

**3745-30-04 Residual waste landfill classification.**

- (A) After an individual waste specified in paragraph (B)(1), (B)(2), (B)(3), (B)(4), (B)(5), (B)(6), or (B)(7) of rule 3745-30-01 of the Administrative Code is characterized in accordance with rule 3745-30-03 of the Administrative Code, the applicant or permittee shall determine the appropriate residual waste landfill class in accordance with appendix A to this rule. The concentration of any parameter, based on the upper limit of the confidence interval specified in paragraph (E) of rule 3745-30-03 of the Administrative Code, shall not exceed the delineated maximum allowable concentration for the proposed class.
- (B) No maximum allowable concentration is delineated in Appendix A to this rule for a class I landfill. Any residual waste may be disposed in a class I landfill provided the waste is not a hazardous waste as defined in Chapter 3745-51 of the Administrative Code. The concentration of the parameters in appendix A to this rule need not be determined for the purposes of the residual waste landfill classification process if a class I residual waste landfill is proposed.
- (C) Residual wastes which do not exceed the maximum allowable concentrations delineated in appendix A to this rule for a class IV residual waste landfill are eligible for disposal in a class IV residual waste landfill in locations where the siting criteria specified in paragraph (B) of rule 3745-30-06 of the Administrative Code for a class III landfill are met.
- (1) Such locations shall not be areas where the ground water quality has been degraded due to human activities; with the exception of such locations where the quality of ground water has been degraded due to permitted mining operations or pre-law mining operations.
- (2) To determine appropriate environmentally protective measures for the class IV residual waste landfill, the following information comparing the concentration of chemical constituents in the ground water of the first saturated zone beneath the landfill or proposed landfill with the concentration of the same chemical constituents in the leachate from the residual waste(s) shall be submitted and contain all of the following:
- (a) A chemical analysis of actual in-field leachate from the residual waste(s). For the purpose of this rule, the chemical analysis is defined as analysis of those parameters specified by waste type for characterization in paragraph (A) or (B) of rule 3745-30-03 of the Administrative Code and for annual and semiannual monitoring specified in appendix C to rule 3745-30-08 of the Administrative Code. The chemical analysis may also be utilized to meet the requirements of rule 3745-30-03 of the Administrative Code if the sampling and testing criteria of that rule are met. The analysis shall be performed on actual leachate from the residual waste(s) which represents long-term field leachate generated by either of the following:
- (i) An existing disposal facility.
- (ii) A field test cell which simulates actual disposal conditions for a minimum period of one year, or an alternate duration if deemed acceptable by the director.
- (b) A chemical analysis, as defined in paragraph (C)(2)(a) of this rule, of the ground water in the first saturated zone beneath the landfill or proposed landfill.
- (c) The comparison shall be of the mean concentrations from at least three independent samples of the

ground water and of the leachate, or an alternate statistical procedure approved by the director.

- (3) In locations where all constituents are lower in concentration in the leachate than in the ground water, the requirements for a class IV residual waste landfill shall differ from the requirements for a class III residual waste landfill as follows:
- (a) The ground water monitoring program specified in rule 3745-30-08 of the Administrative Code is not required.
  - (b) The recompacted soil liner specified in paragraph (C)(1) of rule 3745-30-07 of the Administrative Code is not required.
  - (c) The geomembrane specified in rule 3745-30-07 of the Administrative Code is not required.
  - (d) The leachate collection system specified in rule 3745-30-07 of the Administrative Code is not required, unless the director determines, on a site-specific and waste-specific basis, that long-term saturated conditions to be caused by the lack of a leachate collection system could create leachate that will have higher concentrations of constituents than the leachate characterized in accordance with paragraph (C)(2)(a) of this rule or that long-term saturated conditions could cause surface water pollution.
  - (e) The cap system specified in paragraph (F)(3) of rule 3745-30-09 of the Administrative Code shall comply with the following:
    - (i) The recompacted soil barrier layer may be constructed of material classified as CL, SC, GC, or CL-ML under the unified soil classification system (USCS). The specifications and test pad referenced from rule 3745-30-07 of the Administrative Code are not required. The construction specifications and material testing frequency shall be determined by the director .
    - (ii) The vegetative layer thickness shall meet the requirement for root penetration protection but the thickness for frost protection is not required.
  - (f) The post closure care period specified in paragraph (A) of rule 3745-30-10 of the Administrative Code is five years.
- (4) In locations where a number of constituents are of higher concentration in the leachate than in the ground water, the director may allow each of the requirements for a class IV landfill listed in paragraphs (C)(3)(a) to (C)(3)(f) of this rule on a site-specific basis if it is demonstrated to the satisfaction of the director that for each requirement the class IV standard is unlikely to cause a nuisance or a health hazard or result in a violation of any regulation adopted under Chapters 3704. and 6111. of the Revised Code.
- (D) If, in accordance with paragraph (B) of rule 3745-30-03 of the Administrative Code, a parameter is added to the list prescribed in paragraph (A) of that rule, the maximum allowable concentration shall be set as follows:
- (1) For class IV landfills, five times the maximum contaminant level established in Chapters 3745-81 and 3745-82 of the Administrative Code.
  - (2) For class III landfills, thirty times the maximum contaminant level established in Chapters 3745-81 and 3745-82 of the Administrative Code.
  - (3) For class II landfills, sixty times the maximum contaminant level established in Chapters 3745-81 and 3745-82 of the Administrative Code.

Effective: 05/18/2015

Five Year Review (FYR) Dates: 01/29/2015 and 11/17/2019

CERTIFIED ELECTRONICALLY

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Certification

05/08/2015

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Date

Promulgated Under: 119.03  
Statutory Authority: 3734.02  
Rule Amplifies: 3734.02  
Prior Effective Dates: 1/13/1992, 11/30/2002

Appendix A  
Residual waste characterization and residual waste landfill classification

Number	Parameter	Residual Waste Landfill		
		Class IV	Class III	Class II
		Maximum Allowable Concentration (ppm or mg/l)		
1	arsenic	0.25	1.5	3.0
2	barium	5.0	30.0	60.0
3	cadmium	0.05	0.3	0.6
4	chromium	0.25	1.5	3.0
5	fluoride	20.0	120.0	240.0
6	lead	0.25	1.5	3.0
7	mercury	0.01	0.06	0.12
8	selenium	0.05	0.3	0.6
9	silver	0.25	1.5	3.0
10	chloride	*	7500	**
11	iron	*	9.0	**
12	manganese	*	9.0	**
13	sodium	*	7500	**
14	sulfate	*	7500	**
15	total dissolved solids	*	10,000	**
16	phenol	17.5	105.0	**
17	cyanide	1.0	6.0	12.0
18	benzene	0.025	0.15	0.3
19	carbon tetrachloride	0.025	0.15	0.3
20	chlorobenzene	5.0	30.0	60.0
21	chloroform	0.3	1.8	3.6
22	m-cresol	10.0	60.0	120.0
23	o-cresol	10.0	60.0	120.0
24	p-cresol	10.0	60.0	120.0
25	1,4 dichlorobenzene	0.38	2.25	4.50
26	1,2 dichloroethane	0.025	0.15	0.3
27	1,1 dichloroethylene	0.035	0.21	0.42
28	2,4 dinitrotoluene	0.0065	0.039	0.078
29	hexachloro-1,3 butadiene	0.025	0.15	0.3
30	hexachlorobenzene	0.0065	0.039	0.078

31	hexachloroethane	0.15	0.9	1.80
32	methylethylketone	10.0	60.0	120.0
33	nitrobenzene	0.1	0.6	1.2
34	pyridine	0.25	1.5	3.0
35	tetrachloroethylene	0.035	0.21	0.42
36	trichloroethylene	0.025	0.15	0.3
37	2,4,5 trichlorophenol	20.0	120.0	240.0
38	2,4,6 trichlorophenol	0.1	0.6	1.2
39	vinyl chloride	0.01	0.06	0.12
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40	pH	***	***	***
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\* No maximum allowable concentration is delineated for a class IV landfill, but the leachate concentration must be less than the class III maximum allowable concentration. The chemical analysis of ground water in the first saturated zone beneath the landfill or proposed landfill required by paragraph (C) of this rule will be utilized to determine appropriate environmentally protective measures.

\*\* No maximum allowable concentration is delineated for a class II landfill. The concentration of these parameters need not be determined for the class II residual waste landfill classification process.

\*\*\* The pH value must be determined and reported for informational purposes; however, the residual waste landfill classification is not dependent on the pH value.