Kansas Administrative Regulations

Department of Health and Environment

Article 16.—Water Pollution Control—Municipal, Commercial and Industrial Wastewater Lagoon Requirements.

28-16-163. Required hydrogeologic information for new or modified municipal, commercial, or industrial wastewater lagoons.

(a) Each hydrogeologic investigation that is conducted by or on behalf of the permittee for new or modified wastewater lagoons shall consist of borings or excavations to a depth of at least 10 feet below the bottom of the wastewater lagoon or to impenetrable bedrock if impenetrable bedrock is encountered less than 10 feet below the lagoon bottom. The bottom of the lagoon shall be determined by the lowest interior surface elevation, at finished grade, of the lagoon structure.

(b) The permittee shall ensure that a minimum of one boring or excavation is performed for each acre of wastewater lagoon, with the area being calculated based on the interior dike dimensions measured at the top of the dike. If the wastewater lagoon is less than one acre in size, a minimum of one boring or excavation shall be required.

(c) The minimum requirements for a hydrogeologic site investigation shall consist of the following:

(1) The logging of all borings or excavations identifying the soil types encountered;

(2) recording the ground surface elevation and location of each boring or excavation. The elevation may be based upon the project datum;

(3) measuring and recording static groundwater levels after the groundwater level has stabilized following the boring or excavation. If no water is readily evident at the time of the boring or excavation, the boring or excavation shall be left open for a minimum of 24 hours. If, after 24 hours, no water is observed, a determination of "no groundwater" shall be reported. Water wells in the immediate vicinity of the proposed wastewater lagoon may be used to help document the presence or absence of groundwater and establish the groundwater elevation, in addition to the borings or

excavations, for the hydrogeologic investigation if the secretary or designee agrees to accept the data as being representative of the proposed site;

(4) the collection of sufficient representative soil samples, if in situ soil materials will be employed in the construction of the compacted soil liner or the lagoon structure, for analysis in determining soil classification, compaction, and permeability for use in designing the lagoon soil liner or embankments, as appropriate; and

(5) a summary, to be submitted with or as a part of the engineering report, evaluating the hydrogeologic information obtained and an analysis of that information regarding the expected impact that the observed hydrogeologic conditions will have on the construction of lagoon embankments and, as appropriate, the expected performance of a constructed soil liner in regard to complying with the maximum soil liner seepage rate requirement.

(d) Hydrogeologic information shall not be required for erosion-control ponds associated with construction activities.

(e) Each permit applicant or permittee, if directed by the secretary, shall notify the department a minimum of two days before performing any hydrogeologic investigation fieldwork activities to allow the opportunity for department staff to witness the activities.

(f) All hydrogeologic information shall be obtained by or under the direct supervision of either a licensed professional engineer or a licensed geologist.

(Authorized by K.S.A. 2003 Supp. 65-171d; implementing K.S.A. 65-170b and K.S.A. 2003 Supp. 65-171d; effective May 20, 2005.)

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