

Kansas Administrative Regulations

Department of Health and Environment

Article 45.—Underground Hydrocarbon Storage Wells and Associated Brine Ponds

28-45-15. Storage well and cavern operation and notification requirements.

(a) Each permittee shall ensure that the maximum allowable operating pressure does not exceed 0.80 pounds per square inch per foot of depth (psi/ft) measured at the higher elevation of either the casing seat, effective casing seat, or the highest interior elevation of the roof of the storage cavern.

(b) Each permittee shall ensure that the maximum test pressure does not exceed 0.05 psi/ft more than the maximum allowable operating pressure. The maximum allowable operating pressure shall be limited to the pressure gradient for which the well was tested, if the well was tested at a gradient less than 0.80 psi/ft.

(c) Each permittee shall maintain a minimum operating pressure of 0.52 psi/ft measured at the higher elevation of the casing seat, effective casing seat, or the highest interior elevation of the cavern roof, unless a variance is granted by the secretary, as specified in K.A.R. 28-45-31.

(d) Each permittee shall ensure that a storage cavern is not subjected to any pressure in excess of the maximum allowable operating pressure, including pressure pulsations and abnormal operating conditions except during testing, as specified in this article of the department's regulations.

(e) Each permittee shall meet the notification requirements in the emergency response plan, notify the department within 24 hours, and submit detailed written notification to the department within seven days if any of the following events occurs:

- (1) The overpressuring or overfilling of a storage cavern;
- (2) the loss of mechanical integrity;
- (3) any uncontrolled or unanticipated loss of product, brine, or any other chemical parameter that is detectable by any monitoring or testing;
- (4) the establishment of underground communication between storage caverns;

(5) the triggering of any alarms verifying that the permit safety restrictions were exceeded; or

(6) any equipment malfunction, failure, or any other occurrence that could endanger public health, safety, or the environment.

(f) Each applicant shall submit an inventory balance plan for measuring the volume of product injected or withdrawn from each storage cavern, including methods for measuring and verifying volume, with the facility permit application.

(g) Each permittee shall ensure that only saturated brine is used to displace product. Each permittee shall notify the department if the salinity of the brine being used to displace product falls below the saturated limit.

(h) Each permittee shall submit a listing, by storage well number, of the maximum allowable operating pressure associated with each product to be stored in a storage cavern, based upon the specific gravity of the product, casing seat or effective casing seat depth, and most recent test pressure gradient. Each permittee shall maintain and update the listing and shall submit the listing to the department annually or whenever more than one change has occurred.

(i) Each permittee shall visually inspect the wellhead monthly for any leakage of product or brine and for physical damage to wellhead equipment. A written record of the inspection shall be kept on file at the facility and made available to the department upon request.

(j) Each permittee shall cease operations or shall comply with instructions from the secretary if the secretary determines that an imminent threat to public health, safety, or the environment due to any unsafe operating condition exists. The permittee may resume operations if authorized by the secretary.

(Authorized by and implementing K.S.A. 2023 Supp. 55-1,117; effective, T-28-4-1-03, April 1, 2003; effective Aug. 8, 2003; amended Aug. 9, 2024.)

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