

# Fact Sheet



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

Permit Number: **R30-03100002-2023**

Application Received: **August 16, 2022**

Plant Identification Number: **031-00002**

Permittee: **Columbia Gas Transmission, LLC**

Facility Name: **Lost River Compressor Station**

Mailing Address: **1700 MacCorkle Ave, SE, 4<sup>th</sup> Floor, Charleston, WV 25314**

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Physical Location: Mathias, Hardy County, West Virginia  
UTM Coordinates: 685.5 km Easting • 4,305.1 km Northing • Zone 17  
Directions: Traveling on I-81 (in VA), take Exit 257 to US Route 11. Take left on US 11 to State Route 259. Travel North on SR 259 to Mathias, WV. Turn right on Upper Cove and travel 1/4 mile toward Basore. Entrance to facility is on the left.

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### **Facility Description**

Columbia Gas Transmission, LLC operates a natural gas compressor station, known as the Lost River Station, located near Mathias in Hardy County, West Virginia. The compressor station currently employs five (5) natural gas-fired engines to power the compressor units, including three (3) 2,700 horsepower engines, one (1) 4,640 horsepower engine and one (1) 4,735 horsepower engine; one (1) natural gas-fired reciprocating engine/emergency generator; four (4) natural gas fired turbines; one (1) wastewater evaporator boiler; three (3) fuel gas heaters; 88 catalytic heaters; and numerous storage tanks.

The facility's SIC Code is: 4922 (Natural Gas Transmission).

**Emissions Summary**

<b>Plantwide Emissions Summary [Tons per Year]</b>		
<b>Regulated Pollutants</b>	<b>Potential Emissions</b>	<b>2022 Actual Emissions</b>
Carbon Monoxide (CO)	533.24	96.18
Nitrogen Oxides (NO <sub>x</sub> )	800.06	72.52
Particulate Matter (PM <sub>2.5</sub> )	26.56	4.95
Particulate Matter (PM <sub>10</sub> )	26.56	4.95
Total Particulate Matter (TSP)	26.56	5.48
Sulfur Dioxide (SO <sub>2</sub> )	1.74	0.62
Volatile Organic Compounds (VOC)	133.26	13.70

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

<b>Hazardous Air Pollutants</b>	<b>Potential Emissions</b>	<b>2022 Actual Emissions</b>
Acetaldehyde	4.57	0.01
Acrolein	4.09	<0.01
Benzene	0.94	<0.01
Ethyl Benzene	0.11	0.01
Formaldehyde	30.60	1.21
Hexane	0.71	0.02
Toluene	0.72	0.04
Xylenes (Mixed Isomers)	0.26	0.02
Other HAPs	2.79	Not reported
Total HAPs	44.79	< 1.33

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

**Title V Program Applicability Basis**

This facility has the potential to emit 533.24 tons per year of CO, 800.06 tons per year of NO<sub>x</sub>, 133.26 tons per year of VOCs, over 10 tons per year of formaldehyde and 44.79 tons per year of aggregate hazardous air pollutants (HAPs). Due to this facility's potential to emit over 100 tons per year of criteria pollutants, over 10 tons per year of a single HAP, and over 25 tons per year of aggregate HAPs, 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	Opacity Requirements for boilers
	45CSR6	Open burning prohibited.
	45CSR11	Standby plans for emergency episodes.
	45CSR13	NSR Permitting
	45CSR16	Standards of Performance for New Stationary Sources Pursuant to 40CFR60
	WV Code § 22-5-4 (a) (14)	The Secretary can request any pertinent information such as annual emission inventory reporting.
	45CSR30	Operating permit requirement.
	45CSR34	Emission Standards for HAPs
	40 C.F.R. Part 60, Subpart JJJJ	NSPS for Stationary Spark Ignition Internal Combustion Engines
	40 C.F.R. Part 60, Subpart KKKK	Standards of Performance for Stationary Combustion Turbines
	40 C.F.R. Part 61	Asbestos inspection and removal
	40 C.F.R. Part 63 Subpart DDDDD	National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters
	40 C.F.R. Part 63 Subpart YYYYY	National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines
	40 C.F.R. 63, Subpart ZZZZ	NESHAPs MACT for Stationary RICEs
	40 C.F.R. Part 82, Subpart F	Ozone depleting substances
State Only:	45CSR4	No objectionable odors.
	45CSR17	Particulate Fugitive

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>
R14-0013E	May 11, 2016	

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**

There were no changes to the facility and no new equipment was added since the previous permit renewal (issued April 13, 2018). Therefore, there were only changes related to boilerplate revisions (Sections 2.0 and 3.0) and the following updates:

1. Section 8.0 – monitoring condition 8.2.1 applicable to emergency generator G3 was revised to remove deleted sections of 40 C.F.R. 63 Subpart ZZZZ §63.6640(f)(2)(ii) and (iii); also, reporting condition 8.5.1 was revised to delete requirement 40 C.F.R. §63.6650(h) because it is no longer applicable to the engine G3 due to changes to Subpart ZZZZ and since the facility is a major source of HAPs.
2. Old Section 10.0 – this section was deleted because 40 C.F.R. 60, Subpart OOOOa LDAR Requirements are not applicable in accordance with 40 C.F.R §60.5365a. The construction of to the Combustion Turbines / Compressors #3 and #4 (Emission Point IDs T03 and T04) commenced on March 3, 2015 (prior to the subpart applicability date of September 18, 2015), and the company recently demonstrated it with the Columbia Gas purchase order for two (2) Solar Mars 100 turbines dated March 3, 2015. The turbines were installed in 2017, and their installation date was mistakenly used during the previous permit renewal process to determine the applicability of this subpart. It was corrected during this permit renewal process. This subpart was also added to the permit shield (condition 3.7.2).
3. New Section 10.0 – this section was added to include requirements of 40 C.F.R. 63, Subpart YYYY applicable to the turbines (Emission Point IDs T01, T02, T03 and T04). During the previous renewal process the provisions of this subpart were not applicable because, although turbines have been installed at this major HAP source, the control requirements of this regulation for natural gas fired units were stayed by USEPA. The stay in 40 C.F.R. §63.6095(d) was removed on March 9, 2022, therefore the turbines became subject to emission limitations and operating limitations of this subpart (condition 10.1.1). These turbines are classified as new lean premix gas-fired turbines. They do not use an oxidation catalyst to comply with Subpart YYYY and do not use distillate oil. According to 40 C.F.R §63.6110, initial performance tests or other applicable initial compliance demonstrations must be conducted within 180 calendar days after the compliance date of March 9, 2022 (condition 10.3.1).

**Non-Applicability Determinations**

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

<b>45CSR4</b>	<i>To Prevent and Control the Discharge of Air Pollutants into the Open Air Which Cause or Contributes to an Objectionable Odor or Odors:</i> This State Rule shall not apply to the following source of objectionable odor until feasible control methods are developed: Internal combustion engines.
<b>45CSR10</b>	<i>To Prevent and Control Air Pollution from the Emission of Sulfur Oxides:</i> The sulfur requirement for fuel burning units do not apply to indirect combustion sources at this site because there are no units with design heat inputs above 10 MMBtu/hr. Therefore, they are exempt in accordance with 45CSR§10-10.1
<b>45CSR21</b>	<i>To Prevent and Control Air Pollution from the Emission of Volatile Organic Compounds:</i> This facility is not located in one of the subject counties defined by this Rule: Wood, Wayne, Putnam, Kanawha, or Cabell.
<b>45CSR27</b>	<i>To Prevent and Control the Emissions of Toxic Air Pollutants:</i> Natural gas is included as a petroleum product and contains less than 5% benzene by weight. 45CSR§27-2.4 exempts equipment “used in the production and distribution of petroleum products providing that such equipment does not produce or contact materials containing more than 5% benzene by weight.”

<b>40 C.F.R. Part 60 Subpart III</b>	<i>Standards of Performance for Stationary Compression Ignition Internal Combustion Engines:</i> There are no compression ignition engines at this facility.
<b>40 C.F.R. Part 60 Subpart OOOO</b>	<i>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.</i> This facility is not subject to the requirements of this subpart because it does not meet the 40 C.F.R. §60.5430 definition of a <i>Crude Oil and Natural Gas Production</i> source category.
<b>40 C.F.R. Part 60 Subpart OOOOa</b>	<i>Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification, or Reconstruction Commenced after September 18, 2015.</i> The GHG and VOC requirements defined by this subpart are not applicable to this site in accordance with 40 C.F.R. §60.5365a because all affected sources commenced construction prior to September 18, 2015 (applicability date of 40 CFR 60 Subpart OOOOa). The permittee has demonstrated to the WV Division of Air Quality that the construction of the Combustion Turbines/Compressors #3 and #4 commenced prior to September 18, 2015. Therefore, the facility is not subject to the leak detection and repair requirements of this regulation.
<b>40 C.F.R. Part 60 Subpart Dc</b>	<i>Standards of Performance for Steam Generating Units:</i> The boiler and fuel gas heaters at this facility are less than 10 MMBtu/hr design heat capacity, which is below the applicability criteria stated in 40 C.F.R. §60.40c(a).
<b>40 C.F.R. Part 60 Subparts K and Ka</b>	<i>Standards of Performance for Petroleum Liquid Storage Vessels.</i> All tanks at the station are below the applicability criteria of 40,000 gallons in capacity as stated in 40 C.F.R. §§60.110(a) and 60.110a(a).
<b>40 C.F.R. Part 60 Subpart Kb</b>	<i>Standards of Performance for Volatile Organic Liquid Storage Vessels.</i> All tanks at the station are between 75 m <sup>3</sup> (19,813 gallons) and 151 m <sup>3</sup> (39,890 gallons) in capacity storing a liquid with a maximum true vapor pressure less than 15 kPa (112.5 mmHg). Therefore, they are exempt from this subpart as stated in the applicability criteria of 40 C.F.R. §§60.110b(a) and (b).
<b>40 C.F.R. Part 60 Subpart KKK</b>	<i>Standards of Performance for Equipment Leaks of VOC From Onshore Natural Gas Processing Plant(s).</i> The station is not engaged in the extraction or fractionation of natural gas liquids from field gas, the fractionation of mixed natural gas liquids to natural gas products, or both. As a result, the station has no affected sources operating within this source category.
<b>40 C.F.R. Part 60 Subpart GG</b>	The provisions of this subpart are not applicable because the turbines were installed after the applicability dates and are therefore subject to 40 C.F.R. 60 Subpart KKKK.
<b>40 C.F.R. Part 63 Subpart HHH</b>	<i>National Emission Standards for Hazardous Air Pollutants From Natural Gas Transmission and Storage Facilities.</i> The transmission station is not subject to Subpart HHH since there are no affected dehydration units utilized at this site.
<b>40 C.F.R. Part 64 CAM</b>	Per 40 C.F.R. §64.2(a)(2) the compliance assurance monitoring provisions of Part 64 are not applicable to the equipment at the station due to them not having add-on controls (except Reciprocating Engine / Compressor E11). The Reciprocating Engine / Compressor E11 is the only potential PSEU at the station (it has PTE above 100 TPY before controls and a control device OC1). Since this engine is subject to the requirements of 40 C.F.R. 60 Subpart JJJJ and 40 C.F.R. 63 Subpart ZZZZ, CAM is not applicable per 40 C.F.R. §64.2(b)(1)(i).

### **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: June 21, 2023

Ending Date: July 21, 2023

### **Point of Contact**

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

Natalya V. Chertkovsky-Veselova  
West Virginia Department of Environmental Protection  
Division of Air Quality  
601 57<sup>th</sup> Street SE  
Charleston, WV 25304  
304/926-0499 ext. 41250  
natalya.v.chertkovsky@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.