bromination of ethene	Methyl bromide (Bromomethane)	74-83-9	0.11	15.0
		Chloroform	67-66-3	0.046	6.0
		Ethylene dibromide (1,2-Dibromoethane)	106-93-4	0.028	15.0
K118	Spent absorbent solids from purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethene	Methyl bromide (Bromomethane)	74-83-9	0.11	15.0
		Chloroform	67-66-3	0.046	6.0
		Ethylene dibromide (1,2-Dibromoethane)	106-93-4	0.028	15.0
K123	Process wastewater (including supernates, filtrates, and washwaters) from the production of ethylene bisdithiocarbamic acid and its salts	NA	NA	CMBST; or CHOXD fb (BIOGD <u>BIOGDG</u> or CARBN)	CMBST
K124	Reactor vent scrubber water from the production of ethylenebisdithiocarbamic acid and its salts	NA	NA	CMBST; or CHOXD fb (BIOGD <u>BIOGDG</u> or CARBN)	CMBST

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		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
K125	Filtration, evaporation, and centrifugation solids from the production of ethylenebisdithiocarbamic acid and its salts	NA	NA	CMBST; or CHOXD fb (BIODG BIODG or CARBN)	CMBST
K126	Baghouse dust and floor sweepings in milling and packaging operations in the production of formulation of ethylenebisdithiocarbamic acid and its salts	NA	NA	CMBST; or CHOXD fb (BIODG BIODG or CARBN)	CMBST
K131	Wastewater from the reactor and spent sulfuring acid from the acid dryer from the production of methyl bromide	Methyl bromide (Bromomethane)	74-83-9	0.11	15.0
K132	Spent absorbent and wastewater separator solids from the production of methyl bromide	Methyl bromide (Bromomethane)	74-83-9	0.11	15.0
K136	Still bottoms from the purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethene	Methyl bromide (Bromomethane)	74-83-9	0.11	15.0
		Chloroform	67-66-3	0.046	6.0
		Ethylene dibromide (1,2-Dibromoethane)	106-93-4	0.028	15.0

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
K141	Process residues from the recovery of coal tar, including but not limited to, collecting sump residues from the production of coke by-products produced from coal. This listing does not include K087 (decanter tank tar sludge from coking operations).	Benzene	71-43-2	0.14	10.0
		Benz(a)anthracene	56-55-3	0.059	3.4
		Benzo(a)pyrene	50-2-8	0.061	3.4
		Benzo(b)fluoranthene (difficult to distinguish from benzo(k)fluoranthene)	205-99-2	0.11	6.8
		Benzo(k)fluoranthene (difficult to distinguish from benzo(b)fluoranthene)	207-08-9	0.11	6.8
		Chrysene	218-01-9	0.059	3.4
		Dibenz(a,h)anthracene	53-70-3	0.055	8.2
		Indeno(1,2,3-c,d)pyrene	193-39-5	0.0055	3.4
K142	Tar storage tank residues from the production of coke from coal tar or from the recovery of coke by-products produced from coal.	Benzene	71-43-2	0.14	10.0
		Benz(a)anthracene	56-55-3	0.059	3.4
		Benzo(a)pyrene	50-32-8	0.061	3.4
		Benzo(b)fluoranthene (difficult to distinguish from benzo(k)fluoranthene)	205-99-2	0.11	6.8

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
		Benzo(k)fluoranthene (difficult to distinguish from benzo(b)fluoranthene)	207-08-9	0.11	6.8
		Chrysene	218-01-9	0.059	3.4
		Dibenz(a,h)anthracene	53-70-3	0.055	8.2
		Indeno(1,2,3-c,d)pyrene	193-39-5	0.0055	3.4
K143	Process residues from the recovery of light oil, including but not limited to, those generated in stills, decanters, and wash oil recovery units from the recovery of coke by-products produced from coal	Benzene	71-43-2	0.14	10.0
		Benz(a)anthracene	56-55-3	0.059	3.4
		Benzo(a)pyrene	50-32-8	0.061	3.4
		Benzo(b)fluoranthene (difficult to distinguish from benzo(k)fluoranthene)	205-99-2	0.11	6.8
		Benzo(k)fluoranthene (difficult to distinguish from benzo(b)fluoranthene)	207-08-9	0.11	6.8
		Chrysene	218-01-9	0.059	3.4

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
K144	Wastewater sump residues from light oil refining, including but not limited to, intercepting or contamination sump sludges from the recovery of coke by-products produced from coal	Benzene	71-43-2	0.14	10.0
		Benz(a)anthracene	56-55-3	0.059	3.4
		Benzo(a)pyrene	50-32-8	0.061	3.4
		Benzo(b)fluoranthene (difficult to distinguish from benzo(k)fluoranthene)	205-99-2	0.11	6.8
		Benzo(k)fluoranthene (difficult to distinguish from benzo(b)fluoranthene)	207-08-9	0.11	6.8
		Chrysene	218-01-9	0.059	3.4
		Dibenz(a,h)anthracene	53-70-3	0.055	8.2
K145	Residues from naphthalene collection and recovery operations from the recovery of coke by-products produced from coal	Benzene	71-43-2	0.14	10.0
		Benz(a)anthracene	56-55-3	0.059	3.4
		Benzo(a)pyrene	50-32-8	0.061	3.4
		Chrysene	218-01-9	0.059	3.4
		Dibenz(a,h)anthracene	53-70-3	0.055	8.2
		Naphthalene	91-20-3	0.059	5.6

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		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
K147	Tar storage tank residues from coal tar refining	Benzene	71-43-2	0.14	10.0
		Benz(a)anthracene	56-55-3	0.059	3.4
		Benzo(a)pyrene	50-32-8	0.061	3.4
		Benzo(b)fluoranthene (difficult to distinguish from benzo(k)fluoranthene)	205-99-2	0.11	6.8
		Benzo(k)fluoranthene (difficult to distinguish from benzo(b)fluoranthene)	207-08-9	0.11	6.8
		Chrysene	218-01-9	0.059	3.4
		Dibenz(a,h)anthracene	53-70-3	0.055	8.2
		Indeno(1,2,3-c,d)pyrene	193-39-5	0.0055	3.4
K148	Residues from coal coal tar distillation, including but not limited to, still bottoms	Benz(a)anthracene	56-55-3	0.059	3.4
		Benzo(a)pyrene	50-32-8	0.061	3.4
		Benzo(b)fluoranthene (difficult to distinguish from benzo(k)fluoranthene)	205-99-2	0.11	6.8

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
		Benzo(k)fluoranthene (difficult to distinguish from benzo(b)fluoranthene)	207-08-9	0.11	6.8
		Chrysene	218-01-9	0.059	3.4
		Dibenz(a,h)anthracene	53-70-3	0.055	8.2
		Indeno(1,2,3-c,d)pyrene	193-39-5	0.0055	3.4
K149	Distillation bottoms from the production of alpha- (or methyl-) chlorinated toluenes, ring-chlorinated toluenes, benzoyl chlorides, and compounds with mixtures of these functional groups. (This waste does not include still bottoms from the distillation of benzyl chloride.)	Chlorobenzene	108-90-7	0.057	6.0
		Chloroform	67-66-3	0.046	6.0
		Chloromethane	74-87-3	0.19	30.0
		p-Dichlorobenzene	106-46-7	0.09	6.0
		Hexachlorobenzene	118-74-1	0.055	10.0
		Pentachlorobenzene	608-93-5	0.055	10.0
		1,2,4,5-Tetrachlorobenzene	95-94-3	0.055	14.0
Toluene	108-88-3	0.08	10.0		

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/lmg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as "mg/lmg/L TCLP"; or technology code ⁴
K150	Organic residuals, excluding spent carbon adsorbent, from the spent chlorine gas and hydrochloric acid recovery processes associated with the production of alpha- (or methyl-) chlorinated toluenes, ring-chlorinated toluenes, benzoyl chlorides, and compounds with mixtures of these functional groups.	Carbon tetrachloride	56-23-5	0.057	6.0
		Chloroform	67-66-3	0.046	6.0
		Chloromethane	74-87-3	0.19	30.0
		p-Dichlorobenzene	106-46-7	0.09	6.0
		Hexachlorobenzene	118-74-1	0.055	10.0
		Pentachlorobenzene	608-93-5	0.055	10.0
		1,2,4,5-Tetrachlorobenzene	95-94-3	0.055	14.0
		1,1,2,2-Tetrachloroethane	79-34-5	0.057	6.0
		Tetrachloroethylene	127-18-4	0.056	6.0
K151	Wastewater treatment sludges, excluding neutralization and biological sludges, generated during the treatment of wastewaters from the production of alpha- (or methyl-) chlorinated toluenes, ring-chlorinated toluenes, benzoyl chlorides, and	1,2,4-Trichlorobenzene	120-82-1	0.055	19.0
		Benzene	71-43-2	0.14	10.0
		Carbon tetrachloride	56-23-5	0.057	6.0
		Chloroform	67-66-3	0.046	6.0
		Hexachlorobenzene	118-74-1	0.055	10.0
		Pentachlorobenzene	608-93-5	0.055	10.0
		1,2,4,5-Tetrachlorobenzene	95-94-3	0.055	14.0

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/lmg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/lmg/L TCLP”; or technology code ⁴
	compounds with mixtures of these functional groups.	Tetrachloroethylene	127-18-4	0.056	6.0
		Toluene	108-88-3	0.08	10.0
K156	Organic waste (including heavy ends, still bottoms, light ends, spent solvents, filtrates, and decantates) from the production of carbamates and carbamoyl oximes. (This listing does not apply to wastes generated from the manufacture of 3-iodo-2-propynyl n-butylcarbamate.)	Acetonitrile	75-05-8	5.6	1.8
		Acetophenone	98-86-2	0.01	9.7
		Aniline	62-53-3	0.81	14.0
		Benomyl ¹⁰	17804-35-2	0.056; or CMBST, CHOXD, BIODG or <u>CARBN</u>	1.4; or CMBST
		Benzene	71-43-2	0.14	10.0
		Carbaryl ¹⁰	63-25-2	0.006; or CMBST, CHOXD, BIODG or <u>CARBN</u>	0.14; or CMBST
		Carbenzadim ¹⁰	10605-21-7	0.056; or CMBST, CHOXD, BIODG or <u>CARBN</u>	1.4; or CMBST
		Carbofuran ¹⁰	1563-66-2	0.006; or CMBST, CHOXD, BIODG or <u>CARBN</u>	0.14; or CMBST
		Carbosulfan ¹⁰	55285-14-8	0.028; or CMBST, CHOXD, BIODG or <u>CARBN</u>	1.4; or CMBST

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
		Chlorobenzene	108-90-7	0.057	6.0
		Chloroform	67-66-3	0.046	6.0
		o-Dichlorobenzene	95-50-1	0.088	6.0
		Methomyl ¹⁰	16752-77-5	0.028; or <u>CMBST, CHOXD, BIODG or CARBN</u>	0.14; or <u>CMBST</u>
		Methylene chloride	75-09-2	0.089	30.0
		Methyl ethyl ketone	78-93-3	0.28	36.0
		Naphthalene	91-20-3	0.059	5.6
		Phenol	108-95-2	0.039	6.2
		Pyridine	110-86-1	0.014	16.0
		Toluene	108-88-3	0.08	10.0
		Triethylamine	121-44-8	0.081; or <u>CMBST, CHOXD, BIODG or CARBN</u>	1.5; or <u>CMBST</u>
K157	Wastewaters (including scrubber waters, condenser waters, washwaters, and separation waters) from the production of carbamates and carbamoyl oximes. (This listing does not	Carbon tetrachloride	56-23-5	0.057	6.0
		Chloroform	67-66-3	0.046	6.0
		Chloromethane	74-87-3	0.19	30.0
		Methomyl ¹⁰	16752-77-5	0.028; or <u>CMBST, CHOXD, BIODG or CARBN</u>	0.14; or <u>CMBST</u>

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
	apply to waste generated from the manufacture of 3-iodo-2-propyl n-butylcarbamate	Methylene chloride	75-09-2	0.089	30.0
		Methyl ethyl ketone	78-93-3	0.28	36.0
		Pyridine	110-86-1	0.014	16.0
		Triethylamine	121-44-8	0.081 <u>or CMBST, CHOXD, BIODG or CARBN</u>	1.5; <u>or CMBST</u>
K158	Baghouse dusts and filter/separation filter or separation solids from the production of carbamates and carbamoyl oximes. (This listing does not apply to wastes generated from the manufacture of 3-iodo-2-propynyl n-butylcarbamate	Benomyl	17804-35-2	0.056	1.4
		Benzene	71-43-2	0.14	10.0
		Carbenzadim ¹⁰	10605-21-7	0.056; <u>or CMBST, CHOXD, BIODG or CARBN</u>	1.4; <u>or CMBST</u>
		Carbofuran ¹⁰	1563-66-2	0.006; <u>or CMBST, CHOXD, BIODG or CARBN</u>	0.14; <u>or CMBST</u>
		Carbosulfan ¹⁰	55285-14-8	0.028; <u>or CMBST, CHOXD, BIODG or CARBN</u>	1.4; <u>or CMBST</u>
		Chloroform	67-66-3	0.046	6.0
		Methylene chloride	75-09-2	0.089	30.0
		Phenol	108-95-2	0.039	6.2

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
K159	Organics from the treatment of thiocarbamates ¹⁰	Benzene	71-43-2	0.14	10.0
		Butylate ¹⁰	2008-41-5	0.042; or <u>CMBST, CHOXD, BIODG or CARBN</u>	1.4; or <u>CMBST</u>
		EPTC (Eptam) ¹⁰	759-94-4	0.042; or <u>CMBST, CHOXD, BIODG or CARBN</u>	1.4; or <u>CMBST</u>
		Molinate ¹⁰	2212-67-1	0.042; or <u>CMBST, CHOXD, BIODG or CARBN</u>	1.4; or <u>CMBST</u>
		Pebulate ¹⁰	1114-71-2	0.042; or <u>CMBST, CHOXD, BIODG or CARBN</u>	1.4; or <u>CMBST</u>
		Vernolate ¹⁰	1929-77-7	0.042; or <u>CMBST, CHOXD, BIODG or CARBN</u>	1.4; or <u>CMBST</u>
K161	Purification solids (including filtration, evaporation, and centrifugation solids), baghouse dust, and floor sweepings from the production of dithiocarbamate acids and their	Antimony	7440-36-0	1.9	1.15 ¹¹ mg/L TCLP
		Arsenic	7440-38-2	1.4	5.0 ¹¹ mg/L TCLP
		Carbon disulfide	75-15-0	3.8	4.8 ¹¹ mg/L TCLP
		Dithiocarbamates (total) ¹⁰	137-30-4 NA	0.028; or <u>CMBST, CHOXD, BIODG or CARBN</u>	28.0; or <u>CMBST</u>

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		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
	salts	Lead	7439-92-1	0.69	0.75 ¹¹ mg/L TCLP
		Nickel	7440-02-0	3.98	11.0 ¹¹ mg/L TCLP
		Selenium	7782-49-2	0.82	5.7 ¹¹ mg/L TCLP
K169	Crude oil tank sediment from petroleum refining operations	Benz(a)anthracene	56-55-3	0.059	3.4
		Benzene	71-43-2	0.14	10.0
		Benzo(g,h,i)perylene	191-24-2	0.0055	1.8
		Chrysene	218-01-9	0.059	3.4
		Ethyl benzene	100-41-4	0.057	10.0
		Fluorene	86-73-7	0.059	3.4
		Naphthalene	91-20-3	0.059	5.6
		Phenanthrene	85-01-8	0.059	5.6
		Pyrene	129-00-0	0.067	8.2
		Toluene (Methyl benzene)	108-88-3	0.08	10.0
Xylene(s) Xylenes (total)	1330-20-7	0.32	30.0		
K170	Clarified slurry oil sediment from petroleum refining operations	Benz(a)anthracene	56-55-3	0.059	3.4
		Benzene	71-43-2	0.14	10.0
		Benzo(g,h,i)perylene	191-24-2	0.0055	1.8
		Chrysene	218-01-9	0.059	3.4
		Dibenz(a,h)anthracene	53-70-3	0.055	8.2

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		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
		Ethyl benzene	100-41-4	0.057	10.0
		Fluorene	86-73-7	0.059	3.4
		Indeno(1,2,3-c,d)pyrene	193-39-5	0.0055	3.4
		Naphthalene	91-20-3	0.059	5.6
		Phenanthrene	85-01-8	0.059	5.6
		Pyrene	129-00-0	0.067	8.2
		Toluene (Methyl benzene)	108-88-3	0.08	10.0
		Xylene(s) Xylenes (total)	1330-20-7	0.32	30.0
K171	Spent hydrotreating catalyst from petroleum refining operations, including guard beds used to desulfurize feeds to other catalytic reactors. (This beds used to desulfurize feeds to other catalytic reactors. (This listing does not include inert support media.)	Benz(a)anthracene	56-55-3	0.059	3.4
		Benzene	71-43-2	0.14	10.0
		Chrysene	218-01-9	0.059	3.4
		Ethyl benzene	100-41-4	0.057	10.0
		Naphthalene	91-20-3	0.059	5.6
		Phenanthrene	85-01-8	0.059	5.6
		Pyrene	129-00-0	0.067	8.2
		Toluene (Methyl benzene)	108-88-3	0.08	10.0
		Xylene(s) Xylenes (total)	1330-20-7	0.32	30.0
		Arsenic	7440-38-2	1.4	5.0 mg/mg/L TCLP
Nickel	7440-02-0	3.98	11.0 mg/mg/L TCLP		

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		Common name	CAS ² number	Concentration ³ in mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/L TCLP”; or technology code ⁴
		Vanadium	7440-62-2	4.3	1.6 mg/L TCLP
		Reactive sulfides	NA	DEACT	DEACT
K172	Spent hydrorefining catalyst from petroleum refining operations, including guard beds used to desulfurize feeds to other catalytic reactors. (This listing does not include inert support media.)	Benzene	71-43-2	0.14	10.0
		Ethyl benzene	100-41-4	0.057	10.0
		Toluene (Methyl benzene)	108-88-3	0.08	10.0
		Xylene(s) Xylenes (total)	1330-20-7	0.32	30.0
		Antimony	7440-36-0	1.9	1.15 mg/L TCLP
		Arsenic	7440-38-2	1.4	5.0 mg/L TCLP
		Nickel	7440-02-0	3.98	11.0 mg/L TCLP
		Vanadium	7440-62-2	4.3	1.6 mg/L TCLP
		Reactive sulfides	NA	DEACT	DEACT
K174	Wastewater treatment sludges from the production of ethylene dichloride or vinyl chloride monomer.	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (1,2,3,4,6,7,8-HpCCD)	35822-46-9	0.000035 or CMBST ¹¹	0.0025 or CMBST ¹¹
		1,2,3,4,6,7,8-Heptachlorodibenzofuran (1,2,3,4,6,7,8-HpCDF)	67562-39-4	0.000035 or CMBST ¹¹	0.0025 or CMBST ¹¹

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		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
		1,2,3,4,7,8,9-Heptachlorodibenzofuran (1,2,3,4,7,8,9-HpCDF)	55673-89-7	0.000035 or CMBST ¹¹	0.0025 or CMBST ¹¹
		HxCDDs (all Hexachlorodibenzo-p-dioxins)	34465-46-8	0.000063 or CMBST ¹¹	0.001 or MBST ¹¹
		HxCDFs (all Hexachlorodibenzo furans)	55684-94-1	0.000063 or CMBST ¹¹	0.001 or CMBST ¹¹
		1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	0.000063 or CMBST ¹¹	0.0025 or CMBST ¹¹
		1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	39001-02-0	0.000063 or CMBST ¹¹	0.005 or CMBST ¹¹
		PeCDDs (all Pentachlorodibenzo-p-dioxins)	36088-22-9	0.000063 or CMBST ¹¹	0.001 or CMBST ¹¹
		PeCDFs (all Pentachlorodibenzo furans)	30402-15-4	0.000035 or CMBST ¹¹	0.001 or CMBST ¹¹

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		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
		TCDDs (all Tetrachlorodibenzo-p-dioxins)	41903-57-5	0.000063 or CMBST ¹¹	0.001 or CMBST ¹¹
		TCDFs (all Tetrachlorodibenzo furans)	55722-27-5	0.000063 or CMBST ¹¹	0.001 or CMBST ¹¹
		Arsenic	7440-38-2	1.4	5.0 mg/mg/L TCLP
K175	Wastewater treatment sludge from the production of vinyl chloride monomer using mercuric chloride catalyst in an acetylene-based process.	Mercury ¹²	7438-97-6	NA	0.025 mg/mg/L TCLP
		pH ¹²	--	NA	pH less than or equal to 6.0
	All K175 wastewaters	Mercury	7438-97-6	0.15	NA
K176	Baghouse filters from the production of antimony oxide, including filters from the production of intermediates (e.g., antimony metal or crude antimony oxide).	Antimony	7440-36-0	1.9	1.15 mg/mg/L TCLP
		Arsenic	7440-38-2	1.4	5.0 mg/mg/L TCLP
		Cadmium	7440-43-9	0.69	0.11 mg/mg/L TCLP
		Lead	7439-92-1	0.69	0.75 mg/mg/L TCLP
		Mercury	7438-97-6	0.15	0.025 mg/mg/L TCLP

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		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
K177	Slag from the production of antimony oxide that is speculatively accumulated or disposed, including slag from the production of intermediates (e.g., antimony metal or crude antimony oxide).	Antimony	7440-36-0	1.9	1.15 mg/mg/L TCLP
		Arsenic	7440-38-2	1.4	5.0 mg/mg/L TCLP
		Lead	7439-92-1	0.069	0.75 mg/mg/L TCLP
K178	Residues from manufacturing and manufacturing-site storage of ferric chloride from acids formed during the production of titanium dioxide using the chloride-ilmenite process.	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (1,2,3,4,6,7,8-HpCCD)	35822-46-9	0.000035 or CMBST ¹¹	0.0025 or CMBST ¹¹
		1,2,3,4,6,7,8-Heptachlorodibenzofuran (1,2,3,4,6,7,8-HpCDF)	67562-39-4	0.000035 or CMBST ¹¹	0.0025 or CMBST ¹¹
		1,2,3,4,7,8,9-Heptachlorodibenzo furan (1,2,3,4,7,8,9-HpCDF)	55673-89-7	0.000035 or CMBST ¹¹	0.0025 or CMBST ¹¹
		HxCDDs (all Hexachlorodibenzo-p-dioxins)	34465-46-8	0.000063 or CMBST ¹¹	0.001 or CMBST ¹¹

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		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
		HxCDFs (all Hexachlorodibenzofurans)	55684-94-1	0.000063 or CMBST ¹¹	0.001 or CMBST ¹¹
		1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	0.000063 or CMBST ¹¹	0.005 or CMBST ¹¹
		1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	39001-02-0	0.000063 or CMBST ¹¹	0.005 or CMBST ¹¹
		PeCDDs (all Pentachlorodibenzo-p-dioxins)	36088-22-9	0.000063 or CMBST ¹¹	0.001 or CMBST ¹¹
		PeCDFs (all Pentachlorodibenzofurans)	30402-15-4	0.000035 or CMBST ¹¹	0.001 or CMBST ¹¹
		TCDDs (all Tetrachlorodibenzo-p-dioxins)	41903-57-5	0.000063 or CMBST ¹¹	0.001 or CMBST ¹¹
		TCDDs TCDFs (all Tetrachlorodibenzofurans)	55722-27-5	0.000063 or CMBST ¹¹	0.001 or CMBST ¹¹
		Thallium	7440-28-0	1.4	0.20 mg/mg/L TCLP

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		Common name	CAS ² number	Concentration ³ in mg/lmg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/lmg/L TCLP”; or technology code ⁴
K181	Nonwastewaters from the production of dyes and or pigments (including nonwastewaters comingled at the point of generation with nonwastewaters from other processes) that, at the point of generation, contain mass loadings of any of the constituents identified in paragraph (C) of rule 3745-51-32 of the Administrative Code that are equal to or greater than the corresponding levels in paragraph (C) of rule 3745-51-32 of the Administrative Code as determined on a calendar year basis.	Aniline	62-53-3	0.81	14.0
		o-Anisidine (2-Methoxyaniline)	90-04-0	0.010	0.66
		4-Chloroaniline	106-47-8	0.46	16.0
		p-Cresidine	120-71-8	0.010	0.66
		2,4-Dimethylaniline (2,4-Xylidine)	95-68-1	0.010	0.66
		1,2-Phenylenediamine	95-54-5	CMBST; or CHOXD fb (BIODG or CARBN); or BIODG fb CARBN	CMBST; or CHOXD fb (BIODG or CARBN); or BIODG fb CARBN
		1,3-Phenylenediamine	108-45-2	0.010	0.66
P001	Warfarin, and salts, when present at concentrations greater than 0.3 per cent	Warfarin	81-81-2	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST

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		Common name	CAS ² number	Concentration ³ in mg/lmg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/lmg/L TCLP”; or technology code ⁴
P002	1-Acetyl-2-thiourea	1-Acetyl-2-thiourea	591-08-2	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P003	Acrolein	Acrolein	107-02-8	0.29	CMBST
P004	Aldrin	Aldrin	309-00-2	0.021	0.066
P005	Allyl alcohol	Allyl alcohol	107-18-6	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P006	Aluminum phosphide	Aluminum phosphide	20859-73-8	CHOXD; CHRED; or CMBST	CHOXD; CHRED; or CMBST
P007	5-Aminomethyl 3-isoxazolol	5-Aminomethyl 3-isoxazolol	2763-96-4	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P008	4-Aminopyridine	4-Aminopyridine	504-24-5	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P009	Ammonium picrate	Ammonium picrate	131-74-8	CHOXD; CHRED; CARBN; BIODG BIODG; or CMBST	CHOXD; CHRED; or CMBST
P010	Arsenic acid	Arsenic	7440-38-2	1.4	5.0 mg/lmg/L TCLP
P011	Arsenic pentoxide	Arsenic	7440-38-2	1.4	5.0 mg/lmg/L TCLP

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
P012	Arsenic trioxide	Arsenic	7440-38-2	1.4	5.0 mg/mg/L TCLP
P013	Barium cyanide	Barium	7440-39-3	NA	21.0 mg/mg/L TCLP
		Cyanides (total) ⁷	57-12-5	1.2	590.0
		Cyanide (amenable) ⁷	57-12-5	0.86	30.0
P014	Thiophenol (Benzene thiol)	Thiophenol (Benzene thiol)	108-98-5	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P015	Beryllium dust	Beryllium	7440-41-7	RMETL; or RTHRM	RMETL; or RTHRM
P016	Dichloromethyl ether (Bis(chloromethyl)ether)	Dichloromethyl ether	542-88-1	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P017	Bromoacetone	Bromoacetone	598-31-2	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P018	Brucine	Brucine	357-57-3	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P020	2-sec-Butyl-4,6-dinitrophenol (Dinoseb)	2-sec-Butyl-4,6-dinitrophenol (Dinoseb)	88-85-7	0.66	2.5
P021	Calcium cyanide	Cyanides (total) ⁷	57-12-5	1.2	590.0
		Cyanide (amenable) ⁷	57-12-5	0.86	30.0

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/L TCLP”; or technology code ⁴
P022	Carbon disulfide	Carbon disulfide	75-15-0	3.8	CMBST
		Carbon disulfide; alternate ⁶ standard for nonwastewaters only	75-15-0	NA	4.8 mg/L TCLP
P023	Chloroacetaldehyde	Chloroacetaldehyde	107-20-0	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P024	p-Chloroaniline	p-Chloroaniline	106-47-8	0.46	16.0
P026	1-(o-Chlorophenyl)thiourea	1-(o-Chlorophenyl) thiourea	5344-82-1	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P027	3-Chloropropionitrile	3-Chloropropionitrile	542-76-7	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P028	Benzyl chloride	Benzyl chloride	100-44-7	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P029	Copper cyanide	Cyanides (total) ⁷	57-12-5	1.2	590.0
		Cyanides (amenable) ⁷	57-12-5	0.86	30.0
P030	Cyanides (soluble salts and complexes)	Cyanides (total) ⁷	57-12-5	1.2	590.0
		Cyanides (amenable) ⁷	57-12-5	0.86	30.0

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as "mg/L TCLP"; or technology code ⁴
P031	Cyanogen	Cyanogen	460-19-5	CHOXD; WETOX; or CMBST	CHOXD; WETOX; or CMBST
P033	Cyanogen chloride	Cyanogen chloride	506-77-4	CHOXD; WETOX; or CMBST	CHOXD; WETOX; or CMBST
P034	2-Cyclohexyl-4,6-dinitrophenol	2-Cyclohexyl-4,6-dinitrophenol	131-89-5	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P036	Dichlorophenylarsine	Arsenic	7440-38-2	1.4	5.0 mg/L TCLP
P037	Dieldrin	Dieldrin	60-57-1	0.017	0.13
P038	Diethylarsine	Arsenic	7440-38-2	1.4	5.0 mg/L TCLP
P039	Disulfoton	Disulfoton	298-04-4	0.017	6.2
P040	0,0-Diethyl O-pyrazinyl phosphorothioate	0,0-Diethyl O-pyrazinyl phosphorothioate	297-97-2	CARBN; or CMBST	CMBST
P041	Diethyl-p-nitrophenyl phosphate	Diethyl-p-nitrophenyl phosphate	311-45-5	CARBN; or CMBST	CMBST
P042	Epinephrine	Epinephrine	51-43-4	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P043	Diisopropylfluorophosphate (DFP)	Diisopropylfluoro phosphate (DFP)	55-91-4	CARBN; or CMBST	CMBST
P044	Dimethoate	Dimethoate	60-51-5	CARBN; or CMBST	CMBST

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
P045	Thiofanox	Thiofanox	39196-18-4	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P046	alpha, alpha-Dimethylphenethylamine	alpha, alpha-Dimethylphenethylamine	122-09-8	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P047	4,6-Dinitro-o-cresol	4,6-Dinitro-o-cresol	543-52-1	0.28	160.0
	4,6-Dinitro-o-cresol salts	NA	NA	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P048	2,4-Dinitrophenol	2,4-Dinitrophenol	51-28-5	0.12	160.0
P049	Dithiobiuret	Dithiobiuret	541-53-7	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P050	Endosulfan	Endosulfan I	939-98-8	0.023	0.066
		Endosulfan II	33213-6-5	0.029	0.13
		Endosulfan sulfate	1031-07-8	0.029	0.13
P051	Endrin	Endrin	72-20-8	0.0028	0.13
		Endrin aldehyde	7421-93-4	0.025	0.13

EPA hazardous waste number	Waste description and <u>treatment/regulatory treatment or regulatory subcategory</u> ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
P054	Aziridine	Aziridine	151-56-4	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P056	Fluorine	Fluoride (measured in wastewaters only)	16964-48-8	35.0	ADGAS fb NEUTR
P057	Fluoroacetamide	Fluoroacetamide	640-19-7	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P058	Fluoroacetic acid, sodium salt	Fluoroacetic acid, sodium salt	62-74-8	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P059	Heptachlor	Heptachlor	76-44-8	0.0012	0.066
		Heptachlor epoxide	1024-57-3	0.016	0.066
P060	Isodrin	Isodrin	465-73-6	0.021	0.066
P062	Hexaethyl tetraphosphate	Hexaethyltetraphosphate	757-58-4	CARBN; or CMBST	CMBST
P063	Hydrogen cyanide	Cyanides (total) ⁷	57-12-5	1.2	590.0
		Cyanide (amenable) ⁷	57-12-5	0.86	30.0
P064	Isocyanic acid, ethyl ester	Isocyanic acid, ethyl ester	624-83-0	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
P065	Mercury fulminate nonwastewaters, regardless of their total mercury content, that are not incinerator residues or are not residues from RMERC	Mercury	7439-97-6	NA	IMERC
	Mercury fulminate nonwastewaters that are either incinerator residues or are residues from RMERC, equal to 260.0 mg/kg total mercury	Mercury	7439-97-6	NA	RMERC
	Mercury fulminate nonwastewaters that are residues from RMERC and contain less than 260.0 mg/kg total mercury	Mercury	7439-97-6	NA	0.2 mg/mg/L TCLP
	Mercury fulminate nonwastewaters that are incinerator residues and contain less than 260.0 mg/kg total mercury	Mercury	7439-97-6	NA	0.25 mg/mg/L TCLP
	All mercury fulminate wastewaters	Mercury	7439-97-6	0.15	NA

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
P066	Methomyl	Methomyl	16752-77-5	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P067	2-Methyl-aziridine	2-Methyl-aziridine	75-55-8	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P068	Methyl hydrazine	Methyl hydrazine	60-34-4	CHODX; CHRED; CARBN; BIODG BIODG; or CMBST	CHODX; CHRED; or CMBST
P069	2-Methylactonitrile	2-Methylactonitrile	75-86-5	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P070	Aldicarb	Aldicarb	116-06-3	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P071	Methyl parathion	Methyl parathion	298-00-0	0.014	4.6
P072	1-Naphthyl-2-thiourea	1-Naphthyl-2-thiourea	86-88-4	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P073	Nickel carbonyl	Nickel	7440-02-0	3.98	11.0 mg/mg/L TCLP

EPA hazardous waste number	Waste description and <u>treatment/regulatory treatment or regulatory subcategory</u> ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/L TCLP”; or technology code ⁴
P074	Nickel cyanide	Cyanides (total) ⁷	57-12-5	1.2	590.0
		Cyanide (amenable) ⁷	57-12-5	0.86	30.0
		Nickel	7440-02-0	3.98	11.0 mg/L TCLP
P075	Nicotine and salts	Nicotine and salts	54-11-5	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P076	Nitric oxide	Nitric oxide	10102-43-9	ADGAS	ADGAS
P077	p-Nitroaniline	p-Nitroaniline	100-01-6	0.028	28.0
P078	Nitrogen dioxide	Nitrogen dioxide	10102-44-0	ADGAS	ADGAS
P081	Nitroglycerin	Nitroglycerin	55-63-0	CHODX; CHRED; CARBN; BIODG BIODG; or CMBST	CHODX; CHRED; or CMBST
P082	N-Nitrosodimethylamine	N-Nitrosodimethylamine	62-75-9	0.4	2.3
P084	N-Nitrosomethylvinylamine	N-Nitrosomethylvinylamine	4549-40-0	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P085	Octamethylpyrophosphoramidate	Octamethylpyrophosphoramidate	152-16-9	CARBN; or CMBST	CMBST
P087	Osmium tetroxide	Osmium tetroxide	20816-12-0	RMETL; or RTHRM	RMETL; or RTHRM

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
P088	Endothall	Endothall	145-73-3	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P089	Parathion	Parathion	56-38-2	0.014	4.6
P092	Phenyl mercuric acetate nonwastewaters, regardless of their total mercury content, that are not incinerator residues or are not residues from RMERC	Mercury	7439-97-6	NA	IMERC; or RMERC
	Phenyl mercuric acetate nonwastewaters that are either incinerator residues or are residues from RMERC, and still contain greater than or equal to 260.0 mg/kg total mercury	Mercury	7439-97-6	NA	RMERC
	Phenyl mercuric acetate nonwastewaters that are residues from RMERC and contain less than 260.0 mg/kg total mercury	Mercury	7439-97-6	NA	0.2 mg/mg/L TCLP

EPA hazardous waste number	Waste description and <u>treatment/regulatory treatment or regulatory subcategory</u> ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
	Phenyl mercuric acetate nonwastewaters that are incinerator residues and contain less than 260.0 mg/kg total mercury	Mercury	7439-97-6	NA	0.25 mg/mg/L TCLP
	All phenyl mercuric acetate wastewaters	Mercury	7439-97-6	0.15	NA
P093	Phenylthiourea	Phenylthiourea	103-85-5	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P094	Phorate	Phorate	298-02-2	0.021	4.6
P095	Phosgene	Phosgene	75-44-5	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P096	Phosphine	Phosphine	7803-51-2	CHODX; CHRED; CARBN; BIODG BIODG; or CMBST	CHODX; CHRED; or CMBST
P097	Famphur	Famphur	52-85-7	0.017	15.0
P098	Potassium cyanide	Cyanides (total) ⁷	57-12-5	1.2	590.0
		Cyanides (amenable) ⁷	57-12-5	0.86	30.0

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/L TCLP”; or technology code ⁴
P099	Potassium silver cyanide	Cyanides (total) ⁷	57-12-5	1.2	590.0
		Cyanides (amenable) ⁷	57-12-5	0.86	30.0
		Silver	7440-22-4	0.43	0.14 mg/L TCLP
P101	Ethyl cyanide (Propanenitrile)	Ethyl cyanide (Propanenitrile)	107-12-0	0.24	360.0
P102	Propargyl alcohol	Propargyl alcohol	107-19-7	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P103	Selenourea	Selenium	7782-49-2	0.82	5.7 mg/L TCLP
P104	Silver cyanide	Cyanides (total) ⁷	57-12-5	1.2	590.0
		Cyanides (amenable) ⁷	57-12-5	0.86	30.0
		Silver	7440-22-4	0.43	0.14 mg/L TCLP
P105	Sodium Azide	Sodium Azide	26628-22-8	CHODX; CHRED; CARBN; BIODG BIODG; or CMBST	CHODX; CHRED; or CMBST
P106	Sodium cyanide	Cyanides (total) ⁷	57-12-5	1.2	590.0
		Cyanides (amenable) ⁷	57-12-5	0.86	30.0
P108	Strychnine and salts	Strychnine and salts	57-24-9	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/lmg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/lmg/L TCLP”; or technology code ⁴
P109	Tetraethyldithiopyrophosphate	Tetraethyldithio pyrophosphate	3689-24-5	CARBN; or CMBST	CMBST
P110	Tetraethyl lead	Lead	7439-92-1	0.69	0.75 mg/lmg/L TCLP
P111	Tetraethylpyrophosphate	Tetraethylpyrophosphate	107-49-3	CARBN; or CMBST	CMBST
P112	Tetranitromethane	Tetranitromethane	509-14-8	CHODX; CHRED; CARBN; BIOGD B IODG; or CMBST	CHODX; CHRED; or CMBST
P113	Thallic oxide	Thallium (measured in wastewaters only)	7440-28-0	1.4	RTHRM; or STABL
P114	Thallium selenite	Selenium	7782-49-2	0.82	5.7 mg/lmg/L TCLP
P115	Thallium (I) sulfate	Thallium (measured in wastewaters only)	7440-28-0	1.4	RTHRM; or STABL
P116	Thiosemicarbazide	Thiosemicarbazide	79-19-6	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P118	Trichloromethanethiol	Trichloromethanethiol	75-70-7	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P119	Ammonium vandate	Vanadium (measured in wastewaters only)	7440-62-2	4.3	STABL

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
P120	Vanadium pentoxide	Vanadium (measured in wastewaters only)	7440-62-2	4.3	STABL
P121	Zinc cyanide	Cyanides (total) ⁷	57-12-5	1.2	590.0
		Cyanides (amenable) ⁷	57-12-5	0.86	30.0
P122	Zinc phosphide Zn ₃ P ₂ , when present at concentrations greater than 10.0 per cent	Zinc phosphide	1314-84-7	CHODX; CHRED; or CMBST	CHODX; CHRED; or CMBST
P123	Toxaphene	Toxaphene	8001-35-2	0.0095	2.6
P127	Carbofuran ¹⁰	Carbofuran	1563-66-2	0.006; or CMBST, <u>CHOXD, BIODG or CARBN</u>	0.14; or CMBST
P128	Mexacarbate ¹⁰	Mexacarbate	315-18-4	0.056; or CMBST, <u>CHOXD, BIODG or CARBN</u>	1.4; or CMBST
P185	Tirpate ¹⁰	Tirpate	26419-73-8	0.056; or CMBST, <u>CHOXD, BIODG or CARBN</u>	0.28; or CMBST
P188	Physostigmine salicylate ¹⁰	Physostigmine salicylate	57-64-7	0.056; or CMBST, <u>CHOXD, BIODG or CARBN</u>	1.4; or CMBST

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		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
P189	Carbosulfan ¹⁰	Carbosulfan	55285-14-8	0.028; or <u>CMBST, CHOXD, BIODG or CARBN</u>	1.4; or <u>CMBST</u>
P190	Metolcarb ¹⁰	Metolcarb	1129-41-5	0.056; or <u>CMBST, CHOXD, BIODG or CARBN</u>	1.4; or <u>CMBST</u>
P191	Dimetilan ¹⁰	Dimetilan	644-64-4	0.056; or <u>CMBST, CHOXD, BIODG or CARBN</u>	1.4; or <u>CMBST</u>
P192	Isolan ¹⁰	Isolan	119-38-0	0.056; or <u>CMBST, CHOXD, BIODG or CARBN</u>	1.4; or <u>CMBST</u>
P194	Oxamyl ¹⁰	Oxamyl	23135-22-0	0.056; or <u>CMBST, CHOXD, BIODG or CARBN</u>	0.28; or <u>CMBST</u>
P196	Manganese dimethyldithiocarbamate ¹⁰	Dithiocarbamates (total)	NA	0.028; or <u>CMBST, CHOXD, BIODG or CARBN</u>	28.0; or <u>CMBST</u>
P197	Formparanate ¹⁰	Formparanate	17702-57-7	0.056; or <u>CMBST, CHOXD, BIODG or CARBN</u>	1.4; or <u>CMBST</u>

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		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
P198	Formetanate hydrochloride ¹⁰	Formetanate hydrochloride	23422-53-9	0.056; or <u>CMBST, CHOXD, BIODG or CARBN</u>	1.4; or <u>CMBST</u>
P199	Methiocarb ¹⁰	Methiocarb	2032-65-7	0.056; or <u>CMBST, CHOXD, BIODG or CARBN</u>	1.4; or <u>CMBST</u>
P201	Promecarb ¹⁰	Promecarb	2631-37-0	0.056; or <u>CMBST, CHOXD, BIODG or CARBN</u>	1.4; or <u>CMBST</u>
P202	m-Cumenyl methylcarbamate ¹⁰	m-Cumenyl methylcarbamate	64-00-6	0.056; or <u>CMBST, CHOXD, BIODG or CARBN</u>	1.4; or <u>CMBST</u>
P203	Aldicarb sulfone ¹⁰	Aldicarb sulfone	1646-88-4	0.056; or <u>CMBST, CHOXD, BIODG or CARBN</u>	0.28; or <u>CMBST</u>
P204	Physostigmine ¹⁰	Physostigmine	57-47-6	0.056; or <u>CMBST, CHOXD, BIODG or CARBN</u>	1.4; or <u>CMBST</u>
P205	Ziram ¹⁰	Dithiocarbamates (total)	NA	0.028; or <u>CMBST, CHOXD, BIODG or CARBN</u>	28.0; or <u>CMBST</u>

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
U001	Acetaldehyde	Acetaldehyde		(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U002	Acetone	Acetone		0.28	160.0
U003	Acetonitrile	Acetonitrile	75-05-8	5.6	CMBST
		Acetonitrile; alternate ⁶ standard for nonwastewaters only	75-05-8	NA	38.0
U004	Acetophenone	Acetophenone	98-86-2	0.01	9.7
U005	2-Acetylaminofluorene	2-Acetylaminofluorene	53-96-3	0.059	140.0
U006	Acetyl chloride	Acetyl chloride	75-36-5	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U007	Acrylamide	Acrylamide	79-06-1	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U008	Acrylic acid	Acrylic acid	79-10-7	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U009	Acrylonitrile	Acrylonitrile	107-13-1	0.24	84.0

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
U010	Mitomycin C	Mitomycin C	50-07-7	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U011	Amitrole	Amitrole	61-82-5	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U012	Aniline	Aniline	62-53-3	0.81	14.0
U014	Auramine	Auramine	492-80-8	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U015	Azaserine	Azaserine	115-02-6	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U016	Benz(c)acridine	Benz(c)acridine	225-51-4	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U017	Benzal chloride	Benzal chloride	98-87-3	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U018	Benz(a)anthracene	Benz(a)anthracene	56-55-3	0.059	3.4
U019	Benzene	Benzene	71-43-2	0.14	10.0

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
U020	Benzenesulfonyl chloride	Benzenesulfonyl chloride	98-09-9	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U021	Benzidine	Benzidine	92-87-5	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U022	Benzo(a)pyrene	Benzo(a)pyrene	50-32-8	0.061	3.4
U023	Benzotrichloride	Benzotrichloride	98-07-7	CHOXD; CHRED; CARBN; BIODG BIODG; or CMBST	CHOXD; CHRED; or CMBST
U024	bis(2-Chloroethoxy)methane	bis(2-Chloroethoxy)methane	111-91-1	0.036	7.2
U025	bis(2-Chloroethyl)ether	bis(2-Chloroethyl)ether	111-44-4	0.033	6.0
U026	Chloraphazine	Chloraphazine	494-03-1	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U027	bis(2-Chloroisopropyl)ether	bis(2-Chloroisopropyl)ether	39638-32-9	0.055	7.2
U028	bis(2-Ethylhexyl)phthalate	bis(2-Ethylhexyl)phthalate	117-81-7	0.28	28.0

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/lmg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/lmg/L TCLP”; or technology code ⁴
U029	Methyl bromide (Bromomethane)	Methyl bromide (Bromomethane)	74-83-9	0.11	15.0
U2030	4-Bromophenyl phenyl ether	4-Bromophenyl phenyl ether	101-55-3	0.055	15.0
U031	n-Butyl alcohol	n-Butyl alcohol	71-36-3	5.6	2.6
U032	Calcium chromate	Chromium (total)	7440-47-3	2.77	0.6 mg/lmg/L TCLP
U033	Carbon oxyfluoride	Carbon oxyfluoride	353-50-4	(WETOX OR CHOXD) fb CARBN; or CMBST	CMBST
U034	Trichloroacetaldehyde (Chloral)	Trichloroacetaldehyde (Chloral)	75-87-6	(WETOX OR CHOXD) fb CARBN; or CMBST	CMBST
U035	Chlorambucil	Chlorambucil	305-03-3	(WETOX OR CHOXD) fb CARBN; or CMBST	CMBST
U036	Chlordane	Chlordane (alpha and gamma isomers)	57-74-9	0.0033	0.26
U037	Chlorobenzene	Chlorobenzene	108-90-7	0.057	6.0
U038	Chlorobenzilate	Chlorobenzilate	510-15-6	0.1	CMBST
U039	p-Chloro-m-cresol	p-Chloro-m-cresol	59-50-7	0.018	14.0

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/lmg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/lmg/L TCLP”; or technology code ⁴
U041	Epichlorohydrin (1-Chloro-2,3-epoxypropane)	Epichlorohydrin (1-Chloro-2,3-epoxypropane)	106-89-8	(WETOX OR CHOXD) fb CARBN; or CMBST	CMBST
U042	2-Chloroethyl vinyl ether	2-Chloroethyl vinyl ether	110-75-8	0.062	CMBST
U043	Vinyl chloride	Vinyl chloride	75-01-4	0.27	6.0
U044	Chloroform	Chloroform	67-66-3	0.046	6.0
U045	Chloromethane (Methyl chloride)	Chloromethane (Methyl chloride)	74-87-3	0.19	30.0
U046	Chloromethyl methyl ether	Chloromethyl methyl ether	107-30-2	(WETOX OR CHOXD) fb CARBN; or CMBST	CMBST
U047	2-Chloronaphthalene	2-Chloronaphthalene	91-58-7	0.055	5.6
U048	2-Chlorophenol	2-Chlorophenol	95-57-8	0.044	5.7
U049	4-Chloro-o-toluidine-hydrochloride <u>4-Chloro-o-toluidine hydrochloride</u>	4-Chloro-o-toluidine-hydrochloride <u>4-Chloro-o-toluidine hydrochloride</u>	3165-93-3	(WETOX OR CHOXD) fb CARBN; or CMBST	CMBST
U050	Chrysene	Chrysene	2218-01-9	0.059	3.4
U051	Creosote	Naphthalene	91-20-3	0.059	5.6
		Pentachlororphenol	87-86-5	0.089	7.4
		Phenanthrene	85-01-8	0.059	5.6

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
		Pyrene	129-00-0	0.067	8.2
		Toluene	108-88-3	0.08	10.0
		Xylenes- mixed isomers (sum of o-, m-, and p-xylene concentrations)	1330-20-7	0.32	30.0
		Lead	7439-92-1	0.69	0.75 mg/l TCLP
U052	Cresols (Cresylic acid)	o-Cresol	95-48-7	0.11	5.6
		m-Cresol (difficult to distinguish from p-Cresol)	108-39-4	0.77	5.6
		p-Cresol (difficult to distinguish from m-Cresol)	106-44-5	0.77	5.6
		Cresol- mixed isomers (Cresylic acid) (sum of o-, m-, and p-cresol concentrations)	1319-77-3	0.88	11.2
U053	Crotonaldehyde	Crotonaldehyde	4170-30-3	(WETOX OR CHOXD) fb CARBN; or CMBST	CMBST
U055	Cumene	Cumene	98-82-8	(WETOX OR CHOXD) fb CARBN; or CMBST	CMBST

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
U056	Cyclohexane	Cyclohexane	110-82-7	(WETOX OR CHOXD) fb CARBN; or CMBST	CMBST
U057	Cyclohexanone	Cyclohexanone	108-94-1	0.36	CMBST
		Cyclohexanone; alternate ⁶ standard for nonwastewaters only	108-94-1	NA	0.75 mg/mg/L TCLP
U058	Cyclophosphamide	Cyclophosphamide	50-18-0	CARBN; or CMBST	CMBST
U059	Daunomycin	Daunomycin	20830-81-3	(WETOX OR CHOXD) fb CARBN; or CMBST	CMBST
U060	DDD	o,p'-DDD	53-19-0	0.023	0.087
		p,p'-DDD	72-54-8	0.023	0.087
U061	DDT	o,p'-DDT	789-02-6	0.0039	0.087
		p,p'-DDT	50-29-3	0.0039	0.087
		o,p'-DDD	53-19-0	0.023	0.087
		p,p'-DDD	72-54-8	0.023	0.087
		o,p'-DDE	3424-82-6	0.031	0.087
		p,p'-DDE	72-55-9	0.031	0.087

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
U062	Diallate	Diallate	2303-16-4	(WETOX OR CHOXD) fb CARBN; or CMBST	CMBST
U063	Dibenz(a,h)anthracene	Dibenz(a,h)anthracene	53-70-3	0.055	8.2
U064	Dibenz(a,i)pyrene	Dibenz(a,i)pyrene	189-55-9	(WETOX OR CHOXD) fb CARBN; or CMBST	CMBST
U066	1,2-Dibromo-3-chloropropane	1,2-Dibromo-3-chloropropane	96-12-8	0.11	15.0
U067	Ethylene dibromide (1,2-Dibromomethane)	Ethylene dibromide (1,2-Dibromomethane)	106-93-4	0.028	15.0
U068	Dibromomethane	Dibromomethane	74-95-3	0.11	15.0
U069	Di-n-butyl phthalate	Di-n-butyl phthalate	84-74-2	0.057	28.0
U070	o-Dichlorobenzene	o-Dichlorobenzene	95-50-1	0.088	6.0
U071	m-Dichlorobenzene	m-Dichlorobenzene	541-73-1	0.036	6.0
U072	p-Dichlorobenzene	p-Dichlorobenzene	106-46-7	0.09	6.0
U073	3,3'-Dichlorobenzidine	3,3'-Dichlorobenzidine	91-94-1	(WETOX OR CHOXD) fb CARBN; or CMBST	CMBST

EPA hazardous waste number	Waste description and <u>treatment/regulatory treatment or regulatory subcategory</u> ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
U074	1,4-Dichloro-2-butene	cis-1,4-Dichloro-2-butene	1476-11-5	(WETOX OR CHOXD) fb CARBN; or CMBST	CMBST
		trans-1,4-Dichloro-2-butane	764-41-0	(WETOX OR CHOXD) fb CARBN; or CMBST	CMBST
U075	Dichlorodifluoromethane	Dichlorodifluoromethane	75-71-8	0.23	7.2
U076	1,1-Dichloroethane	1,1-Dichloroethane	75-34-3	0.059	6.0
U077	1,2-Dichloroethane	1,2-Dichloroethane	107-06-2	0.21	6.0
U078	1,1-Dichloroethylene	1,1-Dichloroethylene	75-35-4	0.025	6.0
U079	1,2-Dichloroethylene	trans-1,2-Dichloroethylene	156-60-5	0.054	30.0
U080	Methylene chloride	Methylene chloride	75-09-2	0.089	30.0
U081	2,4-Dichlorophenol	2,4-Dichlorophenol	120-83-2	0.044	14.0
U082	2,6-Dichlorophenol	2,6-Dichlorophenol	87-65-0	0.044	14.0
U083	1,2-Dichloropropane	1,2-Dichloropropane	78-87-5	0.85	18.0
U084	1,3- Dichloropropylene	cis-1,3-Dichloropropylene	10061-01-5	0.036	18.0
		trans-1,3-Dichloropropylene	10061-02-6	0.036	18.0

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
U085	1,2:3,4-Diepoxybutane	1,2:3,4-Diepoxybutane	1464-53-5	(WETOX OR CHOXD) fb CARBN; or CMBST	CMBST
U086	N,N'-Diethylhydrazine	N,N'-Diethylhydrazine	1615-80-1	CHOXD; CHRED; CARBN; BIODG BIODG; or CMBST	CHOXD; CHRED; or CMBST
U087	O,O-Diethyl S-methyldithiophosphate	O,O-Diethyl S-methyldithiophosphate	3288-58-2	CARBN; or CMBST	CMBST
U088	Diethyl phthalate	Diethyl phthalate	84-66-2	0.2	28.0
U089	Diethyl stilbestrol	Diethyl stilbestrol	56-53-1	(WETOX OR CHOXD) fb CARBN; or CMBST	CMBST
U090	Dihydrosafrole	Dihydrosafrole	94-58-6	(WETOX OR CHOXD) fb CARBN; or CMBST	CMBST
U091	3,3'-Dimethoxybenzidine	3,3'-Dimethoxybenzidine	119-90-4	(WETOX OR CHOXD) fb CARBN; or CMBST	CMBST
U092	Dimethylamine	Dimethylamine	124-40-3	(WETOX OR CHOXD) fb CARBN; or CMBST	CMBST

EPA hazardous waste number	Waste description and <u>treatment/regulatory treatment or regulatory subcategory</u> ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
U093	p-Dimethylaminoazobenzene	p-Dimethylamino azobenzene	60-11-7	0.13	CMBST
U094	7,12-Dimethyl benz(a)anthracene	7,12-Dimethyl benz(a)anthracene	57-97-6	(WETOX OR CHOXD) fb CARBN; or CMBST	CMBST
U095	3,3'-Dimethylbenzidine	3,3'- Dimethylbenzidine	119-93-7	(WETOX OR CHOXD) fb CARBN; or CMBST	CMBST
U096	alpha, alpha-Dimethyl benzyl hydroperoxide	alpha, alpha-Dimethyl benzyl hydroperoxide	80-15-9	CHOXD; CHRED; CARBN; BIODG BIODG; or CMBST	CHOXD; CHRED; or CMBST
U097	Dimethylcarbamoyl chloride	Dimethylcarbamoyl chloride	79-44-7	(WETOX OR CHOXD) fb CARBN; or CMBST	CMBST
U098	1,1-Dimethylhydrazine	1,1-Dimethylhydrazine	57-14-7	CHOXD; CHRED; CARBN; BIODG BIODG; or CMBST	CHOXD; CHRED; or CMBST
U099	1,2-Dimethylhydrazine	1,2-Dimethylhydrazine	540-73-8	CHOXD; CHRED; CARBN; BIODG BIODG; or CMBST	CHOXD; CHRED; or CMBST

EPA hazardous waste number	Waste description and <u>treatment/regulatory treatment or regulatory subcategory</u> ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
U101	2,4-Dimethylphenol	2,4-Dimethylphenol	105-67-9	0.036	14.0
U102	Dimethyl phthalate	Dimethyl phthalate	131-11-3	0.047	28.0
U103	Dimethyl sulfate	Dimethyl sulfate	77-78-1	CHOXD; CHRED; CARBN; BIODG BIODG; or CMBST	CHOXD; CHRED; or CMBST
U105	2,4-Dinitrotoluene	2,4-Dinitrotoluene	121-14-2	0.32	140.0
U106	2,6-Dinitrotoluene	2,6-Dinitrotoluene	606-20-2	0.55	28.0
U107	Di-n-octyl- phthalate	Di-n-octyl- phthalate	117-84-0	0.017	28.0
U108	1,4-Dioxane	1,4-Dioxane	123-91-1	(WETOX OR CHOXD) fb CARBN; or CMBST	CMBST
		1,4-Dioxane; alternate ⁶ standard for nonwastewaters only	123-91-1	12.0	170.0
U109	1,2-Diphenylhydrazine	1,2-Diphenylhydrazine	122-66-7	CHOXD; CHRED; CARBN; BIODG BIODG; or CMBST	CHOXD; CHRED; or CMBST
		1,2-Diphenylhydrazine; alternate ⁶ standard for wastewaters only	122-66-7	0.087	NA

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/lmg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/lmg/L TCLP”; or technology code ⁴
U110	Dipropylamine	Dipropylamine	142-84-7	(WETOX OR CHOXD) fb CARBN; or CMBST	CMBST
U111	Di-n-propylnitrosamine	Di-n-propylnitrosamine	621-64-7	0.4	14.0
U112	Ethyl acetate	Ethyl acetate	141-78-6	0.34	33.0
U113	Ethyl acrylate	Ethyl acrylate	140-88-5	(WETOX OR CHOXD) fb CARBN; or CMBST	CMBST
U114	Ethylenebisdithiocarbamic acid salts and esters	Ethylenebis dithiocarbamic acid	111-54-6	(WETOX OR CHOXD) fb CARBN; or CMBST	CMBST
U115	Ethylene oxide	Ethylene oxide	75-21-8	(WETOX OR CHOXD) fb CARBN; or CMBST	CHOXD; or CMBST
		Ethylene oxide; alternate ⁶ standard for wastewaters only	75-21-8	0.12	NA
U116	Ethylene thiourea	Ethylene thiourea	96-45-7	(WETOX OR CHOXD) fb CARBN; or CMBST	CMBST
U117	Ethyl ether	Ethyl ether	60-29-7	0.12	160.0
U118	Ethyl methacrylate	Ethyl methacrylate	97-63-2	0.14	160.0

EPA hazardous waste number	Waste description and <u>treatment/regulatory treatment or regulatory subcategory</u> ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/lmg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/lmg/L TCLP”; or technology code ⁴
U119	Ethyl methane sulfonate	Ethyl methane sulfonate	62-50-0	(WETOX OR CHOXD) fb CARBN; or CMBST	CMBST
U120	Fluoranthene	Fluoranthene	206-44-0	0.068	3.4
U121	Trichloromonofluoromethane	Trichloromono fluoromethane	75-69-4	0.02	30.0
U122	Formaldehyde	Formaldehyde	50-00-0	(WETOX OR CHOXD) fb CARBN; or CMBST	CMBST
U123	Formic acid	Formic acid	64-18-6	(WETOX OR CHOXD) fb CARBN; or CMBST	CMBST
U124	Furan	Furan	110-00-9	(WETOX OR CHOXD) fb CARBN; or CMBST	CMBST
U125	Furfural	Furfural	98-01-1	(WETOX OR CHOXD) fb CARBN; or CMBST	CMBST
U126	Glycidylaldehyde	Glycidylaldehyde	765-34-4	(WETOX OR CHOXD) fb CARBN; or CMBST	CMBST
U127	Hexachlorobenzene	Hexachlorobenzene	118-74-1	0.055	10.0

EPA hazardous waste number	Waste description and <u>treatment/regulatory treatment or regulatory subcategory</u> ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
U128	Hexachlorobutadiene	Hexachlorobutadiene	87-68-3	0.055	5.6
U129	Lindane	alpha-BHC	319-84-6	0.00014	0.066
		beta-BHC	319-85-7	0.00014	0.066
		delta-BHC	319-86-8	0.023	0.066
		gamma-BHC (Lindane)	58-89-9	0.0017	0.066
U130	Hexachlorocyclopentadiene	Hexachloro cyclopentadiene	77-47-4	0.057	2.4
U131	Hexachloroethane	Hexachloroethane	67-72-1	0.055	30.0
U132	Hexachlorophene	Hexachlorophene	70-30-4	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U133	Hydrazine	Hydrazine	302-01-2	CHOXD; CHRED; CARBN; BIODG BIODG; or CMBST	CHOXD; CHRED; or CMBST
U134	Hydrogen fluoride	Fluoride (measured in wastewaters only)	7664-39-3	35.0	ADGAS fb NEUTR; or NEUTR
U135	Hydrogen sulfide	Hydrogen sulfide	7783-06-4	CHOXD; CHRED; or CMBST	CHOXD; CHRED; or CMBST
U136	Cacodylic acid	Arsenic	7440-38-2	1.4	5.0 mg/mg/L TCLP

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/lmg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/lmg/L TCLP”; or technology code ⁴
U137	Indeno(1,2,3-cd)pyrene Indeno(1,2,3 cd)pyrene	Indeno(1,2,3-cd)pyrene Indeno(1,2,3-c,d)pyrene	193-39-5	0.0055	3.4
U138	Iodomethane	Iodomethane	74-88-4	0.19	65.0
U140	Isobutyl alcohol	Isobutyl alcohol	78-83-1	5.6	170.0
U141	Isosafrole	Isosafrole	120-58-1	0.081	2.6
U142	Kepone	Kepone	143-50-8	0.0011	0.13
U143	Lasiocarpine	Lasiocarpine	303-34-4	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U144	Lead acetate	Lead	7439-92-1	0.69	0.75 mg/lmg/L TCLP
U145	Lead phosphate	Lead	7439-92-1	0.69	0.75 mg/lmg/L TCLP
U146	Lead subacetate	Lead	7439-92-1	0.69	0.75 mg/lmg/L TCLP
U147	Maleic anhydride	Maleic anhydride	108-31-6	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U148	Maleic hydrazide	Maleic hydrazide	123-33-1	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U149	Malonitrile	Malonitrile	109-77-3	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/L TCLP”; or technology code ⁴
U150	Melphalan	Melphalan	148-82-3	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U151	U151 (mercury) nonwastewaters that contain greater than or equal to 260.0 mg/kg total mercury	Mercury	7439-97-6	NA	RMERC
	U151 (mercury) nonwastewaters that contain less than 260.0 mg/kg total mercury and that are residues from RMERC only	Mercury	7439-97-6	NA	0.2 mg/L TCLP
	U151 (mercury) nonwastewaters that contain less than 260.0 mg/kg total mercury and that are not residues from RMERC	Mercury	7439-97-6	NA	0.025 mg/L TCLP
	All U151 (mercury) wastewaters	Mercury	7439-97-6	0.15	NA
	Elemental mercury contaminated with radioactive materials	Mercury	7439-97-6	NA	AMLGM
U152	Methacrylonitrile	Methacrylonitrile	126-98-7	0.24	84.0
U153	Methanethiol	Methanethiol	74-93-1	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
U154	Methanol	Methanol	67-56-1	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
		Methanol; alternate ⁶ standards for both wastewaters and nonwastewaters	67-56-1	5.6	0.75 mg/mg/L TCLP
U155	Methapyrilene	Methapyrilene	91-80-5	0.081	1.5
U156	Methyl chlorocarbonate	Methyl chlorocarbonate	79-22-1	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U157	3-Methylcholanthrene	3-Methylcholanthrene	56-49-5	0.0055	15.0
U158	4,4'-Methylene bis(2-chloroaniline)	4,4'-Methylene bis(2-chloroaniline)	101-14-4	0.5	30.0
U159	Methyl ethyl ketone	Methyl ethyl ketone	78-93-3	0.28	36.0
U160	Methyl ethyl ketone peroxide	Methyl ethyl ketone peroxide	1338-23-4	CHOXD; CHRED; or CMBST	CHOXD; CHRED; or CMBST
U161	Methyl isobutyl ketone	Methyl isobutyl ketone	108-10-1	0.14	33.0
U162	Methyl methacrylate	Methyl methacrylate	80-62-6	0.14	160.0
U163	N-Methyl N'-nitro N-nitrosoguanidine	N-Methyl N'-nitro N-nitrosoguanidine	70-25-7	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
U164	Methylthiouracil	Methylthiouracil	56-04-2	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U165	Naphthalene	Naphthalene	91-20-3	0.059	5.6
U166	1,4-Naphthoquinone	1,4-Naphthoquinone	130-15-4	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U167	1-Naphthylamine	1-Naphthylamine	134-32-7	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U168	2-Naphthylamine	2-Naphthylamine	91-59-8	0.52	CMBST
U169	Nitrobenzene	Nitrobenzene	98-95-3	0.068	14.0
U170	p-Nitrophenol	p-Nitrophenol	100-02-7	0.12	29.0
U171	2-Nitropropane	2-Nitropropane	79-46-9	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U172	N-Nitrosodi-n-butylamine	N-Nitrosodi-n-butylamine	924-16-3	0.4	17.0
U173	N-Nitrosodiethanolamine	N-Nitrosodiethanolamine	1116-54-7	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U174	N-Nitrosodiehtylamine N-Nitrosodiethylamine	N-Nitrosodiehtylamine N-Nitrosodiethylamine	55-18-5	0.4	28.0

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
U176	N-Nitroso-N-ethylurea	N-Nitroso-N-ethylurea	759-73-9	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U177	N-Nitroso-N-methylurea	N-Nitroso-N-methylurea	684-93-5	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U178	N-Nitroso-N-methylurethane	N-Nitroso-N-methylurethane	615-53-2	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U179	N-Nitrosopiperidine	N-Nitrosopiperidine	100-75-4	0.013	35.0
U180	N-Nitrosopyrrolidine	N-Nitrosopyrrolidine	930-55-2	0.013	35.0
U181	5-Nitro-o-toluidine	5-Nitro-o-toluidine	99-55-8	0.32	28.0
U182	Paraldehyde	Paraldehyde	123-63-7	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U183	Pentachlorobenzene	Pentachlorobenzene	608-93-5	0.055	10.0

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
U184	Pentachloroethane	Pentachloroethane	76-01-7	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
		Pentachloroethane; alternate ⁶ standards for both wastewaters and nonwastewaters	76-01-7	0.055	6.0
U185	Pentachloronitrobenzene	Pentachloronitrobenzene	82-68-8	0.055	4.8
U186	1,3-Pentadiene	1,3-Pentadiene	504-60-9	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U187	Phenacetin	Phenacetin	62-44-2	0.081	16.0
U188	Phenol	Phenol	108-95-2	0.039	6.2
U189	Phosphorus sulfide	Phosphorus sulfide	1314-80-3	CHOXD; CHRED; or CMBST	CHOXD; CHRED; or CMBST
U190	Phthalic anhydride (measured as phthalic acid or terephthalic acid)	Phthalic anhydride (measured as phthalic acid or terephthalic acid)	100-21-0	0.055	28.0
		Phthalic anhydride (measured as phthalic acid or terephthalic acid)	85-44-9	0.055	28.0

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
U191	2-Picoline	2-Picoline	109-06-8	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U192	Pronamide	Pronamide	23950-58-5	0.093	1.5
U193	1,3-Propane sultone	1,3-Propane sultone	1120-71-4	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U194	n-Propylamine	n-Propylamine	107-10-8	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U196	Pyridine	Pyridine	110-86-1	0.014	16.0
U197	p-Benzoquinone	p-Benzoquinone	106-51-4	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U200	Reserpine	Reserpine	50-55-5	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U201	Resorcinol	Resorcinol	108-46-3	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
U202	Saccharin and salts	Saccharin	81-07-2	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U203	Safrole	Safrole	94-59-7	0.081	22.0
U204	Selenium dioxide	Selenium	7782-49-2	0.82	5.7 mg/mg/L TCLP
U205	Selenium sulfide	Selenium	7782-49-2	0.82	5.7 mg/mg/L TCLP
U206	Streptozotocin	Streptozotocin	18883-66-4	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U207	1,2,4,5-Tetrachlorobenzene	1,2,4,5-Tetrachlorobenzene	95-94-3	0.055	14.0
U208	1,1,1,2-Tetrachloroethane	1,1,1,2-Tetrachloroethane	630-20-6	0.057	6.0
U209	1,1,2,2-Tetrachloroethane	1,1,2,2-Tetrachloroethane	79-34-6	0.057	6.0
U210	Tetrachloroethylene	Tetrachloroethylene	127-18-4	0.056	6.0
U211	Carbon tetrachloride	Carbon tetrachloride	56-23-5	0.057	6.0
U213	Tetrahydrofuran	Tetrahydrofuran	109-99-9	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U214	Thallium (I) acetate	Thallium (measured in wastewaters only)	7440-28-0	1.4	RTHRM; or STABL

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
U215	Thallium (I) carbonate	Thallium (measured in wastewaters only)	7440-28-0	1.4	RTHRM; or STABL
U216	Thallium (I) chloride	Thallium (measured in wastewaters only)	7440-28-0	1.4	RTHRM; or STABL
U217	Thallium (I) nitrate	Thallium (measured in wastewaters only)	7440-28-0	1.4	RTHRM; or STABL
U218	Thioacetamide	Thioacetamide	62-55-5	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U219	Thiourea	Thiourea	62-56-6	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U220	Toluene	Toluene	108-88-3	0.08	10.0
U221	Toluenediamine	Toluenediamine	25376-45-8	CARBN; or CMBST	CMBST
U222	o-Toluidine hydrochloride	o-Toluidine hydrochloride	636-21-5	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U223	Toluene diisocyanate	Toluene diisocyanate	26471-62-5	CARBN; or CMBST	CMBST
U225	Bromoform (Tribromomethane)	Bromoform (Tribromomethane)	75-25-2	0.63	15.0
U226	1,1,1-Trichloroethane	1,1,1-Trichloroethane	71-55-6	0.054	6.0

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/lmg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/lmg/L TCLP”; or technology code ⁴
U227	1,1,2-Trichloroethane	1,1,2-Trichloroethane	79-00-5	0.054	6.0
U228	Trichloroethylene	Trichloroethylene	79-01-6	0.054	6.0
U234	1,3,5-Trinitrobenzene	1,3,5-Trinitrobenzene	99-35-4	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U235	tris-(2,3-Dibromopropyl)-phosphate	tris-(2,3-Dibromopropyl)-phosphate	126-72-7	0.11	0.1
U236	Trypan blue	Trypan blue	72-57-1	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U237	Uracil mustard	Uracil mustard	66-75-1	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U238	Urethane (Ethyl carbamate)	Urethane (Ethyl carbamate)	51-79-6	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U239	Xylenes	Xylenes- mixed isomers (sum of o-, m-, and p-xylene concentrations)	1330-20-7	0.32	30.0

EPA hazardous waste number	Waste description and <u>treatment/regulatory treatment or regulatory subcategory</u> ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in <u>mg/lmg/L</u> ; or technology code ⁴	Concentration ⁵ in <u>mg/kg</u> unless noted as “ <u>mg/lmg/L TCLP</u> ”; or technology code ⁴
U240	2,4-D (2,4-Dichlorophenoxyacetic acid)	2,4-D (2,4- Dichloro phenoxyacetic acid)	94-75-7	0.72	10.0
	2,4-D (2,4-Dichlorophenoxy acetic acid) salts and esters		NA	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U243	Hexachloropropylene	Hexachloropropylene	1888-71-7	0.035	30.0
U244	Thiram	Thiram	137-26-8	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U246	Cyanogen bromide	Cyanogen bromide	506-68-3	CHOXD; WETOX; or CMBST	CHOXD; WETOX; or CMBST
U247	Methoxychlor	Methoxychlor	72-43-5	0.25	0.18
U248	Warfarin, and salts, when present at concentrations of 10.0 per cent or less	Warfarin	81-81-2	⊗ (WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U249	Zinc phosphide, Zn ₃ P ₂ , when present at concentrations of 10.0 per cent or less	Zinc phosphide	1314-84-7	CHOXD; CHRED; or CMBST	CHOXD; CHRED; or CMBST
U271	Benomyl ¹⁰	Benomyl	17804-35-2	0.056; or CMBST, CHOXD, BIODG or CARBN	1.4; or CMBST

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
U278	Bendiocarb ¹⁰	Bendiocarb	22781-23-3	0.056; or <u>CMBST, CHOXD, BIODG or CARBN</u>	1.4; or <u>CMBST</u>
U279	Carbaryl ¹⁰	Carbaryl	63-25-2	0.006; or <u>CMBST, CHOXD, BIODG or CARBN</u>	0.14; or <u>CMBST</u>
U280	Barban ¹⁰	Barban	101-27-9	0.056; or <u>CMBST, CHOXD, BIODG or CARBN</u>	1.4; or <u>CMBST</u>
U328	o-Toluidine	o-Toluidine	95-53-4	CMBST; or CHOXD fb (BIOGD <u>BIODG</u> or CARBN); or BIOGD <u>BIODG</u> fb CARBN	CMBST
U353	p-Toluidine	p-Toluidine	106-49-0	CMBST; or CHOXD fb (BIOGD <u>BIODG</u> or CARBN); or BIOGD <u>BIODG</u> fb CARBN	CMBST

EPA hazardous waste number	Waste description and <u>treatment/regulatory treatment or regulatory subcategory</u> ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
U359	2-Ethoxyethanol	2-Ethoxyethanol	110-80-5	CMBST; or CHOXD fb (BIODG BIODG or CARBN); or BIODG BIODG fb CARBN	CMBST
U364	Bendiocarb phenol ¹⁰	Bendiocarb phenol	22961-82-6	0.056; or CMBST, CHOXD, BIODG or <u>CARBN</u>	1.4; or <u>CMBST</u>
U367	Carbofuran phenol ¹⁰	Carbofuran phenol	1563-38-8	0.056; or CMBST, CHOXD, BIODG or <u>CARBN</u>	1.4; or <u>CMBST</u>
U372	Carbenzadim ¹⁰	Carbenzadim	10605-21-7	0.056; or CMBST, CHOXD, BIODG or <u>CARBN</u>	1.4; or <u>CMBST</u>
U373	Propham ¹⁰	Propham	122-42-9	0.056; or CMBST, CHOXD, BIODG or <u>CARBN</u>	1.4; or <u>CMBST</u>
U387	Prosulfocarb ¹⁰	Prosulfocarb	52888-80-9	0.042; or CMBST, CHOXD, BIODG or <u>CARBN</u>	1.4; or <u>CMBST</u>
U389	Triallate ¹⁰	Triallate	2303-17-5	0.042; or CMBST, CHOXD, BIODG or <u>CARBN</u>	1.4; or <u>CMBST</u>

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
U394	A2213 ¹⁰	A2213	30558-43-1	0.042; or <u>CMBST, CHOXD, BIODG or CARBN</u>	1.4; or <u>CMBST</u>
U395	Diethylene glycol, dicarbamate ¹⁰	Diethylene glycol, dicarbamate	5952-26-1	0.056; or <u>CMBST, CHOXD, BIODG or CARBN</u>	1.4; or <u>CMBST</u>
U404	Triethylamine ¹⁰	Triethylamine	121-44-8	0.081; or <u>CMBST, CHOXD, BIODG or CARBN</u>	1.5; or <u>CMBST</u>
U409	Thiophanate-methyl ¹⁰	Thiophanate-methyl	23564-05-8	0.056; or <u>CMBST, CHOXD, BIODG or CARBN</u>	1.4; or <u>CMBST</u>
U410	Thiocarb ¹⁰	Thiocarb	59669-26-0	0.019; or <u>CMBST, CHOXD, BIODG or CARBN</u>	1.4; or <u>CMBST</u>
U411	Propoxur ¹⁰	Propoxur	114-26-1	0.056; or <u>CMBST, CHOXD, BIODG or CARBN</u>	1.4; or <u>CMBST</u>

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
Footnotes:					
NA	NA means not applicable.				
1	The waste descriptions provided in this table do not replace descriptions in Chapter 3745-51 of the Administrative Code. Descriptions of treatment/regulatory treatment or regulatory subcategories are provided, as needed, to distinguish between applicability of different standards.				
2	CAS means chemical abstract services. When the EPA hazardous waste number and/or regulated constituents are described as a combination of a chemical with its salts and/or esters, the CAS number is given for the parent compound only.				
3	Concentration standards for wastewaters are expressed in mg/mg/L and are based on analysis of composite samples.				
4	All treatment standards expressed as a technology code or combination of technology codes are explained in detail in the table in rule 3745-270-42 of the Administrative Code.				
5	Except for “Metals (EP or TCLP)” and “Cyanides (total and amenable)” the nonwastewater treatment standards expressed as a concentration were established, in part, based upon incineration in units operated in accordance with the technical requirements of rules 3745-57-40 to 3745-57-51 or 3745-68-40 to 3745-68-52 of the Administrative Code, or based upon combustion in fuel substitution units operating in accordance with the applicable technical requirements. A facility may comply with these treatment standards according to provisions in paragraph (D) of this rule. All concentration standards for nonwastewaters are based on analysis of grab samples.				

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
6	Where an alternate treatment standard or set of alternate standards has been indicated, a facility may comply with this alternate standard, but only for the “ Treatment/Regulatory Treatment or Regulatory Subcategory” or physical form (i.e., wastewater and/or nonwastewater) specified for that alternate standard.				
7	Both “Cyanides (total)” and “Cyanides (amenable)” for nonwastewaters are to be analyzed using method 9010C or method 9012B found in “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,”; U.S. EPA publication SW-846 with a sample size of ten grams and a distillation time of one hour and fifteen minutes.				
8	These wastes, when rendered nonhazardous and then subsequently managed in Clean Water Act (CWA), or CWA-equivalent systems, are not subject to treatment standards. [See paragraph (C)(3) and (C)(4) of rule 3745-270-01 of the Administrative Code.]				
9	These wastes, when rendered nonhazardous and then subsequently injected in a “Class I SDWA” well are not subject to treatment standards. [See 40 CFR 148.1(d).]				
10	The treatment standard for this waste may be satisfied by either meeting the constituent concentrations in this table, or by treating the waste by the specified technologies: combustion, as defined described by the technology code CMBST in the table in rule 3745-270-42 of the Administrative Code, for nonwastewaters; and biodegradation as defined described by the technology code BIODG BIODG , carbon adsorption as defined described by the technology code CARBN, chemical oxidation as defined described by the technology code CHOXD, or combustion as defined described by the technology code CMBST in the table in rule 3745-270-42 of the Administrative Code, for wastewaters.				

EPA hazardous waste number	Waste description and treatment/regulatory treatment or regulatory subcategory ¹	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS ² number	Concentration ³ in mg/mg/L; or technology code ⁴	Concentration ⁵ in mg/kg unless noted as “mg/mg/L TCLP”; or technology code ⁴
11	For these wastes, the definition of CMBST is limited to: (1) combustion units operating under Chapter 3745-266 of the Administrative Code, (2) combustion units permitted under rules 3745-57-40 to 3745-57-51 of the Administrative Code, or (3) combustion units operating under rules 3745-68-40 to 3745-68-52 of the Administrative Code, which have obtained a determination of equivalent treatment under paragraph (B) of rule 3745-270-42 of the Administrative Code.				
12	Disposal of K175 wastes that have complied with all applicable treatment standards in this rule must <u>shall</u> also be macroencapsulated in accordance with the table in rule 3745-270-45 of the Administrative Code unless the waste is placed in: (1) A permitted hazardous waste landfill containing only K175 wastes that meet all applicable treatment standards in this rule; or (2) A dedicated permitted hazardous waste landfill cell in which all other wastes being co-disposed are at pH less than or equal to 6.0.				

[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:

Five Year Review (FYR) Dates: Exempt

Certification

Date

Promulgated Under:	119.03
Statutory Authority:	3734.12
Rule Amplifies:	3734.12
Prior Effective Dates:	12/30/1989, 02/11/1992, 09/02/1997, 12/07/2000, 02/08/2005, 02/16/2009, 09/05/2010, 03/17/2012

RSFA Attachment A

Rule 3745-270-48 is amended as follows:		
Location	Change	Reason
(A)	1 st sentence: remove the typo word and add "hazardous"	a
	2 nd sentence: add quotation marks around the defined term "underlying hazardous constituents"	b
Table header	-in Wastewater column, remove "mg/l" and add "mg/L" -in Nonwastewater column, remove "mg/l" and add "mg/L"	c
Table	row Aldicarb sulfone- remove row	FR 06/13/2011
	row Barban- remove row	FR 06/13/2011
	row Bendiocarb- remove row	FR 06/13/2011
	row Benomyl- remove row	FR 06/13/2011
	row Butylate- remove row	FR 06/13/2011
	row Carbaryl- remove row	FR 06/13/2011
	row Carbenzadim- remove row	FR 06/13/2011
	row Carbofuran- remove row	FR 06/13/2011
	row Carbofuran phenol- remove row	FR 06/13/2011
	in row Carbon disulfide, in Nonwastewater column, remove "mg/l" and add "mg/L"	c
	row Carbosulfan- remove row	FR 06/13/2011
	row m-Cumenyl methylcarbamate- remove row	FR 06/13/2011
	in row Cyclohexanone, in Nonwastewater column, remove "mg/l" and add "mg/L"	c
	row Dithiocarbamates (total)- remove row	FR 06/13/2011
	row EPTC- remove row	FR 06/13/2011
	row Formetanate hydrochloride- remove row	FR 06/13/2011
	in row Methanol, in Nonwastewater column, remove "mg/l" and add "mg/L"	c
row Methiocarb- remove row	FR 06/13/2011	

RSFA Attachment A

Rule 3745-270-48 is amended as follows:		
Location	Change	Reason
	row Methomyl- remove row	FR 06/13/2011
	row Metolcarb- remove row	FR 06/13/2011
	row Mexacarbate- remove row	FR 06/13/2011
	row Molinate- remove row	FR 06/13/2011
	row Oxamyl- remove row	FR 06/13/2011
	row Pebulate- remove row	FR 06/13/2011
	row Physostigmine- remove row	FR 06/13/2011
	row Physostigmine salicylate- remove row	FR 06/13/2011
	row Promecarb- remove row	FR 06/13/2011
	row Propham- remove row	FR 06/13/2011
	row Propoxur- remove row	FR 06/13/2011
	row Prosulfocarb- remove row	FR 06/13/2011
	row Thiodicarb- remove row	FR 06/13/2011
	row Thiophanate-methyl- remove row	FR 06/13/2011
	row Triallate- remove row	FR 06/13/2011
	row Triethylamine- remove row	FR 06/13/2011
	row Vernolate- remove row	FR 06/13/2011
	in row Antimony, in Nonwastewater column, remove "mg/l" and add "mg/L"	c
	in row Arsenic, in Nonwastewater column, remove "mg/l" and add "mg/L"	c
	in row Barium, in Nonwastewater column, remove "mg/l" and add "mg/L"	c
	in row Beryllium, in Nonwastewater column, remove "mg/l" and add "mg/L"	c
	in row Cadmium, in Nonwastewater column, remove "mg/l" and add "mg/L"	c

RSFA Attachment A

Rule 3745-270-48 is amended as follows:		
Location	Change	Reason
	in row Chromium (Total), in Nonwastewater column, remove “mg/l” and add “mg/L”	c
	In row Lead, in Nonwastewater column, remove “mg/l” and add “mg/L”	c *
	in row Mercury- nonwastewater from retort, in Nonwastewater column, remove “mg/l” and add “mg/L”	c
	in row Mercury- all others, in Nonwastewater column, remove “mg/l” and add “mg/L”	c
	in row Nickel, in Nonwastewater column, remove “mg/l” and add “mg/L”	c
	in row Selenium, in Nonwastewater column, remove “mg/l” and add “mg/L”	c
	in row Silver, in Nonwastewater column, remove “mg/l” and add “mg/L”	c
	in row Thallium, in Nonwastewater column, remove “mg/l” and add “mg/L”	c
	in row Vanadium, in Nonwastewater column, remove “mg/l” and add “mg/L”	c
	in row Zinc, in Nonwastewater column, remove “mg/l” and add “mg/L”	c
Table @ Footnote 1	[2 times] remove “and/or” and add “or”	e
	remove “it’s” and add “its”	a
Table @ Footnote 3	remove “provisions in”	d
Table @ Footnote 6	remove text and add “Reserved”	FR 06/13/2011
Table @ Footnote 8	remove the typo word and add “waste”	a

RSFA Attachment A

Rule 3745-270-48 is amended as follows:		
Location	Change	Reason

- a Spelling correction.
- b This punctuation correction (adding quotation marks around defined terms) is made in all hazardous waste rules, as they are amended, at locations of defined terms that are designated as such in the text.
- c The correct symbol for “liter” is an upper case L, so this amendment corrects the term to use the correct symbol; net change is the lower case L becomes and upper case L.
- d Unnecessary text is removed.
- e Word choice correction.
- * This amendment was shown in the Interested Parties draft rule, but it was not recorded on this cover sheet.

This rule is submitted for 5-year review upon proposal. As this rule is considered equivalent to its federal counterpart provision (40 CFR 268.48), we request its exemption from further 5-year review under ORC 106.3 and 106.031 (formerly ORC 119.032).

This rule appears in a different font from most other rules at the request of LSC.

3745-270-48 Universal treatment standards.

- (A) The table in this rule identifies the hazardous constituents, along with the nonwastewater and wastewater treatment standard levels, that are used to regulate most prohibited ~~hazardous~~ hazardous wastes with numerical limits. For determining compliance with treatment standards for “underlying hazardous constituents” as defined in rule 3745-270-02 of the Administrative Code, these treatment standards may not be exceeded. Compliance with these treatment standards is measured by an analysis of grab samples, unless otherwise noted in the table in this rule.

Table: Universal Treatment Standards			
Regulated constituent common name	CAS ¹ number	Wastewater standards concentration ² in mg/L <u>mg/L</u>	Nonwastewater standards concentration ³ in mg/kg unless noted as " mg/L <u>mg/L</u> TCLP"
Organic constituents:			
Acenaphthene	83-32-9	0.059	3.4
Acenaphthylene	208-96-8	0.059	3.4
Acetone	67-64-1	0.28	160.0
Acetonitrile	75-05-8	5.6	38.0
Acetophenone	96-86-2	0.01	9.7
2-Acetylaminofluorene	53-96-3	0.059	140.0
Acrolein	107-02-8	0.29	NA
Acrylamide	79-06-1	19.0	23.0
Acrylonitrile	107-13-1	0.24	84.0
Aldicarb sulfone ⁶	1646-88-4	0.056	0.28
Aldrin	309-00-2	0.021	0.066
4-Aminobiphenyl	92-67-1	0.13	NA
Aniline	62-53-3	0.81	14.0
o-Anisidine (2-Methoxyaniline)	90-04-0	0.010	0.66
Anthracene	120-12-7	0.059	3.4
Aramite	140-57-8	0.36	NA
Barban ⁶	101-27-9	0.056	1.4
Bendiocarb ⁶	22781-23-3	0.056	1.4
Benomyl ⁶	17804-35-2	0.056	1.4
Benz(a)anthracene	56-55-3	0.059	3.4

Table: Universal Treatment Standards			
Regulated constituent common name	CAS ¹ number	Wastewater standards concentration ² in <u>mg/l</u> / <u>mg/L</u>	Nonwastewater standards concentration ³ in mg/kg unless noted as " <u>mg/l</u> / <u>mg/L</u> TCLP"
Benzal chloride	98-87-3	0.055	6.0
Benzene	71-43-2	0.14	10.0
Benzo(b)fluoranthene [difficult to distinguish from benzo(k)fluoranthene]	205-99-2	0.11	6.8
Benzo(k)fluoranthene [difficult to distinguish from benzo(b)fluoranthene]	207-08-9	0.11	6.8
Benzo(g,h,i)perylene	191-24-2	0.0055	1.8
Benzo(a)pyrene	50-32-8	0.061	3.4
alpha-BHC	319-84-6	0.00014	0.066
beta-BHC	319-85-7	0.00014	0.066
delta-BHC	319-86-8	0.023	0.066
gamma-BHC	58-89-9	0.0017	0.066
Bromodichloromethane	75-27-4	0.35	15.0
Bromomethane / Methyl bromide	74-83-9	0.11	15.0
4-Bromophenyl phenyl ether	101-55-3	0.055	15.0
n-Butyl alcohol	71-36-3	5.6	2.6
Butyl benzyl phthalate	85-68-7	0.017	28.0
Butylate⁶	2008-41-5	0.042	1.4
2-sec-Butyl-4,6-dinitrophenol / Dinoseb	88-85-7	0.066	2.5
Carbaryl⁶	63-25-2	0.006	0.14
Carbenzadim⁶	10605-21-7	0.056	1.4
Carbofuran⁶	1563-66-2	0.006	0.14
Carbofuran phenol⁶	1563-38-8	0.056	1.4
Carbon disulfide	75-15-0	3.8	4.8 <u>mg/l</u> / <u>mg/L</u> TCLP
Carbon tetrachloride	56-23-5	0.057	6.0
Carbosulfan⁶	55285-14-8	0.028	1.4
Chlordane (alpha and gamma isomers)	57-74-9	0.0033	0.26
p-Chloroaniline	106-47-8	0.46	16.0

Table: Universal Treatment Standards			
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Chlorobenzene	108-90-7	0.057	6.0
Chlorobenzilate	510-15-6	0.1	NA
2-Chloro-1,3-butadiene	126-99-8	0.057	0.28
Chlorodibromomethane	124-48-1	0.057	15.0
Chloroethane	75-00-3	0.27	6.0
bis(2-Chloroethoxy)methane	111-91-1	0.036	7.2
bis(2-Chloroethyl)ether	111-44-4	0.033	6.0
2-Chloroethyl vinyl ether	110-75-8	0.062	NA
Chloroform	67-66-3	0.046	6.0
bis(2-Chloroisopropyl)ether	39638-32-9	0.055	7.2
p-Chloro-m-cresol	59-50-7	0.018	14.0
Chloromethane / Methyl chloride	74-87-3	0.19	30.0
2-Chloronaphthalene	91-58-7	0.055	5.6
2-Chlorophenol	95-57-8	0.044	5.7
3-Chloropropylene	107-05-1	0.036	30.0
Chrysene	218-01-9	0.059	3.4
p-Cresidine	120-71-8	0.010	0.66
o-Cresol	95-48-7	0.11	5.6
m-Cresol (difficult to distinguish from p-cresol)	108-39-4	0.77	5.6
p-Cresol (difficult to distinguish from m-cresol)	106-44-5	0.77	5.6
m-Cumenyl methylcarbamate⁶	64-00-6	0.056	1.4
Cyclohexanone	108-94-1	0.36	0.75 <u>mg/l</u> / <u>mg/L</u> TCLP
o,p'-DDD	53-19-0	0.023	0.087
p,p'-DDD	72-54-8	0.023	0.087
o,p'-DDE	3424-82-6	0.031	0.087
p,p'-DDE	72-55-9	0.031	0.087

Table: Universal Treatment Standards			
Regulated constituent common name	CAS ¹ number	Wastewater standards concentration ² in <u>mg/L</u> / <u>mg/L</u>	Nonwastewater standards concentration ³ in mg/kg unless noted as " <u>mg/L</u> / <u>mg/L</u> TCLP"
o,p'-DDT	789-02-6	0.0039	0.087
p,p'-DDT	50-29-3	0.0039	0.087
Dibenz(a,h)anthracene	53-70-3	0.055	8.2
Dibenz(a,e)pyrene	192-65-4	0.061	NA
1,2-Dibromo-3-chloropropane	96-12-8	0.11	15.0
1,2-Dibromoethane / Ethylene dibromide	106-93-4	0.028	15.0
Dibromomethane	74-95-3	0.11	15.0
m-Dichlorobenzene	541-73-1	0.036	6.0
o-Dichlorobenzene	95-50-1	0.088	6.0
p-Dichlorobenzene	106-46-7	0.09	6.0
Dichlorodifluoromethane	75-71-8	0.23	7.2
1,1-Dichloroethane	75-34-3	0.059	6.0
1,2-Dichloroethane	107-06-2	0.21	6.0
1,1-Dichloroethylene	75-35-4	0.025	6.0
trans-1,2-Dichloroethylene	156-60-5	0.054	30.0
2,4-Dichlorophenol	120-83-2	0.044	14.0
2,6-Dichlorophenol	87-65-0	0.044	14.0
2,4-Dichlorophenoxyacetic acid / 2,4-D	94-75-7	0.72	10.0
1,2-Dichloropropane	78-87-5	0.85	18.0
cis-1,3-Dichloropropylene	10061-01-5	0.036	18.0
trans-1,3-Dichloropropylene	10061-02-6	0.036	18.0
Dieldrin	60-57-1	0.017	0.13
Diethyl phthalate	84-66-2	0.2	28.0
p-Dimethylaminoazobenzene	60-11-7	0.13	NA
2,4-Dimethylaniline (2,4-Xylidine)	95-68-1	0.010	0.66
2,4-Dimethyl phenol	105-67-9	0.036	14.0
Dimethyl phthalate	131-11-3	0.047	28.0

Table: Universal Treatment Standards			
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Di-n-butyl phthalate	84-74-2	0.057	28.0
1,4-Dinitrobenzene	100-25-4	0.32	2.3
4,6-Dinitro-o-cresol	534-52-1	0.28	160.0
2,4-Dinitrophenol	51-28-5	0.12	160.0
2,4-Dinitrotoluene	121-14-2	0.32	140.0
2,6-Dinitrotoluene	606-20-2	0.55	28.0
Di-n-octyl phthalate	117-84-0	0.017	28.0
Di-n-propylnitrosamine	621-64-7	0.4	14.0
1,4-Dioxane	123-91-1	12.0	170.0
Diphenylamine (difficult to distinguish from diphenylnitrosamine)	122-39-4	0.92	13.0
Diphenylnitrosamine (difficult to distinguish from diphenylamine)	86-30-6	0.92	13.0
1,2-Diphenylhydrazine	122-66-7	0.087	NA
Disulfoton	298-04-3	0.017	6.2
Dithiocarbamates (total) ⁶	NA	0.028	28.0
Endosulfan I	959-98-8	0.023	0.066
Endosulfan II	33213-65-9	0.029	0.13
Endosulfan sulfate	1031-07-8	0.029	0.13
Endrin	72-20-8	0.0028	0.13
Endrin aldehyde	7421-93-4	0.025	0.13
EPTC	759-94-4	0.042	1.4
Ethyl acetate	141-78-6	0.34	33.0
Ethyl benzene	100-41-4	0.057	10.0
Ethyl cyanide / Propanenitrile	107-12-0	0.24	360.0
Ethyl ether	60-29-7	0.12	160.0
Ethyl methacrylate	97-63-2	0.14	160.0
Ethylene oxide	75-21-8	0.12	NA

Table: Universal Treatment Standards			
Regulated constituent common name	CAS ¹ number	Wastewater standards concentration ² in <u>mg/l</u> / <u>mg/L</u>	Nonwastewater standards concentration ³ in mg/kg unless noted as " <u>mg/l</u> / <u>mg/L</u> TCLP"
bis(2-Ethylhexyl) phthalate	117-81-7	0.28	28.0
Famphur	52-85-7	0.017	15.0
Fluoranthene	206-44-0	0.068	3.4
Fluorene	86-73-7	0.059	3.4
Formetanate hydrochloride ⁶	23422-53-9	0.056	1.4
Heptachlor	76-44-8	0.0012	0.066
Heptachlor epoxide	1024-57-3	0.016	0.066
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (1,2,3,4,6,7,8-HpCDD)	35822-46-9	0.000035	0.0025
1,2,3,4,6,7,8-Heptachlorodibenzofuran (1,2,3,4,6,7,8-HpCDF)	67562-39-4	0.000035	0.0025
1,2,3,4,7,8,9-Heptachlorodibenzofuran (1,2,3,4,7,8,9-HpCDF)	55673-89-7	0.000035	0.0025
Hexachlorobenzene	118-74-1	0.055	10.0
Hexachlorobutadiene	87-68-3	0.055	5.6
Hexachlorocyclopentadiene	77-47-4	0.057	2.4
Hexachloroethane	67-72-1	0.055	30.0
Hexachloropropylene	1888-71-7	0.035	30.0
HxCDDs (all Hexachlorodibenzo-p-dioxins)	NA	0.000063	0.001
HxCDFs (all Hexachlorodibenzofurans)	NA	0.000063	0.001
Indeno (1,2,3-c,d) pyrene	193-39-5	0.0055	3.4
Iodomethane	74-88-4	0.19	65.0
Isobutyl alcohol	78-83-1	5.6	170.0
Isodrin	465-73-6	0.021	0.066
Isosafrole	120-58-1	0.081	2.6
Kepone	143-50-0	0.0011	0.13
Methacrylonitrile	126-98-7	0.24	84.0

Table: Universal Treatment Standards			
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Methanol	67-56-1	5.6	0.75 <u>mg/l</u> / <u>mg.L</u> TCLP
Methapyrilene	91-80-5	0.081	1.5
Methiocarb ⁶	2032-65-7	0.056	1.4
Methomyl	16752-77-5	0.028	0.14
Methoxychlor	72-43-5	0.25	0.18
Methyl ethyl ketone	78-93-3	0.28	36.0
Methyl isobutyl ketone	108-10-1	0.14	33.0
Methyl methacrylate	80-62-6	0.14	160.0
Methyl methansulfonate	66-27-3	0.018	NA
Methyl parathion	298-00-0	0.014	4.6
3-Methylcholanthrene	56-49-5	0.0055	15.0
4,4-Methylene bis(2-chloroaniline)	101-14-4	0.5	30.0
Methylene chloride	75-09-2	0.089	30.0
Metolcarb ⁶	1129-41-5	0.056	1.4
Mexacarbate ⁶	315-18-4	0.056	1.4
Molinate ⁶	2212-67-1	0.042	1.4
Naphthalene	91-20-3	0.059	5.6
2-Naphthylamine	91-59-8	0.52	NA
o-Nitroaniline	88-74-4	0.27	14.0
p-Nitroaniline	100-01-6	0.028	28.0
Nitrobenzene	98-95-3	0.068	14.0
5-Nitro-o-toluidine	99-55-8	0.32	28.0
o-Nitrophenol	88-75-5	0.028	13.0
p-Nitrophenol	100-02-7	0.12	29.0
N-Nitrosodiethylamine	55-18-5	0.4	28.0
N-Nitrosodimethylamine	62-75-9	0.4	2.3
N-Nitroso-di-n-butylamine	924-16-3	0.4	17.0

Table: Universal Treatment Standards			
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N-Nitrosomethylethylamine	10595-95-6	0.4	2.3
N-Nitrosomorpholine	59-89-2	0.4	2.3
N-Nitrosopiperidine	100-75-4	0.013	35.0
N-Nitrosopyrrolidine	930-55-2	0.013	35.0
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	0.000063	0.005
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	39001-02-0	0.000063	0.005
Oxamyl ⁶	23135-22-0	0.056	0.28
Parathion	56-38-2	0.014	4.6
Total PCBs (sum of all PCB isomers, or all Aroclors) ⁸	1336-36-3	0.1	10.0
Pebulate ⁶	1114-71-2	0.042	1.4
Pentachlorobenzene	608-93-5	0.055	10.0
PeCDDs (all Pentachlorodibenzo-p-dioxins)	NA	0.000063	0.001
PeCDFs (all Pentachlorodibenzofurans)	NA	0.000035	0.001
Pentachloroethane	76-01-7	0.055	6.0
Pentachloronitrobenzene	82-68-8	0.055	4.8
Pentachlorophenol	87-86-5	0.089	7.4
Phenacetin	62-44-2	0.081	16.0
Phenanthrene	85-01-8	0.059	5.6
Phenol	108-95-2	0.039	6.2
1,3-Phenylenediamine	108-45-2	0.010	0.66
Phorate	298-02-2	0.021	4.6
Phthalic acid	100-21-0	0.055	28.0
Phthalic anhydride	85-44-9	0.055	28.0
Physostigmine ⁶	57-47-6	0.056	1.4

Table: Universal Treatment Standards			
Regulated constituent common name	CAS ¹ number	Wastewater standards concentration ² in <u>mg/l</u> / <u>mg/L</u>	Nonwastewater standards concentration ³ in mg/kg unless noted as " <u>mg/l</u> / <u>mg/L</u> TCLP"
Physostigmine salicylate ⁶	57-64-7	0.056	1.4
Promecarb ⁶	2631-37-0	0.056	1.4
Pronamide	23950-58-5	0.093	1.5
Propham ⁶	122-42-9	0.056	1.4
Propoxur ⁶	114-26-1	0.056	1.4
Prosulfocarb ⁶	52888-80-9	0.042	1.4
Pyrene	129-00-0	0.067	8.2
Pyridine	110-86-1	0.014	16.0
Safrole	94-59-7	0.081	22.0
Silvex / 2,4,5-TP	93-72-1	0.72	7.9
1,2,4,5-Tetrachlorobenzene	95-94-3	0.055	14.0
TCDDs (all Tetrachlorodibenzo-p-dioxins)	NA	0.000063	0.001
TCDFs (all Tetrachlorodibenzofurans)	NA	0.000063	0.001
1,1,1,2-Tetrachloroethane	630-20-6	0.057	6.0
1,1,2,2-Tetrachloroethane	79-34-5	0.057	6.0
Tetrachloroethylene	127-18-4	0.056	6.0
2,3,4,6-Tetrachlorophenol	58-90-2	0.03	7.4
Thiodicarb ⁶	59669-26-0	0.019	1.4
Thiophanate-methyl ⁶	23564-05-8	0.056	1.4
Toluene	108-88-3	0.08	10.0
Toxaphene	8001-35-2	0.0095	2.6
Triallate ⁶	2303-17-5	0.042	1.4
Tribromomethane / Bromoform	75-25-2	0.63	15.0
1,2,4-Trichlorobenzene	120-82-1	0.055	19.0
1,1,1-Trichlorethane	71-55-6	0.054	6.0
1,1,2-Trichlorethane	79-00-5	0.054	6.0
Trichloroethylene	79-01-6	0.054	6.0

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Trichloromonofluoromethane	75-69-4	0.02	30.0
2,4,5-Trichlorophenol	95-95-4	0.18	7.4
2,4,6-Trichlorophenol	88-06-2	0.035	7.4
2,4,5-Trichlorophenoxyacetic acid / 2,4,5-T	93-76-5	0.72	7.9
1,2,3-Trichloropropane	96-18-4	0.85	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	0.057	30.0
Triethylamine ⁶	101-44-8	0.081	1.5
tris-(2,3-Dibromopropyl) phosphate	126-72-7	0.11	0.1
Vernolate ⁶	1929-77-7	0.042	1.4
Vinyl chloride	75-01-4	0.27	6.0
Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations)	1330-20-7	0.32	30.0
Inorganic constituents:			
Antimony	7440-36-0	1.9	1.15 <u>mg/l</u> / <u>mg/L</u> TCLP
Arsenic	7440-38-2	1.4	5.0 <u>mg/l</u> / <u>mg/L</u> TCLP
Barium	7440-39-3	1.2	21.0 <u>mg/l</u> / <u>mg/L</u> TCLP
Beryllium	7440-41-7	0.82	1.22 <u>mg/l</u> / <u>mg/L</u> TCLP
Cadmium	7440-43-9	0.69	0.11 <u>mg/l</u> / <u>mg/L</u> TCLP
Chromium (Total)	7440-47-3	2.77	0.60 <u>mg/l</u> / <u>mg/L</u> TCLP
Cyanides (Total) ⁴	57-12-5	1.2	590.0
Cyanides (Amenable) ⁴	57-12-5	0.86	30.0
Fluoride ⁵	16984-48-8	35.0	NA
Lead	7439-92-1	0.69	0.75 <u>mg/l</u> / <u>mg/L</u> TCLP
Mercury- nonwastewater from retort	7439-97-6	NA	0.2 <u>mg/l</u> / <u>mg/L</u> TCLP
Mercury- all others	7439-97-6	0.15	0.025 <u>mg/l</u> / <u>mg/L</u> TCLP
Nickel	7440-02-0	3.98	11.0 <u>mg/l</u> / <u>mg/L</u> TCLP
Selenium ⁷	7782-49-2	0.82	5.7 <u>mg/l</u> / <u>mg/L</u> TCLP

Table: Universal Treatment Standards			
Regulated constituent common name	CAS ¹ number	Wastewater standards concentration ² in <u>mg/l</u> / <u>mg/L</u>	Nonwastewater standards concentration ³ in mg/kg unless noted as " <u>mg/l</u> / <u>mg/L</u> TCLP"
Silver	7440-22-4	0.43	0.14 <u>mg/l</u> / <u>mg/L</u> TCLP
Sulfide ⁵	18496-25-8	14.0	NA
Thallium	7440-28-0	1.4	0.2 <u>mg/l</u> / <u>mg/L</u> TCLP
Vanadium ⁵	7440-62-2	4.3	1.6 <u>mg/l</u> / <u>mg/L</u> TCLP
Zinc ⁵	7440-66-6	2.61	4.3 <u>mg/l</u> / <u>mg/L</u> TCLP

Footnotes:

NA Not applicable.

TCLP Toxicity Characteristic Leaching Procedure

TC Toxicity Characteristic

EP Extraction Procedure

1 CAS means chemical abstract services. When the EPA hazardous waste number ~~and/or~~ regulated constituents are described as a combination of a chemical with ~~its~~ salts ~~and/or~~ esters, the CAS number is given for the parent compound only.

2 Concentration standards for wastewaters are expressed in mg/l and are based on analysis of composite samples.

3 Except for "Metals (EP or TCLP)" and "Cyanides (Total and Amenable)" the nonwastewater treatment standards expressed as a concentration were established, in part, based upon incineration in units operated in accordance with the technical requirements of rules 3745-57-40 to 3745-57-51 or 3745-68-40 to 3745-68-52 of the Administrative Code, or based upon combustion in fuel substitution units operating in accordance with applicable technical requirements. A facility may comply with these treatment standards according to ~~provisions in~~ paragraph (D) of rule 3745-270-40 of the Administrative Code. All concentration standards for nonwastewaters are based on analysis of grab samples.

4 Both "Cyanides (Total)" and "Cyanides (Amenable)" for nonwastewaters are to be analyzed using method 9010C or method 9012B, found in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", U.S. EPA publication SW-846, with a sample size of ten grams and a distillation time of one hour and fifteen minutes.

Table: Universal Treatment Standards			
Regulated constituent common name	CAS ¹ number	Wastewater standards concentration ² in <u>mg/L</u>	Nonwastewater standards concentration ³ in mg/kg unless noted as " <u>mg/L</u> TCLP"
5			These constituents are not "underlying hazardous constituents" in characteristic wastes, according to the definition in rule 3745-270-02 of the Administrative Code.
6			Between August 26, 1998 and March 4, 1999, these constituents are not "underlying hazardous constituents" as defined in rule 3745-270-02 of the Administrative Code <u>Reserved.</u>
7			This constituent is not an "underlying hazardous constituent" as defined in rule 3745-270-02 of the Administrative Code because its universal treatment standards (UTS) level is greater than its TC level, thus a treated selenium waste would always be characteristically hazardous, unless it is treated to below its characteristic level.
8			This standard is temporarily deferred for soil exhibiting a hazardous characteristic due to EPA hazardous waste <u>waste</u> numbers D004-D011 only.

(B) Reserved.

[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:

Five Year Review (FYR) Dates: 07/01/2015 and Exempt

Certification

Date

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Prior Effective Dates: 12/07/2000, 12/07/2004, 02/16/2009, 09/05/2010

RSFA Attachment A

Rule 3745-273-05 is amended as follows:		
Location	Change	Reason
title	after "Applicability-" add "management standards for universal waste-" before "lamps"	a
(A)	remove "The requirements of"	b
	-remove "apply" and add "applies" -remove "those" and add "as"	c
	add quotation marks around the defined term "lamps"	d
(B)	remove "The requirements of"	b
	remove "do" and add "does"	c

- a Word choice correction. This amendment makes the phrase consistent with other locations of the similar phrase, and sets this rule apart from other hazardous waste rules that have a similar title.
- b Unnecessary text is removed.
- c Word choice correction. This amendment corrects the sentence structure to accommodate the other text amendments.
- d This punctuation correction (adding quotation marks around defined terms) is made in all hazardous waste rules, as they are amended, at locations of defined terms that are designated as such in the text.

3745-273-05 **Applicability - management standards for universal waste-lamps.**

- (A) Lamps covered under Chapter 3745-273 of the Administrative Code. ~~The requirements of Chapter 3745-273 of the Administrative Code~~ apply to persons managing "lamps" as defined in rule 3745-273-09 of the Administrative Code, except ~~those~~ as listed in paragraph (B) of this rule.
- (B) Lamps not covered under Chapter 3745-273 of the Administrative Code. ~~The requirements of Chapter 3745-273 of the Administrative Code~~ do not apply to persons managing the following lamps:
- (1) Lamps that are not yet wastes under Chapter 3745-51 of the Administrative Code as provided in paragraph (C) of this rule.
 - (2) Lamps that are not hazardous waste. A lamp is a hazardous waste if it exhibits one or more of the characteristics identified in rules 3745-51-20 to 3745-51-24 of the Administrative Code.
- (C) Generation of waste lamps.
- (1) A used lamp becomes a waste on the date it is discarded.
 - (2) An unused lamp becomes a waste on the date the handler decides to discard it.

Effective:

Five Year Review (FYR) Dates: Exempt

Certification

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Promulgated Under: 119.03
Statutory Authority: 3734.12
Rule Amplifies: 3734.12
Prior Effective Dates: 09/02/1997, 12/07/2004

RSFA Attachment A

Rule 3745-273-09 is amended as follows:		
Location	Change	Reason
title	-after "definitions" add a dash -remove "pertaining to"	a
(B)	in "Battery" -after "electrochemical cells" add a comma	b
(G)	in "Large quantity handler of universal waste" -add quotation marks around the defined term "universal waste handler"	c
(J)	in "Pesticide" -remove "for preventing, destroying, repelling, or mitigating" and add "to prevent, destroy, repel, or mitigate"	d
	-add "is any of the following" before the colon	e
(J)(1)	in "Pesticide" (1) -remove "Is a" and add "A"	f
	-after "under" add "Section 201(v) of" -after "(FFDCA)" remove "Section 201(w)"	g *
	-remove the ending ", or" and add a period	b, h
(J)(2)	in "Pesticide" (2) -remove "Is an" and add "An"	F
	-remove the ending ", or" and add a period	b, h
(J)(3)	in "Pesticide" (3) -remove "Is an" and add "An"	F
	-after "under" add "Section 201(w) of the" -after "FFDCA" remove "Section 201(x)"	g *
(K)	in "Small quantity handler of universal waste" -add quotation marks around the defined term "universal waste handler"	c
(L)	in "Thermostat" -remove "the requirements of"	h
(M)	in "Universal waste" -remove "the universal waste requirements of"	h
(M)(1)	in "Universal waste" (1) -remove the ending semicolon and add a period	b

RSFA Attachment A

Rule 3745-273-09 is amended as follows:		
Location	Change	Reason
(M)(2)	in "Universal waste" (2) -remove the ending semicolon and add a period	b
(M)(3)	in "Universal waste" (3) -remove the ending "; and" and add a period	b, h
(N)(1)	in "Universal waste handler" (1) -add "either of the following" before the colon	e
(N)(1)(a)	in "Universal waste handler" (1)(a) -add quotation marks around the defined term "generator"	c
	-remove the ending "; or" and add a period	b, h
(N)(2)	in "Universal waste handler" (2) -add "either of the following" before the colon	e
(N)(2)(a)	in "Universal waste handler" (2)(a) -remove "the provisions of"	h
	-remove the ending "; or" and add a period	b, h

- a These amendments put the rule title into a format more similar to other "definitions" rules in the hazardous waste management program.
- b Punctuation correction.
- c This punctuation correction (adding quotation marks around defined terms) is made in all hazardous waste rules, as they are amended, at locations of defined terms that are designated as such in the text.
- d This phrase is slightly re-written to correct the sentence structure, verb tense, or other grammar so that is consistent with the rest of the rule.
- e This amendment adds specificity to the provision.

RSFA Attachment A

Rule **3745-273-09** is amended as follows:

Location	Change	Reason
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- f This amendment is necessary because text was added to the parent paragraph, so it is being removed from the sub-paragraphs.
- g Cross-reference format correction. LSC requirement
- h Unnecessary text is removed.
- * This amendment was changed in response to a comment on the Interested Parties draft rule. The FFDCA removed a paragraph, resulting in the re-designation (re-lettering) of paragraphs in the document we cite here. The federal counterpart provision to this rule (40 CFR 273.09) has not yet been corrected for this error, but U.S. EPA is aware of it.

3745-273-09 **Definitions- ~~pertaining to~~ management standards for universal waste.**

As used in Chapter 3745-273 of the Administrative Code:

- (A) "Ampule" means an airtight vial made of glass, plastic, metal, or any combination of these materials.
- (B) "Battery" means a device consisting of one or more electrically connected electrochemical cells, which is designed to receive, store, and deliver electric energy. An electrochemical cell is a system consisting of an anode, cathode, and an electrolyte, plus such connections (electrical and mechanical) as may be needed to allow the cell to deliver or receive electrical energy. The term battery also includes an intact, unbroken battery from which the electrolyte has been removed.
- (C) "Destination facility" means a facility that treats, disposes of, or recycles a particular category of universal waste, except those management activities described in paragraphs (A) and (C) of rule 3745-273-13 of the Administrative Code and in paragraphs (A) and (C) of rule 3745-273-33 of the Administrative Code. A facility at which a particular category of universal waste is only accumulated is not a destination facility for purposes of managing that category of universal waste.
- (D) "FIFRA" means the Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C. 136-136y).
- (E) "Generator" means any person, by site, whose act or process produces hazardous waste identified or listed in Chapter 3745-51 of the Administrative Code or whose act first causes a hazardous waste to become subject to the hazardous waste rules.
- (F) "Lamp" or "universal waste lamp" means the bulb or tube portion of an electric lighting device. A lamp is specifically designed to produce radiant energy, most often in the ultraviolet, visible, and infra-red regions of the electromagnetic spectrum. Examples of common universal waste electric lamps include, but are not limited to, fluorescent, high intensity discharge, neon, mercury vapor, high pressure sodium, and metal halide lamps.

- (G) "Large quantity handler of universal waste" means a "universal waste handler" (as defined in this rule) who accumulates five thousand kilograms or more total of universal waste (batteries, pesticides, mercury-containing equipment, or lamps, calculated collectively) at any time. This designation as a large quantity handler of universal waste is retained through the end of the calendar year in which the five thousand kilogram limit is met or exceeded.
- (H) "Mercury-containing equipment" means a device or part of a device (including thermostats, but excluding batteries and lamps) that contains elemental mercury integral to its function.
- (I) "On-site" means the same or geographically contiguous property which may be divided by public or private right-of-way, provided the entrance and exit between the properties is at a cross-roads intersection, and access is by crossing as opposed to going along the right-of-way. Non-contiguous properties owned by the same person but connected by a right-of-way which he controls and to which the public does not have access are also considered on-site property.
- (J) "Pesticide" means any substance or mixture of substances intended ~~for preventing, destroying, repelling, or mitigating~~ to prevent, destroy, repel, or mitigate any pest, or intended for use as a plant regulator, defoliant, or desiccant, other than any article that is any of the following:
- (1) ~~Is a~~ An new animal drug under Section 201(v) of the Federal Food, Drug and Cosmetic Act (FFDCA) Section 201(w), or,
 - (2) ~~Is an~~ An animal drug that has been determined by regulation of the secretary of health and human services not to be a new animal drug, ~~or,~~
 - (3) ~~Is an~~ An animal feed under Section 201(w) of the FFDCA Section 201(x) that bears or contains any substances described by any portion of the definition of "pesticide" in this rule.
- (K) "Small quantity handler of universal waste" means a "universal waste handler" (as defined in this rule) who does not accumulate five thousand kilograms or more total of universal waste (batteries, pesticides, mercury-containing equipment, or lamps, calculated collectively) at any time.

- (L) "Thermostat" means a temperature control device that contains metallic mercury in an ampule attached to a bimetal sensing element, and mercury-containing ampules that have been removed from these temperature control devices in compliance with ~~the requirements of~~ paragraph (C)(2) of rule 3745-273-13 of the Administrative Code or paragraph (C)(2) of rule 3745-273-33 of the Administrative Code.
- (M) "Universal waste" means any of the following hazardous wastes that are subject to ~~the universal waste requirements of~~ Chapter 3745-273 of the Administrative Code:
- (1) Batteries as described in rule 3745-273-02 of the Administrative Code;
 - (2) Pesticides as described in rule 3745-273-03 of the Administrative Code;
 - (3) Mercury-containing equipment as described in rule 3745-273-04 of the Administrative Code; ~~and,~~
 - (4) Lamps as described in rule 3745-273-05 of the Administrative Code.
- (N) "Universal waste handler":
- (1) Means either of the following:
 - (a) A "generator" (as defined in this rule) of universal waste; ~~or,~~
 - (b) The owner or operator of a facility, including all contiguous property, that receives universal waste from other universal waste handlers, accumulates universal waste, and sends universal waste to another universal waste handler, to a destination facility, or to a foreign destination.
 - (2) Does not mean either of the following:
 - (a) A person who treats [except under ~~the provisions of~~ paragraph (A) or (C) of rule 3745-273-13 of the Administrative Code, or paragraph (A) or (C) of rule 3745-273-33 of the Administrative Code], disposes of, or recycles universal waste; ~~or,~~
 - (b) A person engaged in the off-site transportation of universal waste by air, rail, highway, or water, including a universal waste transfer facility.

(O) "Universal waste transfer facility" means any transportation-related facility including loading docks, parking areas, storage areas, and other similar areas where shipments of universal waste are held during the normal course of transportation for ten days or less.

(P) "Universal waste transporter" means a person engaged in the off-site transportation of universal waste by air, rail, highway, or water.

[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:

Five Year Review (FYR) Dates: Exempt

Certification

Date

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RSFA Attachment A

Rule 3745-273-39 is amended as follows:		
Location	Change	Reason
(A)	add "all of" before "the following information"	a
(A)(1)	remove the ending semicolon and add a period	b
(A)(2)	remove "thermostats" and add "mercury-containing equipment, lamps" within the parentheses	c
	remove the ending semicolon and add a period	b
(B)	add "all of" before "the following information"	a
(B)(1)	remove the ending semicolon and add a period	b
(B)(2)	remove "thermostats" and add "mercury-containing equipment, lamps" within the parentheses	c
	remove the ending semicolon and add a period	b
(C)(1)	remove "from" and add "after"	d
(C)(2)	remove "from" and add "after"	d

- a This amendment adds specificity to the provision.
- b Punctuation correction.
- c The "thermostats" is being removed and replaced by the term "mercury-containing equipment" to be consistent with that language change that occurred in the rest of the hazardous waste rules in a prior rule-making.
- d Word choice correction.

3745-273-39

Tracking universal waste shipments- standards for large quantity handlers of universal waste.

(A) Receipt of shipments. A large quantity handler of universal waste shall keep a record of each shipment of universal waste received at the facility. The record may take the form of a log, invoice, manifest, bill of lading, or other shipping document. The record for each shipment of universal waste received shall include all of the following information:

- (1) The name and address of the originating universal waste handler or foreign shipper from whom the universal waste was sent;
- (2) The quantity of each type of universal waste received (e.g., batteries, pesticides, ~~thermostats~~mercury-containing equipment, lamps);
- (3) The date of receipt of the shipment of universal waste.

(B) Shipments off-site. A large quantity handler of universal waste shall keep a record of each shipment of universal waste sent from the handler to other facilities. The record may take the form of a log, invoice, manifest, bill of lading, or other shipping document. The record for each shipment of universal waste sent shall include all of the following information:

- (1) The name and address of the universal waste handler, destination facility, or foreign destination to whom the universal waste was sent;
- (2) The quantity of each type of universal waste sent (e.g., batteries, pesticides, ~~thermostats~~mercury-containing equipment, lamps);
- (3) The date the shipment of universal waste left the facility.

(C) Record retention.

- (1) A large quantity handler of universal waste shall retain the records described in paragraph (A) of this rule for at least three years ~~from~~after the date of receipt of a shipment of universal waste.
- (2) A large quantity handler of universal waste shall retain the records described in paragraph (B) of this rule for at least three years ~~from~~after the date a shipment of universal waste left the facility.

Effective:

Five Year Review (FYR) Dates: Exempt

Certification

Date

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Statutory Authority:	3734.12
Rule Amplifies:	3734.12
Prior Effective Dates:	09/02/1997

RSFA Attachment A

Rule 3745-273-62 is amended as follows:		
Location	Change	Reason
(A)	add "all of" before "the following information"	a
(A)(1)	remove the ending semicolon and add a period	b
(A)(2)	remove "thermostats" and add "mercury-containing equipment, lamps" within the parentheses	c
	remove the ending semicolon and add a period	b
(B)	remove "from" and add "after"	d

- a This amendment adds specificity to the provision.
- b Punctuation correction.
- c The "thermostats" is being removed and replaced by the term "mercury-containing equipment" to be consistent with that language change that occurred in the rest of the hazardous waste rules in a prior rule-making.
- d Word choice correction.

3745-273-62

Tracking universal waste shipments- standards for destination facilities.

- (A) The owner or operator of a destination facility shall keep a record of each shipment of universal waste received at the facility. The record may take the form of a log, invoice, manifest, bill of lading, or other shipping document. The record for each shipment of universal waste received shall include all of the following information:
- (1) The name and address of the universal waste handler, destination facility, or foreign shipper from whom the universal waste was sent;
 - (2) The quantity of each type of universal waste received (e.g., batteries, pesticides, ~~thermostats~~mercury-containing equipment, lamps);
 - (3) The date of receipt of the shipment of universal waste.
- (B) The owner or operator of a destination facility shall retain the records described in paragraph (A) of this rule for at least three years ~~from~~after the date of receipt of a shipment of universal waste.

Effective:

Five Year Review (FYR) Dates: Exempt

Certification

Date

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Rule Amplifies: 3734.12
Prior Effective Dates: 09/02/1997

RSFA Attachment A

Rule 3745-279-42 is amended as follows:		
Location	Change	Reason
(A)	remove "Identification" and add "U.S. EPA identification"	a
	remove "must" and add "shall"	b
	-remove "these requirements" and add "this rule" -after "and" add "shall"	c
(B)	remove "their" and add "the"	d
	after "used oil activity" add "at the facility"	c
(B)(1)	remove "EPA9029 (" [no space, followed by parenthesis] and add "EPA 9029 [" [with a space, followed by bracket]	e, f
	remove "division of hazardous waste management at 614-644-2917); or" and add ' "Division of Materials and Waste Management (DMWM)" at 614/644-2621]. '	f, g, h
(B)(2)	remove the 2 nd sentence that begins with "Call Ohio EPA's..." and add the following new sentence: Send the letter to "Ohio EPA- DMWM, P.O. Box 1049, Columbus, Ohio," 43216-1049.	i
	in last sentence add "all of" before "the following"	j
(B)(2)(a)	remove the ending semicolon and add a period	f
(B)(2)(b)	remove the ending semicolon and add a period	f
(B)(2)(c)	remove the ending semicolon and add a period	f
(B)(2)(d)	remove the ending semicolon and add a period	f
(B)(2)(e)	remove the ending semicolon and add a period	f
(B)(2)(f)	remove the ending "; and" and add a period	f, h

- a This amendment clarifies the language to use the defined term.
- b The change of "must" to "shall" is an LSC requirement.
- c Word choice correction, to clarify the requirement.
- d Word choice correction.

RSFA Attachment A

Rule **3745-279-42** is amended as follows:

Location	Change	Reason
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- e Typo correction.
- f Punctuation correction.
- g The division name, acronym, and phone number are being updated after the agency reorganization.
- h Unnecessary text is removed.
- i Information correction.
- j This amendment adds specificity to the provision.

This rule is submitted for 5-year review upon proposal. A new review date will be assigned.

3745-279-42

Notification by used oil transporters.

- (A) ~~Identification~~ U.S. EPA identification numbers. Used oil transporters who have not previously notified Ohio EPA or U.S. EPA of regulated waste activity ~~must~~ shall comply with ~~these requirements~~ this rule and shall obtain a U.S. EPA identification number.
- (B) Mechanics of notification. A used oil transporter who has not received a U.S. EPA identification number may obtain one by notifying the director of ~~their~~ the used oil activity at the facility by submitting either:
- (1) A completed Ohio EPA form ~~EPA9029~~ (EPA 9029 [to obtain this form, call Ohio EPA's ~~division of hazardous waste management at 614-644-2917~~]; ~~or~~ "Division of Materials and Waste Management (DMWM)" at 614/644-2621].
 - (2) A letter requesting a U.S. EPA identification number. ~~Call Ohio EPA's division of hazardous waste management at 614-644-2917 to determine where to send a letter requesting a U.S. EPA identification number.~~ Send the letter to "Ohio EPA- DMWM, P.O. Box 1049, Columbus, Ohio," 43216-1049. The letter should include all of the following information:
 - (a) Transporter company name;_
 - (b) Mailing address of the transporter;_
 - (c) Name of the owner of the transporter company;_
 - (d) Name and telephone number of the transporter point of contact;_
 - (e) Type of transport activity (i.e., transport only, transport and transfer facility, transfer facility only);_
 - (f) Location of all transfer facilities at which used oil is stored; ~~and~~ .
 - (g) Name and telephone number for a contact at each transfer facility.

[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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RSFA Attachment A

Rule 3745-279-43 is amended as follows:		
Location	Change	Reason
(A)	remove “must” and add “shall”	a
	add “one of the following” before the colon	b
(A)(1)	remove the ending semicolon and add a period	c
(A)(2)	-remove “processing/re-refining” and add “processing or re-refining” -remove “who” and add “that”	d
	remove the ending semicolon and add a period	c
(A)(3)	remove “who” and add “that”	d
	remove the ending “; or” and add a period	d, e
(B)	at beginning, add “U.S.” before “DOT”	f
	[2 times] remove “must” and add “shall”	a
	after “transportation” add “(U.S. DOT)”	g
	add quotation marks around the defined term “hazardous material”	h
(C)(1)	remove “must” and add “shall”	a
(C)(3)	remove “must” and add “shall”	a
(C)(3)(a)	remove “national response center (800-424-8802 or 202-426-2675); and” and add ‘ “National Response Center” at 800/424-8802. ‘	i
(C)(3)(a) [Comment] [new]	add this new bracketed comment: [Comment: The public utilities commission of Ohio, which has adopted 49 CFR 171.15 by reference, also requires notice of such discharge.]	j
(C)(3)(b)	remove “to the director, office of hazardous materials regulations, materials transportation bureau, department of transportation, Washington, DC 20590; and” and add a period	k
(C)(3)(c)	remove “Ohio EPA's division of emergency and remedial response at 800-282-9378” and add ‘ the Ohio EPA “Emergency Response Unit” at 800/282-9378 ‘	m
(C)(4)	remove “must” and add “shall”	a
(C)(5)	remove “must” and add “shall”	a

RSFA Attachment A

Rule 3745-279-43 is amended as follows:		
Location	Change	Reason

- a The change of “must” to “shall” is an LSC requirement.
- b This amendment adds specificity to the provision.
- c Punctuation correction.
- d Word choice correction.
- e Unnecessary text is removed.
- f Add text to properly use and define the acronym.
- g This amendment adds the acronym at the first use of the text that defines it.
- h This punctuation correction (adding quotation marks around defined terms) is made in all hazardous waste rules, as they are amended, at locations of defined terms that are designated as such in the text.
- i This amendment corrects the punctuation needed to maintain the upper case title, and corrects the telephone number and its punctuation (both are LSC requirements).
- j This comment is added to mirror the same information that is provided in other rules at references to the same federal provision (49 CFR 171.15).
- k The address being removed appears in the corresponding federal provision (see 40 CFR 279.43), but the address is incorrect, so the federal error is being removed from the Ohio rule.
- L This amendment makes the use of the upper case consistent with other locations of the same reference.
- m This amendment corrects the name of the party to be notified

The addition of language and a comment to this rule make it different enough from its federal counterpart provision (40 CFR 279.43) to make it subject to 5-year review. However, these changes do not make the Ohio rule more stringent, or less stringent, than its federal counterpart. This rule is submitted for 5-year review upon proposal. A new review date will be assigned.

3745-279-43

Used oil transportation.

(A) Deliveries. A used oil transporter ~~must~~shall deliver all used oil received to one of the following:

- (1) Another used oil transporter, provided that the transporter has obtained a U.S. EPA identification number~~;~~.
- (2) A used oil ~~processing/re-refining~~processing or re-refining facility ~~who~~that has obtained a U.S. EPA identification number~~;~~.
- (3) An off-specification used oil burner facility ~~who~~that has obtained a U.S. EPA identification number~~;~~~~or~~.
- (4) An on-specification used oil burner facility.

(B) U.S. DOT requirements. Used oil transporters ~~must~~shall comply with all applicable requirements under the U.S. department of transportation (U.S. DOT) regulations in 49 CFR Parts 171 to 180. Persons transporting used oil that meets the definition of "hazardous material" in 49 CFR 171.8 ~~must~~shall comply with all applicable regulations in 49 CFR Parts 171 to 180.

(C) Used oil discharges.

- (1) In the event of a discharge of used oil during transportation, the transporter ~~must~~shall take appropriate immediate action to protect human health and the environment (e.g., notify local authorities, dike the discharge area).
- (2) If a discharge of used oil occurs during transportation and an official (state or local government or a federal agency) acting within the scope of official responsibilities determines that immediate removal of the used oil is necessary to protect human health or the environment, that official may authorize the removal of the used oil by transporters who do not have U.S. EPA identification numbers.
- (3) An air, rail, highway, or water transporter who has discharged used oil ~~must~~shall:

- (a) Give notice, if required by 49 CFR 171.15, to the ~~national response center (800 424 8802 or 202 426 2675); and~~ "National Response Center" at 800/424-8802.

[Comment: The public utilities commission of Ohio, which has adopted 49 CFR 171.15 by reference, also requires notice of such discharge.]

- (b) Report in writing as required by 49 CFR 171.16 ~~to the director, office of hazardous materials regulations, materials transportation bureau, department of transportation, Washington, DC 20590; and~~

- (c) Give notice to ~~Ohio EPA's division of emergency and remedial response at 800-282-9378~~ the Ohio EPA "Emergency Response Unit" at 800/282-9378.

- (4) A water transporter who has discharged used oil ~~must~~shall give notice as required by 33 CFR 153.203.

- (5) A transporter ~~must~~shall clean up any used oil discharge that occurs during transportation or take such action as may be required or approved by federal, state, or local officials so that the used oil discharge no longer presents a hazard to human health or the environment.

[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:

Five Year Review (FYR) Dates: 07/01/2015

Certification

Date

Promulgated Under: 119.03
Statutory Authority: 3734.12
Rule Amplifies: 3734.12
Prior Effective Dates: 10/20/1998, 12/07/2004, 09/05/2010

RSFA Attachment A

Rule 3745-279-51 is amended as follows:		
Location	Change	Reason
(A)	remove "Identification" and add "U.S. EPA identification"	a
	remove "must" and add "shall"	b
	-remove "these regulations" and add "this rule" -after "and" add "shall"	c
(B)	remove "their" and add "the"	d
	after "used oil activity" add "at the facility"	e
(B)(1)	remove "EPA9029 (" [no space, followed by parenthesis] and add "EPA 9029 [" [with a space, followed by bracket]	f, g *
	remove "division of hazardous waste management at 614-644-2917); or" and add ' "Division of Materials and Waste Management (DMWM)" at 614/644-2621].'	d, g, h
(B)(2)	remove the 2 nd sentence that begins with "Call Ohio EPA's..." and add the following new sentence: Send the letter to "Ohio EPA- DMWM, P.O. Box 1049, Columbus, Ohio," 43216-1049.	i
	in last sentence add "all of" before "the following"	j
(B)(2)(a)	remove the ending semicolon and add a period	g
(B)(2)(b)	remove the ending semicolon and add a period	g
(B)(2)(c)	remove the ending semicolon and add a period	g
(B)(2)(d)	remove the ending "; and" and add a period	d, g
(B)(2)(e)	remove the ending "; and" and add a period	d, g

- a This amendment clarifies the language to use the defined term.
- b The change of "must" to "shall" is an LSC requirement.
- c Word choice correction, to clarify the requirement.
- d Unnecessary text is removed.
- e Word choice correction.

RSFA Attachment A

Rule **3745-279-51** is amended as follows:

Location	Change	Reason
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- f Typo correction.
- g Punctuation correction.
- h The division name, acronym, and phone number are being updated after the agency reorganization.
- i Information correction.
- j This amendment adds specificity to the provision.
- * This amendment was changed in response to a comment on the Interested Parties draft rule.

This rule is submitted for 5-year review upon proposal. A new review date will be assigned.

3745-279-51

Notification by used oil processors and re-refiners.

- (A) ~~Identification~~ U.S. EPA identification numbers. Used oil processors and re-refiners who have not previously notified Ohio EPA or U.S. EPA of regulated waste activity ~~must~~ shall comply with ~~these requirements~~ this rule and shall obtain a U.S. EPA identification number.
- (B) Mechanics of notification. Used oil processors or re-refiners who have not received a U.S. EPA identification number may obtain one by notifying the director of ~~their~~ the used oil activity at the facility by submitting either:
- (1) A completed Ohio EPA form ~~EPA9029~~ (EPA 9029 [to obtain this form, call Ohio EPA's ~~division of hazardous waste management at 614-644-2917~~; ~~or~~ "Division of Materials and Waste Management (DMWM)" at 614/644-2621].
 - (2) A letter requesting a U.S. EPA identification number. ~~Call Ohio EPA's division of hazardous waste management at 614-644-2917 to determine where to send a letter requesting a U.S. EPA identification number.~~ Send the letter to "Ohio EPA- DMWM, P.O. Box 1049, Columbus, Ohio," 43216-1049. The letter should include all of the following information:
 - (a) Processor or re-refiner company name; ;
 - (b) Address of the processor or re-refiner facility (actual location); ;
 - (c) Mailing address of the processor or re-refiner; ;
 - (d) Name of the owner of the processor or re-refiner company; ~~and~~ ;
 - (e) Name and telephone number of the processor or re-refiner point of contact; ~~and~~ ;
 - (f) Type of used oil activity (i.e., process only, process and re-refine).

[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:

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RSFA Attachment A

Rule 3745-279-52 is amended as follows:		
Location	Change	Reason
(A)	remove "must" and add "shall"	a
(A)(1)	remove "must" and add "shall"	a
(A)(2)	remove "must" and add "shall"	a
(A)(2)(a)	remove the ending semicolon and add a period	b
(A)(2)(b)	remove the ending semicolon and add a period	b
(A)(2)(c)	after "spill control equipment" add a comma	b
	remove the ending "; and" and add a period	b, c
(A)(3)	remove "must" and add "shall"	a
(A)(4)(a)	remove "must" and add "shall"	a
(A)(4)(b)	remove "must" and add "shall"	a
(A)(5)	remove "must" and add "shall"	a
(A)(6)(a)	remove "must" and add "shall"	a
	remove "these" and add "the following"	d
(A)(6)(a)(i)	remove the ending semicolon and add a period	b
(A)(6)(a)(ii)	[2 times] remove "agreements" and add "arrangements"	e
	remove the ending semicolon and add a period	b
(A)(6)(a)(iii)	remove "Agreements" and add "Arrangements"	e
	remove the ending "; and" and add a period	b, c
(A)(6)(b)	remove "must" and add "shall"	a
(B)	remove "must" and add "shall"	a
(B)(1)(a)	[2 times] remove "must" and add "shall"	a
(B)(1)(b)	remove "provisions of the plan must be carried out" and add "contingency plan shall be implemented"	a, c, d, e, f
(B)(2)(a)	[2 times] remove "must" and add "shall"	a
(B)(2)(b)	-remove "provisions that are" -remove "the requirements of"	c

RSFA Attachment A

Rule 3745-279-52 is amended as follows:		
Location	Change	Reason
(B)(2)(c)	after "The" add "contingency" before "plan"	f
	remove "must" and add "shall"	a
	remove "agreed to by" and add "with"	e
(B)(2)(d)	after "The" add "contingency" before "plan"	f
	[4 times] remove "must" and add "shall"	a
	remove "phone numbers (office and home)" and add "home or cellular telephone numbers"	g
(B)(2)(e)	[2 times] add "contingency" before "plan"	f
	[3 times] remove "must" and add "shall"	a
	-remove "its" and add "the" -after "capabilities" add "of each item"	d
(B)(2)(f)	-in 1 st sentence add "contingency" before "plan" -in 2 nd sentence add "evacuation" before "plan"	f
	[2 times] remove "must" and add "shall"	a
	remove "signal(s)" and add "signals"	d
(B)(3)	after "revisions to the" add "contingency" before "plan"	f
	remove "must" and add "shall"	a
	add "both" before the colon	h
(B)(3)(a)	remove the ending "; and" and add a period	b, c
(B)(3)(b)	remove "state and"	i
(B)(4)	remove "must" and add "shall"	a
(B)(4)(a)	remove the ending semicolon and add a period	b
(B)(4)(b)	after "the" add "contingency" before "plan"	f
	remove the ending semicolon and add a period	b
(B)(4)(c)	remove the ending semicolon and add a period	b
(B)(4)(d)	remove the ending "; or" and add a period	b, c
(B)(5)	[3 times] remove "must" and add "shall"	a
	remove "carry out" and add "implement"	d

RSFA Attachment A

Rule 3745-279-52 is amended as follows:		
Location	Change	Reason
(B)(6)(a)	remove “must” and add “shall”	a
(B)(6)(a)(i)	remove the ending “; and” and add a period	b, c
(B)(6)(a)(ii)	after “Notify” add ‘ the Ohio EPA “Emergency Response Unit” at 800/282-9378, and ‘	e
	after “appropriate” remove “state or”	c
	remove “if their help is needed”	e
(B)(6)(b)	remove “must” and add “shall”	a
	remove “He” and add “The emergency coordinator”	d
(B)(6)(c)	remove “Concurrently” and add “In addition”	e
	[2 times] remove “must” and add “shall”	a
(B)(6)(d)	-after “health” remove the comma -after “environment” remove the comma	b *
	remove “, he must report his findings as follows” [keep the colon]	c
(B)(6)(d)(i)	remove “his assessment indicated” and add “the emergency coordinator’s determination indicates”	d
	remove “he must” and add “the emergency coordinator shall”	a, d
	after “authorities” remove “. He must” and add “and shall”	c, d
	remove the ending “; and” and add a period	b, c
(B)(6)(d)(ii)	remove the existing text and add this text: The emergency coordinator shall immediately notify the Ohio EPA “Emergency Response Unit” at 800/282-9378, and either the “U.S. EPA Region 5 Response Center” at 312/353-2318 or the “National Response Center” at 800/424-8802. The notification report shall include all of the following:	a, c, d, h, j
(B)(6)(d)(ii)(a)	remove “reporter;” and add “the emergency coordinator who is making the notification.”	b, c, d
(B)(6)(d)(ii)(b)	remove the ending semicolon and add a period	b
(B)(6)(d)(ii)(c)	remove the ending semicolon and add a period	b

RSFA Attachment A

Rule 3745-279-52 is amended as follows:		
Location	Change	Reason
(B)(6)(d)(ii)(d)	remove “material(s)” and add “materials”	d
	remove the ending semicolon and add a period	b
(B)(6)(d)(ii)(e)	remove the ending “; and” and add a period	b, c
(B)(6)(d)(ii)(f)	-after “health” remove the comma -after “environment” remove the comma	b
(B)(6)(e)	[2 times] remove “must” and add “shall”	a
(B)(6)(f)	remove “must” and add “shall”	a
(B)(6)(g)	remove “must” and add “shall”	a
(B)(6)(h)	remove “must” and add “shall”	a
	after “that” remove the comma	b
	remove “area(s)” and add “areas”	d
(B)(6)(h)(i)	remove the ending “; and” and add a period	b, c
(B)(6)(h)(iii)	remove “must” and add “shall”	a
	after “director” remove the comma	b
	remove “area(s)” and add “areas”	d
(B)(6)(i)	[2 times] remove “must” and add “shall”	a
	after “date” add a comma	b
	-after “requires” remove “implementing” -after “contingency plan” add “to be implemented”	k
	remove “he must” and add “the owner or operator shall”	a, d
	add “all of the following” before the colon	h
(B)(6)(i)(i)	remove the ending semicolon and add a period	b
(B)(6)(i)(ii)	remove the ending semicolon and add a period	b
(B)(6)(i)(iii)	remove the ending semicolon and add a period	b
(B)(6)(i)(iv)	remove “material(s)” and add “materials”	d
	remove the ending semicolon and add a period	b
(B)(6)(i)(v)	remove the ending semicolon and add a period	b

RSFA Attachment A

Rule 3745-279-52 is amended as follows:		
Location	Change	Reason
(B)(6)(i)(vi)	remove the ending “; and” and add a period	b, c

- a The change of “must” to “shall” is an LSC requirement.
- b Punctuation correction.
- c Unnecessary text is removed.
- d Word choice correction.
- e Word choice correction. This amendment makes the phrase consistent with other locations of the similar phrase.
- f Clarification. This rule references several “plans” so text is being added as appropriate to differentiate among the different plans.
- g The location of the telephone being referenced is being removed, since now most people and businesses use more options than office telephones.
- h This amendment adds specificity to the provision.
- i The contingency plan need not be submitted to state emergency response teams, i.e., Ohio EPA’s Emergency Response Unit. Ohio EPA has access to the contingency plan via the facility’s permit and via the copy that is submitted to the local response entities, so duplicating this submittal is not necessary.
- j The new text makes the following additional corrections:
 - The reference to the organizational structure within Ohio EPA is updated.
 - Punctuation is corrected in the phone numbers
 - Punctuation is corrected by the use of quotation marks to maintain the upper case (LSC requirement).
 - Specific information is provided regarding the required notifications of the several entities and their phone numbers.
- k This amendment slightly re-writes the sentence to put it into the same structure (verb form) as the rest of the rule.

RSFA Attachment A

Rule **3745-279-52** is amended as follows:

Location	Change	Reason
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- * This amendment is made in response to a comment on the Interested Parties draft rule.

The language of this rule is different enough from its federal counterpart provision (40 CFR 279.52) to make it subject to 5-year review. However, these changes do not make the Ohio rule more stringent, or less stringent, than its federal counterpart. This rule is submitted for 5-year review upon proposal. A new review date will be assigned.

3745-279-52

General facility standards for used oil processors and re-refiners.

(A) Preparedness and prevention. Owners and operators of used oil processing and re-refining facilities ~~must~~shall comply with all of the following requirements:

(1) Maintenance and operation of facility. Facilities ~~must~~shall be maintained and operated to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of used oil to air, soil, or surface water which could threaten human health or the environment.

(2) Required equipment. All facilities ~~must~~shall be equipped with the following, unless none of the hazards posed by used oil handled at the facility could require a particular kind of equipment specified in paragraphs (A)(2)(a) to (A)(2)(d) of this rule:

(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 state or local emergency response teams;

(c) Portable fire extinguishers, fire control equipment (including special extinguishing equipment, such as that using foam, inert gas, or dry chemicals), spill control equipment, and decontamination equipment; ~~and~~.

(d) Water at adequate volume and pressure to supply water hose streams, or foam producing equipment, or automatic sprinklers, or water spray systems.

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

(4) Access to communications or alarm system.

(a) Whenever used oil is being poured, mixed, spread, or otherwise handled, all personnel involved in the operation ~~must~~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 in paragraph (A)(2) of this rule.

- (b) If there is ever just one employee on the premises while the facility is operating, the employee ~~must~~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 in paragraph (A)(2) of this rule.
- (5) Required aisle space. The owner or operator ~~must~~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 aisle space is not needed for any of these purposes.
- (6) Arrangements with local authorities.
- (a) The owner or operator ~~must~~shall attempt to make the following arrangements, as appropriate for the type of used oil handled at the facility and the potential need for the services of ~~these~~the following organizations:
- (i) Arrangements to familiarize police, fire departments, and emergency response teams with the layout of the facility, properties of used oil handled at the facility and associated hazards, places where facility personnel would normally be working, entrances to roads inside the facility, and possible evacuation routes~~;~~;
- (ii) Where more than one police and fire department might 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~~;~~;
- (iii) ~~Agreements~~Arrangements with state emergency response teams, emergency response contractors, and equipment suppliers~~;~~; ~~and~~.

- (iv) Arrangements to familiarize local hospitals with the properties of used oil handled at the facility and the types of injuries or illnesses which could result from fires, explosions, or releases at the facility.
 - (b) Where state or local authorities decline to enter into such arrangements, the owner or operator ~~must~~shall document the refusal in the operating record.
- (B) Contingency plan and emergency procedures. Owners and operators of used oil processors and re-refiners facilities ~~must~~shall comply with all of the following requirements:
- (1) Purpose and implementation of contingency plan.
 - (a) Each owner or operator ~~must~~shall have a contingency plan for the facility. The contingency plan ~~must~~shall be designed to minimize hazards to human health or the environment from fires, explosions, or any unplanned sudden or non-sudden release of used oil to air, soil, or surface water.
 - (b) ~~The provisions of the plan must be carried out~~contingency plan shall be implemented immediately whenever there is a fire, explosion, or release of used oil which could threaten human health or the environment.
 - (2) Content of contingency plan.
 - (a) The contingency plan ~~must~~shall describe the actions facility personnel ~~must~~shall take to comply with paragraphs (B)(1) and (B)(6) of this rule in response to fires, explosions, or any unplanned sudden or non-sudden release of used oil to air, soil, or surface water at the facility.
 - (b) If the owner or operator has already prepared a spill prevention, control, and countermeasures (SPCC) 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 used oil management ~~provisions that are~~ sufficient to comply with ~~the requirements of~~ Chapter 3745-279 of the Administrative Code.

- (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 paragraph (A)(6) of this rule.
 - (d) The contingency plan ~~must~~shall list names, addresses, and ~~phone numbers~~ (office and home) home or cellular telephone numbers of all persons qualified to act as emergency coordinator [see paragraph (B)(5) of this rule], and this list ~~must~~shall be kept up to date. Where more than one person is listed, one ~~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.
 - (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~~the capabilities of each item.
 - (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 used oil or fires).
- (3) Copies of contingency plan. A copy of the contingency plan and all revisions to the contingency plan ~~must~~shall be both:
- (a) Maintained at the facility; ~~and~~.
 - (b) Submitted to all local police departments, fire departments, hospitals, and ~~state and~~ local emergency response teams that may be called upon to provide emergency services.
- (4) Amendment of contingency plan. The contingency plan ~~must~~shall be reviewed, and immediately amended, if necessary, whenever:
- (a) Applicable rules are revised; ~~and~~.

- (b) The contingency plan fails in an emergency~~;~~.
 - (c) 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 used oil, or changes the response necessary in an emergency~~;~~.
 - (d) The list of emergency coordinators changes~~;~~~~or~~.
 - (e) The list of emergency equipment changes.
- (5) Emergency coordinator. At all times, there ~~must~~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 emergency response measures. This emergency coordinator ~~must~~shall be thoroughly familiar with all aspects of the facility's contingency plan, all operations and activities at the facility, the location and characteristic of used oil handled, the location of all records within the facility, and facility layout. In addition, this person ~~must~~shall have the authority to commit the resources needed to ~~carry out~~implement the contingency plan.

[Comment: The emergency coordinator's responsibilities are more fully spelled out in paragraph (B)(6) of this rule. Applicable responsibilities for the emergency coordinator vary, depending on factors such as type and variety of used oil handled by the facility, and type and complexity of the facility.]

- (6) Emergency procedures.
- (a) Whenever there is an imminent or actual emergency situation, the emergency coordinator (or the designee when the emergency coordinator is on call) ~~must~~shall immediately:
 - (i) Activate internal facility alarms or communication systems, where applicable, to notify all facility personnel~~;~~~~and~~.
 - (ii) Notify the Ohio EPA "Emergency Response Unit" at 800/282-9378, ~~and~~ appropriate state or local agencies with designated response roles ~~if their help is needed.~~

- (b) Whenever there is a release, fire, or explosion, the emergency coordinator ~~must~~shall immediately identify the character, exact source, amount, and areal extent of any released materials. ~~He~~The emergency coordinator may do this by observation or review of facility records or manifests and, if necessary, by chemical analyses.
- (c) ~~Concurrently~~In addition, the emergency coordinator ~~must~~shall assess possible hazards to human health or the environment that may result from the release, fire, or explosion. This assessment ~~must~~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-offs from water or surface water run-offs 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; ~~he must report his findings as follows:~~
- (i) If ~~his assessment indicated~~the emergency coordinator's determination indicates that evacuation of local areas may be advisable, ~~he must~~the emergency coordinator shall immediately notify appropriate local authorities. ~~He must~~and shall be available to help appropriate officials decide whether local areas should be evacuated; ~~and~~.
- (ii) ~~He must immediately notify Ohio EPA's division of emergency and remedial response at 800-282-9378, and either the government official designated as the on scene coordinator for the geographical area (in the applicable regional contingency plan under 40 CFR Part 300) or the national response center (using the twenty four hour toll free number 800-424-8802). The report must include:~~The emergency coordinator shall immediately report the incident to the Ohio EPA "Emergency Response Unit" at 800/282-9378, and either the "U.S. EPA Region 5 Response Center" at 312/353-2318 or the "National Response Center" at 800/424-8802. The report shall include all of the following:
- (a) Name and telephone number of ~~reporter;~~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 ~~material(s)~~materials involved, to the extent known;
 - (e) The extent of injuries, if any;~~and~~
 - (f) The possible hazards to human health; or the environment; outside the facility.
- (e) During an emergency, the emergency coordinator ~~must~~shall take all reasonable measures necessary to ensure that fires, explosions, and releases do not occur, recur, or spread to other used oil or hazardous waste at the facility. These measures ~~must~~shall include, where applicable, stopping processes and operation, collecting and containing released used oil, and removing or isolating containers.
- (f) If the facility stops operation in response to a fire, explosion, or release, the emergency coordinator ~~must~~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 ~~must~~shall provide for recycling, storing, or disposing of recovered used oil, contaminated soil or surface water, or any other material that results from a release, fire, or explosion at the facility.
- (h) The emergency coordinator ~~must~~shall ensure that; in the affected ~~area(s)~~areas of the facility:
- (i) No waste or used oil that may be incompatible with the released material is recycled, treated, stored, or disposed of until cleanup procedures are completed;~~and~~
 - (ii) All emergency equipment listed in the contingency plan is cleaned and fit for its intended use before operations are resumed.

- (iii) The owner or operator ~~must~~shall notify the director, and appropriate state and local authorities that the facility is in compliance with paragraphs (B)(6)(h)(i) and (B)(6)(h)(ii) of this rule before operations are resumed in the affected ~~area(s)~~areas of the facility.

- (i) The owner or operator ~~must~~shall note in the operating record the time, date, and details of any incident that requires ~~implementing~~ the contingency plan to be implemented. Within fifteen days after the incident, ~~he must~~the owner or operator shall submit a written report on the incident to the director. The report ~~must~~shall include all of the following:
 - (i) Name, address, and telephone number of the owner or operator;
 - (ii) Name, address, and telephone number of the facility;
 - (iii) Date, time, and type of incident (e.g., fire, explosion);
 - (iv) Name and quantity of ~~material(s)~~materials involved;
 - (v) The extent of injuries, if any;
 - (vi) An assessment of actual or potential hazards to human health or the environment, where this is applicable; ~~and~~;
 - (vii) Estimated quantity and disposition of recovered material that resulted from the incident.

Effective:

Five Year Review (FYR) Dates: 07/01/2015

Certification

Date

Promulgated Under: 119.03
Statutory Authority: 3734.12
Rule Amplifies: 3734.12
Prior Effective Dates: 10/20/1998, 12/07/2000, 09/05/2010

RSFA Attachment A

Rule 3745-279-62 is amended as follows:		
Location	Change	Reason
(A)	remove "Identification" and add "U.S. EPA identification"	a
	remove "must" and add "shall"	b
	-remove "these requirements" and add "this rule" -after "and" add "shall"	c
(B)	remove "their" and add "the"	c
	after "activity" add "at the facility"	c
(B)(1)	remove "EPA9029 (" [no space, followed by parenthesis] and add "EPA 9029 [" [with a space, followed by bracket]	d, e
	remove "division of hazardous waste management at 614-644-2917); or" and add ' "Division of Materials and Waste Management (DMWM)" at 614/644-2621]. '	e, f, g
(B)(2)	remove the 2 nd sentence that begins with "Call Ohio EPA's..." and add the following new sentence: Send the letter to "Ohio EPA- DMWM, P.O. Box 1049, Columbus, Ohio," 43216-1049.	h
	in last sentence add "all of" before "the following"	i
(B)(2)(a)	remove the ending semicolon and add a period	e
(B)(2)(b)	remove the ending semicolon and add a period	e
(B)(2)(c)	remove the ending semicolon and add a period	e
(B)(2)(d)	remove the ending semicolon and add a period	e
(B)(2)(e)	remove the ending "; and" and add a period	e, f

- a This amendment clarifies the language to use the defined term.
- b The change of "must" to "shall" is an LSC requirement.
- c Word choice correction, to clarify the requirement.
- d Typo correction.
- e Punctuation correction.

RSFA Attachment A

Rule **3745-279-62** is amended as follows:

Location	Change	Reason
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- f Unnecessary text is removed.
- g The division name, acronym, and phone number are being updated after the agency reorganization.
- h Information correction.
- i This amendment adds specificity to the provision.

This rule is submitted for 5-year review upon proposal. A new review date will be assigned.

3745-279-62

Notification by used oil burners.

- (A) ~~Identification~~ U.S. EPA identification numbers. Used oil burners who have not previously notified Ohio EPA or U.S. EPA of regulated waste activity ~~must~~ shall comply with ~~these requirements~~ this rule and shall obtain a U.S. EPA identification number.
- (B) Mechanics of notification. Used oil burners who have not received a U.S. EPA identification number may obtain one by notifying the director of ~~their~~ the used oil activity at the facility by submitting either:
- (1) A completed Ohio EPA form ~~EPA9029~~ (EPA 9029 [to obtain this form, call Ohio EPA's ~~division of hazardous waste management at 614-644-2917~~; ~~or~~ "Division of Materials and Waste Management (DMWM)" at 614/644-2621.]
 - (2) A letter requesting a U.S. EPA identification number. ~~Call Ohio EPA's division of hazardous waste management at 614-644-2917 to determine where to send a letter requesting a U.S. EPA identification number.~~ Send the letter to "Ohio EPA- DMWM, P.O. Box 1049, Columbus, Ohio," 43216-1049. The letter should include all of the following information:
 - (a) Burner company name; ;
 - (b) Address of the burner facility (actual location); ;
 - (c) Mailing address of the burner; ;
 - (d) Name of the owner of the burner company; ;
 - (e) Name and telephone number of the burner point of contact; ~~and~~ ;
 - (f) Type of used oil activity.

[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:

Five Year Review (FYR) Dates: 07/01/2015

Certification

Date

Promulgated Under: 119.03
Statutory Authority: 3734.12
Rule Amplifies: 3734.12
Prior Effective Dates: 10/20/1998, 03/13/2002, 12/07/2004, 09/05/2010

RSFA Attachment A

Rule 3745-279-73 is amended as follows:		
Location	Change	Reason
(A)	remove "Identification" and add "U.S. EPA identification"	a
	remove "the requirements of"	b
	remove "must" and add "shall"	c
	-remove "these requirements" and add "this rule" -after "and" add "shall"	d
(B)	remove "their" and add "the marketer's"	e
(B)(1)	remove "EPA9029 (" [no space, followed by parenthesis] and add "EPA 9029 [" [with a space, followed by bracket]	f, g
	remove "division of hazardous waste management at 614-644-2917); or" and add ' "Division of Materials and Waste Management (DMWM)" at 614/644-2621]. '	b, g, h
(B)(2)	remove the 2 nd sentence that begins with "Call Ohio EPA's..." and add the following new sentence: Send the letter to "Ohio EPA- DMWM, P.O. Box 1049, Columbus, Ohio," 43216-1049.	i
	in last sentence after "include" add "all of" before "the following"	j
(B)(2)(a)	remove the ending semicolon and add a period	g
(B)(2)(b)	remove the ending semicolon and add a period	g
(B)(2)(c)	remove the ending semicolon and add a period	g
(B)(2)(d)	remove the ending "; and" and add a period	b, g

- a This amendment clarifies the language to use the defined term.
- b Unnecessary language is removed.
- c The change of "must" to "shall" is an LSC requirement.
- d Word choice correction, to clarify the requirement.
- e Word choice correction.

RSFA Attachment A

Rule **3745-279-73** is amended as follows:

Location	Change	Reason
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- f Typo correction.
- g Punctuation correction.
- h The division name, acronym, and phone number are being updated after the agency reorganization.
- i Information correction.
- j This amendment adds specificity to the provision.

This rule is submitted for 5-year review upon proposal. A new review date will be assigned.

3745-279-73

Notification by a used oil fuel marketer.

- (A) ~~Identification~~ U.S. EPA identification numbers. Used oil fuel marketers subject to ~~the requirements of rules 3745-279-70 to 3745-279-75 of the Administrative Code who have not previously notified Ohio EPA or U.S. EPA of regulated waste activity~~ must~~shall~~ comply with ~~these requirements~~this rule and shall obtain a U.S. EPA identification number.
- (B) Mechanics of notification. A marketer who has not received a U.S. EPA identification number may obtain one by notifying the director of ~~their~~the marketer's used oil activity by submitting either:
- (1) A completed Ohio EPA form ~~EPA9029~~ (EPA 9029 [to obtain this form, call Ohio EPA's ~~division of hazardous waste management at 614-644-2917~~; ~~or~~ "Division of Materials and Waste Management (DMWM)" at 614/644-2621].
 - (2) A letter requesting a U.S. EPA identification number. ~~Call Ohio EPA's division of hazardous waste management at 614-644-2917 to determine where to send a letter requesting a U.S. EPA identification number.~~ Send the letter to "Ohio EPA- DMWM, P.O. Box 1049, Columbus, Ohio," 43216-1049. The letter should include all of the following information:
 - (a) Marketer company name; and
 - (b) Mailing address of the marketer; and
 - (c) Name of the owner of the marketer; and
 - (d) Name and telephone number of the marketer point of contact; ~~and~~
 - (e) Type of used oil activity (e.g., generator directing shipments of off-specification used oil to a burner).

[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:

Five Year Review (FYR) Dates: 07/01/2015

Certification

Date

Promulgated Under: 119.03
Statutory Authority: 3734.12
Rule Amplifies: 3734.12
Prior Effective Dates: 10/20/1998, 03/13/2002, 12/07/2004, 09/05/2010

**BEFORE THE
OHIO ENVIRONMENTAL PROTECTION AGENCY**

**Public Notice of Proposed Rulemaking
Governing Hazardous Waste Management**

Notice is hereby given that the Director of Environmental Protection, under the authority of Ohio Revised Code (ORC) Sections 3734.05 and 3734.12 and in accordance with ORC Chapter 119, proposes to originally file the following rules of the Ohio Administrative Code, commonly referred to as Hazardous Waste Management "Set L":

<u>Rule Number</u>	<u>Rule Title * this is the amended title ** is a no-change submittal</u>
3745-50-10	Definitions and computation of time
3745-50-11	Incorporated by reference
3745-50-20	Petitions to amend Chapter 3745-273 of the Administrative Code to include additional hazardous wastes
3745-50-21	Draft permits
3745-50-23	Variances from classification as waste
3745-50-29 rescind	Inspection of public records
3745-50-30 rescind	Trade secrets- request for confidentiality
3745-50-30 new	Trade secrets- confidentiality of information *
3745-50-36	Annual hazardous waste permit fees
3745-50-38	Contents of the "Siting Criteria Document"
3745-50-40	Submittal of hazardous waste permit applications
3745-50-42	Signatories to permit applications and reports
3745-50-44	Contents of "Part B" of the permit application
3745-50-45	Special inclusions and exclusions for hazardous waste permits
3745-50-50	Schedules of compliance
3745-50-51	Permit modifications
3745-50-52	Transfer of permits
3745-50-57	Emergency permits
3745-50-62	Trial burn
3745-50-66	Permits for boilers and industrial furnaces burning hazardous waste
3745-50-235	Options for incinerators, cement kilns, lightweight aggregate kilns, solid fuel boilers, liquid fuel boilers, and hydrochloric acid production furnaces to minimize emissions from startup, shutdown, and malfunction events *
3745-51-04	Exclusions
3745-51-05	Special requirements for hazardous waste generated by conditionally exempt small quantity generators
3745-51-06	Requirements for recyclable materials

<u>Rule Number</u>	<u>Rule Title * this is the amended title ** is a no-change submittal</u>
3745-51-08	PCB wastes regulated under the Toxic Substances Control Act *
3745-51-10	Criteria for identifying the characteristics of hazardous waste
3745-51-11	Criteria for listing hazardous waste
3745-51-20	Characteristics of hazardous waste- general
3745-51-21	Characteristic of ignitability
3745-51-22	Characteristic of corrosivity
3745-51-24	Toxicity characteristic
3745-51-33	Discarded commercial chemical products, off-specification species, container residues, and spill residues thereof
3745-51-35	Deletion of certain EPA hazardous waste numbers following equipment cleaning and replacement
3745-51-38 rescind	Comparable/syngas fuel exclusion
3745-51-100 new	Financial assurance for seventy-two hour recyclers
3745-52-21	Manifest tracking numbers, manifest printing, and obtaining manifests
3745-52-30	Packaging
3745-52-34	Accumulation time of hazardous waste
3745-52-200	Definitions- university labs *
3745-52-201	Applicability- university labs *
3745-52-206	Labeling and management standards for containers of unwanted material in the laboratory
3745-52-212	Making the hazardous waste determination at an on-site interim or permitted treatment, storage, or disposal facility
3745-52-214	Laboratory management plan
3745-53-22	Recordkeeping- transporters *
3745-53-30	Immediate action
3745-53-31	Discharge cleanup *
3745-54-01	Purpose, scope, and applicability of Chapters 3745-54 to 3745-57 and 3745-205 of the Administrative Code
3745-54-13	General waste analysis
3745-54-15	General inspection requirements
3745-54-18	Location standards
3745-54-37	Arrangements with local authorities *
3745-54-52	Content of contingency plan
3745-54-53	Copies of contingency plan
3745-54-54	Amendment of contingency plan
3745-54-56	Emergency procedures
3745-54-70	Applicability- manifest system, recordkeeping, and reporting
3745-54-73	Operating record

<u>Rule Number</u>	<u>Rule Title * this is the amended title ** is a no-change submittal</u>
3745-54-76	Unmanifested waste report
3745-55-18	Post-closure plan and amendment of post-closure plan *
3745-55-43	Financial assurance for facility closure
3745-55-96	Response to leaks or spills and disposition of leaking or unfit for use tank systems
3745-56-27	Emergency repairs and contingency plans- surface impoundments *
3745-56-59	Special requirements for hazardous wastes F020, F021, F022, F023, F026, and F027- waste piles *
3745-56-83	Special requirements for hazardous wastes F020, F021, F022, F023, F026, and F027- land treatment *
3745-57-17	Special requirements for hazardous wastes F020, F021, F022, F023, F026, and F027- landfills *
3745-57-90	Applicability- miscellaneous units *
3745-65-01	Purpose, scope, and applicability of Chapters 3745-65 to 3745-69 and 3745-256 of the Administrative Code
3745-65-13	General waste analysis
3745-65-15	General inspection requirements
3745-65-37	Arrangements with local authorities
3745-65-52	Content of contingency plan
3745-65-53	Copies of contingency plan
3745-65-56	Emergency procedures
3745-65-70	Applicability- manifest system, recordkeeping, and reporting
3745-65-73	Operating record
3745-65-76	Unmanifested waste report
3745-66-41	Definitions- financial requirements *
3745-66-93	Containment and detection of releases- tanks *
3745-66-95	Inspections- tank systems *
3745-66-96	Response to leaks or spills and disposition of leaking or unfit for use tank systems
3745-69-40	Applicability- drip pads *
3745-256-100	Applicability- containment buildings *
3745-256-101	Design and operating standards for containment buildings
3745-266-23	Standards applicable to users of materials that are used in a manner that constitutes disposal
3745-266-100	Applicability- boilers and industrial furnaces
3745-266-102	Permit standards for burners
3745-266-104	Standards to control organic emissions
3745-266-105	Standards to control particulate matter

<u>Rule Number</u>	<u>Rule Title * this is the amended title ** is a no-change submittal</u>
3745-266-106	Standards to control metals emissions
3745-266-107	Standards to control hydrogen chloride and chlorine gas emissions
3745-266-108	Small quantity on-site burner exemption
3745-266-109	Low risk waste exemption
3745-266-111	Standards for direct transfer
3745-266-200 **	Applicability- military munitions
3745-266-201	Definitions- military munitions *
3745-266-202	Definition of waste for purposes of military munitions
3745-266-203	Standards applicable to the transportation of waste military munitions
3745-266-205	Standards applicable to the storage of waste military munitions
3745-266-210	Definitions- conditional exemption for LLMW storage and disposal *
3745-266-260	LLMW storage unit closure
3745-270-38	Waste specific prohibitions- newly identified organic toxicity characteristic wastes and newly listed coke by-product and chlorotoluene production wastes
3745-270-40	Applicability- treatment standards *
3745-270-48	Universal treatment standards
3745-273-05	Applicability- management standards for universal waste-lamps *
3745-273-09	Definitions- management standards for universal waste *
3745-273-39	Tracking universal waste shipments- standards for large quantity handlers of universal waste
3745-273-62	Tracking universal waste shipments- standards for destination facilities
3745-279-42	Notification by used oil transporters
3745-279-43	Used oil transportation
3745-279-51	Notification by used oil processors and re-refiners
3745-279-52	General facility standards for used oil processors and re-refiners
3745-279-62	Notification by used oil burners
3745-279-73	Notification by a used oil fuel marketer

One of the reasons Ohio EPA amends the hazardous waste management rules to make the state rules equivalent to their recently amended federal counterpart provisions, as published in the Federal Register (FR). The following is a list of the final federal RCRA Subtitle C (hazardous waste) FRs that are addressed in this rulemaking:

FR title or subject in Set L	FR date, location
Comparable Fuels: - Expansion of comparable fuels (superseded)	12/19/2008, 73 FR 77954
- Withdrawal of expansion of comparable fuels (superseded)	06/15/2010, 75 FR 33712
- Response to court vacatur of comparable fuels and gasification	04/08/2015, 80 FR 18777
Removal of saccharin and its salts from the lists of hazardous waste constituents and hazardous wastes (U202)	12/17/2010, 75 FR 78918
Technical corrections; unwanted material at labs owned by colleges and universities (Subpart K corrections)	12/20/2010, 75 FR 79304
Land Disposal Restrictions- revision of the treatment standards for carbamate wastes	06/13/2011, 76 FR 34147
Guidelines establishing test procedures for the analysis of pollutants under the Clean Water Act; analysis and sampling procedures	05/18/2012, 77 FR 29758
Conditional exclusion for solvent-contaminated wipes	07/31/2013, 78 FR 46447
Conditional exclusion for carbon dioxide streams in geologic sequestration activities (carbon sequestration, RCRA portions)	01/03/2014, 79 FR 358

The purpose of this rulemaking is to address the above-listed federal rule amendments in similar Ohio rule amendments so that the Ohio hazardous waste program is equivalent to these published federal amendments. In addition, several of these proposed Ohio rules are amended to address cross-referencing requirements within rules, make minor stylistic changes, to correct typographical errors and rule structure errors (indenting, spacing). Several of these rules change the current annual reporting requirement to a biennial reporting requirement, consistent with Senate Bill 294 (129th General Assembly, Senator Schaffer sponsor), and consistent with the federal counterpart regulations. This proposal includes corrections and clarifications that are not directly included in the federal hazardous waste rules, but which are necessary to the Ohio rules to maintain the internal consistency (in wording, references, format) of the Ohio hazardous waste management program. An amended rule and a new rule contain state-initiated text designed to clarify requirements regarding recycled materials. Many of these rules were also reviewed and amended pursuant to ORC sections 106.03 and 106.031, which require Ohio EPA to review certain rules every five years.

The public comment period will run until August 4, 2015. A public hearing on this proposed rulemaking will be held to consider public comments in accordance with ORC section 119.03. This public hearing will be held on August 4, 2015 at 10:30 at Ohio EPA, Lazarus Government Center, 50

W. Town Street, Suite 700, Columbus, Ohio.

To facilitate the scheduling of verbal presentations, persons intending to give testimony at the hearing should notify the Ohio EPA Public Interest Center, P.O. Box 1049, Columbus, Ohio 43216-1049, (614) 644-2160. Prior registration will ensure that registrants are heard ahead of those individuals who register at the hearing. Verbal testimony may be limited to five minutes, depending on the number of persons testifying. All interested persons are entitled to attend or be represented and to present verbal and/or written comments concerning the proposed rulemaking.

Written testimony should be sent to the attention of Dan Harris at Ohio EPA, Division of Materials and Waste Management, P.O. Box 1049, Columbus Ohio 43216-1049. Written comments may also be submitted to the Hearing Officer at the public hearing. Written testimony will receive the same consideration as verbal testimony. All testimony received at the hearing or by close of business on August 4, 2015, will be considered by Ohio EPA prior to final action on this rulemaking proposal. Written comments submitted after this date may be considered as time and circumstances permit.

The proposed rules are accessible on DMWM hazardous waste rules web page at <http://www.epa.state.oh.us/dmwm/dmwmrules>, at the "proposed rules" tab. Questions regarding proposed rules Set L should be directed to Dan Harris at the Division of Materials and Waste Management at (614) 728-5377.



Division of Materials and Waste Management Response to Comments

Agency Contact for Hazardous Waste Rules Set L- IP Comments

Division Contact: Kit Arthur, 614/644-2932, Katherine.arthur@epa.ohio.gov

Ohio EPA held a 30-day comment period for interested parties (IP) beginning 12/29/2014 regarding draft hazardous waste management rules Set L, which contained 114 draft rules. This document summarizes the comments and questions received during the comment period, which ended **1/28/2015**.

Ohio EPA reviewed and considered all comments received during the IP comment period, which included 3 letters and 1 telephone call. By law, Ohio EPA has authority to consider specific issues related to protection of the environment and public health.

In an effort to help you review this document, the questions are grouped by topic and organized in a consistent format. The name of the commenter follows the comment in parentheses.

General/Overall Concerns

Comment 1: The following summarizes a phone conversation during which the caller asked several questions and expressed the following concerns:

- Requested a hard copy of the Set L draft rules be sent to the caller.
- Requested an extension of the IP comment period. The caller was aware that the IP comment deadline was the day of the phone call and was informed that no other request for an extension had been received during the IP comment period.
- The caller asked if there would be a responsiveness summary. The caller expressed an interest in seeing other people's comments.
- The caller expressed many concerns regarding depleted uranium, and that it is regulated by DOE and not a different agency.

(Diana Cahall of Sardinia, Ohio, phone call to K. Arthur, 8:40-9:00a.m., 1/28/2015)

Response 1: In response to the requests made during the phone conversation, the caller was mailed a hard copy of the Set L draft rules. A copy of this responsiveness summary will be mailed to the caller.

In consideration of the lateness of the caller's IP comment period extension request and that it was the only extension request received, the Agency choose not to extend the IP comment period. It is worth noting that the next anticipated step is the filing proposed rules. The filing of proposed rules will afforded the caller and other persons another opportunity to provide written and oral comment as part of the statutorily required rule-making process.

During the phone conversation, Agency staff explained that depleted uranium is not the subject of any rule in Set L. This information was acknowledged by the caller.

Comment 2: **Definition of Solid Waste:** On July 22, 2011, US EPA proposed new safeguards for hazardous secondary materials recycling with the intent of better protecting public health and the environment. At this time, the federal Office of Management and Budget is now scheduled to release the final Definition of Solid Waste rule. OESI recommends that Ohio EPA adopt the final federal rule in order to maintain consistency and equivalence with the Federal program under RCRA. (Ohio Environmental Service Industries; Thomas P. Pappas, Executive Director, via Dee Smith, Manager, Client Services, 8/22/2014^a)

Response 2: At the time of this letter, the final federal rulemaking had not been published; it was published on 1/13/2015. The up to 70 new and amended rules that could result in Ohio were not added to Set L. The Early Stakeholders Outreach (ESO) comment period is in progress for the DoSW concept. The ESO comment period ends 8/13/2015.

Comment 3: **Land Disposal Restrictions– Revision of Universal Treatment Standards for Carbamate Wastes:** On June 13, 2011, USEPA issued a direct final rule... which revised the LDR UTs for hazardous wastes from the production of carbamates and carbamate commercial chemical products, off-specification or manufacturing chemical intermediates and container residues that become hazardous wastes when they are discarded or intended to be discarded. OESI requests that Ohio EPA revise its carbamate treatment standards to meet the updated US EPA treatment standards. (Ohio Environmental Service Industries; Thomas P. Pappas, Executive Director, via Dee Smith, Manager, Client Services, 8/22/2014^a)

Response 3: This Federal Register (FR) is already being addressed in the Set L rules. No changes to the Set L rules are necessary.

Comment 4: **Comparable Fuels and Gasification Exclusion Vacatur:** In *Natural Resources Defense Council v. EPA*, decided June 27, 2014, the US Court of Appeals held that the Comparable Fuels Gasification exclusions violate RCRA. Following its opinion, the Court is expected to enter its mandate vacating the rule this month. As such, US EPA is expected to issue a notice in the Federal Register withdrawing both the Comparable Fuels and Gasification rules as soon as practicable. OESI urges the Agency to withdraw its comparable fuels and gasification exclusions under OAC 3745-51-04 to match the anticipated US EPA revised rulemaking. (Ohio Environmental Service Industries; Thomas P. Pappas, Executive Director, via Dee Smith, Manager, Client Services, 8/22/2014^a)

Comment 5: **Solvent Contaminated Wipes:** On July 31, 2013, the US EPA published the final rules titled "*Conditional Exclusion from Hazardous Waste and Solid Waste for Solvent Contaminated Wipes.*" OESI urges the Agency promulgate conditional exclusions for solvent contaminated wipes which are the equivalent to the 2013 US EPA final rules. (Ohio Environmental Service Industries; Thomas P. Pappas, Executive Director, via Dee Smith, Manager, Client Services, 8/22/2014^a)

Response 5: This FR is already being addressed in the Set L rules. No changes to the Set L rules are necessary.

Comments on Specific Rules

3745-50-10 Definitions and computation of time specifically, at the definition of “treatment”

Comment 6: **Definition of ‘Treatment’:** Ohio EPA’s definition of ‘treatment’ ... includes the phrases “*amenable for further treatment, or amenable for disposal*” which makes it significantly more stringent than the USEPA definition under 40 CFR 260.10. These additional phrases make the definition easier for misinterpretation, or worse, multiple different interpretations by regulators and the regulated community. An overly liberal interpretation as to what the Ohio definition applies to could result in affected facilities needing to permit certain activities which do not need to be permitted in other states. At a minimum, this puts commercial TSDFs in Ohio at an economic disadvantage to their competitors located outside of the State. Modifying Ohio’s definition to match the federal one would put everyone in the regulated community on even footing and reduce the overall confusion as to what this definition applies to. (Ohio Environmental Service Industries; Thomas P. Pappas, Executive Director, via Dee Smith, Manager, Client Services, 8/22/2014^a)

Response 6: As a result of comments on this definition, it was re-examined. The amendments were changed, but not in the manner requested by this commenter. Please see Footnote b.

Comment 7: The clause “amenable for further treatment” or “amenable for disposal” or “to reduce the volume of waste” needs to be modified to match the federal definition of treatment to prevent confusion on permit requirements and as to improve the clarity of what constitutes treatment. The definition of treatment adopted by the Ohio EPA [in 2010] is not equivalent to or consistent with the Federal definition or that adopted by any other state. Ohio should consider adoption of the Federal definition of treatment for regulatory clarity to be consistent with US EPA and other states. (Daniel J. McCabe, P.E., President, Environmental Enterprises Inc., 7/15/2014^a)

Response 7: As a result of comments on this definition, it was re-examined. The amendments were changed, but not in the manner requested by this commenter. Please see Footnote b.

3745-53-30 Immediate action.

Comment 8: The language [at this location] where the language “of such discharge to the Ohio EPA office of emergency response, by use of its twenty-four-hour number 1-800-282-9378; and” is omitted is detrimental to the rule and removes “stringent” enforcement of the rule unnecessarily as compared to its Federal counterpart. My suggested solution is to maintain stringent standards by not omitting the language referenced. (Scott Bushbaum, 1/28/2015)

Response 8: The language that is stricken from (C)(1) is being re-located to (C)(3), so it is in fact maintained. No change to the rule is necessary.

Comment 9: I also suggest retaining the language following the proposed omission to maintain the standard of rule 3745-53-30 C (1). (Scott Bushbaum, 1/28/2015)

Response 9: The stricken text appears after (C)(2) in a bracketed informational comment, not a compliance requirement. It references non-RCRA federal requirements that are not part of the Ohio (or federal) hazardous waste rules. The federal counterpart provision, 40 CFR 263.30, does not contain similar text, so the removal of the text is maintained to improve the equivalence of the Ohio rule to its federal counterpart. No change to the rule was made in response to this comment.

Footnotes

- a These letters of comment were received in the summer of 2014, prior to the IP comment period for Set L. The OESI letter was in response to ESOs on different DMWM hazardous waste rulemaking efforts. The EEI letter stated no specific rulemaking or ESO it was responding to, except the 2010 amendment of rule 3745-50-10 (similar comments were not provided at that time). Because these comments were largely about concepts addressed in Set L, DMWM treated the letters as IP comments on the draft Set L rules to ensure that the comments would be taken into consideration in a timely manner with relevant rulemaking concepts. DMWM's response to each commenter pre-dated the beginning of the Set L IP comment period, and each included reference to the availability of the upcoming IP comment period to continue any communications regarding the rule language. DMWM did not receive comments from either commenter during the Set L IP comment period.
- b Regarding the definition of "treatment," DMWM has worked with both commenters prior to and subsequent to receipt of this comment regarding their interpretation of this defined term. The Ohio statute's definition of "treatment" [see ORC 3734.01(K)] is part of the federally authorized hazardous waste management program, and is considered by Ohio EPA and U.S. EPA to be equivalent to the federally defined term in 40 CFR 260.10. In proposed Set L, the definition of "treatment" is amended to make it *identical* to the definition in statute.

End of Response to Comments