

Fact Sheet



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

Permit Number: **R30-00700100-2016**
Application Received: **May 2, 2016**
Plant Identification Number: **007-00100**
Permittee: **Columbia Gas Transmission, LLC**
Facility Name: **Frametown Compressor Station**
Mailing Address: **1700 MacCorkle Avenue, SE**
Charleston, WV 25314

Revised: N/A

Physical Location:	Frametown, Braxton County, West Virginia
UTM Coordinates:	511.99 km Easting • 4,279.09 km Northing • Zone 17
Directions:	Travel approximately 0.5 miles north from Frametown on State Route 4 and turn left onto County Route 9. Proceed on CR 9 approximately 1.5 miles to the station which is on the right side of the road.

Facility Description

The Frametown Compressor Station is a natural gas transmission facility covered by Standard Industrial Classification (SIC) Code 4922, and North American Industrial Classification System (NAICS) Code 48621. The station has the potential to operate seven (7) days per week, twenty-four (24) hours per day. The station consists of one (1) 12,500-hp, two (2) 3,350-hp, and one (1) 16,300-hp turbine engines, one (1) 925-hp emergency generator, one (1) 0.8 mmBtu/hr fuel gas heater, forty (40) 0.072 mmBtu/hr space heaters and multiple storage tanks of various sizes.

Emissions Summary

Plantwide Emissions Summary [Tons per Year]		
Regulated Pollutants	Potential Emissions	2015 Actual Emissions
Carbon Monoxide (CO)	199.52	44.0
Nitrogen Oxides (NO _x)	250.75	16.0
Particulate Matter (PM _{2.5})	9.92	5.6
Particulate Matter (PM ₁₀)	9.92	5.6
Total Particulate Matter (TSP)	9.92	5.6
Sulfur Dioxide (SO ₂)	0.88	0.1
Volatile Organic Compounds (VOC)	24.52	1.1

PM₁₀ is a component of TSP.

Hazardous Air Pollutants	Potential Emissions	2015 Actual Emissions
Benzene	0.03	0.003
Toluene	0.16	0.012
Ethylbenzene	0.04	0.003
Xylene	0.08	0.005
n-Hexane	0.03	0.016
Formaldehyde	0.91	0.101
Acetaldehyde	0.06	0.007
Other HAPs	0.05	0.003
Total HAPs	1.35	0.150

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

Title V Program Applicability Basis

This facility has the potential to emit 199.52 TPY of CO and 250.75 TPY of NO_x. 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 45CSR6 45CSR11 45CSR13 45CSR16 WV Code § 22-5-4 (a) (14) 45CSR30 45CSR34 40 C.F.R. Part 60, Subpart JJJJ 40 C.F.R. Part 60, Subpart KKKK 40 C.F.R. Part 61 40 C.F.R. Part 63, Subpart ZZZZ 40 C.F.R. Part 82, Subpart F	Particulate air pollution from combustion of fuel in indirect heat exchangers. Open burning prohibited. Standby plans for emergency episodes. NSR permit Standards of performance for new stationary sources The Secretary can request any pertinent information such as annual emission inventory reporting. Operating permit requirement. Emission Standards for HAPs RICE NSPS Turbine NSPS Asbestos inspection and removal National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines Ozone depleting substances
State Only:	45CSR4 45CSR17	No objectionable odors. To Prevent and Control Particulate Matter Air Pollution from Material 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	Permit Determinations or Amendments That Affect the Permit (<i>if any</i>)
R13-2234A	04-19-2013	

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

Removal of Heating System Boiler (BLR1)

Due to the addition of space heaters, this boiler is no longer needed for heating, therefore it will be removed. The boiler was removed from the emission units table.

Reformatting of Permit

The previous Title V renewal for this facility was written in a general permit-style format. With this renewal, this Title V permit has been reformatted in the standard Title V permit format. The source-specific contents of the permit will be described in the following paragraphs.

40CFR63, Subpart ZZZZ: RICE MACT

Compliance with the RICE MACT for 045G5 is achieved by complying with 40CFR60, Subpart JJJ (RICE NSPS). Therefore, no requirements from this subpart were included in this permit.

Section 4.0: 45CSR13 Permit Conditions from R13-2234A [emission point ID(s): E01, E04, H1, and G05]

This permit section incorporates all conditions from R13-2234A that have not been included elsewhere in the permit. The conditions of this section of the permit are summarized below:

Title V Permit Condition	Summary of Condition	R13-2234A Condition	Other Regulatory Citations
4.1.1.	Emission Limits	4.1.1.	N/A
4.1.2.	2000 hour/yr operation limit for E01	4.1.2.	N/A
4.1.3.	500 hour/yr operation limit for G05	4.1.3.	N/A
4.1.4.	MDHI and opacity requirements for H1	4.1.4.	45CSR§2-3.1
4.1.5.	Operation and Maintenance of Air Pollution Control Equipment	4.1.8.	45CSR§13-5.11
4.2.1.	Method 22 observations	4.3.9.	N/A
4.2.2.	Calculation of emissions for E04	4.3.4.	N/A
4.4.1.	Records of visible emissions observations	4.3.10	N/A
4.4.2.	Record of monitoring	4.3.1.	N/A
4.4.3.	Record of maintenance of air pollution control equipment	4.3.2.	N/A
4.4.4.	Record of malfunction of air pollution control equipment	4.3.3.	N/A
4.4.5.	Certifiable monthly records for E04	4.3.5.	N/A
4.4.6.	Certifiable monthly records of hours of operation for E01	4.3.6.	N/A
4.4.7.	Certifiable monthly records of hours of operation for G5	4.3.7.	N/A
4.5.1	Reporting of deviations from visible emissions requirements	4.3.11.	N/A

Section 5.0: 40 C.F.R. 60, Subpart JJJJ Requirements for Emergency Reciprocating Internal Combustion Engine (RICE) [emission point ID(s): G05]

This engine (045G5) is a non-certified emergency generator rated at 925 horsepower installed in 2013. All applicable RICE NSPS requirements and any additional requirements are summarized below:

Title V Permit Condition	Summary of Condition	R13-2234A Condition	Other Regulatory Citations
5.1.1.	Emission limits	4.1.5.	45CSR16; 40CFR§60.4233(e)
5.1.2.	Non-resettable hour meter	N/A	45CSR16; 40CFR§60.4237(a)
5.1.3.	Emergency engine operation	N/A	45CSR16; 40CFR§60.4243(d)
5.1.4.	Comply with emission standards for the life of the engine	N/A	45CSR16; 40CFR§60.4234
5.1.5.	Use of propane fuel	N/A	45CSR16; 40CFR§60.4243(e)
5.2.1.	Compliance demonstration	4.2.1. and 4.3.8.	45CSR16; 40CFR§60.4243(b)(2)
5.4.1.	Recordkeeping requirements	N/A	45CSR16; 40CFR§60.4245(a)
5.4.2.	Records of hours of operation	N/A	45CSR16; 40CFR§60.4245(b)
5.5.1.	Annual reporting	N/A	45CSR16; 40CFR§60.4245(e)

Section 6.0: 40 C.F.R. 60, Subpart KKKK Requirements for Turbine [emission point ID(s): E04]

This turbine (E04) is subject to NSPS requirements for turbines. It was installed in 2013 and is rated at 16,300 horsepower (122mm BTU/hr). The applicable requirements for this turbine are summarized below:

Title V Permit Condition	Summary of Condition	R13-2234A Condition	Other Regulatory Citations
6.1.1.	NO _x emission limit	4.1.6.	45CSR16; 40CFR§60.4320(a)
6.1.2.	SO ₂ emission limit	4.1.7	45CSR16; 40CFR§60.4330(a)(2)
6.1.3.	Operate consistent with good air pollution control practices	N/A	45CSR16; 40CFR§60.4333(a)
6.1.4.	Annual performance testing for NO _x	N/A	45CSR16; 40CFR§60.4340(a) ¹
6.1.5.	Monitor total sulfur content except as provided in §60.4365	N/A	45CSR16; 40CFR§60.4360
6.2.1.	Elect not to monitor total sulfur content if fuel is demonstrated to not exceed potential sulfur emissions	N/A	45CSR16; 40CFR§60.4365 ²
6.3.1.	Testing to determine compliance with 6.1.1.	4.2.2.	45CSR16; 40 CFR §60.4400(a)
6.5.1.	Reports of excess emissions	4.4.1.	45CSR16; 40CFR§60.4375(a)
6.5.2.	Reports of each performance test	4.4.1.	45CSR16; 40CFR§60.4375(b)
6.5.3.	All reports required under §60.7(c) must be postmarked by the 30th day following the end of each 6-month period.	N/A	45CSR16; 40CFR§60.4395

¹The permittee does not intend to use a continuous monitoring system as an alternative to the monitoring required in 40CFR§60.4340(a). Therefore, the requirements of 40CFR§60.4340(b) were not included in this permit.

²Since the permittee is using this option to monitor the sulfur content of the fuel, it will not need to comply with 40 CFR§§60.4370(b), 4370(c), 4385, and 4415(a). Therefore, these requirements were not included in the permit.

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.
45CSR21	<i>To Prevent and Control Air Pollution from the Emission of Volatile Organic Compounds:</i> The facility is not located in a designated VOC County. Therefore, this State Rule does not apply.
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 OOOO	<i>Standards of Performance for Crude Oil and Natural Gas Production, Transmission, and Distribution.</i> The Storage Vessel requirements defined for transmission sources are not applicable to this site because there are no affected source storage vessels constructed or reconstructed after August 23, 2011 and on or before September 18, 2015 as stated in accordance with 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 GHG and VOC requirements defined by this NSPS are not applicable to this site because all affected sources commenced constructed prior to September 18, 2015 in accordance with the applicability criteria defined within [40CFR§60.5365a]. Affected source evaluated are as follows: Compressors, Equipment Leaks, Pneumatic Controllers, and Storage Vessels.
40 C.F.R. Part 60 Subpart K and Ka	<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 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 station are below the applicability criteria of 19,813 gallons in capacity as stated in 40CFR§60.110b(a).
40 C.F.R. Part 60, Subpart Dc	<i>Standards of Performance for Steam Generating Units.</i> The fuel gas heater burner has a maximum design heat input capacity of less than 10 MMBtu/hr, which is below the applicability threshold defined within [40CFR60.40c(a)]. Additionally, the heater is not a steam generating unit.
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 GG	The provisions of this subpart are not applicable to the 04501, 04502, or 04503 turbines at this site because they were installed prior to the October 3, 1977 NSPS applicability date defined within 40CFR§60.330(b). Additionally, no modifications have occurred since the original installation.
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 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 it is not a major source of HAPs and it does not incorporate dehydration operations.
40 C.F.R. Part 63 Subpart YYYY	National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines does not apply to this station since it does not exceed major source HAP thresholds.
40 C.F.R. Part 63 Subpart DDDDD	National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters does not apply to this station since it does not exceed major source HAP thresholds.
40 C.F.R. Part 63 Subpart JJJJJ	<i>National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources.</i> The facility is not subject to 40 C.F.R. Part 63 Subpart JJJJJ since the fuel gas heater (045H1) is not a boiler, but a process heater, which is not regulated under this source category.
40 C.F.R. Part 64	There are no add-on controls, so this is not applicable per 40 CFR§64.2(a)(2).

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: Tuesday, September 20, 2016
Ending Date: Thursday, October 20, 2016

Point of Contact

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

Rex Compston, P.E.
West Virginia Department of Environmental Protection
Division of Air Quality
601 57th Street SE
Charleston, WV 25304
Phone: 304/926-0499 ext. 1209 • Fax: 304/926-0478
Rex.E.Compston@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)

EPA Comments

The following comments were received from Paul Wentworth of EPA Region 3 in an email sent on October 18, 2016:

1. Reference: 4.1.1 Table 1.0 Notes: "Note: all hourly emissions based on normal operation (load>50% and ambient temperature >0 °F)"

Comment: The above note might imply that there are other limits below 50% load or if the sources are operating below these operating conditions, they can forgo any compliance. To clarify the permit should include a statement that the limits apply over any and all operating levels for the above emission points.

Response to Comment #1: This note comes from R13-2234A issued on 4/19/13. Hourly limits could be higher at <50% load or <0 °F because of the SoLoNox controls. Annual limits factor in 40 hrs/yr below 0°F and 100 hours at low load. The facility has to maintain hours at normal, low load, and low temperature on a monthly basis in condition 4.4.5 and calculate emissions on a monthly and 12 month rolling total basis in condition 4.2.2.

2. Reference 4.2.1.c: "In the event visible emissions are observed in excess of the limitations given under 4.1.4(b), the permittee shall take immediate corrective action."

Comment: the permit should include at a minimum, the scope of corrective actions expected for the emissions sources.

Response to Comment #2: This is a 0.8 mmBtu/hr natural gas line heater. This requirement came from R13-2334A. Since this is a natural gas-fueled heater, visible emissions are not anticipated.

3. Reference: 4.2.2: "Hourly emission rates used in the above calculation shall be based on either data provided in Tables 2-2 and 2-3 of the letter from Columbia Gas to Steven R. Pursley dated January 30, 2013 or any actual source specific testing (whichever is higher)".

Comment: the portions of the contents of the January 30, 2013 letter, as they pertain to the calculation of hourly rates, should be included in the permit.

Response to Comment #3: I agree that the referenced portion of this letter should be included.

The portions of the letter were included in this condition.

4. Reference 4.3.1

Comment: The sources should have a performance test done once per permit term to verify the hourly emission rates of the sources in table 1.o with the exception of the RICE sources.

Response to Comment #4: G5 is an emergency generator subject to 40CFR60, Subpart JJJJ testing under condition 5.2.1.a.1, so testing is already required. E04 is a turbine subject to monitoring, reporting, recordkeeping, and testing under 40CFR60, Subpart KKKK specified in section 6. H1 is a 0.8 mmBtu/hr natural gas heater with maximum emission limits of less than 1lb/hr and less than 1 tpy for each pollutant; due to this low emission limit, we feel that testing would be unnecessary. E01 is in "emergency standby" status and is limited by R13-2334A to 2,000 hrs/yr; since E01 is in standby mode, we feel testing would be unnecessary.

5. Reference 5.3:

Comment: add a reference to the language prior to this section which specifies a performance test for these units on a three year interval.

Response to Comment #5: A note will be added stating that testing requirements are included in condition 5.2.1.a.1.

6. Reference: 5.1.4: "The permittee must operate and maintain the stationary SI ICE as required in 40CFR§60.4233 over the entire life of the engine".

Comment: Provide details in the permit regarding the operation and maintenance of the station SI ICE from 40CFR§60.4233.

Response to Comment #6: Since this language was copied directly from 40CFR§60.4234, we feel that no changes are necessary.

7. Reference: 6.1.3: "The permittee must operate and maintain your stationary combustion turbine, air pollution control equipment, and monitoring equipment in a manner consistent with good air pollution control practices for minimizing emissions at all times including during startup, shutdown, and malfunction".

Comment: include a definition of "in a manner consistent with good air pollution control practices for minimizing emissions at all times including during startup, shutdown, and malfunction". in terms of what maintenance needs to be done on the source and its control equipment".

Response to Comment #7: Since this language was copied directly from 40CFR§63.4333(a), we feel that no changes are necessary.

Permittee Comments

The following comments were received from Mili Patel in an email on October 19, 2016.

1. Section 3.7 – Permit Shield – reference to 40 CFR Part 60 Subpart OOOO: The rule states the applicability date as “after August 23, 2011 and on or before September 18, 2015.” The permit condition states “prior to August 23, 2011,” and should be changed to match the rule.

§60.5365 Am I subject to this subpart?

You are subject to the applicable provisions of this subpart if you are the owner or operator of one or more of the onshore affected facilities listed in paragraphs (a) through (g) of this section for which you **commence construction, modification or reconstruction after August 23, 2011, and on or before September 18, 2015.**

Response to Comment #1: We agree with this comment, and the change was made.

2. Section 4.2 - Monitoring Requirements

4.2.1(a) references the initial Method 22 visual observation for the fuel heater which is from the R13. Could this be removed from the Title V?

Response to Comment #2: We will not take it out since it is a Rule 13 requirement.

3. Section 5.3 – Testing Requirements

5.3.1 states “None” - however, there should be a reference to the initial performance test and subsequent performance testing every 8,760 hours or 3 years that is reference in Condition 5.2.1(a)(1).

Response to Comment #3: This comment has already been addressed with the EPA comments (See Comment #5).