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Title 22@ Social Security

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Division 4.5@ Environmental Health Standards for the Management of Hazardous Waste

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Chapter 14@ Standards for Owners and Operators of Hazardous Waste Transfer, Treatment, Storage, and Disposal Facilities

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Article 14@ Landfills

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Section 66264.310@ Closure and Post-Closure Care

66264.310 Closure and Post-Closure Care

(a)

At final closure of the landfill or upon closure of any cell, the owner or operator shall cover the landfill or cell with a final cover designed and constructed to: (1) prevent the downward entry of water into the closed landfill throughout a period of at least 100 years; (2) function with minimum maintenance; (3) promote drainage and minimize erosion or abrasion of the cover; (4) accommodate settling and subsidence so that the cover's integrity is maintained; (5) accommodate lateral and vertical shear forces generated by the maximum credible earthquake so that the integrity of the cover is maintained; (6) have a permeability less than or equal to the permeability of any bottom liner system or natural subsoils present; and (7) conform to the provisions of subsections (e) through (r) of section 66264.228, except that the Department shall grant a variance from any requirement of subsections (e) through (r) which the owner or operator demonstrates to the satisfaction of the Department is not necessary to protect public health, water quality or other environmental quality.

(1)

prevent the downward entry of water into the closed landfill throughout a period of at least 100 years;

(2)

function with minimum maintenance;

(3)

promote drainage and minimize erosion or abrasion of the cover;

(4)

accommodate settling and subsidence so that the cover's integrity is maintained;

(5)

accommodate lateral and vertical shear forces generated by the maximum credible earthquake so that the integrity of the cover is maintained;

(6)

have a permeability less than or equal to the permeability of any bottom liner system or natural subsoils present; and

(7)

conform to the provisions of subsections (e) through (r) of section 66264.228, except that the Department shall grant a variance from any requirement of subsections (e) through (r) which the owner or operator demonstrates to the satisfaction of the Department is not necessary to protect public health, water quality or other environmental quality.

(b)

After final closure, the owner or operator must comply with all post-closure requirements contained in sections 66264.117 through 66264.120, including maintenance and monitoring throughout the post-closure care period specified in the permit under section 66264.117. The owner or operator must: (1) maintain the integrity and effectiveness of the final cover, including making repairs to the cap as necessary to correct the effects of settling, subsidence, erosion, or other events; (2) continue to operate the leachate collection and removal system until leachate is no longer detected; (3) maintain and monitor the groundwater monitoring system and comply with all other applicable requirements of article 6

of this chapter; (4) prevent run-on and run-off from eroding or otherwise damaging the final cover; (5) protect and maintain surveyed benchmarks used in complying with section 66264.309, and (6) maintain and monitor the leak detection system in accordance with Sections 66264.301(c)(3)(D) and (c)(4) and 66264.303(c), and comply with all other applicable leak detection system requirements of this part;

(1)

maintain the integrity and effectiveness of the final cover, including making repairs to the cap as necessary to correct the effects of settling, subsidence, erosion, or other events;

(2)

continue to operate the leachate collection and removal system until leachate is no longer detected;

(3)

maintain and monitor the groundwater monitoring system and comply with all other applicable requirements of article 6 of this chapter;

(4)

prevent run-on and run-off from eroding or otherwise damaging the final cover;

(5)

protect and maintain surveyed benchmarks used in complying with section 66264.309, and

(6)

maintain and monitor the leak detection system in accordance with Sections 66264.301(c)(3)(D) and (c)(4) and 66264.303(c), and comply with all other applicable leak detection system requirements of this part;

(c)

Unless the owner or operator can demonstrate to the satisfaction of the Department that significant amounts of toxic or flammable gas or vapor will not be emitted by waste and that no gas will be emitted that is capable of disrupting the cover or causing other property damage, the owner or operator shall provide a control system designed to prevent migration of gas. The control system shall be designed to collect gases that are emitted from the buried waste and convey gas or vapor to a flare, incinerator or treatment device that will render the gas or vapor harmless to public health or safety, or to a collection system that allows gas to be exported for use or treatment elsewhere. Any gas collection system used shall be designed to withstand pressures that may result from overburden weight of structures that may overlie the cover, and traffic that may occur.

(d)

If gas or vapor that can be expected to be emitted from buried waste after closure would be flammable or toxic, the owner shall describe in the closure plan measures to render such gases or vapors harmless, or export gas from the site, for as many years as they would be emitted from the waste, and shall estimate the cost of such measures as part of the cost of closure and post-closure care of the facility. In that case, the closure plan shall provide a map showing: (1) the number, spacing and locations of wells to be used for gas extraction; (2) the location and spacing of piping. Also in that case, the closure plan shall describe the equipment and capability of equipment, to be provided to render gases or vapor harmless or export gas for use or treatment elsewhere. If pumping would be needed to assure that such gas is withdrawn at a rate sufficient to avoid hazardous accumulation of gas or vapor or uncontrolled migration of such gas or vapor or uncontrolled migration of such gas or vapor from the facility, the owner or operator shall describe measures to provide such pumping for as many years

as such gas or vapor will be emitted from the waste, and shall estimate the cost of such measures as part of the cost of closure and post-closure care of the facility. The closure plan shall in that case describe the type of pump, volume of gas the pump can move per unit time, and the estimated distances from the pump from which gas can be extracted from the landfill. The owner or operator shall provide such measures as needed.

(1)

the number, spacing and locations of wells to be used for gas extraction;

(2)

the location and spacing of piping. Also in that case, the closure plan shall describe the equipment and capability of equipment, to be provided to render gases or vapor harmless or export gas for use or treatment elsewhere. If pumping would be needed to assure that such gas is withdrawn at a rate sufficient to avoid hazardous accumulation of gas or vapor or uncontrolled migration of such gas or vapor or uncontrolled migration of such gas or vapor from the facility, the owner or operator shall describe measures to provide such pumping for as many years as such gas or vapor will be emitted from the waste, and shall estimate the cost of such measures as part of the cost of closure and post-closure care of the facility. The closure plan shall in that case describe the type of pump, volume of gas the pump can move per unit time, and the estimated distances from the pump from which gas can be extracted from the landfill. The owner or operator shall provide such measures as needed.