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leak detection system requirements of this part;

(3) Maintain and monitor the ground-water monitoring system and comply with all other applicable requirements of subpart F of this part; and

(4) Prevent run-on and run-off from eroding or otherwise damaging the final cover.

(c)(1) If an owner or operator plans to close a surface impoundment in accordance with paragraph (a)(1) of this section, and the impoundment does not comply with the liner requirements of §264.221(a) and is not exempt from them in accordance with §264.221(b), then:

(i) The closure plan for the impoundment under §264.112 must include both a plan for complying with paragraph (a)(1) of this section and a contingent plan for complying with paragraph (a)(2) of this section in case not all contaminated subsoils can be practicably removed at closure; and

(ii) The owner or operator must prepare a contingent post-closure plan under §264.118 for complying with paragraph (b) of this section in case not all contaminated subsoils can be practicably removed at closure.

(2) The cost estimates calculated under §§264.142 and 264.144 for closure and post-closure care of an impoundment subject to this paragraph must include the cost of complying with the contingent closure plan and the contingent post-closure plan, but are not required to include the cost of expected closure under paragraph (a)(1) of this section.

[47 FR 32357, July 26, 1982, as amended at 50 FR 28748, July 15, 1985; 57 FR 3488, Jan. 29, 1992]

**§ 264.229 Special requirements for ignitable or reactive waste.**

Ignitable or reactive waste must not be placed in a surface impoundment, unless the waste and impoundment satisfy all applicable requirements of 40 CFR part 268, and:

(a) The waste is treated, rendered, or mixed before or immediately after placement in the impoundment so that:

(1) The resulting waste, mixture, or dissolution of material no longer meets the definition of ignitable or reactive

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waste under §261.21 or §261.23 of this chapter; and

(2) Section 264.17(b) is complied with; or

(b) The waste is managed in such a way that it is protected from any material or conditions which may cause it to ignite or react; or

(c) The surface impoundment is used solely for emergencies.

[47 FR 32357, July 26, 1982, as amended at 55 FR 22685, June 1, 1990]

**§ 264.230 Special requirements for incompatible wastes.**

Incompatible wastes, or incompatible wastes and materials, (see appendix V of this part for examples) must not be placed in the same surface impoundment, unless §264.17(b) is complied with.

**§ 264.231 Special requirements for hazardous wastes FO20, FO21, FO22, FO23, FO26, and FO27.**

(a) Hazardous Wastes FO20, FO21, FO22, FO23, FO26, and FO27 must not be placed in a surface impoundment unless the owner or operator operates the surface impoundment in accordance with a management plan for these wastes that is approved by the Regional Administrator pursuant to the standards set out in this paragraph, and in accord with all other applicable requirements of this part. The factors to be considered are:

(1) The volume, physical, and chemical characteristics of the wastes, including their potential to migrate through soil or to volatilize or escape into the atmosphere;

(2) The attenuative properties of underlying and surrounding soils or other materials;

(3) The mobilizing properties of other materials co-disposed with these wastes; and

(4) The effectiveness of additional treatment, design, or monitoring techniques.

(b) The Regional Administrator may determine that additional design, operating, and monitoring requirements are necessary for surface impoundments managing hazardous wastes FO20, FO21, FO22, FO23, FO26, and FO27 in order to reduce the possibility of migration of these wastes to ground

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water, surface water, or air so as to protect human health and the environment.

[50 FR 2004, Jan. 14, 1985]

### § 264.232 Air emission standards.

The owner or operator shall manage all hazardous waste placed in a surface impoundment in accordance with the applicable requirements of subparts BB and CC of this part.

[61 FR 59950, Nov. 25, 1996]

## Subpart L—Waste Piles

SOURCE: 47 FR 32359, July 26, 1982, unless otherwise noted.

### § 264.250 Applicability.

(a) The regulations in this subpart apply to owners and operators of facilities that store or treat hazardous waste in piles, except as § 264.1 provides otherwise.

(b) The regulations in this subpart do not apply to owners or operators of waste piles that are closed with wastes left in place. Such waste piles are subject to regulation under subpart N of this part (Landfills).

(c) The owner or operator of any waste pile that is inside or under a structure that provides protection from precipitation so that neither runoff nor leachate is generated is not subject to regulation under § 264.251 or under subpart F of this part, provided that:

(1) Liquids or materials containing free liquids are not placed in the pile;

(2) The pile is protected from surface water run-on by the structure or in some other manner;

(3) The pile is designed and operated to control dispersal of the waste by wind, where necessary, by means other than wetting; and

(4) The pile will not generate leachate through decomposition or other reactions.

### § 264.251 Design and operating requirements.

(a) A waste pile (except for an existing portion of a waste pile) must have:

(1) A liner that is designed, constructed, and installed to prevent any migration of wastes out of the pile into

the adjacent subsurface soil or ground water or surface water at any time during the active life (including the closure period) of the waste pile. The liner may be constructed of materials that may allow waste to migrate into the liner itself (but not into the adjacent subsurface soil or ground water or surface water) during the active life of the facility. The liner must be:

(i) Constructed of materials that have appropriate chemical properties and sufficient strength and thickness to prevent failure due to pressure gradients (including static head and external hydrogeologic forces), physical contact with the waste or leachate to which they are exposed, climatic conditions, the stress of installation, and the stress of daily operation;

(ii) Placed upon a foundation or base capable of providing support to the liner and resistance to pressure gradients above and below the liner to prevent failure of the liner due to settlement, compression, or uplift; and

(iii) Installed to cover all surrounding earth likely to be in contact with the waste or leachate; and

(2) A leachate collection and removal system immediately above the liner that is designed, constructed, maintained, and operated to collect and remove leachate from the pile. The Regional Administrator will specify design and operating conditions in the permit to ensure that the leachate depth over the liner does not exceed 30 cm (one foot). The leachate collection and removal system must be:

(i) Constructed of materials that are:

(A) Chemically resistant to the waste managed in the pile and the leachate expected to be generated; and

(B) Of sufficient strength and thickness to prevent collapse under the pressures exerted by overlaying wastes, waste cover materials, and by any equipment used at the pile; and

(ii) Designed and operated to function without clogging through the scheduled closure of the waste pile.

(b) The owner or operator will be exempted from the requirements of paragraph (a) of this section, if the Regional Administrator finds, based on a demonstration by the owner or operator, that alternate design and operating practices, together with location