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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 15@ Interim Status Standards for Owners and Operators of Hazardous Waste Transfer, Treatment, Storage, and Disposal Facilities

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Article 13@ Land Treatment

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Section 66265.278@ Vadose Zone (Zone of Aeration) Monitoring

66265.278 Vadose Zone (Zone of Aeration) Monitoring

(a)

The owner or operator shall have in writing, and shall implement, a vadose zone monitoring plan which is designed to:(1) detect the vertical migration of hazardous waste and hazardous waste constituents under the active portion of the land treatment facility, and (2) provide information on the background concentrations of the hazardous waste and hazardous waste constituents in similar but untreated soils nearby; this background monitoring shall be conducted before or in conjunction with the monitoring required under subsection (a)(1) of this section.

(1)

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(2)

provide information on the background concentrations of the hazardous waste and hazardous waste constituents in similar but untreated soils nearby; this background monitoring shall be conducted before or in conjunction with the monitoring required under subsection (a)(1) of this section.

(b)

The vadose zone monitoring plan shall include, at a minimum:(1) soil monitoring using soil cores, and (2) soil-pore water monitoring using devices such as

lysimeters.

(1)

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(2)

soil-pore water monitoring using devices such as lysimeters.

(c)

To comply with subsection (a)(1) of this section, the owner or operator shall demonstrate in the vadose zone monitoring plan that: (1) the depth at which soil and soil-pore water samples are to be taken is below the depth to which the waste is incorporated into the soil: (2) the number of soil and soil-pore water samples to be taken is based on the variability of: (A) the hazardous waste constituents (as identified in sections 66265.273(a) and (b) in the waste and in the soil; and (B) the soil type(s); and (3) the frequency and timing of soil and soil-pore water sampling is based on the frequency, time, and rate of waste application, proximity to ground water, and soil permeability.

(1)

the depth at which soil and soil-pore water samples are to be taken is below the depth to which the waste is incorporated into the soil:

(2)

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(3)

the frequency and timing of soil and soil-pore water sampling is based on the frequency, time, and rate of waste application, proximity to ground water, and soil permeability.

(d)

The owner or operator shall keep at the facility his vadose zone monitoring plan, and the rationale used in developing this plan.

(e)

The owner or operator shall analyze the soil and soil-pore water samples for the hazardous waste constituents that were found in the waste during the waste analysis under sections 66265.273(a) and (b).

(f)

As required by section 66265.73, all data and information developed by the owner or operator under this section shall be placed in the operating record of the facility.

(g)

Except as provided in section 66265.272(h) no person shall place or dispose of hazardous waste in a land treatment unit if any of the following conditions exist:

(1) hazardous constituents have migrated from the land treatment unit into the vadose zone beneath or surrounding the treatment zone or into the waters beneath or surrounding the treatment zone; (2) there is evidence that a hazardous constituent in the waste discharged to the land treatment unit has not been or will not be completely degraded, transformed or immobilized in the treatment zone; (3) there is a significant potential for hazardous constituents to migrate from the land treatment unit into a potential source of drinking water.

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(3)

there is a significant potential for hazardous constituents to migrate from the land treatment unit into a potential source of drinking water.

(h)

The owner or operator shall periodically, at the request of the Department, and at least annually, submit information required by the Department to assure that the conditions set forth in subsections (g)(1) and (g)(2) of this section are not present. The information to be submitted to the Department to demonstrate compliance with subsection (g) of this section shall include, but is not limited to, a sufficient number of soil core samples in, beneath, and surrounding the treatment zone of the land treatment unit to detect any constituents of concern.

(i)

If the owner or operator determines pursuant to subsection (a) of this section, that there has been a statistically significant increase in the concentration of a hazardous constituent below the treatment zone, or that either of the conditions set forth in subsections (g)(1) or (g)(2) of this section are detected and confirmed, or that conditions exist that render the owner or operator unable to continue to satisfy the variance requirements of section 66265.272(f)(2), the owner or

operator shall, within 72 hours, report to the Department describing the full extent of the owner's or operator's findings, including the identification of all constituents which have shown a statistically significant increase.

(j)

Upon receiving notice pursuant to subsection (i) of this section, or upon independent confirmation by the Department, the Department shall order the owner or operator to cease operating the land treatment unit. The owner or operator shall not resume operating the land treatment unit and shall close the land treatment unit unless one of the following actions is taken: (1) the owner or operator completes appropriate removal or remedial actions to the satisfaction of the Department, and the owner or operator submits to the Department, and the Department approves, an application for a permit or a variance modification to modify the operating practices at the facility to maximize the success of degradation, immobilization, or transformation processes in the treatment zone; or (2) the owner or operator completes appropriate removal or remedial actions, submits to the Department, and the Department approves, an application for a permit or a variance modification to modify the operating practices at the facility to maximize the success of degradation, immobilization, or transformation processes in the treatment zone, and equips the land treatment unit with liners, and a leachate collection and removal system that satisfy the requirements of section 66265.272(f)(1).

(1)

the owner or operator completes appropriate removal or remedial actions to the satisfaction of the Department, and the owner or operator submits to the Department, and the Department approves, an application for a permit or a variance modification to modify the operating practices at the facility to maximize the success of degradation,

immobilization, or transformation processes in the treatment zone; or

(2)

the owner or operator completes appropriate removal or remedial actions, submits to the Department, and the Department approves, an application for a permit or a variance modification to modify the operating practices at the facility to maximize the success of degradation, immobilization, or transformation processes in the treatment zone, and equips the land treatment unit with liners, and a leachate collection and removal system that satisfy the requirements of section 66265.272(f)(1).

(k)

All actions taken by an owner or operator pursuant to subsections (j)(1) or (j)(2) of this section shall be completed within a time period specified by the Department, which shall not exceed 18 months after the Department receives notice pursuant to subsection (i) of this section. If the actions are not completed within this time period, the land treatment unit shall be closed, unless granted an extension by the Department due to exceptional circumstances beyond the control of the owner and operator.