West Virginia Department of Environmental Protection
Division of Air Quality

Fact Sheet

For Final Permitting Action Under 45CSR30 and Title V of the Clean Air Act

Permit Number: **R30-10300109-2025**
Application Received: **July 17, 2024**
Plant Identification Number: **03-54-103-00109**
Permittee: **Mountain Valley Pipeline, LLC**
Facility Name: **Bradshaw Compressor Station**
Mailing Address: **2200 Energy Drive, Canonsburg, PA 15317**

Physical Location:	Smithfield, Wetzel County, West Virginia
UTM Coordinates:	540.05 km Easting • 4,376.00 km Northing • Zone 17
Directions:	From Charleston, WV, take I-79 N for approximately 121 miles. Take Exit 119 for US-50 toward Clarksburg/Bridgeport. Continue on US-50 W for 7 miles. Turn right onto Bear Run/Gregory Run and continue for 5.8 miles. Next, turn left onto WV-20 N/State Highway 20, and continue for 16 miles. Turn right onto Mannington Road and drive for 1.2 miles. Finally, turn left onto Bear Run Road, and continue 2.2 miles to the site.

Facility Description

The Bradshaw Compressor Station is a natural gas compressor station which receives natural gas and liquids (primarily produced water) from nearby wells. The natural gas undergoes compression before it is transported to a gas gathering line for additional processing. The facility operates four compressor turbines, fourteen microturbines, two fuel heaters, one building heater, one produced fluid storage tank, and one used oil storage tank. Fluids collected in the storage tanks are removed from the facility via trucks.
NAICS: 486210, SIC: 4922

Emissions Summary

Plantwide Emissions Summary [Tons per Year]

Regulated Pollutants	Potential Emissions	2023 Actual Emissions
Carbon Monoxide (CO)	197.78	2.10
Nitrogen Oxides (NO_X)	178.62	0.96
Particulate Matter ($PM_{2.5}$)	47.36	0.01
Particulate Matter (PM_{10})	47.46	0.01
Total Particulate Matter (TSP)	47.46	0.01
Sulfur Dioxide (SO_2)	10.98	0.02
Volatile Organic Compounds (VOC)	47.14	0.91

PM_{10} is a component of TSP.

Hazardous Air Pollutants	Potential Emissions	2023 Actual Emissions
Formaldehyde	8.99	< 0.01
Other HAPs	2.94	< 0.01
Total HAPs	11.93	< 0.01

Some of the above HAPs may be counted as PM or VOCs.

Title V Program Applicability Basis

This facility has the potential to emit 197.78 tpy of Carbon Monoxide and 178.62 tpy of Nitrogen Oxides. Due to this facility's potential to emit over 100 tons per year of criteria pollutant, Mountain Valley Pipeline, LLC is required to have an operating permit pursuant to Title V of the Federal Clean Air Act as amended and 45CSR30.

Legal and Factual Basis for Permit Conditions

The State and Federally-enforceable conditions of the Title V Operating Permits are based upon the requirements of the State of West Virginia Operating Permit Rule 45CSR30 for the purposes of Title V of the Federal Clean Air Act and the underlying applicable requirements in other state and federal rules.

This facility has been found to be subject to the following applicable rules:

Federal and State:	45CSR2	Control of Particulate Matter Air Pollution from the Combustion of Fuel in Indirect Heat Exchangers.
	45CSR6	Control of Air Pollution from Combustion of Refuse.
	45CSR11	Standby plans for emergency episodes.
	45CSR13	Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Administrative Updates, Temporary Permits, General Permits, Permission to Commence Construction, and Procedures for Evaluation.
	45CSR16	Standards of Performance for New Stationary Sources.

	WV Code § 22-5-4 (a) (15)	The Secretary can request any pertinent information such as annual emission inventory reporting.
	45CSR30	Requirements for Operating Permits.
	40 C.F.R. Part 60 Subpart KKKK	Standards of Performance for Stationary Combustion Turbines.
	40 C.F.R. Part 60 Subpart OOOOa	Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced after September 18, 2015 and on or before December 6, 2022.
	40 C.F.R. Part 61	Asbestos inspection and removal.
	40 C.F.R. Part 82 Subpart F	Ozone depleting substances.
State Only:	45CSR4	No objectionable odors.
	45CSR17	To Prevent and Control Particulate Matter Air Pollution from Materials Handling, Preparation, Storage and Other Sources of Fugitive Particulate Matter.

Each State and Federally-enforceable condition of the Title V Operating Permit references the specific relevant requirements of 45CSR30 or the applicable requirement upon which it is based. Any condition of the Title V permit that is enforceable by the State but is not Federally-enforceable is identified in the Title V permit as such.

The Secretary's authority to require standards under 40 C.F.R. Part 60 (NSPS), 40 C.F.R. Part 61 (NESHAPs), and 40 C.F.R. Part 63 (NESHAPs MACT) is provided in West Virginia Code §§ 22-5-1 *et seq.*, 45CSR16, 45CSR34 and 45CSR30.

Active Permits/Consent Orders

Permit or Consent Order Number	Date of Issuance
R13-3278B	January 3, 2025

Conditions from this facility's Rule 13 permit(s) governing construction-related specifications and timing requirements will not be included in the Title V Operating Permit but will remain independently enforceable under the applicable Rule 13 permit(s). All other conditions from this facility's Rule 13 permit(s) governing the source's operation and compliance have been incorporated into this Title V permit in accordance with the "General Requirement Comparison Table," which may be downloaded from DAQ's website.

Determinations and Justifications

Mountain Valley Pipeline, LLC's Bradshaw Compressor Station is an existing facility that was initially permitted under the NSR Permit R13-3278 (issued: March 14, 2016) which was revised with the Class II Administrative Update R13-3278A (issued: March 22, 2021) and the Class I Administrative Update R13-3278B (issued: January 3, 2025). On November 16, 2023, the DAQ received a notification of the startup date for several emission units at the facility, with the earliest date being October 27, 2023. The permittee was required to obtain a Title V operating permit due to the potential to emit 197.78 tpy of Carbon Monoxide and 178.62 tpy of Nitrogen Oxides.

The physical address of the facility has been revised in the operating permit to the 911 address: 2165 Gilbert Ridge Road, Smithfield, WV 26437.

The Emission Units Table of Section 1.1. includes one used oil tank (S022) and one office building heater (S023). Potential emissions from these emission units are minimal, and neither unit is subject to any applicable requirements under this operating permit.

This section outlines the applicable requirements that have been included in this initial Title V operating permit.

Section 1.0. – Emission Units and Active R13, R14, and R19 Permits

The Emission Units Table of this operating permit has been revised from R13-3278B as follows:

1. In R13-3278, the turbines S002 through S004 were initially permitted at the facility with a site-specific rating of 23,536 HP. With the issuance of R13-3278A, the rating of these turbines was changed to 19,483 HP in the Emission Units Table. The revised ratings were carried through to R13-3278B. The changes were likely inadvertent, given that in the application for R13-3278A the permittee only requested revisions to the potential-to-emit of the fugitive and blowdown emissions and that these changes to the rating of the turbines were not discussed in the evaluation for R13-3278A. Therefore, in accordance with the application for R13-3278 and the application for this operating permit, the site-specific rating of each turbine was corrected to 23,536 HP in the Emission Units Table of this operating permit.

2. In R13-3278B, the emission unit description of multiple microturbine generators was "Microturbine Generator #10". In the operating permit, the emission unit description of S015 through S018 was corrected to "Microturbine Generator #11" through "Microturbine Generator #14", respectively.

3. The Emission Point ID of the liquid loading emission unit (Emission Unit: S025) has been corrected from E026 to E025.

4. The Emission Unit ID of the blowdowns emission unit (Emission Point: E026) has been corrected from S020 to S026.

Section 3.0. – Facility-Wide Requirements

The following conditions were added to Section 3.0.:

Title V Permit Condition	Summary of Permit Condition	Regulatory Citation	R13-3278B Condition
3.1.9.	Facility-wide HAP emissions are limited to ensure the facility remains a minor source of HAPs.	45CSR13	4.1.7.
3.1.10.	Only the permitted emission units and *de minimis* sources are authorized at the facility.	45CSR13	4.1.8.
3.1.11.	Fugitive particulate matter may not be discharged beyond the boundary lines of the facility.	45CSR§17-3.1.	N/A
3.4.1.	Record of Monitoring Information.	45CSR13	4.4.1.
3.4.2.	Retention of Records.	45CSR13	3.4.1.

Section 4.0. – Turbines and Microturbine Generators [Emission Point IDs: E001 through E018]

Four Solar Titan 130 turbines (S001 to S004) are operated at the Bradshaw Compressor Station to drive the centrifugal compressors. Each of the turbines is fueled by pipeline-quality natural gas, has a site-specific rating of 23,536 HP, and has a design heat input of 169.08 mmBTU/hr.

The turbines are equipped with SoLoNO$_X$, a dry low NO$_X$ emission combustion system which minimizes emissions of nitrogen oxides, carbon monoxide, and unburned hydrocarbons. The turbines are operated in "SoLoNO$_X$ mode" when operated at normal conditions (above 50% of peak power output with ambient temperatures above 0°F); at all other times, including start-up and shutdown events, the turbines are operated in "non-SoLoNO$_X$ mode". The potential-to-emit of the turbines was based on the continuous operation of the units. Emissions from the turbines are vented directly to the atmosphere.

The turbines are subject to the following regulations:

1. **45CSR13** – *Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Administrative Updates, Temporary Permits, General Permits, Permission to Commence Construction, and Procedures for Evaluation*

2. **45CSR16** – *Standards of Performance for New Stationary Sources*

3. **40 C.F.R. Part 60 Subpart KKKK** – *Standards of Performance for Stationary Combustion Turbines*

   Subpart KKKK establishes emission standards for the control of nitrogen oxides (NO$_X$) and sulfur dioxide (SO$_2$) from stationary combustion turbines. Construction of the turbines began after February 18, 2005, and each turbine has a heat input at peak load equal to or greater than 10.7 gigajoules (10 mmBTU) per hour, based on the higher heating value of the fuel. Therefore, per §60.4305(a), S001 through S004 are subject to Subpart KKKK.

   Under §60.4320(a), the turbines are subject to the NO$_X$ emission standards of Table 1 to Subpart KKKK of Part 60. As the turbines S001 through S004 are new natural gas-fired turbines with a heat input at peak load greater than 50 mmBTU/hr and less than 850 mmBTU/hr, the turbines are subject to the NO$_X$ emission standard of 25 ppm at 15% O$_2$, as well as the alternative NO$_X$ emission standard of 150 ppm at 15% O$_2$ for turbines with less than or equal to 30 MW output that operates at less than 75% of peak load or that operates at temperatures below 0°F. Compliance with the NO$_X$ emission standards is demonstrated through annual performance testing as specified in §§60.4340(a) and 60.4400. A written report of the results of the testing must be submitted per §60.4375(b).

   The turbines are also subject to the sulfur dioxide emission standards of §60.4330(a). In accordance with §60.4330(a)(2), compliance with this requirement will be demonstrated through the use of fuel which does not contain total potential sulfur emissions in excess of 0.060 lbs SO$_2$/mmBTU heat input. Under §60.4365(a), monitoring of the total sulfur content of the fuel in the turbine is not required if the permittee maintains current and valid documentation that specifies the natural gas consumed by the turbines has a maximum total sulfur content less than or equal to 20 grains of sulfur/standard ft^3.

Fourteen Capstone C200 microturbine generators (S005 to S018) provide electricity to the Bradshaw Compressor Station. The microturbines are natural gas-fired and have an electrical power output of 200 kW.

In accordance with 40 C.F.R. §60.4305(a), Subpart KKKK is applicable to stationary combustion turbines with a heat input at peak load equal to or greater than 10 mmBTU/hr, based on the higher heating value of the fuel. The microturbines have a design heat input of 2.28 mmBTU/hr and, therefore, are not subject to the requirements of Subpart KKKK.

The microturbine generators are subject to the following regulation:

1. **45CSR13** – *Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Administrative Updates, Temporary Permits, General Permits, Permission to Commence Construction, and Procedures for Evaluation*

The table below describes each condition added to Section 4.0. of the Title V operating permit.

Title V Permit Condition	Summary of Permit Condition	Regulatory Citation	R13-3278B Condition
4.1.1.	Paragraph a. contains the limitations for NO_X, CO, SO_2, and VOC emissions from the turbines S001 to S004 as established in R13-3278B and/or Subpart KKKK. Paragraph b. requires the use of pipeline-quality natural gas to fuel the turbines. Paragraph c. requires the permittee to operate and maintain the turbine, any air pollution control equipment, and monitoring equipment in a manner consistent with good air pollution control practices for minimizing emissions.	45CSR13 45CSR16 40 C.F.R. §§60.4320(a), 60.4330(a)(2), 60.4333(a), and 60.4365(a) Table 1 to Subpart KKKK of Part 60	4.1.1.
4.1.2.	Paragraph a. contains annual emission limitations for NO_X, CO, and VOCs from each of the microturbines S005 to S018. The emission limits are based on the manufacturer's specifications for the microturbines and on the continuous operation of each unit. Therefore, compliance with the limits will be demonstrated by operating the microturbines as specified in paragraphs b. and c. of this condition. Paragraph b. requires the use of pipeline-quality natural gas to fuel the microturbines. Paragraph c. requires the permittee to operate and maintain the microturbines, any air pollution control equipment, and monitoring equipment in a manner consistent with good air pollution control practices for minimizing emissions.	45CSR13	4.1.2.
4.2.1.	Compliance with the emission limits for the turbines in Condition 4.1.1. is demonstrated by monitoring and recording the number of hours that the turbines are operated at various conditions and the number of startup and shutdown cycles that occurred during the month.	45CSR13	4.2.1.
4.3.1.	The permittee must conduct annual performance tests on each of the turbines, except as specified in §60.4340(a). Each performance test must be conducted in accordance with §60.4400. NOTE: Condition 4.3.1. of R13-3278B also requires the permittee to conduct an initial performance test to demonstrate compliance with the NO_X emission standards within 60 days of achieving maximum output of each turbine but no later than 180 days after initial startup. The initial performance test of each turbine was conducted February 7-8, 2024. Therefore, the requirements to conduct an initial performance test have not been included in the operating permit.	45CSR13 45CSR16 40 C.F.R. §§60.4340(a) and 60.4400	4.3.1.

Title V Permit Condition	Summary of Permit Condition	Regulatory Citation	R13-3278B Condition
4.4.1.	Compliance with the annual emission limits in Condition 4.1.1. must be based on a rolling 12-month total and must be demonstrated by determining and maintaining records of the monthly emissions from each turbine (S001 to S004). NOTE: This requirement was revised in R13-3278A to only refer to the turbines S001 and S002. However, because this requirement demonstrates compliance with the emission limits of Condition 4.1.1. which also apply to the turbines S003 and S004, the reference in the operating permit has been updated to the turbines S001 to S004.	45CSR13	4.4.2.
4.4.2.	If it is demonstrated that the natural gas used to fuel the turbines does not exceed potential sulfur emissions of 0.060 lbs of SO_2/mmBTU, then the permittee is exempt from the requirements for the monitoring of the total sulfur content of the fuel in 40 C.F.R. §§60.4360 and 60.4365. For this demonstration, the permittee shall maintain documentation that the natural gas consumed by the turbine has a total sulfur content of 20 grains of sulfur or less per 100 cubic feet of natural gas. NOTE: Condition 4.4.3. of R13-3278B states that these records satisfy Conditions 4.1.1.b., 4.1.2.c., and 4.1.3.f. Conditions 4.1.1., 4.1.2., and 4.1.3. contain requirements for the turbines, microturbines, and fuel gas heaters, respectively. The references to 4.1.2.c. (which contains a general requirement to operate the microturbines in a manner consistent with good air pollution control practices) and 4.1.3.f. (which is not a requirement under R13-3278B) are likely mistakes. Considering pipeline-quality natural gas contains a sulfur content below 20 grains of sulfur per 100 cubic feet and the other referenced condition (4.1.1.b.) contains the requirement to use pipeline-quality natural gas to fuel the turbines, the references in this requirement have been revised to specify that these records will satisfy the requirements to fuel the emission units with pipeline quality natural gas in Conditions 4.1.1.b., 4.1.2.b., and 6.1.1.d. of the operating permit.	45CSR13 45CSR16 40 C.F.R. §60.4365(a)	4.4.3.
4.5.1.	A report of the results of each performance test conducted must be submitted within 60 days.	45CSR13 45CSR16 40 C.F.R. §60.4375(b)	4.3.1.

NOTE: Condition 4.5.1. of R13-3278B has not been included in this operating permit. This condition required the permittee to submit a notification of the initial startup of the turbines per 40 C.F.R. §60.7(a)(3). The notification of the initial startup of the turbines was received by the WV DAQ on November 16, 2023. Therefore, this requirement has not been included in the operating permit.

Section 5.0. – 40 C.F.R. Part 60 Subpart OOOOa Requirements for Fugitive Emissions Components

40 C.F.R. Part 60 Subpart OOOOa contains emission standards for the control of volatile organic compounds (VOCs), sulfur dioxide (SO_2), and greenhouse gases (GHG) from affected facilities in the crude oil and natural gas source category that commenced construction after September 18, 2015 and on or before December 6, 2022. Per 40 C.F.R. §60.5365a(j), the collection of fugitive emissions components at a compressor station is an affected facility under Subpart OOOOa. As the equipment at the Bradshaw Compressor Station was constructed within the applicability

dates of Subpart OOOOa, the requirements for the collection of fugitive emissions components at a compressor station are applicable to the facility. No other emission units at the compressor station are currently subject to Subpart OOOOa (see paragraph 8. of the Non-Applicability Determinations).

Under 40 C.F.R. §60.5430a, a fugitive emissions component is defined as "any component that has the potential to emit fugitive emissions of methane or VOC at a compressor station, including valves, connectors, pressure relief devices, open-ended lines, flanges, covers and closed vent systems not subject to §60.5411 or §60.5411a, thief hatches or other openings on a controlled storage vessel not subject to §60.5395 or §60.5395a, compressors, instruments, and meters. Devices that vent as part of normal operations such as natural gas-driven pneumatic controllers or natural gas-driven pumps, are not fugitive emissions components, insofar as the natural gas discharged from the device's vent is not considered a fugitive emission. Emissions originating from other than the device's vent, such as the thief hatch on a controlled storage vessel, would be considered fugitive emissions."

For each fugitive emissions component subject to Subpart OOOOa, the permittee is subject to the monitoring plan and repair standards of §60.5397a, the continuous compliance demonstration requirements of §60.5415a(h), and the recordkeeping and reporting requirements of §60.5420a.

The permittee is also subject to the initial compliance demonstration requirements for fugitive emissions components under §60.5397a(f)(2) and §60.5410a(j). However, on October 28, 2024, the WV DAQ received the annual report for several of Mountain Valley Pipeline, LLC's facilities, including the Bradshaw Compressor Station. The report covered the initial compliance period from October 27, 2023 (the date of equipment startup at the Bradshaw Compressor Station) to August 2, 2024. The report included the general facility information, the date of the initial monitoring survey (January 24, 2024), the dates of subsequent monitoring surveys, and the monitoring method and results. Therefore, the initial compliance demonstration requirements of §60.5410a and the initial monitoring survey requirements of §60.5397a(f)(2) have been met and were not included in the operating permit.

The table below describes each condition added to Section 5.0. of the Title V operating permit:

Title V Permit Condition	Summary of Permit Condition	Regulatory Citation	R13-3278B Condition
5.1.1.	Affected facilities under Subpart OOOOa must be operated in a manner consistent with good air pollution control practice for minimizing emissions.	45CSR16 40 C.F.R. §60.5370a(b)	N/A
5.1.2.	VOC and GHG standards for fugitive emissions components affected facilities.	45CSR16 40 C.F.R. §§60.5397a(a) through (e), (g), (g)(2) through (4), and (h) through (j)	N/A
5.2.1.	Continuous compliance demonstration requirements for the collection of fugitive emissions components.	45CSR16 40 C.F.R. §60.5415a(h)	N/A
5.4.1.	Recordkeeping requirements for the collection of fugitive emissions components.	45CSR16 40 C.F.R. §§60.5420a(c), (c)(15), and (c)(15)(i), (vi) through (ix)	N/A

Title V Permit Condition	Summary of Permit Condition	Regulatory Citation	R13-3278B Condition
5.5.1.	Reporting requirements for the collection of fugitive emissions components.	45CSR16 40 C.F.R. §§60.5420a(b), (b)(1), (b)(7), (b)(7)(i)(A), (b)(7)(i)(B), (b)(7)(ii) through (iv), and (b)(11)	N/A

Section 6.0. – Fuel Gas Heaters [Emission Point IDs: E019 and E020]

Two 2.31 mmBTU/hr fuel gas heaters (S019 and S020) are operated at the Bradshaw Compressor Station. The heaters are natural gas-fired. The potential emissions of criteria pollutants and HAPs were based on continuous operation of the heaters.

The fuel gas heaters are subject to the following regulations:

1. **45CSR2** – *Control of Particulate Matter Air Pollution from the Combustion of Fuel in Indirect Heat Exchangers*

   45CSR2 establishes particulate matter emission standards and requirements for fuel burning units. Per 45CSR§2-2.10., a fuel burning unit includes any furnace, boiler apparatus, device, mechanism, stack, or structure used in the process of burning fuel or other combustible material for the primary purpose of producing heat or power by indirect heat transfer. Therefore, the heaters are subject to the particulate matter emission standards of this rule.

   The heaters are subject to the visible emissions standards in 45CSR§2-3. The 10% opacity limit of 45CSR§2-3.1. has been included in the operating permit as Condition 6.1.2. Condition 6.3.1. has also been added with the requirements to demonstrate compliance with this limit through visible emission checks conducted in accordance with Method 9 of 40 C.F.R. Part 60, Appendix A, as designated by the Secretary.

   As the heaters each have a design heat input less than 10 mmBTU/hr, the permittee is exempt from the weight emission standards of Section 4; the control of fugitive particulate matter standards of Section 5; the registration standards of Section 6; the testing, monitoring, recordkeeping, and reporting requirements of Section 8; and the start-up, shutdown, and malfunction requirements of Section 9 of this rule per 45CSR§2-11.1.

2. **45CSR10** – *Control Air Pollution from the Emission of Sulfur Oxides*

   45CSR10 establishes sulfur oxides emission standards and requirements for fuel burning units. Per 45CSR§10-2.8., a fuel burning unit includes any furnace used in the process of burning fuel or other combustible material for the primary purpose of producing heat or power by indirect heat transfer. Therefore, the heaters are subject to the emission standards of this rule.

   However, per 45CSR§10-10.1., fuel burning units with a design heat input of less than 10 mmBTU/hr are exempt from the weight emission standards of Section 3; the permit requirements of Section 7; and the testing, monitoring, recordkeeping, and reporting requirements of Section 8. Furthermore, Section 4 is inapplicable because the heaters are not part of a manufacturing process, and Section 5 is inapplicable because the units do not combust a refinery or other process gas stream. Therefore, although the heaters are subject to 45CSR10, the emission units currently have no applicable requirements under this rule.

3. **45CSR13** – *Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Administrative Updates, Temporary Permits, General Permits, Permission to Commence Construction, and Procedures for Evaluation*

The table below describes each condition added to Section 6.0. of the Title V operating permit.

Title V Permit Condition	Summary of Permit Condition	Regulatory Citation	R13-3278B Condition
6.1.1.	The fuel gas heaters are subject to NO_X and CO emission limits, a maximum design heat input limit, and a requirement to only use pipeline-quality natural gas as fuel.	45CSR13	4.1.3.
6.1.2.	45CSR2 visible emission limit.	45CSR§2-3.1.	N/A
6.3.1.	Testing methods for visible emissions observations.	45CSR§2-3.2.	N/A
6.4.1.	To demonstrate compliance with the NO_X and CO emission limits of Condition 6.1.1., records of the amount of fuel consumed by each fuel gas heater must be maintained.	45CSR13	4.2.2.
6.4.2.	Compliance with the requirement to use pipeline-quality natural gas as fuel in the heaters is demonstrated by maintaining documentation of the natural gas consumed by the combustion turbines specifying that the maximum total sulfur content is 20 grains of sulfur or less per 100 cubic feet of natural gas, in accordance with Condition 4.4.2. of the operating permit.	45CSR13	4.4.3.

Section 7.0. – Produced Fluid Storage Tank and Liquid Loading [Emission Point IDs: E021 and E025]

The Bradshaw Compressor Station operates a 10,080-gallon storage tank (S021) to store produced fluids. The produced fluids collected are removed from the facility via tanker trucks. The potential emissions of VOCs and HAPs from the storage tank are minimal.

1. **45CSR13** – *Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Administrative Updates, Temporary Permits, General Permits, Permission to Commence Construction, and Procedures for Evaluation*

The table below describes each condition added to Section 7.0. of the Title V operating permit.

Title V Permit Condition	Summary of Permit Condition	Regulatory Citation	R13-3278B Condition
7.1.1.	The maximum annual throughput of produced fluid to the storage tank is limited to 126,000 gallons per year. NOTE: The Emission Unit ID of the storage tank has been corrected from S015 to S021.	45CSR13	4.1.4.
7.1.2.	All above-ground piping, valves, pumps, etc. shall be installed, maintained, and operated to prevent any substantive fugitive emissions.	45CSR13	4.1.5.
7.4.1.	To demonstrate compliance with Condition 7.1.1., a requirement to maintain a record of the volume of produced fluid removed from the storage tank S021 during the calendar year has been added to the operating permit.	45CSR§30-5.1.c.	N/A

Title V Permit Condition	Summary of Permit Condition	Regulatory Citation	R13-3278B Condition
7.4.2.	Maintain records of the fugitive component counts and any fugitive component leaks or replacements.	45CSR13	4.4.4.

NOTE: Condition 4.2.3. of R13-3278B has not been included in the operating permit. This condition contained the requirements of 40 C.F.R. §60.5410a(h) and required the permittee to determine if the produced fluids storage tank (S021) is an affected source under Subpart OOOOa. In the application for R13-3278, the potential VOC emissions from S021 were calculated to be 0.01 tpy based on a throughput of 8 bbl/day and continuous operation of the tank. On December 5, 2023, the WV DAQ received notification that, during the first 30 days of production, no produced fluids were received by S021, resulting in no VOC emissions from the tank. As the potential VOC emissions from S021 do not exceed 6 tpy, the produced fluids storage tank is not an affected facility under Subpart OOOOa. Therefore, the requirements of Condition 4.2.3. and 40 C.F.R. §60.5410a(h) have been met and were not included in the operating permit.

Section 8.0. – Compressor Blowdown Events [Emission Point IDs: E026]

Compressor Blowdown events (Emission Unit ID: S026, Emission Point ID: E026) result in emissions of VOCs and HAPs which are vented to the atmosphere.

The blowdown events are subject to the following regulations:

1. **45CSR13** – *Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Administrative Updates, Temporary Permits, General Permits, Permission to Commence Construction, and Procedures for Evaluation*

The table below describes each condition added to Section 8.0. of the Title V operating permit.

Title V Permit Condition	Summary of Permit Condition	Regulatory Citation	R13-3278B Condition
8.1.1.	Maximum limits for the volume of gas vented annually from pigging and blowdown events.	45CSR13	4.1.6.
8.4.1.	The permittee must maintain a record of the blowdown and pigging events and the estimated volume of each on a monthly and rolling twelve-month total.	45CSR13	4.4.5.
8.5.1.	The permittee must report any exceedance of the annual limits in Condition 8.1.1. within ten days of the occurrence.	45CSR13	4.5.2.

Non-Applicability Determinations

The following requirements have been determined not to be applicable to the subject facility due to the following:

1. **45CSR21** – *Regulation to Prevent and Control Air Pollution from the Emission of Volatile Organic Compounds* – This rule applies to sources located in Putnam County, Kanawha County, Cabell County, Wayne County, and Wood County. The Bradshaw Compressor Station is located in Wetzel County. Therefore, 45CSR21 is inapplicable to the facility.

2. **40 C.F.R. Part 60 Subparts D, Da, Db, and Dc** – *Standards of Performance for Steam Generators* – As there are no steam generating units with a maximum design heat input equal to or greater than 10 mmBTU/hr operated

at the facility, Subparts D, Da, Db, and Dc do not apply to the Bradshaw Compressor Station per 40 C.F.R. §§60.40(a), 60.40Da(a), 60.40b(a), and 60.40c(a), respectively.

3. **40 C.F.R. Part 60 Subparts K, Ka, Kb, and Kc** – *Standards of Performance for Storage Vessels for Petroleum Liquids/Volatile Organic Liquids* – Subparts K and Ka do not apply to the Bradshaw Compressor Station because construction of the storage vessels used at the facility began after the applicability dates of each subpart (Subpart K – after June 11, 1973 and prior to May 19, 1978; Subpart Ka – after May 18, 1978 and prior to July 23, 1984). Per 40 C.F.R. §60.110b(a), Subpart Kb does not apply to the facility because each storage vessel has a capacity less than 75 m^3 (19,812.9 gallons). Subpart Kc does not apply to the Bradshaw Compressor Station because construction of the storage vessels used at the facility began before the applicability date of the subpart (Subpart Kc – after October 4, 2023).

4. **40 C.F.R. Part 60 Subpart GG** – *Standards of Performance for Stationary Gas Turbines* – The turbines, S001 to S004, are subject to the requirements of 40 C.F.R. Part 60 Subpart KKKK in accordance with §60.4305(a). Therefore, per §60.4305(b), the turbines are exempt from the requirements of Subpart GG.

5. **40 C.F.R. Part 60 Subpart IIII** – *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines* – This subpart does not apply because no compression ignition internal combustion engines are operated at the Bradshaw Compressor Station.

6. **40 C.F.R. Part 60 Subpart JJJJ** – *Standards of Performance for Stationary Spark Ignition Internal Combustion Engines* – This subpart does not apply because no spark ignition internal combustion engines are operated at the Bradshaw Compressor Station.

7. **40 C.F.R. Part 60 Subpart OOOO** – *Standards of Performance for Crude Oil and Natural Gas Facilities for Which Construction, Modification, or Reconstruction Commenced After August 23, 2011, and On or Before September 18, 2015* – The Bradshaw Compressor Station does not operate any affected facilities which commenced construction, reconstruction, or modification within the applicability dates.

8. **40 C.F.R. Part 60 Subpart OOOOa** – *Standards of Performance for Crude Oil and Natural Gas Facilities for Which Construction, Modification, or Reconstruction Commenced After September 18, 2015, and On or Before December 6, 2022* – Equipment at the Bradshaw Compressor Station that are potentially subject to Subpart OOOOa include the centrifugal compressors, the pneumatic controllers, and the storage vessels.

    a. Per §60.5365a(b), a centrifugal compressor affected facility is a single centrifugal compressor using wet seals. The centrifugal compressors operated at the Bradshaw Compressor Station use dry seals and, therefore, are not subject to Subpart OOOOa.

    b. Per §60.5365a(d)(1), a pneumatic controller affected facility not located at a natural gas processing plant is a single continuous bleed natural gas-driven pneumatic controller operating at a natural gas bleed rate greater than 6 scfh. The pneumatic controllers operated at the Bradshaw Compressor Station are air-driven and, therefore, are not subject to Subpart OOOOa.

    c. Per §60.5365a(e), a storage vessel affected facility is a single storage vessel that has the potential for VOC emissions equal to or greater than 6 tpy. The produced fluids tank (S021) and the used oil tank (S022) both have the potential-to-emit less than 6 tpy and, therefore, are not subject to Subpart OOOOa.

9. **40 C.F.R. Part 60 Subpart OOOOb** – *Standards of Performance for Crude Oil and Natural Gas Facilities for Which Construction, Modification, or Reconstruction Commenced After December 6, 2022* – The Bradshaw Compressor Station does not operate any affected facilities which commenced construction, reconstruction, or modification after the applicability date.

10. **40 C.F.R. Part 63 Subpart HH** – *National Emission Standards for Hazardous Air Pollutants from Oil and Natural Gas Production Facilities* – The Bradshaw Compressor Station is not a natural gas production facility. Therefore, the facility is not subject to Subpart HH.

11. **40 C.F.R. Part 63 Subpart HHH** – *National Emission Standards for Hazardous Air Pollutants from Natural Gas Transmission and Storage Facilities* – Per §63.1270(a), Subpart HHH is applicable to natural gas transmission and storage facilities that are a major source of HAP emissions. As the Bradshaw Compressor Station is an area source of HAPs, the facility is not subject to Subpart HHH.

12. **40 C.F.R. Part 63 Subpart YYYY** – *National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines* – In accordance with §63.6080, Subpart YYYY is applicable to turbines located at major sources of HAP emissions. As the Bradshaw Compressor Station is an area source of HAPs, the facility is not subject to Subpart YYYY.

13. **40 C.F.R. Part 63 Subpart DDDDD** – *National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters* – Per §63.7480, Subpart DDDDD is applicable to industrial, commercial, and institutional boilers and process heaters located at major sources of HAPs. As the Bradshaw Compressor Station is an area source of HAPs, the facility is not subject to Subpart DDDDD.

14. **40 C.F.R. Part 63 Subpart JJJJJJ** – *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources* – In accordance with §63.11193, Subpart JJJJJJ is applicable to industrial, commercial, or institutional boilers as defined in §63.11237 that are located at an area source of HAP emissions. Per §63.11237, process heaters are excluded from the definition of boiler. Therefore, the fuel gas heaters S019 and S020 are not subject to Subpart JJJJJJ.

15. **40 C.F.R. Part 64** – *Compliance Assurance Monitoring (CAM)* – The emission units at the Bradshaw Compressor Station are not operated with a control device and do not have uncontrolled emissions greater than the Title V major source thresholds. Therefore, per §§64.2(a)(2) and (a)(3), CAM is inapplicable to the emission units listed in Section 1.1. of this operating permit.

Request for Variances or Alternatives
None.

Insignificant Activities
Insignificant emission unit(s) and activities are identified in the Title V application.

Comment Period
Beginning Date: March 12, 2025
Ending Date: April 11, 2025

Point of Contact
All written comments should be addressed to the following individual and office:

Sarah Barron
West Virginia Department of Environmental Protection
Division of Air Quality
601 57th Street SE
Charleston, WV 25304
304/414-1915
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Procedure for Requesting Public Hearing

During the public comment period, any interested person may submit written comments on the draft permit and may request a public hearing, if no public hearing has already been scheduled. A request for public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. The Secretary shall grant such a request for a hearing if he/she concludes that a public hearing is appropriate. Any public hearing shall be held in the general area in which the facility is located.

Response to Comments (Statement of Basis)

None.