



## Ohio Administrative Code

### Rule 3745-270-49 Alternative land disposal restriction treatment standards for contaminated soil.

Effective: September 5, 2010

(A) Applicability. You must comply with land disposal restrictions (LDRs) contained in Chapter 3745-270 of the Administrative Code prior to placing soil that exhibits a characteristic of hazardous waste, or exhibited a characteristic of hazardous waste at the time it was generated, into a land disposal unit. The following chart describes whether you must comply with LDRs prior to placing soil contaminated by listed hazardous waste into a land disposal unit:

If LDRs	And LDRs	And if	Then you
Applied to the listed waste when it contaminated the soil	Apply to the listed waste now	--	Must comply with LDRs
Did not apply to the listed waste when it contaminated the soil	Apply to the listed waste now	The soil is determined to contain the listed waste when the soil is first generated	Must comply with LDRs
Did not apply to the listed waste when it contaminated the soil	Apply to the listed waste now	The soil is determined not to contain the listed waste when the soil is first generated	Need not comply with LDRs
Did not apply to the listed waste when it contaminated the soil	Do not apply to the listed waste now	--	Need not comply with LDRs

(B) Prior to land disposal, contaminated soil identified by paragraph (A) of this rule as needing to comply with LDRs must be treated according to the applicable treatment standards specified in paragraph (C) of this rule or according to the universal treatment standards specified in rule 3745-270-48 of the Administrative Code applicable to the contaminating listed hazardous waste and/or the applicable characteristic of hazardous waste if the soil is characteristic. The treatment standards specified in paragraph (C) of this rule and the universal treatment standards may be modified through a treatment variance approved in accordance with rule 3745-270-44 of the Administrative Code.

(C) Treatment standards for contaminated soils. Prior to land disposal, contaminated soil identified



by paragraph (A) of this rule as needing to comply with LDRs must be treated according to all the standards specified in paragraphs (C) to (C)(3)(b) of this rule or according to the universal treatment standards specified in rule 3745-270-48 of the Administrative Code.

(1) All soils. Prior to land disposal, all constituents subject to treatment must be treated as follows:

(a) For non-metals except carbon disulfide, cyclohexanone, and methanol, treatment must achieve ninety per cent reduction in total constituent concentrations, except as provided by paragraph (C)(1)(c) of this rule.

(b) For metals and carbon disulfide, cyclohexanone, and methanol, treatment must achieve ninety per cent reduction in constituent concentrations as measured in leachate from the treated media (tested according to the toxicity characteristic leaching procedure) or ninety per cent reduction in total constituent concentrations (when a metal removal treatment technology is used), except as provided by paragraph (C)(1)(c) of this rule.

(c) When treatment of any constituent subject to treatment to a ninety per cent reduction standard would result in a concentration less than ten times the universal treatment standard for that constituent, treatment to achieve constituent concentrations less than ten times the universal treatment standard is not required. Universal treatment standards are identified in the table in rule 3745-270-48 of the Administrative Code.

(2) Soils that exhibit the characteristic of ignitability, corrosivity or reactivity. In addition to the treatment required by paragraph (C)(1) of this rule, prior to land disposal, soils that exhibit the characteristic of ignitability, corrosivity, or reactivity must be treated to eliminate these characteristics.

(3) Soils that contain nonanalyzable constituents. In addition to the treatment requirements of paragraphs (C)(1) and (C)(2) of this rule, prior to land disposal, the following treatment is required for soils that contain nonanalyzable constituents:

(a) For soil that contains only analyzable and nonanalyzable organic constituents, treatment of the analyzable organic constituents to the levels specified in paragraphs (C)(1) and (C)(2) of this rule; or,



(b) For soil that contains only nonanalyzable constituents, treatment by the method(s) specified in rule 3745-270-42 of the Administrative Code for the waste contained in the soil.

(D) Constituents subject to treatment. When applying the soil treatment standards in paragraph (C) of this rule, constituents subject to treatment are any constituents listed in the table in rule 3745-270-48 of the Administrative Code that are reasonably expected to be present in any given volume of contaminated soil, except fluoride, selenium, sulfides, vanadium, and zinc, and that are present at concentrations greater than ten times the universal treatment standard. Polychlorinated biphenyls (PCBs) are not constituent subject to treatment in any given volume of soil which exhibits the toxicity characteristic solely because of the presence of metals.

(E) Management of treatment residuals. Treatment residuals from treating contaminated soil identified by paragraph (A) of this rule as needing to comply with LDRs must be managed as follows:

(1) Soil residuals are subject to the treatment standards of this rule;

(2) Non-soil residuals are subject to:

(a) For soils contaminated by listed hazardous waste, the hazardous waste rules applicable to the listed hazardous waste; and

(b) For soils that exhibit a characteristic of hazardous waste, if the non-soil residual also exhibits a characteristic of hazardous waste, the treatment standards applicable to the characteristic hazardous waste.