**Section 506.310 Additional Design and Construction Standards for Construction in an Area with Shallow Aquifer Material**

a) In addition to the other requirements of this Subpart, if aquifer material is located above or within 5 feet of the lowest point of the proposed livestock waste handling facility as determined under Section 506.302, the design and construction of the facility must comply with this Section.

b) Livestock waste handling facility components constructed of concrete must ensure that concrete footings extend below the maximum frost depth.

c) Livestock waste handling facility components constructed of earthen materials must include the installation of an earthen or synthetic liner.

1) Earthen liners must meet the following requirements:

A) The liner must consist of in-situ soil, borrowed clay, or clay/bentonite mixtures;

B) The minimum liner thickness must be 2 feet;

C) The liner must be constructed in lifts not to exceed 6 inches in compacted thickness; and

D) The construction and compaction of the liner must be carried out to reduce void spaces and allow the liner to support the loadings imposed by the waste disposal operation without settling.

2) Synthetic liners must meet the design and construction requirements in Section 506.308 and must have a minimum thickness of 40 mil.

3) The design, construction, and installation of the liner required under this Section must be conducted under the direction of a Licensed Professional Engineer. Upon completion of construction or installation of the liner, the supervising Licensed Professional Engineer must certify that the liner meets all the applicable requirements of this Section. Such certification must include all supporting justification and data.

4) The owner or operator of the livestock waste handling facility must submit to the Department a copy of the Licensed Professional Engineer's liner certification before placing the livestock waste handling facility in service in compliance with 8 Ill. Adm. Code 900.506(a).

d) The owner or operator of the livestock waste handling facility may, upon written request and with written approval from the Department, modify or exceed these standards to meet site specific objectives. The owner or operator must demonstrate that such modification will be at least as protective of the groundwater, the surface water, and the structural integrity of the livestock waste handling facility as the requirements of this Part.

(Source: Amended at 48 Ill. Reg. 3274, effective February 15, 2024)