

Kansas Department of Health and Environment
Application for a Brine Pond Associated with an Underground Storage Facility

In conformity with the provision of K.S.A. 55-1,117 through K.S.A. 55-1,119, and K.A.R. 28-45-22 through K.A.R. 28-45-30, the undersigned, representing

(Name of company, corporation or person applying)

hereby makes application to the Kansas Department of Health and Environment for a permit to operate a brine pond associated with an underground storage facility. This application shall be submitted and signed by both the facility owner and the facility operator. This application shall be signed by an Executive Officer equivalent to or higher than a Vice-President. Signature statements are attached.

The applicant shall submit the completed brine pond application not less than 90 days before the construction of the new brine pond commences.

All phases of the plan shall be designed, reviewed, and/or approved by a licensed geologist or a licensed engineer, as appropriate.

The brine pond permit shall be authorized for a term not to exceed ten years.

Submit the application to:

Kansas Department of Health and Environment
Bureau of Water, Geology Section
Underground Hydrocarbon Storage Unit
1000 SW Jackson St., Suite 420
Topeka, KS 66612-1267

**PERMIT APPLICATION
BRINE POND ASSOCIATED WITH AN UNDERGROUND
HYDROCARBON STORAGE FACILITY**

Name of Facility:

Location of Facility:

Street:

City: _____

Zip Code: _____

Facility Mailing Address:

Street:

City: _____

Zip Code: _____

Facility Contact Person:

Name: _____

Job Title: _____

Telephone: _____

Fax: _____

E-mail: _____

Address: _____

City: _____

State: _____

Zip: _____

Facility Operator:

Company Name: _____

Street: _____

City: _____ **State:** _____ **Zip:** _____

Telephone: _____ **Fax:** _____

E-mail: _____

Facility Owner: (if different than operator)

Name: _____

Street: _____

City: _____ **State:** _____ **Zip:** _____

Telephone: _____ **Fax:** _____

Email: _____

Submit a title page listing the owner's name, operator's name, the facility name, brine pond identification, and the brine pond's location (both GPS and USPLSS).

1. Submit a hydrogeological investigation for the brine pond.
 - a. Provide a site characterization for the brine pond construction using the following criteria:
 - i. the bottom of the brine pond as determined by the lowest surface elevation of compacted or excavated soils used in creating the pond structure;
 - ii. all required excavations or boreholes drilled to a depth of at least 10 ft below the bottom of the brine pond;
 - iii. a separation distance of at least 10 ft maintained between the brine pond bottom and the water table;
 - iv. the surface area measured at the interior top dike elevation.
 - b. Provide the location and elevation for each proposed borehole or excavation (based on surface area). A minimum of two boreholes or excavations for each five acres of proposed brine pond surface area is required.
 - c. Submit a log of soil types and a groundwater level measurement for each borehole or excavation.
2. Submit a design and construction plan. The plan shall meet all criteria and requirements set forth in KAR 28-45-28.
 - a. Submit a description and a schematic for the brine pond liner system and the intermediate leak detection system
 - b. Submit the following information obtained from the liner manufacturer:
 - i. confirmation that the specified liner is compatible for use with brine;
 - ii. confirmation that the specified liner is ultraviolet-resistant;
 - iii. data for the estimated leakage, and permeability or transmissivity rate for the specified liner;
 - iv. the rate of movement of fluids through the synthetic membrane liner, expressed in units of volume per area per time;
 - v. any normally expected manufacturing defects in the liner material;
 - vi. any normally expected defects associated with the seaming and installation process.
 - c. Submit a description of the materials between the primary and secondary liners.
 - d. Submit a description for the dewatering system design.
 - e. Submit a description of the leak detection design.
 - f. Submit a description of a seam testing method to verify the adequacy of the seaming process for the liners at the brine pond.
3. Submit a contingency plan for brine containment issues associated with brine pond maintenance and dewatering due to liner failure, repair, replacement or expansion of the brine pond.
4. Submit a flood response plan if the brine pond is located in a floodplain or a flood-prone area.

5. Submit a plan for the construction and installation of a gas vapor control system to ignite or capture hydrocarbon vapors at the brine pond. The system should include a hydrocarbon knockout vessel and degassifier. Provide a schematic for the system.
6. Submit a groundwater monitoring plan. Include the following:
 - a. proposed locations for the monitoring wells;
 - b. quality assurance plan;
 - c. plan for monthly chloride monitoring, combustible gas monitoring, static groundwater level measurement, and monthly brine pond monitoring reports
7. Submit financial assurance for the commissioning and abandonment of the brine pond pursuant to KAR 28-45-27 and procedure UICLPG#11. The brine closure plan should include procedures for the following:
 - a. deactivating the brine lines;
 - b. remediation, removal, or disposal of the brine, accumulated sludge in the brine pond, contaminated soils and contaminated groundwater;
 - c. a description regarding the proposed maintenance, deactivation, conversion, or demolition of the brine pond structure;
 - d. the plugging of any water wells or groundwater monitoring wells associated with the brine pond.
8. Submit a letter designating signatories approved to sign permit applications and reports.

SIGNATORY CERTIFICATION

I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Company _____

Name (Printed) _____

Signature _____

Title _____

Date _____