

FACT SHEET  
CLASS I WELL

I. Background Information

1. Owner/Operator: ONEOK Inc.  
Address: 777 Ave. Y, Bushton, KS 67427
2. The application for permit pertains to the re-permitting of a deep disposal well located in the SWSWNE of Section 31, Township 17 South, Range 9 West; more particularly described as a point 2964' from the south line and 2630' from the east line of the southeast corner of said section, Ellsworth County, Kansas.

II. Injection Details

1. Injection will be made into the Arbuckle formation through open-hole from a depth of 3335 feet to 3800 feet.
2. Disposal will be by means of gravity flow; wellhead pressure will not be allowed.
3. The maximum injection rate will be 2,000,000 gallons per day.

III. Description of Waste and Fluids to be injected.

The fluids to be injected are described as non-hazardous liquid waste consisting of near saturated mineralized waste brines from the hydrocarbon storage operation; wastewater from hydrocarbon dehydrators; cooling tower water; RO unit wastewater; laboratory wastewater; boiler blow-down; wastewater from engine room and plant floor drains; knock-out water from hydrocarbons from incoming pipelines; water softener regenerate wastewater; steam condensate, and non-hazardous equipment wash water.

IV. Description of Disposal Formation

The Arbuckle formation is a sequence of dolomites, limestones and occasional sandstone units which are extensively used for disposal of oil field brine and treated industrial wastewater in Kansas. In this area of Rice and Ellsworth Counties, the Arbuckle is 400 - 500 feet in thickness and the top of the sequence is encountered at a depth of approximately 3250 feet. The Arbuckle formation is capable of receiving large quantities of fluid without use of wellhead pressure because of its porous and permeable nature.

V. Chemical Characteristics of Disposal Formation Waters

The connate disposal formation waters in the vicinity of these wells exceed the "usable" water standards of 10,000 mg/l total dissolved solids.

VI. Construction, Monitoring, and Operation of Well

All construction, monitoring, and operation of these wells has or will meet the requirements that apply to Class I injection wells as outlined in the Kansas Underground Injection Control Regulations, K.A.R. 28-46-1 through 28-46-44. The applicant must agree to all conditions stated in the final permit as required by the Department.

VII. Basis for Draft Permit Conditions

1. General
  - (a) Applicable Federal laws
  - (b) Applicable Federal regulations
  - (c) Applicable State statutes

- (d) Applicable State regulations
- (e) Applicable State and Federal waste quality standards
- (f) Technical guidance and reference documents
- (g) Permit application and supporting documents
- (h) Technical expertise and professional judgment of permit writers and Department technical staff
- (i) Technical input and consultation with Federal, State and Local agencies and representatives of citizen groups

2. Specific

The following specific documents were used to draft permit limitations, conditions, operating procedures, monitoring and reporting requirements:

- (a) Clean Water Act (Public Law 100-4)
- (b) Resource Conservation and Recovery Act
- (c) Safe Drinking Water Act
- (d) Toxic Substances Control Act
- (e) 40 CFR Parts 122-125, 136, 144-148, 233, 251, 260-271 and Guidance 1425
- (f) K.S.A. Chapter 65
- (g) Hazardous Waste Management Articles 31 and 34
- (h) Kansas UIC Regulations 28-46-1 through 28-46-44
- (i) Drinking Water Standards (Public Law 93-523, 40 CFR Part 141)
- (j) K.A.R. 28-15-11 through 22
- (k) EPA-600/2-77-240, An Introduction to the Technology of Subsurface Wastewater Injection
- (l) Type Logs of Kansas published by the Kansas Geological Society
- (m) U.S.G.S. Professional Paper 708, Groundwater Hydraulics
- (n) Freeze and Cherry - Groundwater
- (o) Davis and DeWiest - Hydrogeology
- (p) Applicable bulletins and other related publications by the Kansas Geological Survey
- (q) Applicable publications by the U.S. Geological Survey
- (r) Warner and Lehr - Subsurface Wastewater Injection

VIII. Area of Review

The area of review, as specified in K.A.R. 28-46-32, has been examined by the Department.

IX. Evidence of Financial Responsibility

The applicant has established the necessary financial assurance for the future plugging and abandonment of these wells by use of the financial test.

X. Final Determination Procedures

In anticipation of public interest and a desire to comment, the agency has allowed 30 days from the date of the public notice to submit comment.

XI. Additional information may be obtained from:

Kirk Hoeffner  
Bureau of Water  
Kansas Department of Health and Environment  
1000 SW Jackson St. Suite 420  
Topeka, Kansas 66612-1367  
(785) 296-1843