

Kansas Administrative Regulations

Kansas Department of Agriculture

Article 4.—Commercial Fertilizers

4-4-933. Secondary containment requirements; lining.

(a) General requirement. The base of a secondary containment facility, and any earthen walls of the facility shall be lined with asphalt, concrete, an approved synthetic liner, a clay soil liner or other product approved by the secretary, designed to limit permeability of the base and walls. Liners shall meet the requirements of this regulation.

(b) Asphalt or concrete liners. Asphalt or concrete liners shall be designed, according to good engineering practices, to withstand any foreseeable loading conditions, including a full hydrostatic head of discharged fluid and static loads of storage containers, including appurtenances, equipment, and contents. Cracks and seams shall be sealed to prevent leakage.

(c) Synthetic liners.

(1) All synthetic liners and installation plans shall be approved by the secretary. Until the manufacturer of the synthetic liner provides the secretary with a written confirmation of compatibility and a written estimate of the life of the liner, no approval shall be given.

(2) Synthetic liners shall not react either chemically or electrolytically with the materials being stored within the storage facility.

(3) Synthetic liners shall be installed according to manufacturer's specifications. All field constructed seams shall be tested and repaired, if necessary, in accordance with the manufacturer's recommendations.

(d) Clay soil liners. The surface soil, including the berm of an earthen dike and 10 feet beyond the berm, shall be sealed with a sealing agent such as sodium bentonite, attapulgite clay or a similar clay material approved by the secretary. The liner shall be constructed in accordance with reliable civil engineering recommendations to establish a barrier layer which will maintain a water level up to the working height of the containment structure for 72 hours, or a clay application which results in a downward water movement of not greater than one-half of an inch per 24 hour period. The floor of

the containment area shall be protected with a layer of gravel, sand, earth or crushed stone at least six inches thick placed on top of the clay liner.

(e) Exemptions.

(1) A liner need not be installed directly under a storage container with a capacity of 100,000 gallons or more that has been constructed on site and put into use prior to the effective date of this regulation if all of the following conditions are met:

(A) A second bottom made of steel or other material approved by the secretary is constructed for the storage container, placed over the original bottom, and topped with a layer of smooth, fine gravel or coarse sand at least six inches thick;

(B) the original bottom of the storage container is tested for leaks before the sand layer or second bottom, as described in (A) are installed; and

(C) the newly constructed bottom is tested for leaks before any fluid fertilizer is stored in the storage container;

(D) records of the tests described in (B) and (C) are kept on file at the storage facility, or at the nearest local office from which the storage facility is administered; and

(E) a method to readily detect leaks from the newly constructed bottom into the sand layer is in place.

(2) The secondary containment requirements in this regulation shall not apply to rail cars which are periodically removed from the storage facility.

(Authorized by and implementing K.S.A. 2-1227; effective Jan. 14, 1991; amended Jan. 25, 1993.)

***** Authenticated Kansas Administrative Regulation *****