UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Phillip D. Lowe
Manager, Southern Region
CNX Gas Company, LLC
2481 John Nash Blvd
Bluefield, WV 24701

RE: Issuance of Underground Injection Control (UIC) Permit VAS2D970BRUS

Dear Mr. Lowe:

The permit's effective date is specified on the signatory page. All permit conditions are effective and enforceable as of that date and CNX's compliance with these conditions is required. CNX should respond to the provisions of Condition D.9.b. of Part I of this permit and provide an appropriate demonstration of the delegation of signatory authority. In addition, please note that permit Condition D.1. of Part II of this permit requires that CNX report back to the Environmental Protection Agency within thirty days of CNX's receipt of this letter and attest to the fact that CNX has read and is personally familiar with all terms and conditions of this permit.

If you should have questions regarding the permit, its conditions or other UIC procedures, please give me a call at 215-814-5469.

Sincerely,

James C. Bennett
Enforcement Branch (3WP22)
Office of Drinking Water & Source Water Protection

Enclosure

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

UNDERGROUND INJECTION CONTROL PERMIT NUMBER VAS2D970BRUS
AUTHORIZATION TO OPERATE A CLASS II-D INJECTION WELL

In compliance with provisions of the Safe Drinking Water Act, as amended, (42 U.S.C. §§ 300f-300j-11, commonly known as the SDWA), the Resource Conservation and Recovery Act (42 U.S.C. §§ 6901-6991i, commonly known as RCRA) and implementing regulations promulgated by the U. S. Environmental Protection Agency at Title 40 of the Code of Federal Regulations,

CNX Gas Company, LLC
2481 John Nash Blvd
Bluefield, WV 24701

is authorized by this permit as the permittee to inject fluids in accordance with the provisions of this permit, and which are produced solely in association with oil and gas production from CNX Gas Company, LLC, through a Class II-D injection well (Well No. AW114ACV) (hereinafter, "the Injection Well"), located in the Buckhorn Coal Tract, located in Swords Creek, Russell County, Virginia, into the Lower Mississippian of the Weir Sand Formation in accordance with the conditions set forth herein. The coordinates for the Injection Well are: Latitude 37° 07' 13.6" and Longitude -81° 57' 37.5".

All references to Title 40 of the Code of Federal Regulations are to all regulations that are in effect on the date that this permit becomes effective.

This permit shall become effective on May 7th, 2013.

This permit and its authorization to inject shall remain in effect until midnight

May 7th, 2023.

Signed this 7th day of May, 2013.

Jon M. Capacasa, Director
Water Protection Division

PART I

A. Effect of Permit

CNX Gas Company, LLC (hereinafter, CNX or permittee) is allowed to engage in underground injection at the Injection Well in accordance with the conditions of this permit. The permittee shall not allow the underground injection activity, otherwise authorized by this permit, to cause or contribute to the movement of fluid containing any contaminant into underground sources of drinking water (USDW), if the presence of that contaminant may cause a violation of any primary drinking water regulation under 40 CFR Part 141 or may otherwise adversely affect the health of persons. Any underground injection activity not authorized in this permit or otherwise authorized by rule is prohibited. Issuance of this permit does not convey property rights or mineral rights of any sort or any exclusive privilege; nor does it authorize any injury to persons or property, any invasion of other private rights, or any infringement of State or local law or regulations. Compliance with terms of this permit does not constitute a defense to any action brought under Part C and the imminent and substantial endangerment provisions in Part D of the Safe Drinking Water Act (SDWA) or any other common or statutory law for any breach of any other applicable legal duty.

B. Permit Actions

This permit can be modified, revoked and reissued or terminated for cause as specified in 40 CFR §§ 144.12, 144.39 and 144.40. Also, the permit is subject to minor modifications as specified in 40 CFR § 144.41. The filing of a request for a permit modification, revocation and reissuance, or termination, or the notification of planned changes, or anticipated noncompliance on the part of the permittee shall not stay the applicability or enforceability of any permit condition.

C. Severability

The provisions of this permit are severable, and if any provision of this permit or the permittee's application, dated June 14, 2012, is held invalid, the remainder of this permit shall not be affected thereby.

D. General Requirements

1. Duty to Comply. The permittee shall comply with all applicable UIC Program regulations and conditions of this permit, except to the extent and for the duration such noncompliance is authorized by an emergency permit issued under 40 C.F.R. 144.34. Any permit noncompliance constitutes a violation of the SDWA and is grounds for enforcement action, permit termination, revocation and reissuance, modification, or for denial of a permit renewal application.

2. Need to Halt or Reduce Activity Not a Defense. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

3. Duty to Mitigate. The permittee shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this permit.

4. Proper Operation and Maintenance. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control and related appurtenances which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, adequate security at the land and appurtenances where the Injection Well is located to prevent unauthorized access and operation of the Injection Well, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facility or similar systems only when necessary to achieve compliance with the conditions of this permit.

5. Duty to Provide Information. The permittee shall furnish to the Director of the Water Protection Division ("Director"), within a time specified by the Director, any information which the Director 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 to the Director, upon request, copies of records required to be kept by this permit. If the permittee becomes aware of any incomplete or incorrect information in the Permit Application or subsequent reports, the permittee shall promptly submit information addressing these deficiencies.

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

a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

d. Sample or monitor any substances or parameters at any location, at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by SDWA.

7. Penalties. Any person who violates a permit requirement is subject to civil penalties, fines and other enforcement actions under the SDWA and may be subject to the same such actions pursuant to RCRA. Any person who willfully violates permit conditions is subject to criminal prosecution.

8. Transfer of Permits. This permit is not transferable to any person except after notice is sent on EPA Form 7520 and approval is given by the Director and the requirements of 40 CFR § 144.38 are satisfied. The Director may require modification or revocation of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the SDWA.

9. Signatory Requirements.

a. The permitee shall sign all reports required by this permit and other information requested by the Director as follows:

(1) for a corporation, by a responsible corporate officer of at least the level of vice-president;

(2) for a partnership or sole proprietorship, by a general partner or the proprietor, respectively; or

(3) for a Municipality, State, Federal, or other public agency by either a principal executive or a ranking elected official.

b. A duly authorized representative of the official designated in paragraph a. above may also sign only if:

(1) the authorization is made in writing by a person described in paragraph a. above;

(2) the authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, or a position of equivalent responsibility. A duly authorized representative may thus be either a named individual or any individual occupying a named position; and

(3) the written authorization is submitted to the Director.

c. If an authorization under paragraph b. of this section is no longer accurate because a different individual or position has responsibility for the overall operation of the Injection Well, a new authorization satisfying the requirements of paragraph b. of this section must be submitted to the Director prior to or together with any reports, information or applications to be signed by an authorized representative.

d. Any person signing a document under paragraph a. or b. of this section shall make the following 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(s) who manage the system, or those persons directly responsible for gathering the information, the information submitted 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."

10. Confidentiality of Information.

a. In accordance with 40 CFR Parts 2 (Public Information) and § 144.5, any information submitted to the Director pursuant to these permits may be claimed as confidential by the submitter. Any such claim must be asserted at the time of submission by stamping the words "confidential business information" on each page containing such information. If no claim is made at the time of submission, EPA may make the information available to the public without further notice. If a claim is asserted, the information will be treated in accordance with the procedures in 40 CFR Part 2.

b. EPA will deny any claims of confidentiality for the following information:

(1) The name and address of any permit applicant or permittee.

(2) Information which deals with the existence, absence, or level of contaminants in drinking water.

11. Reapplication. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must submit a complete application for a new permit at least 100 days before this permit expires.

12. State Laws. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or regulation.

PART II

A. General

The permittee shall sign and certify copies of all reports and notifications required by this permit in accordance with the requirements of Section D(9) of Part I of this permit and submit such reports and notifications to the Director at the following address:

Ground Water & Enforcement Branch (3WP22)
Office of Drinking Water & Source Water Protection
U. S. Environmental Protection Agency
Region III
1650 Arch Street
Philadelphia, Pennsylvania 19103

B. Record Retention

1. The permittee shall retain records of all monitoring and other information required by this permit, including the following (if applicable), for a period of at least five years from the date of the sample, measurement, report or application, unless such records are required to be retained for a longer period of time under paragraph B.2, below. This period may be extended by the Director at any time. If the period is extended, the permittee must comply with the new period.

a. All data required to complete the Permit Application form for this permit and any supplemental information submitted under 40 CFR § 144.31.

b. Calibrations and maintenance records and all original strip chart recordings for continuous monitoring instrumentation.

c. Copies of all reports required by this permit.

2. The permittee shall retain records concerning the nature and composition of all injected fluids, as listed in Part II, paragraphs C.3. and C.4. of this permit, until three years after the completion of any plugging and abandonment procedures. After three years from the

completion of plugging and abandonment, the permittee shall continue to retain these records unless he or she delivers the records to the Director or obtains written approval from the Director to discard the records.

3. Records of monitoring information shall include:

a. The date, exact place, and the time of sampling or measurements;

b. The individual(s) who performed the sampling or measurements;

c. A precise description of both sampling methodology and the handling (custody) of samples;

d. The date(s) analyses were performed;

e. The individual(s) who performed the analyses;

f. The analytical techniques or methods used; and

g. The results of such analyses.

C. Monitoring Requirements

1. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. The permittee shall use method(s) to obtain a representative sample of the fluid to be analyzed and procedure(s) for analysis of the sample in accordance with test procedures approved under 40 CFR § 136.3 unless otherwise approved by the Director. The permittee shall identify the types of tests and methods used to generate the monitoring data.

2. The permittee shall observe and continuously record injection pressure, annular pressure, flow rate and cumulative volume beginning on the date on which the Injection Well commences operation and concluding when the Injection Well is plugged and abandoned.

3. The permittee shall sample, analyze and record the nature of the injected fluid for the parameters listed below at the initiation of the injection operation and every two years thereafter, and whenever the operator observes or anticipates a change in the injection fluid (see condition C.4. below).

- pH
- Specific Gravity
- Specific Conductance
- Sodium
- Iron
- Magnesium
- Chloride
- Total Organic Carbon (TOC)
- Manganese
- Total Dissolved Solids
- Barium
- Hydrogen Sulfide
- Dissolved Oxygen
- Alkalinity
- Hardness

4. The permittee shall report any analysis of specific gravity greater than 1.08 to the Director within twenty four hours of receipt of such results.

5. The permittee shall perform all environmental measurements required by the permit, including, but not limited to: measurements of pressure, temperature, mechanical integrity (as applicable) and chemical analyses in accordance with EPA guidance on quality assurance.

6. The permittee shall make a demonstration of mechanical integrity in accordance with 40 CFR § 146.8 at least once every five years by conducting a mechanical integrity test. The permittee shall conduct the five-year demonstrations within five years of the date that the previous demonstration was made. In addition to the above requirement, the permittee shall conduct a mechanical integrity test demonstration whenever protective casing or tubing is removed from the well, the packer is reseated, or a well failure is evident. The permittee may continue operation only if it has successfully demonstrated to the Director the mechanical integrity of the permitted Injection Well. The permittee shall cease injection operations if a loss of mechanical integrity becomes evident or if mechanical integrity cannot be demonstrated. Any such test shall be conducted in keeping with the notification requirements of Permit Condition D.11. of Part II of this permit.

D. Reporting and Notification Requirements.

1. Report on Permit Review. Within 30 days of receipt of this permit, the permittee shall report to the Director that he or she has read and is personally familiar with all terms and conditions of this permit.

2. Commencing Injection. The operator of an injection well may not commence injection until construction or well rework is complete and all of the following conditions have been satisfied:

a. The permittee has demonstrated to EPA that the injection well has mechanical integrity in accordance with 40 CFR § 146.8 and the permittee has received written notice from the Director that such demonstration is satisfactory;

b. The permittee has submitted notice of completion of construction (EPA Form 7520-10) to the Director; and

c.(1) The Director has inspected or otherwise reviewed the new injection well and finds it is in compliance with the conditions of the permit; or

c.(2) The permittee has not received notice from the Director of his or her intent to inspect or otherwise review the new injection well within 13 days of the date of the notice in paragraph (a) of this permit condition, in which case, prior inspection or review is waived and the permittee may commence injection.

3. Twenty-four Hour Reporting.

a. The permittee shall report to the Director any noncompliance which may endanger or has endangered human health or the environment. Such report shall be provided orally (phone numbers: (215)814-5469 or (215)814-5445 within 24 hours from the time the permittee becomes aware of the circumstances. The permittee shall include the following as information which must be reported orally within 24 hours:

(1) Any monitoring or other information which indicates that any contaminant may cause an endangerment to an underground source of drinking water.

(2) Any noncompliance with a permit condition, or malfunction of the injection system which may cause or has caused fluid migration into or between underground sources of drinking water, or failure of mechanical integrity test demonstrations.

b. The permittee shall also provide a written submission within five days of the time the permittee becomes aware of the circumstances described above. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

4. Anticipated Noncompliance. The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

5. Other Noncompliance. The permittee shall report all other instances of noncompliance in writing within ten (10) days of the time the permittee becomes aware of the circumstances. The reports shall contain the information listed in Permit Condition D.3., of Part II of this permit.

6. Planned Changes. The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility.

7. Conversion. The permittee shall notify the Director thirty days prior to the conversion of the well to an operating status other than an injection well.

8. Annual Report. The permittee shall submit an Annual Report to the Director summarizing the results of the monitoring required by Permit Condition C within Part II of this permit. This report shall include monthly monitoring records of injected fluids, the results of any mechanical integrity test(s), and any major changes in characteristics or sources of injected fluids. The permittee shall complete and submit this information with its Annual Report EPA Form 7520-11 (Annual Disposal/Injection Well Monitoring Report). The permittee shall submit the Annual Report not later than January 31st of each year, summarizing the activity of the calendar year ending the previous December 31st.

9. Plugging and Abandonment Reports and Notifications.

a. The permittee shall notify the Director 45 days before the plugging and abandonment of the Injection Well. The Director may allow a shorter notice period upon written request.

b. The permittee shall submit any revisions to the Plugging and Abandonment Plan to the Director no less than 45 days prior to plugging and abandonment on EPA Plugging and Abandonment Form 7520-14. The permittee shall not commence plugging operations until it receives written notice from the Director that the Plan has been approved.

c. Within 60 days after plugging the Injection Well, the permittee shall submit a report to the Director which shall consist of either:

(1) A statement that the Injection Well was plugged in accordance with the plan previously submitted to and approved by the Director; or

(2) Where actual plugging differed from the plan previously submitted, an updated version of the plan, on the form supplied by the Director, specifying the different procedures used.

The permittee shall ensure that the report is certified as accurate by the person who performed the plugging operation.

10. Compliance Schedules. The permittee shall submit reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit no later than 30 days following each schedule date.

11. Mechanical Integrity Tests. The permittee shall notify the Director of its intent to conduct a mechanical integrity test at least 30 days prior to such a demonstration.

12. Cessation of Injection Activity. After a cessation of injection for two years, the permittee shall plug and abandon the Injection Well in accordance with the Plugging and Abandonment Plan in Attachment 1, unless it:

a. Provides notice to the Director; and

b. Describes actions or procedures, satisfactory to the Director, which permittee will take to ensure that the Injection Well will not endanger USDWs during the period of temporary abandonment. These actions and procedures shall include compliance with the technical requirements applicable to an active injection well unless waived in writing by the Director.

E. Mechanical Integrity Standards

1. Standards. The permittee shall maintain the mechanical integrity of the permitted injection well pursuant to 40 CFR § 146.8.

2. Request from Director. The Director may, by written notice, require the permittee to demonstrate mechanical integrity at any time during the term of this permit.

PART III

A. Construction Requirements

1. Notwithstanding any other provision of this permit, the permittee shall inject through the Injection Well only into formations which are separated from any underground source of drinking water by a confining zone that is free of known open faults or fractures within the Area of Review.

2. Casing and Cementing. The permittee shall case and cement the Injection Well and/or maintain casing and cementing, as applicable, to prevent the movement of fluids into or between underground sources of drinking water. The permittee shall use in the construction of the well casing and cement designed for the life expectancy of the well. Surface casing has been installed from the surface to a depth of approximately 710 feet, and cemented back to the surface. Long String casing has been installed from the surface to a depth of approximately

6015 feet, and cemented back to surface. Injection shall occur through a tubing string and packer installed inside the long string casing and set above the injection zone.

3. Logs and Tests. In accordance with 40 CFR § 146.22(f), the permittee has prepared logs and performed the test listed below. The logs and test have provided information that identifies: (1) the lowermost underground source of drinking water and the confining zone adjacent to it; and (2) the injection zone and adjacent formations within the Area of Review.

a. A cement bond log and variable density log which document the cemented portion of the long string casing.
b. A log which documents the location of the surface casing.
c. Records documenting the cementing of the surface casing.
d. Gamma Ray logs which document the geologic formations in the wellbore.

4. Mechanical Integrity. The permittee is prohibited from injection operations until it demonstrates: (1) that the well covered by this permit has mechanical integrity in accordance with 40 CFR § 146.8; and (2) it has received notice from the Director that such a demonstration is satisfactory in accordance with the provisions of Section II.D.2 of this permit.

5. Corrective Action. Prior to injection, the permittee shall complete corrective action, in the form of plugging and abandoning wells within the one-quarter mile Area of Review which could provide conduits for fluid migration into USDWs. If an abandoned well is discovered within the one-quarter mile Area of Review after injection commences, the permittee shall notify the Director upon discovery, and within five (5) days of such discovery, submit to the Director for approval a plan for corrective action, consistent with the requirements of 40 CFR Parts 144 – 146.

B. Operating Requirements

1. Injection Formation. Injection shall be limited to the Lower Mississippian Weir Sandstone in the subsurface intervals between approximately 5522 feet to 5526 feet and 5580 feet to 5582 feet.

2. Injection Fluid. The permittee shall not inject any hazardous wastes, as defined by 40 CFR § 261.3, nor any other fluid, other than the fluids produced solely through oil and gas production activity by CNX Gas Company, LLC.

3. Injection Volume Limitation. Injection volume shall not exceed 45,000 barrels per month.

4. Injection Pressure Limitation. The permittee shall not exceed a surface injection pressure maximum of 841 psi and bottom hole pressure of 3423 psi. This pressure calculation is

based on the specific gravity of the injection fluid not exceeding 1.08. If the specific gravity of the injection fluid is greater than 1.08, the permittee shall reduce the surface injection pressure by an appropriate amount such that the bottom hole pressure does not exceed 3423 psi. The permitee is prohibited from injecting at a pressure which initiates new fractures or propagates existing fractures in the confining zone adjacent to USDWs or which causes the movement of injection or formation fluids into an USDW.

5. The permittee is prohibited from injecting between the outermost casing protecting USDWs and the well bore, and also from injecting into any USDW.

C. Plugging and Abandonment

1. The permittee shall plug and abandon the Injection Well in accordance with the approved plugging and abandonment plan in Attachment 1 hereto.

2. Plugging and Abandonment. The permittee shall plug and abandon the Injection Well in such a manner that fluids shall not move into or between USDWs.

D. Financial Responsibility

The permittee shall maintain financial responsibility and resources to close, plug and abandon the underground injection well in accordance with 40 CFR § 144.52(a)(7).

The permittee shall not substitute an alternative demonstration of financial responsibility for that which the Director has approved, unless it has previously submitted evidence of that alternative demonstration to the Director and the Director notifies him or her that the alternative demonstration of financial responsibility is acceptable. The Director may require the permittee to submit a revised demonstration of Financial Responsibility if the Director has reason to believe that the original demonstration is no longer adequate to cover the costs of plugging and abandonment.