Kansas Administrative Regulations

Department of Health and Environment

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

28-16-168. Postconstruction testing of municipal, commercial, and industrial impermeable synthetic membrane liners.

(a) Each permit applicant or permittee proposing a new municipal, commercial, or industrial wastewater treatment lagoon that will employ an impermeable synthetic membrane liner shall, when submitting construction plans and specifications to the secretary for review and consideration for approval, also submit information addressing each method to be employed for postconstruction testing of the impermeable synthetic membrane liner to ensure that it is installed properly and for compliance with the required maximum synthetic membrane liner leakage rate. Each proposed test method shall provide an appropriate degree of monitoring sensitivity and accuracy in addressing the following test variables:

(1) The maximum synthetic membrane liner leakage rate;

(2) the surface area of the lagoon being tested;

(3) the proposed duration of the test;

(4) the time of year and general weather conditions expected during the test period;

(5) the proposed monitoring equipment;

(6) the expected magnitude of evaporation during the test period;

(7) the degree that wind and wave action will impact measurement accuracy; and

(8) the frequency of data collection during the test period.

(b) Within 45 days following the completion of construction, the permittee or applicant shall submit to the department a certification and, if requested, any supporting documentation, confirming that the wastewater lagoon and the wastewater lagoon liner system were constructed in accordance with the plans and specifications approved by the secretary.

(c) The certification shall be signed by the licensed professional engineer who monitored the construction activities and installation of the impermeable synthetic membrane liner or liner system. The licensed professional engineer's certification shall be based on actual observations during construction and installation and any field or laboratory data developed during or following construction or installation.

The construction and installation activities and any testing or sample collection for field or laboratory data developed during or following construction and installation shall be directly observed by the licensed professional engineer or designee. The monitoring of construction and installation activities or the collection of samples or data shall be conducted by a licensed professional engineer or a designee under the licensed professional engineer's direct supervision.

(d)(1) Within two months, or an alternative time frame proposed by the design engineer and approved by secretary, and following approval by the secretary to initiate the filling or use of the lagoon, the permittee shall conduct and report, to KDHE, the results of the postconstruction testing of the impermeable synthetic membrane liner or liner system for compliance with the required maximum synthetic membrane liner leakage rate. This report shall meet the requirements specified in paragraph (d)(2). If the required maximum synthetic membrane liner leakage rate can not be met, the report shall provide a plan and schedule of proposed actions required to achieve compliance, for review and consideration for approval by the secretary.

(2) The postconstruction testing specified in paragraph (d)(1) shall be conducted in conformance with the method or methods approved by the secretary, pursuant to subsection (a), to ensure the protection of public health and the environment. The postconstruction monitoring or testing of the synthetic membrane liner or liner system shall be conducted by a licensed professional engineer or a designee, under the engineer's supervision.

The permittee shall provide a certification signed by the licensed professional engineer as to whether or not the synthetic membrane liner or liner system complies with the maximum synthetic membrane liner leakage rate.

(e) Each permit applicant, when directed by the secretary, shall notify the department a minimum of two days before performing any leak-detection testing, on the entire liner, to allow the opportunity for department staff to witness the test.

(Authorized by K.S.A. 2004 Supp. 65-171d and K.S.A. 65-171h; implementing K.S.A. 65-164, K.S.A. 65-165, K.S.A. 65-166, K.S.A. 65-170b, K.S.A. 2004 Supp. 65-171d, and K.S.A. 65-171h; effective May 20, 2005.)

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