

KANSAS UNDERGROUND INJECTION
CONTROL PERMIT
CLASS I NON-HAZARDOUS WASTE INJECTION WELL

Pursuant to the provisions of Kansas Statutes Annotated (65-164, 65-165, 65-166, 65-170g and 65-171d) and Kansas Administrative Regulations (Chapter 28, Article 46),

Owner/Operator: Mid-Continent Fractionation and Storage, LLC

Owner/Operator Address: 839 Kiowa Road
McPherson, KS 67460

Facility Name: Conway West Facility

Facility Location: Conway, Kansas

Facility Telephone Number: (620) 834-2151

Well Identification: #1

Well Location: Latitude: 38° 22.789 Longitude: 97° 49.840,
McPherson County, Kansas

Receiving Formation: Arbuckle

is authorized to inject non-hazardous liquid wastes from this facility in accordance with the construction, operation, monitoring and reporting requirements as set forth herein.

The permittee shall comply with all conditions in this permit, federal and state regulations governing Class I non-hazardous waste injection wells and the requirements of the Kansas Department of Health and Environment (KDHE).

This permit shall become effective **June 19, 2015**, will supersede all previous permits and/or agreements in effect between KDHE and the permittee relating to the underground injection control well described above, and will expire **June 19, 2025**.

FACILITY DESCRIPTION: The station is an underground storage facility for hydrocarbon gas products.



 Secretary, Kansas Department of Health and Environment

8/24/15

 Date

Class
Williams -

Cynthia Khan

From: Cynthia Khan
Sent: Friday, June 26, 2015 2:30 PM
To: 'Orban, Cathy'
Subject: Permits for Williams Conway West and Mitchell, KS-01-113-001 and KS-01-159-002
Attachments: Scanned from a Xerox Multifunction Printer1.pdf; Scanned from a Xerox Multifunction Printer2.pdf

Conway
West
Permit

Cathy,

Attached are the new permits for both wells. Please print and save for your records and please make sure that everyone who is associated with the well has reviewed these documents.

Thanks,
CYNTHIA KHAN, P.G.
KANSAS DEPT OF HEALTH AND ENVIRONMENT
1000 SW JACKSON, SUITE 420
TOPEKA, KANSAS 66612
785-296-5554
CKHAN@KDHEKS.GOV

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Secretary, Kansas Department of Health and Environment

6/25/15

Date

Injection and Operational Parameters	Injection or Parameter Limitation	Measurement or Analysis Frequency	Reporting Requirement	Sample or Measurement Type
Chloride (mg/l)	Monitor	Weekly	Monthly	Grab
Conductivity (Mmhos)	Monitor	Quarterly	Quarterly	Grab
Total Alkalinity as CaCO ₃ (mg/l)	Monitor	Quarterly	Quarterly	Grab
Total Hardness as CaCO ₃ (mg/l)	Monitor	Quarterly	Quarterly	Grab
Calcium (mg/l)	Monitor	Quarterly	Quarterly	Grab
Magnesium (mg/l)	Monitor	Quarterly	Quarterly	Grab
Sulfate (mg/l)	Monitor	Quarterly	Quarterly	Grab
Iron (mg/l)	Monitor	Quarterly	Quarterly	Grab
Total Dissolved Solids (mg/l)	Monitor	Quarterly	Quarterly	Grab

* Conduct one daily inspection reading for reporting purposes

** The gauge, meter, continuous recording device or sight glass shall at all times be maintained operational and shall at all times be located to properly measure the activity being monitored.

Note: Quarterly analysis frequency and reporting is based upon calendar quarters.

- D. Inspection readings of injection flow rate and volume, wellhead annulus pressure, wellhead injection pressure and seal pot liquid level shall be made daily and reported in the monthly monitoring report submitted to KDHE. The inspection readings for wellhead annulus pressure and injection pressure shall include readings of both the gauge and the continuous recording device. The date and time these readings are taken and the initials of the person taking the readings shall be included in the monthly monitoring report.
- E. The monthly average, maximum and minimum values for the daily inspection readings of injection flow rate and volume, wellhead annulus pressure and wellhead injection pressure for the month shall be reported in the monthly monitoring report submitted to KDHE. The monthly average for injection flow rate and volume shall be calculated using only the number of days for which injection occurred during the month. The total volume of liquid injected for the month shall also be reported in the monthly monitoring report submitted to KDHE.
- F. The maximum and minimum values determined from the continuous recording data for the entire month for wellhead annulus pressure and wellhead injection pressure shall be reported in the monthly monitoring report submitted to KDHE.
- G. The analytical results of representative wastewater samples required by this permit shall be reported in the monitoring reports submitted to KDHE. The wastewater samples shall be collected from the waste stream during a time that the well is being used for injection. The data reported shall include the date the sample was collected, the date the sample was analyzed, analytical results, the name of the laboratory conducting the analyses and the

II. MECHANICAL INTEGRITY TESTING

A two-part mechanical integrity test (MIT) to check for internal and external mechanical integrity shall be conducted at least once every five (5) years. The internal MIT is to check for significant leakage in the casing, tubing and packer and the external MIT is to check for significant fluid movement through vertical channels adjacent to the wellbore. Whenever KDHE believes that because of a downhole problem the continued use of the well constitutes a threat to human health, or the fresh and/or usable waters or the soils of the State, or the release of injected fluid into an unauthorized zone is occurring, the permittee shall be required to immediately cease injection and conduct a MIT. If determined necessary by KDHE, a MIT shall be conducted when there has been a well workover. A MIT plan shall be submitted to KDHE for review and approval prior to conducting any MIT. No MIT work shall commence until approval of the MIT has been obtained from KDHE. The internal MIT shall be witnessed by KDHE. If the well fails a MIT, the requirements of Section III(B) of this permit shall be implemented by the permittee. The results and interpretation of a MIT shall be submitted to KDHE within thirty (30) days of test completion.

III. ANNULUS PRESSURE DECLINE, ANNULUS LIQUID LOSS, ANOMALOUS OPERATIONAL DATA, LOSS OF MECHANICAL INTEGRITY

A. If the annulus pressure declines below forty (40) psig, or loss of annulus liquid indicating a loss of mechanical integrity occurs, or anomalous operational data indicating a loss of mechanical integrity occurs, the permittee shall 1) immediately investigate and identify the cause of the annulus pressure decline, annulus liquid loss or anomalous operational data and 2) notify KDHE within twenty-four (24) hours of becoming aware of the circumstances. The results of this investigation shall be reported to KDHE within twenty-four (24) hours of completion. If the well appears to be lacking mechanical integrity, the permittee shall:

1. Immediately cease injection of waste fluids.
2. Take all steps required by KDHE to determine the presence or absence of mechanical integrity. If the well is determined to have mechanical integrity, injection may resume after the permittee has obtained authorization from KDHE.

B. If a loss of mechanical integrity is determined pursuant to Section III(A) of this permit or as the result of a MIT, the permittee shall:

1. Immediately cease injection of waste fluids.
2. Notify KDHE within twenty-four (24) hours of the determination.
3. Take all steps determined necessary by KDHE to determine whether there may have been a release of waste into any unauthorized zone. If there is evidence there may have been a release into an unauthorized zone, the permittee shall orally notify KDHE within twenty-four (24) hours of the determination. A written notice shall also be provided to KDHE within five (5) days of the determination including a description of the release.
4. Comply with any immediate corrective or remedial action specified by KDHE. If determined necessary by KDHE, the permittee shall submit to KDHE a remediation

Borehole, casing, tubing and cement specifications for disposal well:

Borehole Size	Casing or Tubing Size & Material	Weight lbs/ft	Casing Seat Depth	Type of Cement & Additives	Number of Sacks of Cement
13 3/8"	10 3/4" Steel	28.52	157'	Common w/2% CaCl ₂	150
9 7/8"	7 5/8"	24	4,004	1 st stage – neat w/20% diacel	230
				2 nd stage – neat w/20% diacel	325
				Perf 4 holes at 2580' and 1940	225
N/A	5 1/2" Steel	15.5	3992'	N/A	N/A

Packer Type: Brown Model 'D'

Packer Seating Depth: 3948'

N/A = Not Applicable

A. Type of Annulus Fluid: Fresh water with corrosion inhibitor.

Minimum Annulus Pressure: 40 psig

B. Injection is into the Arbuckle formation through open-hole from 4004 feet to 4290 feet.

VII. SPILL PREVENTION AND CONTAINMENT

Brine ponds on site may be used for waste retention purposes.

VIII. CONVERSION

A notice of conversion of the well to a use other than disposal of industrial waste shall be submitted to KDHE at least sixty (60) days prior to conversion. A conversion plan shall be submitted with the notice to KDHE for review and approval. The well shall not be converted until approval of the conversion plan has been obtained from KDHE.

IX. SCHEDULE OF COMPLIANCE

None.

X. STANDARD CONDITIONS - ATTACHMENT I

In addition to the specified conditions stated herein, the permittee shall comply with the provisions of Attachment I.

XI. OTHER CONDITIONS

None

The permittee shall also furnish to KDHE, upon request, copies of reports and information required to be kept by this permit.

H. Inspection and Entry: The permittee shall allow the Secretary, or any authorized representative, upon the presentation of credentials and other documents as may be required by law, to:

1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this permit;
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
3. Inspect any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
4. Sample or monitor for the purpose of assuring permit compliance or as otherwise authorized by the appropriate Act, any substances or parameters at any location.

I. Samples, Measurements and Records:

1. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
2. The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least three (3) years for the date of sample, measurement, report or application. This period may be extended by request of KDHE at any time.
3. The permittee shall retain records concerning the nature and composition of all injected fluids until three (3) years after the completion of any plugging and abandonment procedures. KDHE may require the owner or operator to deliver the records to KDHE at the conclusion of the retention period.
4. Records of monitoring information shall include:
 - a. The date, exact place, and time of sampling or measurements;
 - b. The individual(s) who performed the sampling or measurements;
 - c. The date(s) analyses were performed;
 - d. The individual(s) who performed the analyses;
 - e. The analytical sampling, and sample preservation techniques or methods used; and
 - f. The results of such analyses.

N. Operational Requirements:

1. The permittee shall not allow the movement of fluid containing any contaminant into any formation or aquifer not permitted to receive fluid by this permit. The permittee shall have the burden of showing the requirements of this paragraph are met.
2. If any water quality monitoring of an aquifer indicates the movement of any contaminant into any formation or aquifer not permitted to receive fluids by this permit or into any uncontaminated part of the formation permitted to receive fluid by this permit, the permittee shall take such action as required by KDHE, including taking the well out of service, closure of the well or plugging and abandonment of the well.

O. Permit Modifications and Terminations: After notice and opportunity for a hearing, this permit may be modified, suspended or revoked, or terminated in whole or in part during its term for cause as provided, but not limited to those set forth in K.A.R. 28-46-15 and K.A.R. 28-46-16 or if the KDHE or Environmental Protection Agency standards or regulations on which the permit was based have been changed by promulgation of new or amended codes, statutes, regulations or standards or by judicial decision after the permit was issued. The permittee shall furnish to KDHE, within a reasonable amount of time, any information which KDHE may

request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish, upon request, copies of all records required to be kept by this permit.

P. Severability: The provisions of this permit are severable and if any provision of this permit and any circumstance is held invalid, the application of such provision to other circumstances and the remainder of the permit shall not be affected thereby.

Q. Change in Waste Stream: Any facility changes or process modifications which may result in new, different or altered injection streams or an increase in injection volumes or an increase in concentration of pollutants shall be reported to KDHE at least one hundred eighty (180) days before such changes.

R. Anticipated Noncompliance: If for any reason, the permittee will be unable to comply with permit requirements, the permittee shall give advance notice to KDHE. The notice shall include the reason for the anticipated noncompliance and a description of steps taken to reduce, eliminate and prevent recurrence of the noncompliance. Upon receiving proper notice from the permittee KDHE may grant for a specified time a temporary waiver to a permit requirement for the purpose of testing or treating the well or for conducting a well workover or to protect human health or the environment.

S. Permit Actions: The filing of a request by the permittee for a permit modification, a notification of planned changes or anticipated noncompliance, does not stay any permit condition.