Kansas Administrative Regulations

Kansas Corporation Commission

Article 3.—Production and Conservation of Oil and Gas

82-3-1208. Site selection.

(a) No operator shall test, construct, convert, or operate a storage facility without a site selection plan approved by the director. The operator shall submit a proposed site selection plan to the conservation division that includes all information specified in, and demonstrates compliance with, subsections (b) through (k).

(b) Each operator shall submit to the conservation division an area of review evaluation, signed by a licensed professional engineer or licensed professional geologist, identifying any plugged or unplugged well of any type, including any well used for production of oil or gas, water supply or injection, solution mining, storage operations, monitoring, or corrosion control, that penetrates the storage facility and is located within one-quarter mile of any proposed boundary. The area of review evaluation shall contain any information available from public records, publicly accessible data, or the operator's records.

(1) The operator shall indicate whether each well has been properly constructed or plugged to protect public safety, usable water, and soil.

(2) The operator shall include a schedule to correct or plug any well that is not properly constructed or plugged to protect public safety, usable water, and soil, including any well that does not have adequate cement to isolate any storage cavity or storage reservoir from any reservoir in the well, or adequate cement behind the casing.

(c) Each operator shall submit the proposed boundaries of the storage facility.

(1) No reservoir storage facility boundary may be approved by the conservation division unless each reservoir storage well is located at least 150 feet from each boundary.

(2) No storage facility boundary may be approved by the conservation division unless the boundary is located at least two miles from each of the following:

(A) Active or abandoned excavated mine cavity;

(B) solution mining operation facility boundary;

(C) LPG, crude oil, or natural gas storage facility boundary;

(D) underground porosity gas storage facility boundary; and

(E) any incorporated city or organized township.

(d) (1) Each operator of a cavern storage facility shall demonstrate that any potential surface subsidence event would remain within the storage facility boundary. No cavern storage facility boundary may be approved by the director unless each of the following is located at least 100 feet from the cavern wall:

(A) Land owned by a surface owner who has not submitted to the operator a signed consent form stating that there is no objection to storage;

(B) any building or structure not owned by the cavern storage facility's owner;

(C) any utility with a right-of-way, including any wind generator, electrical transmission line, or pipeline; and

(D) any railroad, road, or highway.

(2) A distance greater than 100 feet may be required if the director determines that a greater distance is necessary to protect public safety, usable water, or soil.

(e) No cavern having a maximum horizontal diameter of greater than 300 feet may be approved by the director.

(f) Each cavern storage well shall be located so that each cavern wall is at least 100 feet from each cavern wall of any offset storage cavern. The operator shall consider the cavern spacing-to-diameter ratio, cavern pressure differentials, frequency of cavern injection and withdrawal cycles, and cavern shape, size, and depth.

(g) Each operator of a cavern storage facility shall submit the proposed salt roof thickness, which shall be at least 100 feet measured from the top of the bedded salt formation to the cavern roof, unless otherwise approved by the director.

(h) Each operator shall submit a regional geological evaluation and a local geological evaluation covering an area within one-quarter mile outside each storage facility boundary, for all formations between the surface and the top of the proposed cavern or reservoir, and all formations below the base of the proposed cavern or reservoir to a depth of 300 feet below the base.

(1) If the proposed storage facility is a cavern storage facility, the applicant shall submit the following:

(A) A structure map and stratigraphic cross section identifying any bedded salt formation proposed to be solution mined, usable water formation, regional or local fault zone, structural anomaly, salt thinning due to stratigraphic change, dissolution zone in the salt, and migration pathway that could cause a loss of containment; and

(B) an isopach map of the bedded salt formation identifying any regional or local faulting, dissolution zone in the salt, salt thinning due to any stratigraphic change, and migration pathway that could cause a loss of containment.

(2) If the proposed storage facility is a reservoir storage facility, the applicant shall submit the following:

(A) A structure map and stratigraphic cross section identifying the reservoir and any usable water formation, regional or local fault zone, structural anomaly, structural spill point controlling the containment of air, and migration pathway that could cause a loss of containment; and

(B) an isopach map of the storage reservoir formation identifying any regional or local faulting and any migration pathway that could cause a loss of containment.

(3) Each operator shall submit an updated local geologic evaluation pursuant to subsection (h) within 30 days after any new storage well is drilled and completed, unless otherwise approved by the director.

(i) (1) Each operator shall submit the proposed layout of the storage facility and the equipment design parameters, including the minimum and maximum pressure, temperature, and flow rate requirements for the following:

(A) Each electrical generating facility component, including any compressor train used to increase air pressure, compressor intercooler or aftercooler used to reduce air temperature before injection into any cavern storage well, recuperator, expander, exhaust air stack, and fuel-fired combustion turbine;

(B) any equipment, alarm, or safety device that prevents the injection of water and moisture into a cavern;

(C) each air injection and withdrawal flow line connecting any storage well to the electrical generating facility; and

(D) any flow line, equipment, and class I injection well that is used to dispose of fluids and solids produced during storage well operations.

(2) The operator shall list any air sample location that will be used to monitor the quality of air injected into any storage well.

(3) The layout of the proposed storage facility shall include the following:

(A) Each storage well;

(B) for any plugged or unplugged cavern storage well, the cavern configuration and dimensions associated with each historical sonar survey;

(C) the corrosion control system;

(D) any well in the area of review evaluation submitted pursuant to subsection (b);

(E) any navigable water, floodplain, or area prone to flooding;

(F) any utility having a right-of-way, including any wind generator, electrical transmission line, or pipeline; and

(G) any manufactured surface structure, including any industrial or agricultural facility.

(4) Within 30 days after construction of the storage facility is completed, the operator shall submit an updated layout of the storage facility and the updated equipment design parameters to the conservation division.

(j) No person shall test, construct, convert, or operate a storage facility or drill, complete, service, plug, or operate any storage well in either of the following types of geological strata:

(1) A porous geologic stratum containing usable water; or

(2) an excavated mine cavity.

(k) No site selection plan may be approved by the director if underground communication between cavern storage wells exists.

(Authorized by and implementing K.S.A. 2011 Supp. 66-1274; effective Dec. 21, 2012.)