## **Environmental Protection Agency**

- (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 land treatment facilities managing hazardous wastes FO20, FO21, FO22, FO23, FO26, and FO27 in order to reduce the possibility of migration of these wastes to ground water, surface water, or air so as to protect human health and the environment.

[50 FR 2004, Jan. 14, 1985]

## **Subpart N—Landfills**

Source: 47 FR 32365, July 26, 1982, unless otherwise noted.

## § 264.300 Applicability.

The regulations in this subpart apply to owners and operators of facilities that dispose of hazardous waste in landfills, except as §264.1 provides otherwise

## § 264.301 Design and operating requirements.

- (a) Any landfill that is not covered by paragraph (c) of this section or §265.301(a) of this chapter must have a liner system for all portions of the landfill (except for existing portions of such landfill). The liner system must have:
- (1) A liner that is designed, constructed, and installed to prevent any migration of wastes out of the landfill to the adjacent subsurface soil or ground water or surface water at anytime during the active life (including the closure period) of the landfill. The liner must be constructed of materials that prevent wastes from passing into the liner 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 landfill. 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 landfill and the leachate expected to be generated; and
- (B) Of sufficient strength and thickness to prevent collapse under the pressures exerted by overlying wastes, waste cover materials, and by any equipment used at the landfill; and
- (ii) Designed and operated to function without clogging through the scheduled closure of the landfill.
- (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 alternative design and operating practices, together with location characteristics, will prevent the migration of any hazardous constituents (see § 264.93) into the ground water or surface water at any future time. In deciding whether to grant an exemption, the Regional Administrator will consider:
- (1) The nature and quantity of the wastes:
- (2) The proposed alternate design and operation;
- (3) The hydrogeologic setting of the facility, including the attenuative capacity and thickness of the liners and soils present between the landfill and ground water or surface water; and
- (4) All other factors which would influence the quality and mobility of the