

Fact Sheet



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

Permit Number: **R30-03900048-2023**

Application Received: **March 23, 2022 (renewal) and June 21, 2022 (MM01)**

Plant Identification Number: **039-00048**

Permittee: **Columbia Gas Transmission, LLC**

Facility Name: **Clendenin Compressor Station**

Mailing Address: **1700 MacCorkle Ave, SE, 4th Floor
Charleston, WV 25314**

Physical Location:	Clendenin, Kanawha County, West Virginia
UTM Coordinates:	472.793 km Easting • 4260.836 km Northing • Zone 17
Directions:	Traveling north on US Route 119 from Clendenin, go approximately 0.8 mile and turn right onto Thorofare Road (WV secondary Route 59). Proceed approximately 2.5 miles and turn right onto Route 59-2 and travel approximately 1.2 miles to the station.

Facility Description

The Clendenin compressor station compresses natural gas for pipeline transmission. The facility operates under SIC code 4922. This facility uses two (2) indirect-fired heaters, one (1) reciprocating engine/compressor, one (1) turbine engine/centrifugal compressor, one (1) reciprocating engine/generator, and fifty-nine (59) catalytic heaters.

This permitting action combines the permit renewal and a minor modification MM01 (based on recently issued permit R13-2247C). The permit R13-2247C covers design capacity updates for Heaters H1, H2 and the Emergency Generator G2; a change of the Emergency Generator G2 hours of operation from 8,760 hours per year to 500 hours per year; and the addition of 59 Catalytic Heaters SH1.

Emissions Summary

Plantwide Emissions Summary [Tons per Year]		
Regulated Pollutants	Potential Emissions	2021 Actual Emissions
Carbon Monoxide (CO)	119.89	3.90
Nitrogen Oxides (NO _x)	626.51	47.59
Particulate Matter (PM _{2.5})	3.07	0.19
Particulate Matter (PM ₁₀)	3.07	0.19
Total Particulate Matter (TSP)	3.07	0.19
Sulfur Dioxide (SO ₂)	14.72	0.07
Volatile Organic Compounds (VOC)	45.13	3.96
<i>PM₁₀ is a component of TSP.</i>		
Hazardous Air Pollutants	Potential Emissions	2021 Actual Emissions
Benzene	5.56	0
Toluene	0.08	0
Ethylbenzene	0.01	0
Xylene	0.04	0
n-Hexane	0.20	0.01
Formaldehyde	12.65	0.07
Acetaldehyde	1.07	0
Other HAPs	3.63	0
Total HAPs	23.24	0.08

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

Title V Program Applicability Basis

This facility has the potential to emit 119.89 TPY of CO, 626.51 TPY of NO_x and 12.65 TPY of Formaldehyde. Due to this facility's potential to emit over 100 tons per year of criteria pollutant and over 10 tons per year of an individual HAP, 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	Particulate Air Pollution from Indirect Heat Exchangers
	45CSR6	Open burning prohibited.
	45CSR11	Standby plans for emergency episodes.
	45CSR13	NSR permits.
	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	Hazardous air pollutants.
	45CSR40	Ozone season NO _x emissions.
	40 C.F.R. Part 61	Asbestos inspection and removal
	40 C.F.R. Part 63, Subpart ZZZZ	RICE MACT
	40 C.F.R. Part 63, Subpart DDDDD	Boiler MACT
	40 C.F.R. Part 82, Subpart F	Ozone depleting substances
State Only:	45CSR4	No objectionable odors.
	45CSR17	Fugitive Particulate emissions

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>
R13-2247C	07/26/2022	
CO-R40-C-2017-7	10/13/2017	

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

Since the previous permit renewal was issued there were no changes to the permit. As the result of this minor modification MM01 (based on the permit R13-2247C) some changes (explained below) have been made to the permit.

1. Permittee mailing address was changed to 1700 MacCorkle Ave, SE, 4th Floor, Charleston, WV 25314.
2. Emission Units Table 1.1 – revised design capacities of Heaters H1 (from 0.2 MMBtu/hr to 0.12 MMBtu/hr) and H2 (from 0.1 MMBtu/hr to 0.11 MMBtu/hr); revised Emergency Generator G2 design capacity (from 500 HP to 535 HP); added 59 Catalytic Heaters SH1 (less than 0.1 MMBTU/hr each).

3. Section 4.0 (Heaters H1, H2 and SH1) - old requirement 4.1.2 was moved to Testing Section 4.3 and was re-numbered to 4.3.1; added the following new requirements: 4.1.2 (maximum design heat input for the Heaters H1, H2 and SH1), 4.4.1 and 4.5.1; revised monitoring requirement 4.2.1.
4. Section 5 (40 C.F.R. 63 Subpart ZZZZ requirements) – as the result of the minor modification MM01, the design capacity of the Generator G2 was increased from 500 HP to 535 HP. According to 40 C.F.R. §63.6590(b)(3)(iii), existing emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions (Generator G2) doesn't have to meet the requirements of 40 C.F.R. 63 Subpart ZZZZ and Subpart A, including initial notification requirements. The only requirements applicable to the Generator G2 are the emergency engine requirements under 40 C.F.R. §§63.6640(f)(1) through (3). Therefore, the following permit conditions were removed: 5.1.1 through 5.1.3, 5.1.5, 5.2.1, 5.4.1 through 5.4.4, and 5.5.1. Condition 5.1.4 (40 C.F.R. §§63.6640(f)(1), (f)(2), (f)(2)(i) and (f)(3)) was re-numbered to 5.1.1.
5. Section 6.0 (40 C.F.R. 63 Subpart DDDDD requirements) – the 40 C.F.R. 63 Subpart DDDDD requirements were removed from the underlying permit R13-2247C, therefore the citations for R13-2247C were removed from this section.
6. Section 7.0 (45CSR13 Permit Conditions from R13-2247) – removed old requirement 7.1.1 (old requirements 7.1.2, 7.1.3 and 7.1.4 were re-numbered to 7.1.1, 7.1.2 and 7.1.3 respectively); NO_x and CO emission limits in requirement 7.1.1 were revised, and VOC emission limits were added for Emergency Generator G2; added new requirements 7.1.4 (maximum annual operation limit of 500 hrs for the Emergency Generator G2), 7.1.5, 7.3.1, 7.4.1 and 7.5.4.

Non-Applicability Determinations

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

45CSR4	<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 such time as feasible control methods are developed: Internal combustion engines.
45CSR10	<i>To Prevent and Control Air Pollution from the Emission of Sulfur Dioxide - Emissions from Indirect Heat Exchangers.</i> WVDAQ has determined that 45CSR10 does not apply to natural gas fired engines. Also, the requirements for fuel burning units does not apply to HTR1 and HTR2 because they have design heat inputs less than 10 mmBTU/hr and are exempt in accordance with 45CSR§10-10.1.
45CSR21	<i>To Prevent and Control Air Pollution from the Emission of Volatile Organic Compounds:</i> All storage tanks at the station, which are listed as insignificant sources, are below 40,000 gallons in capacity which exempts the facility from 45CSR§21-28. The compressor station is not engaged in the extraction or fractionation of natural gas which exempts the facility from 45CSR§21-29.
45CSR27	<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.”
40 C.F.R. Part 60 Subpart Dc	<i>Standards of Performance for Steam Generating Units:</i> The fuel gas heaters have a maximum design heat input capacity of less than 10 MMBtu/hr, which is below the applicability threshold defined within 40CFR§60.40c(a).
40 C.F.R. Part 60 Subpart K and Ka	<i>Standards of Performance for Storage Vessels for Petroleum Liquids:</i> All tanks at the facility are below 40,000 gallons in capacity as specified in 40CFR§§60.110(a) and 60.110a(a).

40 C.F.R. Part 60 Subpart Kb	<i>Standards of Performance for Volatile Organic Liquid Storage Vessels:</i> All tanks at the facility are below 75m ³ (19,813 gallons) in capacity as specified in 40CFR§60.110b(a).
40 C.F.R. Part 60 Subpart KKK	<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.
40 C.F.R. Part 60 Subpart IIII	<i>Standards of Performance for Stationary Compression Ignition Internal Combustion Engines.</i> The compressor station does not have any compression ignition internal combustion engines.
40 C.F.R. Part 60 Subpart JJJJ	<i>Standards of Performance for Stationary Spark Ignition (SI) Internal Combustion Engines.</i> All engines at the facility were constructed, reconstructed, or modified prior to the June 12, 2006 applicability date listed in 40CFR§60.4230(a)(4).
40 C.F.R. Part 60 Subpart OOOO	<i>Standards of Performance for Crude Oil and Natural Gas Production, Transmission, and Distribution.</i> The storage vessel requirements defined for transmission sources is not applicable to this site because all vessels were constructed, modified, or commenced reconstruction, prior to August 23, 2011 as stated in 40CFR§60.5365(e). No other affected sources were identified at this site.
40 C.F.R. Part 60 Subpart OOOOa	<i>Standards of Performance for Crude Oil and Natural Facilities for which Construction, Modification, or Reconstruction Commenced after September 18, 2015.</i> The requirements defined by this NSPS are not applicable to this site because all affected sources commenced construction prior to September 18, 2015 in accordance with the applicability criteria defined within 40CFR§60.5365a.
40 C.F.R. Part 60 Subpart GG	<i>Standards of Performance for Stationary Gas Turbines.</i> The provisions of this subpart are not applicable to this facility because the turbine was installed in 1970, which is prior to the October 3, 1977 NSPS applicability date for these sources defined within §60.330(b). Additionally, no modifications have occurred since the original installation.
40 C.F.R. Part 60 Subpart KKKK	<i>Standards of Performance for Stationary Combustion Turbines.</i> The provisions of this subpart are not applicable to this facility's turbine because it predates the NSPS applicability date of February 18, 2005 defined by §60.4305(a).
40 C.F.R. Part 63 Subpart HHH	<i>National Emission Standards for Hazardous Air Pollutants from Natural Gas Transmission and Storage Facilities.</i> The compressor station is not subject to Subpart HHH since there are no affected dehydration units utilized at this site.
40 C.F.R. Part 63 Subpart YYYY	<i>National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines.</i> This MACT requirement exempts existing turbines constructed prior to January 14, 2003 in accordance with §63.6090(b)(4).
40 C.F.R. Part 64	<i>Compliance Assurance Monitoring (CAM).</i> This is the fourth permit renewal for this facility. The facility was found not to be subject to CAM since the facility did not have any pollutant specific emissions units (PSEU) that satisfied all the applicability criteria requirements of 40 C.F.R § 64.2 (a).

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 24, 2023

Ending Date: April 24, 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
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Charleston, WV 25304
304/926-0499 ext. 41250
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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)

Not applicable.