



Ohio Administrative Code

Rule 3745-51-03 Definition of hazardous waste.

Effective: [March 24, 2017](#)

(A) A "waste," as defined in rule 3745-51-02 of the Administrative Code, is a "hazardous waste" if:

(1) The waste is not excluded from regulation as a hazardous waste under paragraph (B) of rule 3745-51-04 of the Administrative Code.

(2) The waste meets any of the following criteria:

(a) The waste exhibits any of the characteristics of hazardous waste identified in rules 3745-51-20 to 3745-51-24 of the Administrative Code. However, any mixture of a waste from the extraction, beneficiation, and processing of ores and minerals excluded under paragraph (B)(7) of rule 3745-51-04 of the Administrative Code and any other waste exhibiting a characteristic of hazardous waste under rules 3745-51-20 to 3745-51-24 of the Administrative Code is a hazardous waste only if such mixture exhibits a characteristic that would not have been exhibited by the excluded waste alone if such mixture had not occurred, or if such mixture continues to exhibit any of the characteristics exhibited by the non-excluded wastes prior to mixture. Further, for the purposes of applying the toxicity characteristic leaching procedure to such mixtures, the mixture is also a hazardous waste if such mixture exceeds the maximum concentration for any contaminant listed in the table in rule 3745-51-24 of the Administrative Code that would not have been exceeded by the excluded waste alone if the mixture had not occurred or if such mixture continues to exceed the maximum concentration for any contaminant exceeded by the nonexempt waste prior to mixture.

(b) The waste is listed in rules 3745-51-30 to 3745-51-35 of the Administrative Code and has not been excluded from the lists in rules 3745-51-30 to 3745-51-35 of the Administrative Code under 40 CFR 260.20 and 40 CFR 260.22.

(c) The waste is a mixture of hazardous wastes as described by paragraphs (A)(2)(a) to (A)(2)(c) of this rule and "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, or other radionuclides. However, only the hazardous components of the mixture are subject to regulation for purposes of Chapter 3745-51 of the Administrative Code.

[Comment: See paragraph (H) of this rule for possible exemptions for such mixed wastes.]

(d) The waste is a mixture of waste and one or more hazardous wastes listed in rules 3745-51-30 to 3745-51-35 of the Administrative Code and has not been excluded from paragraph (A)(2) of this rule under 40 CFR 260.20 and 40 CFR 260.22, paragraphs (G)(1) to (G)(4) of this rule, or paragraphs (H)(1) to (H)(3) of this rule. However, the following mixtures of wastes and hazardous wastes listed in rules 3745-51-30 to 3745-51-35 of the Administrative Code are not hazardous wastes [except by application of paragraph (A)(2)(a) or (A)(2)(b) of this rule] if the generator can demonstrate that the mixture consists of wastewater, the discharge of which is subject to regulation under either Section 402 or Section 307(b) of the Clean Water Act (CWA) (including wastewater at facilities which have eliminated the discharge of wastewater) and:

(i) One or more of the following spent solvents listed in rule 3745-51-31 of the Administrative Code - carbon tetrachloride, tetrachloroethylene, trichloroethylene or the scrubber water derived from the combustion of these spent solvents- provided that the maximum total weekly usage of these solvents (other than the amounts that can be demonstrated not to be discharged to wastewater) divided by the average weekly flow of wastewater into the headworks of the facility's wastewater treatment or pretreatment system does not exceed one part per million; or the total measured concentration of these solvents entering the headworks of the facility's wastewater treatment system (at facilities subject to regulation under the Clean Air Act (CAA) at 40 CFR Part 60, 40 CFR Part 61, or 40 CFR Part 63, or at facilities subject to an enforceable limit in a federal operating permit that minimizes fugitive emissions), does not exceed one part per million on an average weekly basis. Any facility that uses benzene as a solvent and claims this exemption shall use an aerated biological wastewater treatment system and shall use only lined surface impoundments or tanks prior to secondary clarification in the wastewater treatment system. Facilities that choose to measure concentration levels shall file a copy of the facility's sampling and analysis plan with the regional administrator, or the director, as the context requires. A facility shall file a copy of a revised sampling and analysis plan only if the initial plan is rendered inaccurate by changes in the facility's operations. The sampling and analysis plan shall include the monitoring point location (headworks), the sampling



frequency and methodology, and a list of constituents to be monitored. A facility is eligible for the direct monitoring option once the facility receives confirmation that the sampling and analysis plan has been received by the director. The director may reject the sampling and analysis plan if the director finds that the sampling and analysis plan fails to include the information required in this paragraph, or if the plan parameters would not enable the facility to accurately calculate the weekly average concentration of these chemicals. If the director rejects the sampling and analysis plan, or if the director finds that the facility is not following the sampling and analysis plan, the director shall notify the facility to cease the use of the direct monitoring option until such time as the bases for rejection are corrected; or

(ii) One or more of the following spent solvents listed in rule 3745-51-31 of the Administrative Code - methylene chloride, 1,1,1-trichloroethane, chlorobenzene, o-dichlorobenzene, cresols, cresylic acid, nitrobenzene, toluene, methyl ethyl ketone, carbon disulfide, isobutanol, pyridine, spent chlorofluorocarbon solvents, 2-ethoxyethanol, or the scrubber waters derived-from the combustion of these spent solvents - provided that the maximum total weekly usage of these solvents (other than the amounts that can be demonstrated not to be discharged to wastewater) divided by the average weekly flow of wastewater into the headworks of the facility's wastewater treatment or pretreatment system does not exceed twenty-five parts per million, or the total measured concentration of these solvents entering the headworks of the facility's wastewater treatment system (at facilities subject to regulation under the CAA at 40 CFR Part 60, 40 CFR Part 61, or 40 CFR Part 63, or at facilities subject to an enforceable limit in a federal operating permit that minimizes fugitive emissions), does not exceed twenty-five parts per million on an average weekly basis. Facilities that choose to measure concentration levels shall file a copy of the facility's sampling and analysis plan with the regional administrator, or the director, as the context requires. A facility shall file a copy of a revised sampling and analysis plan only if the initial plan is rendered inaccurate by changes in the facility's operations. The sampling and analysis plan shall include the monitoring point location (headworks), the sampling frequency and methodology, and a list of constituents to be monitored. A facility is eligible for the direct monitoring option once the facility receives confirmation that the sampling and analysis plan has been received by the director. The director may reject the sampling and analysis plan if the director finds that the sampling and analysis plan fails to include the information required in this paragraph, or if the plan parameters would not enable the facility to accurately calculate the weekly average concentration of these chemicals. If the director rejects the sampling and analysis plan, or if the director finds that the facility is not following the sampling and analysis plan, the



director shall notify the facility to cease the use of the direct monitoring option until such time as the bases for rejection are corrected; or

(iii) One of the following wastes listed in rule 3745-51-32 of the Administrative Code, provided that the wastes are discharged to the refinery oil recovery sewer before primary oil or water or solids separation - heat exchanger bundle cleaning sludge from the petroleum refining industry (EPA hazardous waste number K050), crude oil storage tank sediment from petroleum refining operations (EPA hazardous waste number K169), clarified slurry oil tank sediment or in-line filter solids or separation solids from petroleum refining operations (EPA hazardous waste number K170), spent hydrotreating catalyst (EPA hazardous waste number K171), and spent hydrotreating catalyst (EPA hazardous waste number K172); or

(iv) A discarded hazardous waste, commercial chemical product, or chemical intermediate listed in rules 3745-51-31 to 3745-51-33 of the Administrative Code, arising from de minimis losses of these materials. For purposes of this paragraph, "de minimis losses" are inadvertent releases to a wastewater treatment system, including those from normal material handling operations (e.g., spills from the unloading or transfer of materials from bins or other containers, leaks from pipes, valves, or other devices used to transfer materials); minor leaks of process equipment, storage tanks, or containers; leaks from well-maintained pump packings and seals; sample purgings; relief device discharges; discharges from safety showers and rinsing and cleaning of personal safety equipment; and rinsate from empty containers or from containers that are rendered empty by that rinsing. Any manufacturing facility that claims an exemption for de minimis quantities of wastes listed in rules 3745-51-31 to 3745-51-32 of the Administrative Code, or any non-manufacturing facility that claims an exemption for de minimis quantities of wastes listed in rules 3745-51-30 to 3745-51-35 of the Administrative Code, either shall have eliminated the discharge of wastewaters or shall have included in the facility's CWA permit application or submittal to the facility's pretreatment control authority the constituents for which each waste was listed (in the appendix to rule 3745-51-30 of the Administrative Code); and the constituents in the table "Treatment Standards for Hazardous Wastes" in rule 3745-270-40 of the Administrative Code for which each waste has a treatment standard (i.e., land disposal restriction constituents). A facility is eligible to claim the exemption once the permit writer or control authority has been notified of possible de minimis releases via the CWA permit application or the pretreatment control authority submittal. A copy of the CWA permit application or the submittal to the pretreatment control authority shall be placed in the facility's files; or



(v) Wastewater resulting from laboratory operations containing toxic (T) wastes listed in rules 3745-51-30 to 3745-51-35 of the Administrative Code, provided that the annualized average flow of laboratory wastewater does not exceed one per cent of total wastewater flow into the headworks of the facility's wastewater treatment or pretreatment system, or provided the wastes' combined annualized average concentration does not exceed one part per million in the headworks of the facility's wastewater treatment or pretreatment facility. Toxic (T) wastes used in laboratories that are demonstrated not to be discharged to wastewater are not to be included in this calculation; or

(vi) One or more of the following wastes listed in rule 3745-51-32 of the Administrative Code - wastewaters from the production of carbamates and carbamoyl oximes (EPA hazardous waste number K157) - provided that the maximum weekly usage of formaldehyde, methyl chloride, methylene chloride, and triethylamine (including all amounts that cannot be demonstrated to be reacted in the process, destroyed through treatment, or recovered, i.e., what is discharged or volatilized) divided by the average weekly flow of process wastewater prior to any dilutions into the headworks of the facility's wastewater treatment system does not exceed a total of five parts per million by weight; or the total measured concentration of these chemicals entering the headworks of the facility's wastewater treatment system (at facilities subject to regulation under the CAA at 40 CFR Part 60, 40 CFR Part 61, or 40 CFR Part 63, or at facilities subject to an enforceable limit in a federal operating permit that minimizes fugitive emissions), does not exceed five parts per million on an average weekly basis. Facilities that choose to measure concentration levels shall file a copy of the facility's sampling and analysis plan with the regional administrator, or the director, as the context requires. A facility shall file a copy of a revised sampling and analysis plan only if the initial plan is rendered inaccurate by changes in the facility's operations. The sampling and analysis plan shall include the monitoring point location (headworks), the sampling frequency and methodology, and a list of constituents to be monitored. A facility is eligible for the direct monitoring option once the facility receives confirmation that the sampling and analysis plan has been received by the director. The director may reject the sampling and analysis plan if the director finds that the sampling and analysis plan fails to include the information required in this paragraph, or if the plan parameters would not enable the facility to accurately calculate the weekly average concentration of these chemicals. If the director rejects the sampling and analysis plan, or if the director finds that the facility is not following the sampling and analysis plan, the director shall notify the facility to cease the use of the direct monitoring option until such time as the bases for rejection are corrected; or



(vii) Wastewaters derived from the treatment of one or more of the following wastes listed in rule 3745-51-32 of the Administrative Code- organic waste (including heavy ends, still bottoms, light ends, spent solvents, filtrates, and decantates) from the production of carbamates and carbamoyl oximes (EPA hazardous waste number K156) - provided that the maximum concentration of formaldehyde, methyl chloride, methylene chloride, and triethylamine prior to any dilutions into the headworks of the facility's wastewater treatment system does not exceed a total of five milligrams per liter or the total measured concentration of these chemicals entering the headworks of the facility's wastewater treatment system (at facilities subject to regulation under the CAA at 40 CFR Part 60, 40 CFR Part 61, or 40 CFR Part 63, or at facilities subject to an enforceable limit in a federal operating permit that minimizes fugitive emissions), does not exceed five milligrams per liter on an average weekly basis. Facilities that choose to measure concentration levels shall file a copy of the facility's sampling and analysis plan with the regional administrator, or the director, as the context requires. A facility shall file a copy of a revised sampling and analysis plan only if the initial plan is rendered inaccurate by changes in the facility's operations. The sampling and analysis plan shall include the monitoring point location (headworks), the sampling frequency and methodology, and a list of constituents to be monitored. A facility is eligible for the direct monitoring option once the facility receives confirmation that the sampling and analysis plan has been received by the director. The director may reject the sampling and analysis plan if the director finds that the sampling and analysis plan fails to include the information required in this paragraph, or if the plan parameters would not enable the facility to accurately calculate the weekly average concentration of these chemicals. If the director rejects the sampling and analysis plan, or if the director finds that the facility is not following the sampling and analysis plan, the director shall notify the facility to cease the use of the direct monitoring option until such time as the bases for rejection are corrected; or

(e) Rebuttable presumption for used oil. Used oil containing more than one thousand parts per million total halogens is presumed to be a hazardous waste because the used oil has been mixed with halogenated hazardous waste listed in rules 3745-51-30 to 3745-51-35 of the Administrative Code. Persons may rebut this presumption by demonstrating that the used oil does not contain hazardous waste (for example, to show that the used oil does not contain significant concentrations of halogenated hazardous constituents listed in the appendix to rule 3745-51-11 of the Administrative Code).



(i) The rebuttable presumption does not apply to metalworking oils or fluids containing chlorinated paraffins, if they are processed, through a tolling agreement, to reclaim metalworking oils or fluids. The presumption does apply to metalworking oils or fluids if such oils or fluids are recycled in any other manner, or disposed.

(ii) The rebuttable presumption does not apply to used oils contaminated with chlorofluorocarbons (CFCs) removed from refrigeration units where the CFCs are destined for reclamation. The rebuttable presumption does apply to used oils contaminated with CFCs that have been mixed with used oil from sources other than refrigeration units.

(B) A waste which is not excluded from regulation under paragraph (A)(1) of this rule becomes a hazardous waste when any of the following events occur:

(1) In the case of a waste listed in rules 3745-51-30 to 3745-51-35 of the Administrative Code, when the waste first meets the listing description in rules 3745-51-30 to 3745-51-35 of the Administrative Code.

(2) In the case of a mixture of waste and one or more listed hazardous wastes, when a hazardous waste listed in rules 3745-51-30 to 3745-51-35 of the Administrative Code is first added to the waste.

(3) In the case of any other waste (including a waste mixture), when the waste exhibits any of the characteristics identified in rules 3745-51-20 to 3745-51-24 of the Administrative Code.

(C) Unless and until a hazardous waste meets the criteria of paragraph (D) of this rule:

(1) A hazardous waste will remain a hazardous waste.

(2) Regarding waste generated from the treatment, storage, or disposal of a hazardous waste.

(a) Except as otherwise provided in paragraph (C)(2)(b), (G)(1) to (G)(4), or (H)(1) to (H)(3) of this rule, any waste generated from the treatment, storage, or disposal of a hazardous waste, including any sludge, spill residue, ash, emission control dust, or leachate (but not including precipitation run-



off) is a hazardous waste. (However, materials that are reclaimed from wastes and that are used beneficially are not wastes and hence are not hazardous wastes under this provision unless the reclaimed material is burned for energy recovery or used in a manner constituting disposal.)

(b) The following wastes are not hazardous even though the wastes are generated from the treatment, storage, or disposal of a hazardous waste, unless the wastes exhibit one or more of the characteristics of hazardous waste:

(i) Waste pickle liquor sludge generated by lime stabilization of spent pickle liquor from the iron and steel industry (SIC codes 331X and 332X).

(ii) Waste from burning any of the materials exempted from regulation by paragraphs (A)(3)(c) and (A)(3)(d) of rule 3745-51-06 of the Administrative Code.

(iii) Regarding HTMR.

(a) Nonwastewater residues, such as slag, resulting from high temperature metals recovery (HTMR) processing of K061, K062, or F006 waste, in units defined as rotary kilns, flame reactors, electric furnaces, plasma arc furnaces, slag reactors, rotary hearth furnace or electric furnace combinations, or industrial furnaces [as defined in subparagraphs (f), (g), and (m) of "industrial furnace" in rule 3745-50-10 of the Administrative Code], that are disposed in licensed solid waste landfills, provided that these residues meet the generic exclusion levels identified in this paragraph for all constituents, and exhibit no characteristics of hazardous waste. Testing requirements shall be incorporated in a facility's waste analysis plan or a generator's self-implementing waste analysis plan. At a minimum, composite samples of residues shall be collected and analyzed quarterly or when the process or operation generating the waste changes. Persons claiming this exclusion in an enforcement action will have the burden of proving by clear and convincing evidence that the material meets all the exclusion requirements.

Table	Constituent
Maximum for any single composite sample - TCLP (mg/L)	Generic exclusion levels for K061 and K062 nonwastewater HTMR residues
Antimony	0.1



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Arsenic	0.5
Barium	7.6
Beryllium	0.01
Cadmium	0.05
Chromium (total)	0.33
Lead	0.15
Mercury	0.009
Nickel	1.0
Selenium	0.16
Silver	0.3
Thallium	0.02
Zinc	70.0
Generic exclusion levels for F006 nonwastewater HTMR residues	Antimony
0.1	Arsenic
0.5	Barium
7.6	Beryllium
0.01	Cadmium
0.05	Chromium (total)
0.33	Cyanide (total) (mg/kg)
1.8	Lead
0.15	Mercury
0.009	Nickel
1.0	Selenium
0.16	Silver
0.3	Thallium
0.02	Zinc

(b) A one-time notification and certification shall be placed in the facility's files and sent to the director for K061, K062, or F006 HTMR residues that meet the generic exclusion levels for all constituents and do not exhibit any characteristics that are sent to licensed solid waste landfills. The notification and certification that is placed in the generator's or treater's files shall be updated if the process or operation generating the waste changes or if the licensed solid waste landfill receiving the waste changes. However, the generator or treater need only notify the director on an annual basis if



such changes occur. Such notification and certification should be sent to the director by the end of the calendar year, but no later than December thirty-first. The notification shall include the following information:

- (i) The name and address of the licensed solid waste landfill receiving the waste shipments.
- (ii) The EPA hazardous waste numbers and treatability groups at the initial point of generation.
- (iii) The treatment standards in Chapter 3745-270 of the Administrative Code applicable to the waste at the initial point of generation.
- (iv) The certification shall be signed by an authorized representative and shall state as follows:

"I certify under penalty of law that the generic exclusion levels for all constituents have been met without impermissible dilution and that no characteristics of hazardous waste is exhibited. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

(iv) Biological treatment sludge from the treatment of one of the following wastes listed in rule 3745-51-32 of the Administrative Code - organic waste (including heavy ends, still bottoms, light ends, spent solvents, filtrates, and decantates) from the production of carbamates and carbamoyl oximes (EPA hazardous waste number K156), and wastewaters from the production of carbamates and carbamoyl oximes (EPA hazardous waste number K157).

(v) Catalyst inert support media separated from one of the following wastes listed in rule 3745-51-32 of the Administrative Code - spent hydrotreating catalyst (EPA hazardous waste number K171), and spent hydrorefining catalyst (EPA hazardous waste number K172).

(D) Any waste described in paragraph (C) of this rule is not a hazardous waste if the waste meets the following criteria:

(1) In the case of any waste, the waste does not exhibit any of the characteristics of hazardous waste identified in rules 3745-51-20 to 3745-51-24 of the Administrative Code. However, wastes that



exhibit a characteristic at the point of generation may still be subject to Chapter 3745-270 of the Administrative Code, even if the wastes no longer exhibit a characteristic at the point of land disposal.)

(2) In the case of a waste which is listed in rules 3745-51-30 to 3745-51-35 of the Administrative Code, or contains a hazardous waste listed in rules 3745-51-30 to 3745-51-35 of the Administrative Code, or is derived from a hazardous waste listed in rules 3745-51-30 to 3745-51-35 of the Administrative Code, the hazardous waste also has been excluded from paragraphs (C) to (C)(2)(b)(v) of this rule pursuant to 40 CFR 260.20 and 40 CFR 260.22.

(E) [Reserved.]

(F) Notwithstanding paragraphs (A) to (D) of this rule and provided the "debris" as defined in rule 3745-270-02 of the Administrative Code does not exhibit a characteristic identified in rules 3745-51-20 to 3745-51-24 of the Administrative Code, the following materials are not 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, or 3745-270 of the Administrative Code:

(1) "Hazardous debris" as defined in rule 3745-27-02 of the Administrative Code that has been treated using one of the required extraction or destruction technologies identified in the table in rule 3745-270-45 of the Administrative Code. Persons claiming this exclusion in an enforcement action will have the burden of proving by clear and convincing evidence that the material meets all the exclusion requirements; or

(2) "Debris" as defined in rule 3745-270-02 of the Administrative Code that the director, considering the extent of contamination, has determined is no longer contaminated with hazardous waste.

(G) Regarding characteristic mixtures.

(1) A hazardous waste that is listed in rules 3745-51-30 to 3745-51-35 of the Administrative Code solely because the waste exhibits one or more characteristics of ignitability as identified in rule 3745-51-21 of the Administrative Code, characteristic of corrosivity as identified in rule 3745-51-22 of the Administrative Code, or characteristic of reactivity as identified in rule 3745-51-23 of the



Administrative Code is not a hazardous waste, if the waste no longer exhibits any characteristic of hazardous waste identified in rules 3745-51-20 to 3745-51-24 of the Administrative Code.

(2) The exclusion described in paragraph (G)(1) of this rule also pertains to of the following:

(a) Any mixture of a waste and a hazardous waste listed in rules 3745-51-30 to 3745-51-35 of the Administrative Code solely because the mixture exhibits the characteristic of ignitability, characteristic of corrosivity, or characteristic of reactivity as regulated under paragraph (A)(2)(d) of this rule.

(b) Any waste generated from treating, storing, or disposing of a hazardous waste listed in rules 3745-51-30 to 3745-51-35 of the Administrative Code solely because the waste exhibits the characteristic of ignitability, characteristic of corrosivity, or characteristic of reactivity as regulated under paragraph (C)(2)(a) of this rule.

(3) Wastes excluded under this rule are subject to Chapter 3745-270 of the Administrative Code (as applicable), even if such wastes no longer exhibit a characteristic at the point of land disposal.

(4) Any mixture of a waste excluded from regulation under paragraph (B)(7) of rule 3745-51-04 of the Administrative Code and a hazardous waste listed in rules 3745-51-30 to 3745-51-35 of the Administrative Code solely because the mixture exhibits one or more of the characteristic of ignitability, characteristic of corrosivity, or characteristic of reactivity as regulated under paragraph (A)(2)(d) of this rule is not a hazardous waste, if the mixture no longer exhibits any characteristic of hazardous waste identified in rules 3745-51-20 to 3745-51-24 of the Administrative Code for which the hazardous waste listed in rules 3745-51-30 to 3745-51-35 of the Administrative Code was listed.

(H) Regarding radioactive mixed waste.

(1) Hazardous waste containing radioactive waste is no longer a hazardous waste when the waste meets the eligibility criteria and conditions of rules 3745-266-210 to 3745-266-335 of the Administrative Code ("eligible radioactive mixed waste").

(2) The exemption described in paragraph (H)(1) of this rule also pertains to the following:



- (a) Any mixture of a waste and an eligible radioactive mixed waste.
- (b) Any waste generated from treating, storing, or disposing of an eligible radioactive mixed waste.
- (3) Waste exempted under this rule shall meet the eligibility criteria and specified conditions in paragraph (B) of rule 3745-266-220 and paragraph (C) of rule 3745-266-220 of the Administrative Code (for storage and treatment) and in rule 3745-266-310 and paragraph (A) of rule 3745-266-315 of the Administrative Code (for transportation and disposal). Waste that fails to satisfy these eligibility criteria and conditions is regulated as hazardous waste.
- (I) The director will advise the public of changes to the lists of hazardous wastes in rule 3745-51-30 of the Administrative Code and of exclusions pursuant to 40 CFR 260.22.

[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."]