

§§ 258.30–258.39 [Reserved]

Subpart D—Design Criteria

§ 258.40 Design criteria.

(a) New MSWLF units and lateral expansions shall be constructed:

(1) In accordance with a design approved by the Director of an approved State or as specified in §258.40(e) for unapproved States. The design must ensure that the concentration values listed in Table 1 of this section will not be exceeded in the uppermost aquifer at the relevant point of compliance, as specified by the Director of an approved State under paragraph (d) of this section, or

(2) With a composite liner, as defined in paragraph (b) of this section and a leachate collection system that is designed and constructed to maintain less than a 30-cm depth of leachate over the liner.

(b) For purposes of this section, *composite liner* means a system consisting of two components; the upper component must consist of a minimum 30-mil flexible membrane liner (FML), and the lower component must consist of at least a two-foot layer of compacted soil with a hydraulic conductivity of no more than 1×10^{-7} cm/sec. FML components consisting of high density polyethylene (HDPE) shall be at least 60-mil thick. The FML component must be installed in direct and uniform contact with the compacted soil component.

(c) When approving a design that complies with paragraph (a)(1) of this section, the Director of an approved State shall consider at least the following factors:

(1) The hydrogeologic characteristics of the facility and surrounding land;

(2) The climatic factors of the area; and

(3) The volume and physical and chemical characteristics of the leachate.

(d) The relevant point of compliance specified by the Director of an approved State shall be no more than 150 meters from the waste management unit boundary and shall be located on land owned by the owner of the MSWLF unit. In determining the relevant point of compliance State Direc-

tor shall consider at least the following factors:

(1) The hydrogeologic characteristics of the facility and surrounding land;

(2) The volume and physical and chemical characteristics of the leachate;

(3) The quantity, quality, and direction, of flow of ground water;

(4) The proximity and withdrawal rate of the ground-water users;

(5) The availability of alternative drinking water supplies;

(6) The existing quality of the ground water, including other sources of contamination and their cumulative impacts on the ground water, and whether the ground water is currently used or reasonably expected to be used for drinking water;

(7) Public health, safety, and welfare effects; and

(8) Practicable capability of the owner or operator.

(e) If EPA does not promulgate a rule establishing the procedures and requirements for State compliance with RCRA section 4005(c)(1)(B) by October 9, 1993, owners and operators in unapproved States may utilize a design meeting the performance standard in §258.40(a)(1) if the following conditions are met:

(1) The State determines the design meets the performance standard in §258.40(a)(1);

(2) The State petitions EPA to review its determination; and

(3) EPA approves the State determination or does not disapprove the determination within 30 days.

NOTE TO SUBPART D: 40 CFR part 239 is reserved to establish the procedures and requirements for State compliance with RCRA section 4005(c)(1)(B).

TABLE 1

| Chemical | MCL (mg/l) |
|---------------------------------------|------------|
| Arsenic | 0.05 |
| Barium | 1.0 |
| Benzene | 0.005 |
| Cadmium | 0.01 |
| Carbon tetrachloride | 0.005 |
| Chromium (hexavalent) | 0.05 |
| 2,4-Dichlorophenoxy acetic acid | 0.1 |
| 1,4-Dichlorobenzene | 0.075 |
| 1,2-Dichloroethane | 0.005 |
| 1,1-Dichloroethylene | 0.007 |
| Endrin | 0.0002 |
| Fluoride | 4 |

TABLE 1—Continued

| Chemical | MCL (mg/l) |
|--|------------|
| Lindane | 0.004 |
| Lead | 0.05 |
| Mercury | 0.002 |
| Methoxychlor | 0.1 |
| Nitrate | 10 |
| Selenium | 0.01 |
| Silver | 0.05 |
| Toxaphene | 0.005 |
| 1,1,1-Trichloromethane | 0.2 |
| Trichloroethylene | 0.005 |
| 2,4,5-Trichlorophenoxy acetic acid | 0.01 |
| Vinyl Chloride | 0.002 |

§ 258.41 Project XL Bioreactor Landfill Projects.

(a) Buncombe County, North Carolina Project XL Bioreactor Landfill Requirements. Paragraph (a) of this section applies to Cells 1, 2, 3, 4, and 5 of the Buncombe County Solid Waste Management Facility located in the County of Buncombe, North Carolina, owned and operated by the Buncombe County Solid Waste Authority, or its successors. This paragraph (a) will also apply to Cells 6, 7, 8, 9, and 10, provided that the EPA Regional Administrator for Region 4 and the State Director determine that the pilot project in Cells 3, 4, and 5 is performing as expected and that the pilot project has not exhibited detrimental environmental results.

(1) The Buncombe County Solid Waste Authority is allowed to place liquid waste in the Buncombe County Solid Waste Management Facility, provided that the provisions of paragraphs (a)(2) through (9) of this section are met.

(2) The only liquid waste allowed under this section is leachate or gas condensate derived from the MSWLF, which may be supplemented with water from the French Broad River. The owner or operator shall control any liquids to the landfill to assure that the average moisture content of the landfill does not exceed 50% by weight. Liquid addition and recirculation is allowed only to the extent that the integrity of the landfill including its liner system is maintained, as determined by the State Director.

(3) The MSWLF unit shall be designed and constructed with a liner and leachate collection system as described in § 258.40(a)(2) or paragraphs (a)(4) and

(5) of this section. The owner or operator must place documentation of the landfill design in the operating record and notify the State Director that it has been placed in operating record;

(4) Cells 3-10 shall be constructed with a liner system consisting of the components described in paragraphs (a)(4)(i) through (v) of this section, or an equivalent or superior liner system as determined by the State Director:

(i) A lower component consisting of at least 18 inches of compacted soil with a hydraulic conductivity of no more than 1×10^{-5} cm/sec., and

(ii) An upper component consisting of a minimum 30-millimeter (“mil”) flexible membrane liner (FML) or 60-mil if High Density Polyethylene (“HDPE”) is used, and

(iii) A geosynthetic clay liner (GCL) overlaying and in direct contact with the 18 inches of compacted soil in paragraph (a)(4) of this section and having the following properties:

(A) The GCL shall be formulated and manufactured from polypropylene geotextiles and high swelling containment resistant sodium bentonite. The bentonite-geotextile liner shall be manufactured using a minimum of one pound per square foot as determined using the Standard Test Method for Measuring Mass per Unit Area of Geotextiles, ASTM D-5261-92 (re-approved in 1996). The high swelling sodium montmorillonite clay shall be at 12% moisture content as determined by the Standard Test Method for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass, ASTM D2216-98. The Director of the Federal Register approves this incorporation by reference with 5 U.S.C. 552(a) and 1 CFR part 51. These methods are available from The American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959. These methods may be inspected at EPA’s docket office located at Crystal Gateway, 1235 Jefferson Davis Highway, First Floor, Arlington, Virginia, or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: http://www.archives.gov/federal_register/