

# Fact Sheet



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

Permit Number: **R30-03900670-2025**  
Application Received: **November 15, 2024**  
Plant Identification Number: **03-54-039-00670**  
Permittee: **Columbia Gas Transmission, LLC**  
Facility Name: **Elk River Compressor Station**  
Mailing Address: **1700 MacCorkle Avenue SE, Charleston, WV 25314**

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Physical Location: Clendenin, Kanawha County, West Virginia  
UTM Coordinates: 472.0 km Easting • 4,259.9 km Northing • Zone 17  
Directions: From Charleston, travel north on I-79 to Exit 19. Take Exit 19 and take US 119 South to Clendenin. In Clendenin, turn onto State Route 4 East for approximately 1.5 miles. The compressor station is on the right.

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### **Facility Description**

The Elk River Compressor Station increases the pressure of the incoming natural gas. The facility has three compressors to increase the pressure of the natural gas. The compressors are powered by three 15,600-HP Solar Mars 100 turbines. The turbines are equipped with advanced dry-low-NO<sub>x</sub> combustion controls from SoLoNO<sub>x</sub>. Other emission units at the facility include two fuel gas heaters; catalytic heaters with an aggregate design heat input of 2.404 mmBTU/hr; a 1,000-gallon wastewater storage tank; and a 10,000-gallon pipeline liquids tank. The facility is equipped with an 880-HP four-stroke lean-burn Waukesha VGF-L36GL natural gas-fired reciprocating internal combustion engine (RICE) to power an emergency generator. (SIC: 4922, NAICS: 486210)

## Emissions Summary

<b>Plantwide Emissions Summary [Tons per Year]</b>		
<b>Regulated Pollutants</b>	<b>Potential Emissions</b>	<b>2023 Actual Emissions</b>
Carbon Monoxide (CO)	243.74	28.43
Nitrogen Oxides (NO <sub>x</sub> )	99.30	25.48
Particulate Matter (PM <sub>2.5</sub> )	11.67	2.79
Particulate Matter (PM <sub>10</sub> )	11.67	2.79
Total Particulate Matter (TSP)	11.67	2.79
Sulfur Dioxide (SO <sub>2</sub> )	1.26	0.29
Volatile Organic Compounds (VOC)	42.48	5.26

*PM<sub>10</sub> is a component of TSP.*

<b>Hazardous Air Pollutants</b>	<b>Potential Emissions</b>	<b>2023 Actual Emissions</b>
Formaldehyde	1.33	0.29
Toluene	0.21	0.05
Xylene	0.10	0.02
Other HAPs	0.60	0.07
Total HAPs	2.24	0.43

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

### Title V Program Applicability Basis

This facility has the potential to emit 243.74 tpy of Carbon Monoxide. Due to this facility's potential to emit over 100 tons per year of criteria pollutant, Columbia Gas Transmission, 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	PM from Fuel Burning Units
	45CSR6	Open burning prohibited.
	45CSR11	Standby plans for emergency episodes.
	45CSR13	Construction/modification permits
	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	Operating permit requirement.

	45CSR34	Emission Standard for HAPs
	40 C.F.R. 60 Subpart JJJJ	NSPS for Stationary Spark Ignition Internal Combustion Engines
	40 C.F.R. 60 Subpart KKKK	NSPS for Stationary Combustion Turbines
	40 C.F.R. Part 61	Asbestos inspection and removal
	40 C.F.R. 63 Subpart ZZZZ	Reciprocating Internal Combustion Engine MACT
	40 C.F.R. Part 82, Subpart F	Ozone depleting substances
State Only:	45CSR4	No objectionable odors.
	45CSR17	Prevention and Control of Fugitive PM

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	Permit Determinations or Amendments That Affect the Permit ( <i>if any</i> )
R13-3294C	July 9 2024	

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**

This is the first renewal of the Title V Permit for the Elk River Compressor Station. Changes to the facility since the issuance of the initial Title V Permit have already been addressed in Minor Modifications MM01 and MM02. Any changes addressed in this renewal are due to amendments to 40 C.F.R. 60 Subpart JJJJ.

Section 4.0 - Turbines

Section 4.0 contains applicable requirements from 45CSR13 (Permit R13-3294C) and 40 C.F.R 60 Subpart KKKK.

- There have been no changes to the 45CSR13 permit that were not addressed in Minor Modifications MM01 and MM02 of the initial Title V permit.
- There have been no changes to the applicable requirements of 40 C.F.R. 60 Subpart KKKK in section 4.0 since the issuance of the initial Title V Permit.

### Section 5.0 - Emergency Generator RICE

Section 5.0 contains applicable requirements from 45CSR13 (Permit R13-3294C), 40 C.F.R. 60 Subpart JJJJ, and 40 C.F.R. 63 Subpart ZZZZ.

- There have been no changes to the 45CSR13 permit that were not addressed in Minor Modifications MM01 and MM02 of the initial Title V permit.
- 40 C.F.R. 60 Subpart JJJJ has been amended since the issuance of the initial Title V Permit resulting in updates to the following conditions: 5.1.8, 5.4.3, 5.5.1 and 5.5.2. Also, Condition 5.5.3 was added to include the applicable requirement of 40 C.F.R. §60.4245(e).
- 40 C.F.R. 63 Subpart ZZZZ has been amended since the issuance of the initial Title V Permit, but there has been no change to the applicable requirement 40 C.F.R. §63.6590(c) which states that compliance with 40 C.F.R. 60 Subpart JJJJ shall meet the requirements of 40 C.F.R. 63 Subpart ZZZZ.

### Section 6.0 - Heaters

Section 6.0 contains applicable requirements from 45CSR13 (Permit R13-3294C) and 45CSR2.

- There have been no changes to the 45CSR13 permit that were not addressed in Minor Modifications MM01 and MM02 of the initial Title V permit.
- 45CSR2 has been amended since the issuance of the initial Title V Permit, but did not result in any changes to the applicable requirements contained in Section 6.0.

### Compliance Assurance Monitoring (CAM) Review

The turbines T01, T02, and T03 each utilize a Dry-low-NO<sub>x</sub> (SoLoNO<sub>x</sub>) control device for NO<sub>x</sub> and are potentially subject to CAM. The turbines are subject to the NO<sub>x</sub> emission limits and standards of 40 C.F.R. 60 Subpart KKKK and thus are exempt from CAM under 40 C.F.R. §64.2(b)(1)(i).

### **Non-Applicability Determinations**

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

- 40 C.F.R. 60, Subpart Dc: Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units.** The heaters are less than 10 MMBtu/hr, therefore, according to 40 C.F.R. §60.40c(a), this rule does not apply.
- 40 C.F.R. 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 pipeline liquids tank (PL Tank) at this facility was installed in 2018, which is after the applicability date specified in 40 C.F.R. §60.5365, therefore this rule does not apply to PL Tank. Per 40 C.F.R. §60.5365(b), a centrifugal compressor affected facility is a single centrifugal compressor using wet seals. As the centrifugal compressors driven by the turbines T1 to T3 use dry seals, the compressors at the Elk River Compressor Station are not subject to the Subpart OOOO requirements for centrifugal compressors.

- c. **40 C.F.R. 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.**

Subpart OOOOa applies to the affected facilities listed in §60.5365a for which construction commenced between September 18, 2015 and December 6, 2022. Although the turbines T1 to T3 which drive the compressors at the facility were installed in 2018, the permittee has reported that the purchase order date of the turbines was March 3, 2015. Therefore, in accordance with the definition of “commenced” in 40 C.F.R. §60.2, construction of the turbines and associated compressors commenced prior to the applicability dates of Subpart OOOOa and, in accordance with §60.5365a(j), the requirements for the collection of fugitive emissions components at a compressor station have not been triggered.

In the Subpart OOOOa annual report submitted on December 20, 2019, the permittee reported that the Elk River Compressor Station did not operate any tanks with potential VOC emissions greater than 6 tpy. Therefore, storage tank PL is not an affected facility under Subpart OOOOa, and the requirements of §60.5410a(h) are inapplicable as determined in R30-03900670-2020(MM02).

- d. **40 C.F.R. 60, Subpart OOOOb: Standards of Performance for Crude Oil and Natural Gas Facilities for Which Construction, Modification or Reconstruction Commenced After December 6, 2022.** None of the equipment at the facility commenced construction after December 6, 2022. Therefore, according to 40 C.F.R. §60.5365b, this rule does not apply.
- e. **40 C.F.R. 63 Subpart DDDDD – National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters.** This subpart establishes national emission limitations and work practice standards for hazardous air pollutants (HAP) emitted from industrial, commercial, and institutional boilers and process heaters located at major sources of HAP (40 C.F.R. §63.7480). The facility is not a major source of HAPs; therefore, this regulation is not applicable to any heater at the facility.
- f. **40 C.F.R. 63 Subpart JJJJJ – National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources.** This subpart is applicable to each industrial, commercial, or institutional boiler as defined in §63.11237 that is located at, or is part of, an area source of hazardous air pollutants (HAP). The facility is an area source of HAPs that operates heaters. All the heaters combust natural gas, and as such, are not subject to this regulation as provided in §63.11195(e).

### **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: April 8, 2025  
Ending Date: May 8, 2025

### **Point of Contact**

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

Robert Mullins  
West Virginia Department of Environmental Protection  
Division of Air Quality  
601 57<sup>th</sup> Street SE  
Charleston, WV 25304  
304/926-0499 ext. 41286  
Robert.A.Mullins@wv.gov

### **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)**

Not applicable.