

TITLE 35: ENVIRONMENTAL PROTECTION
SUBTITLE G: WASTE DISPOSAL
CHAPTER I: POLLUTION CONTROL BOARD
SUBCHAPTER c: HAZARDOUS WASTE OPERATING REQUIREMENTS

PART 729
PROHIBITED HAZARDOUS WASTES IN LAND DISPOSAL UNITS

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AUTHORITY: Implementing Sections 22(g), 22.4(b), 22.6 and 39(h) of the Environmental Protection Act (Ill. Rev. Stat. 1985, ch. 111 1/2, pars. 1022(g), 1022.4(b), 1022.6 and 1039(h)) and authorized by Sections 22.6 and 27 of the Environmental Protection Act (Ill. Rev. Stat. 1985, ch. 111 1/2, pars. 1022.6 and 1027.

SOURCE: Emergency rule adopted in R83-28A at 8 Ill. Reg. 12668, effective July 5, 1984 for a maximum of 150 days; adopted in R81-25 at 8 Ill. Reg. 24124, effective December 4, 1984; amended in R83-28B at 9 Ill. Reg. 718, effective January 3, 1985; amended in R83-28C at 10 Ill. Reg. 4864, effective March 7, 1986; emergency amendment in R86-9A at 10 Ill. Reg. 19787, effective November 5, 1986, for a maximum of 150 days.

NOTE: Capitalization is used to indicate that the language quotes or paraphrases a statute.

SUBPART A: GENERAL

Section 729.100 Purpose, Scope and Applicability

- a) The purpose of this Part is to prohibit the disposal of certain hazardous wastes in landfills. "Hazardous waste" is as defined in 35 Ill. Adm. Code 721. 35 Ill. Adm. Code 709 requires wastestream authorizations for certain wastestreams.
- b) Unless otherwise indicated, the requirements of this Part apply to all landfills, or "sanitary landfills" as defined in the Environmental Protection Act (Act) (Ill. Rev. Stat. 1983, ch. 111 1/2, par. 1001 et seq.). Landfills include both non-hazardous and hazardous waste landfills permitted under Sections 21(d) or 21(f) of the Act. Unless otherwise indicated, "landfills" includes surface impoundments and waste piles in which waste residues are expected to remain after closure, and land application.
- c) The provisions of 35 Ill. Adm. Code 721.105 notwithstanding, the landfilling prohibitions of this Part apply to all persons, including small quantity generators, unless otherwise indicated in this Part.

- d) The landfilling prohibitions of this Part do not apply to residues of hazardous waste in containers, or empty liners removed from containers, as defined in 35 Ill. Adm. Code 721.107.
- e) The provisions of this Part are intended to supplement the requirements of 35 Ill. Adm. Code 722, 723, 724, 725, 807 and 809. No provisions of those regulations should be read as permitting the disposal of any hazardous waste in any manner prohibited under this Part.
- f) The provisions of this Part are intended to proscribe any conduct by generators, transporters, treaters or disposers of waste which results in placement of a prohibited waste in a landfill.

(Source: Amended at 10 Ill. Reg. 4864, effective March 7, 1986)

Section 729.101 Severability

If any provision of this Part is adjudged invalid, or if the application to any person or in any circumstance is adjudged invalid, such invalidity shall not affect the validity of this Part as a whole, or of any Subpart, Section, paragraph, sentence or clause which has not been adjudged invalid.

SUBPART B: HALOGENATED SOLVENTS

Section 729.200 Purpose, Scope and Applicability

- a) This Subpart prohibits the landfilling of wastes containing halogenated compounds. Rules are included to differentiate these from other wastes.
- b) Halogenated compounds are a class of organic solvents. As a class halogenated compounds are not very soluble in water; therefore, in a complex system, they will be found in a non-aqueous phase associated with any other organic solvents present. This Subpart assumes that any halogenated compounds present will be more concentrated in any non-aqueous liquid phase. The halogen concentration in the non-aqueous liquid phase is used to determine whether the phase should be regulated as an halogenated solvent or as an organic solvent.
- c) Organic solvent phases, whether they include halogenated compounds or not, pose a threat to the impermeability of clay and synthetic landfill liners.
- d) Aqueous solutions of halogenated compounds placed directly into the landfill, could damage synthetic liners and move into groundwater.
- e) Because of their differing impacts on landfills, the Board intends to encourage the separation prior to disposal of phases in multiphase wastes, and intends to encourage the separation of wastestreams during generation to avoid the formation of multiphase wastes.

Section 729.201 No Circumvention

- a) No person shall cause or allow the mixing or dilution of wastes containing halogenated compounds in order to evade the landfilling prohibitions of this Subpart.
- b) For purposes of determining quantity exemptions, any waste which is transferred prior to ultimate disposal shall be attributed to the last person who used the solvent.

Section 729.202 Incorporations by Reference

- a) The following materials are incorporated by reference: American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103:
 - 1) ASTM D2361-66 (Reapproved 1978)
 - 2) ASTM E442-74 (Reapproved 1981)
- b) This Part incorporates no future editions or amendments.

Section 729.203 Waste Analysis Plan

The owner or operator of a landfill disposing of hazardous waste must, within thirty days after the effective date of this section, develop and follow a written waste analysis plan which describes the procedures which the owner or operator will carry out to ensure that the facility complies with the prohibition stated in this Subpart. The owner or operator must keep this plan at the facility. A copy of the plan shall be submitted to the Agency within thirty days after the effective date of this section.

Section 729.204 Land Treatment Demonstration

This Subpart shall not bar the issuance of a RCRA permit pursuant to Section 21(f) of the Act and 35 Ill. Adm. Code 703 for land treatment of hazardous waste if the owner or operator demonstrates, pursuant to 35 Ill. Adm. Code 703.206, 703.230 and 724.372, that any halogenated compounds in the waste will be completely degraded, transformed or immobilized in the treatment zone.

Section 729.205 Effect on Wastestream Authorizations and Supplemental Permits (Repealed)

(Source: Repealed at 9 Ill. Reg. 718, effective January 3, 1985)

Section 729.220 Definitions

As used in this Subpart, terms have the following meanings:

Aqueous phase: A "phase" in which water is the solvent, constituting more than 500 g/kg.

Component: An element or compound present in a "phase" or "system".

Emulsion: A "system", including two or more liquid "phases", which is not separated into layers. For purposes of this Subpart, an emulsion which does not form layers within one hour is one phase.

Liquid: A waste, or part of a waste, which yields any fluid when subjected to the paint filter test described in Section 729.320.

Non-aqueous phase: A "phase" which contains 500 g/kg or less of water.

One-phase system: A "system" with one and only one "phase".

Phase: A physically distinct portion of a dispersion or solution which at least in principle could be mechanically separated from the remainder of the material. For purposes of this Subpart, a container is not a phase, nor is a vapor above a waste. Emulsions and suspensions are a single phase if they do not form layers within one hour.

Solid: A waste, or part of a waste, which contains no free liquid as determined from the paint filter test described in Section 729.320.

Suspension: A "system", including a "solid" phase and a "liquid" phase, which is not separated into layers. For purposes of this Subpart, a suspension which does not form layers within one hour is one phase.

System: A single isolated "phase" or a set of two or more "phases" which are in physical contact.

TOX test: Either of the tests for total organic halogen incorporated by reference in Section 729.202, ASTM D2361-66 (Reapproved 1978) or ASTM E442-74 (Reapproved 1981).

Two-phase system: A "system" with two "phases".

Section 729.221 Halogenated Compound--Definition

As used in this Subpart, the term "halogenated compound" shall mean any of the following chemicals:

B010	benzene, chloro-
B020	benzene, 1,2-dichloro-
B090	carbon tetrachloride
B030	chlorinated fluorocarbons
B040	ethane, 1,1,1-trichloro-

B050	ethane, 1,1,2-trichloro-1,2,2-trifluoro-
B060	ethene, tetrachloro-
B070	ethene, trichloro-
B070	ethinyl trichloride
B080	methane, dichloro-
B090	methane, tetrachloro-
B100	methane, trichlorofluoro-
B040	methyl chloroform
B080	methylene chloride
B080	methylene dichloride
B020	orthodichlorobenzene
B060	perchloroethylene
B010	phenyl chloride
B060	tetrachloroethylene
B070	trichloroethylene
B100	trichloromonofluoromethane

Section 729.222 Halogenated Solvent--Definition

An "halogenated solvent" is a non-aqueous liquid phase containing more than 14,000 mg of halogenated compounds in any 1 kg.

Section 729.223 Halogen Content Presumption

A non-aqueous liquid phase containing 10,000 mg/kg, or more, total organic halogen, as measured by the TOX test, is assumed to be an halogenated solvent unless it is shown, by a more definitive test whose validity is demonstrated to the Agency, that less than 14,000 mg of the halogenated compounds listed in Section 729.221 are present in any 1 kg of the phase.

Section 729.224 Partition Presumption

It is assumed that, in a multi-phase system, the concentration of halogenated compounds and the total organic halogen concentration in any non-aqueous phase exceeds the concentration of halogenated compounds and the total organic halogen concentration, respectively, in the entire system and in any aqueous phase, unless the contrary is shown by a test whose validity is demonstrated to the Agency.

Section 729.240 Non-aqueous Liquid Phases which are Halogenated Solvents

No person shall cause or allow any hazardous waste containing a non-aqueous liquid phase which is an halogenated solvent to be placed in any landfill.

Section 729.241 Aqueous Solutions of Halogenated Compounds

- a) No person shall cause or allow to be placed in any landfill any hazardous waste containing an aqueous liquid phase containing more than 14,000 mg of halogenated compounds in any 1 kg.
- b) An aqueous liquid phase containing more than 10,000 mg of total organic halogen, as measured by the TOX test, in any 1 kg is assumed to contain more than 14,000 mg of halogenated compounds per kilogram, unless the contrary is shown by a more definitive test whose validity is demonstrated to the Agency.

Section 729.242 Solids Containing Halogenated Compounds

- a) No person shall cause or allow any hazardous waste which is a solid to be placed in any landfill if the waste forms a non-aqueous liquid phase which is an halogenated solvent when a representative sample of the waste is mixed with water.
- b) The prohibition of paragraph (a) shall become effective on July 1, 1986.

Section 729.262 Recycling Residues

This Subpart does not apply to sludges and still bottoms produced from recycling of halogenated solvents in which at least 30% of the waste is recovered for reuse. This exemption shall expire on July 1, 1986.

Section 729.263 Small Quantity Generators

This Subpart applies only to hazardous waste for which a manifest would have to be prepared pursuant to 35 Ill. Adm. Code 722.120 or 809.501 if the waste were transported off the site or facility.

SUBPART C: LIQUID HAZARDOUS WASTES

Section 729.301 Definitions

"Act" means the Environmental Protection Act (Ill. Rev. Stat. 1983, ch. 111 1/2, par. 1001 et seq.)

"Agency" means the Illinois Environmental Protection Agency

"Board" means the Illinois Pollution Control Board

"Generator" is as defined in 35 Ill. Adm. Code 720.110

"Hazardous Waste" is a hazardous waste as defined at 35 Ill. Adm. Code 721.103

"Labwaste" is a liquid hazardous waste generated by an activity in a laboratory engaged in teaching, testing or research, in a quantity totaling less than 100 kg per month for the activity. Wastes which are periodically produced as a result of a production process are not "labwaste".

"LANDFILL" IS A DISPOSAL UNIT OR PART OF A FACILITY WHERE HAZARDOUS WASTE IS PLACED IN OR ON LAND AND WHICH IS NOT A LAND TREATMENT UNIT, A SURFACE IMPOUNDMENT OR AN UNDERGROUND INJECTION WELL. (Section 22.6(d) of the Act)

"Liquid hazardous waste" is a hazardous waste which yields any fluid when subjected to the test procedure described in Section 729.320.

"Non-periodic waste" is a liquid hazardous waste in a quantity of less than 100 kg which will not be generated again by that generator.

"Original generator" is a person who generates hazardous waste as a result of an activity or production process other than the treatment of hazardous waste.

"Residual" is any material other than a gas which remains after, or is generated by, the treatment of a liquid hazardous waste. A "residual" may itself be a "liquid hazardous waste".

"Treater" is a person who engages in treatment of hazardous waste. A "treater" may be a "generator", but may not be the "original generator".

"Treatment" is treatment as defined at 35 Ill. Adm. Code 720.110. 35 Ill. Adm. Code 703.123(h) and 724.101(g)(10) notwithstanding, as used in this Subpart, "treatment" specifically includes the addition of absorbent materials to a liquid hazardous waste or vice versa. Provided, however, that "treatment" shall not include those activities carried out to immediately contain or treat a spill of a liquid hazardous waste or a material which, when spilled, becomes a liquid hazardous waste, to the extent such treatment meets the exemption of 35 Ill. Adm. Code 724.101(g)(8) or 725.101(c)(11), whichever is applicable.

(Source: Amended at 10 Ill. Reg. 4864, effective March 7, 1986)

Section 729.302 Waste Analysis Plan

The owner or operator of a landfill disposing of hazardous waste must develop and follow a written waste analysis plan which describes the procedures which he will carry out to ensure that the facility complies with the prohibition stated in Section 729.310. He must keep this plan at the facility. A copy of the plan shall be submitted to the Agency.

(Source: Amended at 10 Ill. Reg. 4864, effective March 7, 1986)

Section 729.303 Incorporations by Reference

- a) The following materials are incorporated by reference: 49 CFR 173, 178 and 179 (1984).
- b) This Part incorporates no future editions or amendments.

(Source: Amended at 10 Ill. Reg. 4864, effective March 7, 1986)

Section 729.310 Liquid Hazardous Waste Restriction

- a) Liquids: NO PERSON SHALL CAUSE, THREATEN OR ALLOW THE DISPOSAL IN A LANDFILL OF ANY LIQUID HAZARDOUS WASTE, UNLESS THE GENERATOR HAS DEMONSTRATED THAT, CONSIDERING CURRENT TECHNOLOGICAL FEASIBILITY AND ECONOMIC REASONABLENESS, THE HAZARDOUS WASTE CANNOT BE REASONABLY SOLIDIFIED, STABILIZED OR RECYCLED FOR REUSE, NOR INCINERATED OR CHEMICALLY, PHYSICALLY OR BIOLOGICALLY TREATED SO AS TO NEUTRALIZE THE HAZARDOUS WASTE AND RENDER IT NONHAZARDOUS. (Sections 22.6(a) and 22.6(c) of the Act)
- b) Residuals: No person shall engage in the treatment of a liquid hazardous waste and cause, threaten or allow the disposal in a landfill of a residual from such treatment unless the residual meets one of the following standards.
 - 1) Non-hazardous Residuals: The residual may be landfilled if it no longer meets the definition of "hazardous waste".
 - 2) Liquid Removal: For wastes in which treatment is accomplished only through extraction, volatilization, evaporation, thermal destruction or other removal of liquids, the residual may be landfilled if it no longer meets the definition of "liquid hazardous waste".
 - 3) Solidification: The residual may be landfilled if it no longer meets the definition of "liquid hazardous waste" and possesses a load-bearing capacity of at least 2.0 tons per square foot as determined by application of the test procedure described in Section 729.321.

- c) No person shall cause, threaten or allow the disposal in a landfill of a residual from the treatment of a liquid hazardous waste which does not meet one of the standards of paragraph (b), and for which the Agency has not issued a wastestream authorization pursuant to 35 Ill. Adm. Code 709.401(a). Reasonable reliance on a generator's description of the waste shall be a complete defense to violation of this paragraph.

(Source: Amended at 10 Ill. Reg. 4864, effective March 7, 1986)

Section 729.311 Prohibition of Non-hazardous Liquids in Hazardous Waste Landfills

No person shall cause, threaten or allow the placement into a landfill permitted to receive hazardous waste of any non-hazardous waste which yields any fluids when subjected to the test procedure described in Section 729.320.

(Source: Amended at 10 Ill. Reg. 4864, effective March 7, 1986)

Section 729.312 Labpacks

- a) Neither labwaste nor non-periodic waste is subject to the restriction of Section 729.310 or Section 22.6 of the Act if it is in a labpack.
- b) A labpack is a drum containing small containers of hazardous waste meeting the following criteria:
 - 1) Hazardous waste must be packaged in non-leaking inside containers. The inside containers must be of a design and constructed of a material which will not react dangerously with, be decomposed by or be ignited by the contained waste. Inside containers must be tightly and securely sealed. The inside containers must be of the size and type specified in the Department of Transportation (DOT) hazardous materials regulations (49 CFR 173, 178 and 179 (1984)), if those regulations specify a particular inside container for the waste.
 - 2) The inside containers must be overpacked in an open head DOT-specification metal shipping container (49 CFR 178 and 179 (1984)) of no more than 416 liter (110 gallon) capacity and surrounded by, at a minimum, a sufficient quantity of absorbent material to completely absorb all of the liquid contents of the inside containers. The metal outer container must be full after packing with inside containers and absorbent material.
 - 3) In accordance with 35 Ill. Adm. Code 724.117(b), the absorbent material used must not be capable of reacting dangerously with, being decomposed by or being ignited by the contents of the inside containers.

- 4) Incompatible wastes, as defined in 35 Ill. Adm. Code 720.110, must not be placed in the same outside container.
- 5) Reactive wastes, other than cyanide or sulfide-bearing waste as defined in 35 Ill. Adm. Code 721.123(a)(5), must be treated or rendered non-reactive prior to packaging in accordance with paragraphs (1) through (4). Cyanide and sulfide-bearing reactive waste may be packed in accordance with paragraphs (1) through (4) without first being treated or rendered non-reactive.

(Source: Amended at 10 Ill. Reg. 4864, effective March 7, 1986)

Section 729.313 Biodegradable Absorbents

No person shall cause, threaten or allow the disposal in any landfill of any liquid hazardous waste containing an absorbent material which, because of microbial action, will degrade faster than the waste.

(Source: Amended at 10 Ill. Reg. 4864, effective March 7, 1986)

Section 729.320 Test for Liquids

- a) Apparatus
 - 1) Ringstand approximately 10 cm in diameter
 - 2) ml graduated cylinder
 - 3) micron conical paint filter approximately 15 cm in diameter
 - 4) Watch glass.
- b) Procedure
 - 1) Collect a 100 ml representative sample of the hazardous waste.
 - 2) Mix the sample thoroughly.
 - 3) Bring the sample and the filter to a temperature of not less than 20 degrees C (68 degrees F) and to ambient pressure.
 - 4) Place the filter in the ringstand.
 - 5) Place the sample in the filter and cover with the watch glass.
 - 6) Maintain the sample and the filter at the temperature and pressure specified in paragraph (3) for five minutes.
 - 7) Observe whether any fluid portion of the sample drops from the bottom of the filter during the period of time specified in paragraph (6).

(Source: Amended at 10 Ill. Reg. 4864, effective March 7, 1986)

Section 729.321 Load-bearing Capacity Test

- a) Apparatus: Soil penetrometer with a range of 0 to 4.5 tons per square foot

b) Procedure

- 1) Collect a representative sample of the treatment residual. If the material is a monolithic solid proceed to step (2). If the material is granular it should be compacted.
- 2) Grasp the penetrometer by the handle and push the point into the sample by hand, at a constant rate, up to the calibration mark.
- 3) Read the unconfined compressive strength on the low-load side of the indicator ring.
- 4) Return indicator ring to initial position for the next test.
- 5) Repeat the test at least 3 times and average the result.

(Source: Amended at 10 Ill. Reg. 4864, effective March 7, 1986)