§ 104E-25. Performance objectives, technical requirements and design criteria applicable to low-level radioactive waste disposal facilities; engineered barriers.

(a) As used in this section, the term "Part 61" means Title 10, Code of Federal Regulations Part 61 in effect on 1 January 1987. Unless a different meaning is required by definitions generally applicable to this Chapter or by the context, terms defined or used in Part 61 shall have the same meaning in this section as in Part 61.

(b) The Commission shall adopt rules for low-level radioactive waste disposal facilities which incorporate and are consistent with the performance objectives and technical requirements set out in Subparts C and D of Part 61. In the event that Part 61 is amended, the Commission shall amend its rules at least to the extent necessary to maintain the State's status as an agreement state. The Commission may adopt rules which exceed the requirements of applicable federal statutes and regulations.

(c) Low-level radioactive waste disposal facilities shall incorporate engineered barriers for all waste classifications. The Commission shall specify minimum design criteria for engineered barriers. Different engineered barrier design criteria may be specified for different waste classifications. In the event that a single disposal unit is used for the disposal of wastes having more than one waste classification, the engineered barrier employed shall be that specified for the highest waste classification in the disposal unit.

(d) Engineered barriers shall be designed and constructed to complement and, where appropriate, improve the ability of the disposal facility to meet the performance objectives of this section. The site for a low-level radioactive waste disposal facility shall meet all hydrogeological and other criteria and standards applicable to disposal site suitability as though engineered barriers were not required. Engineered barriers shall not substitute for a suitable site or compensate for any deficiency in a site.

(e) Engineered barriers shall be designed and constructed of materials having physical and chemical properties so as to provide reasonable assurance that the barriers will maintain their functional integrity under all reasonably foreseeable conditions for at least the institutional control period. To the maximum extent possible, engineered barriers shall be chemically nonreactive with waste, waste containers and surrounding soil. Engineered barriers shall not detract from the ability of the disposal facility to meet the performance objectives adopted by the Commission under this Chapter. The Commission shall determine the appropriate design life of engineered barriers, which may exceed the institutional control period; however no reliance may be placed on engineered barriers beyond the end of the institutional control period.

(f) Disposal units and the incorporated engineered barriers shall be designed and constructed to meet the following objectives:

(1) Prevention of the migration of water into the disposal unit.
(2) Prevention of the migration of waste or waste contaminated water out of the disposal unit.
(3) Detection of water and other fluids in the disposal unit.
(4) Temporary collection and retention of water and other liquids for a time sufficient to allow for their detection and removal or other remedial measures without contamination of groundwater or surrounding soil.
(5) Facilitation of remedial measures without disturbing other disposal units.
(6) Facilitation of recovery of waste, other than Class A waste, in the packing or container in which the waste was placed for disposal.
(7) Reasonable assurance that waste will be isolated for at least the institutional control period.

(8) Prevention of contact between waste and the surrounding earth, except for earth that may be used as fill within the disposal unit.

(g) The term "container" means any portable device into which waste is placed for storage, transportation, treatment, disposal, or other handling and includes the first enclosure which encompasses the waste. All waste shall be packed in containers for disposal. The Commission shall adopt standards for the design and construction of containers for disposal which are consistent with applicable federal standards. Standards for containers may vary for different types and classifications of waste. The standards for disposal containers may supplement or duplicate any of the requirements for engineered barriers set out in this section; however the requirements for engineered barriers are separate and cumulative, and engineered barriers and containers may not substitute for or replace one another.

(h) Waste shall be converted into a form for disposal which is as chemically stable, nonreactive, and physically stable as can be reasonably achieved, as determined by the Commission, taking into consideration costs and available technology. All liquid waste shall be solidified prior to disposal.

(i) In adopting rules specifying performance objectives, technical requirements, and design criteria and standards for a low-level radioactive waste disposal facility, the Commission shall consider the possibility of unforeseen differences between expected and actual performance of the facility. The Commission shall consider best available technology and costs.

(j) The Commission shall require that the bottom of a low-level radioactive waste disposal facility shall be at least seven feet above the seasonal high water table. The Commission shall require additional separation wherever necessary to adequately protect the public health and the environment. (1987, c. 633, s. 11.)