Kansas Administrative Regulations

Kansas Department of Agriculture—Division of Water Resources

Article 40.—Design of Earth Dams

5-40-74. Design criteria for an existing illegal, unpermitted dam.

(a) Except as specified in subsection (b), the design criteria specified in this subsection (a) shall be met to obtain a permit from the chief engineer pursuant to K.S.A. 82a-301 et seq., and amendments thereto, for an existing illegal, unpermitted hazard class A dam constructed before May 1, 1984 that has not been modified on or after May 1, 1984. The applicant shall have an engineer who is qualified in dam design and construction conduct an inspection of the dam and prepare a report that includes all of the following:

(1) The date of the inspection and a list of the members of the inspection team;

(2) color photographs documenting the condition of the dam's appurtenances and embankment and any observed deficiencies in the appurtenances and embankment;

(3) a plan view sketch of the dam and its immediate vicinity showing the location from which each photograph was taken and the direction in which it was taken;

(4) a description of the physical condition of the dam and its appurtenances, a list of the deficiencies that were observed, and a description of the severity of each observed deficiency. All deficiencies that may threaten the structural integrity of the dam shall be shown; and

(5) a survey of the dam, documented by a plan view of the dam and cross section drawings, including the following:

(A) Cross sections of the embankment every 200 feet, with each cross section starting from the upstream toe of the dam or the water surface on the upstream side to the toe of the dam on the downstream side of the dam;

(B) a profile of each open-channel spillway from the water surface on the upstream side of the dam to the point where spillway flows enter the receiving stream;

(C) a cross section of each open-channel spillway every 200 feet and at each control section, with a minimum of two cross sections;

(D) the elevation of each primary spillway inlet and outlet;

(E) the elevation of the flow line of the outlet channel; and

(F) the dimensions, locations, and descriptions of materials, workmanship, condition, apparent purpose for, and any other relevant information about all visible appurtenances in sufficient detail to represent the appurtenances in three dimensions;

(6) the dimensions and location of each deficiency noted as required in paragraph (a)(4);

(7) the estimated rate and color of discharge from drain outlets and any seeps;

(8) a determination of the hazard classification of the dam as specified in K.A.R. 5-40-24;

(9)(A) A description of the drawdown valve, if any;

(B) specification of whether the valve was operated during the inspection; and

(C) if the valve could not be operated, an explanation of why it could not be operated;

(10) the name, mailing address, and telephone number of the engineer who conducted the inspection;

(11) the name, mailing address, and telephone number of each current owner of the dam; and

(12) any other information relevant to the safety and integrity of the dam, including any items requested by the chief engineer before the inspection.

(b) If the applicant provides construction plans prepared before construction that show how the dam was to be constructed or modified and that reflect the actual dimensions of the dam as it exists, those plans may be substituted for the survey required in paragraph (a)(5).

(c) If the chief engineer determines from the inspection report that the dam does not pose a threat to public safety or public or private property and that the condition of the dam is sound, an after-the-fact permit may be issued by the chief engineer pursuant to K.S.A. 82a-301 et seq., and amendments thereto.

(d)(1) In order for an existing illegal, unpermitted hazard class A dam constructed or modified on or after May 1, 1984 or an existing illegal, unpermitted hazard class B or C dam to receive a permit from the chief engineer pursuant to K.S.A. 82a-301 et seq. and amendments thereto, the applicant shall demonstrate that the dam meets all of the applicable statutory and regulatory requirements in effect when the application for the permit is filed. The applicant shall provide a survey meeting the requirements of paragraph (a)(5) and a design report that meets the requirements of K.A.R. 5-40-2b. If plans are available that show how the dam was constructed or modified and those plans reflect the actual dimensions of the dam as it exists when the application is filed, the plans may be substituted for the required survey. If a geologic investigation was conducted before construction of the dam and the results of that investigation are available, that investigation may be substituted for the investigation and report required by K.A.R. 5-40-40 through K.A.R. 5-40-42.

(2) If the applicant cannot determine that the chief engineer's requirements for the following design or actual construction properties were met without significantly disturbing the embankment but the applicant demonstrates that the dam was built in a manner appropriate to the standards in effect when the dam was constructed, then a permit may be issued if the chief engineer determines that the dam does not pose a hazard to public safety:

(A) The location, dimensions, and composition of the backfill materials to fill the cutoff trench;

(B) the location, dimensions, and construction of cutoff collars, drains, or other seepage control;

(C) the allowance for settlement of an earthen dam;

(D) specification of whether the primary spillway pipe was tested;

(E) the specifications used; and

(F) documentation of any construction inspections.

(Authorized by K.S.A. 2006 Supp. 82a-303a; implementing K.S.A. 2006 Supp. 82a-301a, 82a-302, and 82a-303a; effective May 18, 2007.)