

Kansas Administrative Regulations

Kansas Corporation Commission

Article 3.—Production and Conservation of Oil and Gas

82-3-1213. Operation, monitoring, and measurement requirements for reservoir storage wells.

(a) Each operator shall monitor each reservoir storage well according to a storage well integrity plan signed by a licensed professional engineer and a licensed professional geologist. The operator shall submit a storage well integrity plan that includes information pursuant to, and demonstrates compliance with, subsections (b) through (i).

(b) Each operator shall monitor the quality of air to be injected into each reservoir storage well before the commencement of storage operations and at least once each 12 months after storage operations commence. The analysis of the quality of air shall include consideration of fuel-fired turbine exhaust contaminants.

(c) Each operator shall evaluate the formation water in the reservoir before commencing storage operations.

(d) Each operator shall report the monitoring results for each reservoir storage well to the conservation division, on a form provided by the conservation division, annually on or before April 1.

(e) Each operator shall monitor each reservoir storage well daily. If the reservoir storage well consistently operates in a manner that appears to be protective of public safety, usable water, and soil, monitoring on a time frame based on the air injection and withdrawal cycles may be allowed by the director.

(f) Each operator shall include in the reservoir storage well integrity plan a description of the equipment, processes, and criteria used to determine pressure, total volume, and air flow rate wellhead conditions. Each operator shall monitor and report the pressure, total volume, and air flow rate. If the reservoir storage well is constructed with tubing and a packer, the operator shall also monitor and report the pressure in the annulus between the casing and tubing for any unexpected increase or decrease.

(g) (1) Each operator shall ensure that any reservoir storage well is operated at or below the maximum allowable operating pressure and based on either of the following criteria:

(A) Site-specific geomechanical core analysis of the fracture gradient calibrated to the open hole log for each storage well that determines mechanical rock properties; or

(B) sufficient testing of the reservoir.

(2) The operator shall not subject the reservoir to pressures in excess of the maximum allowable operating pressure associated with abnormal operating conditions, including pressure pulsations from the electrical generating facility.

(3) No operator shall allow the maximum allowable operating pressure to exceed the lower of either 80 percent of the fracture gradient for the storage reservoir or 0.8 pounds per square inch per foot of depth, measured at the top of the reservoir.

(h) Each operator shall operate any reservoir storage well within the injection and withdrawal rates based on casing and tubing limitations, the formation compressibility of the reservoir, and the flow rate requirements for the electrical generating facility.

(i) The operator shall develop an inventory balance plan as part of the reservoir storage well integrity plan that demonstrates the maximum air injection or withdrawal volume for each storage well. The storage volume calculations shall include the cushion air and working air volumes. The operator shall reevaluate the inventory balance plan whenever an additional storage well is drilled and completed.

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

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