Kansas Administrative Regulations

Department of Health and Environment

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

28-16-162. Industrial lagoons: general provisions.

The following general provisions shall apply to industrial wastewater treatment system lagoons. (a) New or modified industrial wastewater treatment system lagoons shall be prohibited if the groundwater separation distance between the lagoon bottom and the groundwater table is 10 feet or less.

(b) For each new or modified lagoon utilized solely for the containment or treatment of domestic sewage, the permittee may employ a constructed soil liner if the maximum soil liner seepage rate is less than ¼ inch per day and the lagoon is not constructed over sensitive groundwater areas, including the Equus Beds.

(c) For each new or modified lagoon constructed over sensitive groundwater areas, excluding the Equus Beds, and utilized solely for the containment or treatment of domestic sewage, the permittee may employ a constructed soil liner if the maximum soil liner seepage rate is less than $\frac{1}{10}$ inch per day.

(d) For each new or modified lagoon constructed over the Equus Beds and utilized solely for the containment or treatment of domestic sewage, the permittee shall, at a minimum, employ a single impermeable synthetic membrane liner and provide for the installation and sampling of groundwater monitoring wells as specified in K.A.R. 28-16-171. Constructed soil liners may be employed if all of the following conditions are met:

(1) The groundwater separation distance between the lagoon bottom and the groundwater table is greater than 10 feet.

(2) The hydrogeologic information developed for the site indicates that in situ soils exist in sufficient quantity to provide an effective pollution barrier to protect groundwater.

(3) A constructed soil liner will provide a maximum soil liner seepage rate of less than $\frac{1}{10}$ inch per day.

(4) The design provides for the installation and sampling of groundwater monitoring wells as specified in K.A.R. 28-16-171.

(e) For each new or modified lagoon utilized solely for the containment or treatment of domestic sewage, the permittee may utilize a single impermeable synthetic membrane liner, in lieu of a constructed soil liner.

(f) For each new or modified industrial wastewater lagoon, the permittee may utilize either a single impermeable synthetic membrane liner or a soil liner with a maximum soil liner seepage rate of less than ¼ inch per day if the wastewater lagoons or ponds are utilized for the containment or treatment of process-generated wastewater and are limited to the following:

(1) Sediment control and aggregate wash water ponds used at limestone quarries;

(2) sediment control ponds used at clay pit operations;

(3) sediment control ponds used for classification and washing operations associated with sand and gravel dredging;

(4) ponds receiving once-through, non-contact cooling water in which there is no chemical addition to the cooling water and where the concentration of total dissolved solids in the cooling water is not increased over the concentration of total dissolved solids in the groundwater;

(5) ponds receiving recirculated cooling water meeting any of the following conditions:

(A) The cooling water, if treated, is treated only with chlorine or bromine;

(B) the total dissolved solids and salt concentration of the cooling water in the ponds are not increased significantly above the groundwater source concentration;

(C) the total dissolved solids and salt concentration of the cooling water in the ponds do not exceed criteria that would prohibit the cooling water from being discharged in conformance with the Kansas surface water quality standards specified in K.A.R. 28-16-28b, 28-16-28c, 28-16-28d, and 28-16-28e; or

(D) the total dissolved solids and salt concentration of the cooling water in the ponds can be land-applied at agronomic application rates without the use of dilution water or freshwater application for controlling dissolved solids and salts;

(6) erosion-control sediment ponds associated with construction activities;

(7) tailwater control ponds utilized for the irrigation of wastewater from an industrial wastewater treatment system if the tailwater control pond is completely dewatered immediately at the completion of each irrigation application cycle;

(8) lime sludge storage lagoons associated with potable water-softening operations;

(9) lagoons that receive concrete washed off of, and from, concrete delivery trucks; and

(10) lagoons utilized for the containment or treatment of coal pile stormwater runoff, coal ash, and air pollution control scrubber wastes from facilities utilizing low-sulfur coal produced in the powder river basin of Wyoming.

(g) Each new industrial wastewater lagoon utilized for the containment or treatment of industrial process wastewater shall utilize an impermeable synthetic membrane liner system with a maximum synthetic membrane liner leakage rate that is less than the more stringent of either of the following:

(1) A maximum monitored or calculated seepage rate of $\frac{1}{64}$ inch per day; or

(2) the liner manufacturer's criteria for the material and installation of the synthetic membrane liner system expressed in units of volume per area per unit of time (gallons per square feet per day).

(h) Industrial wastewater treatment system lagoons in existence on the effective date of this regulation shall not be required to be modified or retrofitted to comply with the provisions of this regulation, unless either of the following occurs:

(1) The secretary determines that environmental or public health threats result from the operation of the lagoon, or data exists showing the actual or potential soil or water pollution.

(2) The modification, replacement, or expansion of an industrial wastewater lagoon results in the lagoon being dewatered, and the secretary or designee orders the implementation of specific lagoon improvements to address conditions that result in noncompliance with statutory, regulatory, or permit requirements or that fail to ensure protection of public health or the environment. Only those specific improvements required by the secretary or designee shall be required to be implemented by the permittee.

(i) For the purpose of K.A.R. 28-16-160 through K.A.R. 28-16-174, an actual or potential environmental or public health threat may be deemed to exist if physical, chemical, biological, or radiological substances, or a combination of these substances, is released into subsurface waters of the state and results in a concentration or amount of a substance in excess of the numerical criteria designated for aquatic life protection, agricultural use, or public health protection as provided in the "Kansas surface water quality standards: tables of numeric criteria," dated December 6, 2004, which is adopted by reference in K.A.R. 28-16-28e. If the background concentration of a substance is naturally occurring and is greater than the numeric criteria, the background concentration shall be considered the criteria.

(j) Land-based sand and gravel pits shall be exempt from the provisions of K.A.R. 28-16-160 through 28-16-174 if the only water or wastewater directed to the dredge pit consists of the following:

(1) Dredge return flows;

(2) flows generated from aggregate classification; and

(3) flows from washing dredged aggregate if water used in creating these flows originates from and is returned to the dredge pit.

(k) No person shall construct, operate, or maintain any industrial wastewater lagoon without obtaining a permit or permit modification from the department.

(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. 2004 Supp. 65-171d, and K.S.A. 65-171h; effective May 20, 2005.)

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