West Virginia Department of Environmental Protection
Division of Air Quality

Fact Sheet

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

Permit Number: **R30-07700017-2017**
Application Received: **August 17, 2016**
Plant Identification Number: **077-00017**
Permittee: **Columbia Gas Transmission, LLC**
Facility Name: **Terra Alta Compressor Station**
Mailing Address: **1700 MacCorkle Avenue, SE, Charleston, WV 25314**

Revised: N/A

Physical Location: Terra Alta, Preston County, West Virginia
UTM Coordinates: 625.13 km Easting • 4364.38 km Northing • Zone 17
Directions: From I-79 take State Route 7 east to Terra Alta. Traveling east on State Route 7 to the town of Terra Alta, turn right onto Secondary Route 53. Proceed approximately 2 miles to the station which is located on the right.

Facility Description

Terra Alta Compressor Station is a natural gas transmission facility covered by Standard Industrial Classification (SIC) 4922. The station has the potential to operate seven (7) days per week, twenty-four (24) hours per day. The station consists of six (6) heaters, five (5) 1100-hp and one (1) 174-hp natural gas fired reciprocating engines, one (1) 0.5 MMBtu/hr odorant flare, and numerous storage tanks of various sizes. On-site support equipment includes two (2) 300-hp emergency generators, one (1) 530-hp emergency generator and one (1) heating system boiler at 3.57 MMBtu/hr.

Emissions Summary

Plantwide Emissions Summary [Tons per Year]

Regulated Pollutants	Potential Emissions	2016 Actual Emissions
Carbon Monoxide (CO)	62.23	26.01
Nitrogen Oxides (NO_X)	388.96	282.74

Regulated Pollutants	Potential Emissions	2016 Actual Emissions
Particulate Matter ($PM_{2.5}$)	10.81	3.85
Particulate Matter (PM_{10})	10.81	3.85
Total Particulate Matter (TSP)	10.81	3.85
Sulfur Dioxide (SO_2)	0.23	0.09
Volatile Organic Compounds (VOC)	28.15	12.03

PM_{10} is a component of TSP.

Hazardous Air Pollutants	Potential Emissions	2016 Actual Emissions
Formaldehyde	11.24	5.46
Other HAPs	5.23	0.39
Total HAPs	16.47	5.85

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

Title V Program Applicability Basis

This facility has the potential to emit 388.96 tons per year of Nitrogen Oxides and 11.24 tons per year of Formaldehyde. Due to this facility's potential to emit over 100 tons per year of a criteria pollutant and over 10 tons per year of a single 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	PM limits for Indirect Heat Exchangers
	45CSR6	Open burning prohibited
	45CSR11	Standby plans for emergency episodes
	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 CFR 61	Asbestos inspection and removal
	40 CFR 82, Subpart F	Ozone depleting substances
	40 CFR 63, Subpart ZZZZ	MACT for Reciprocating Internal Combustion Engines
	40 CFR 63, Subpart DDDDD	MACT for Industrial Boilers
State Only:	45CSR4	No objectionable odors
	45CSR17	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	Permit Determinations or Amendments That Affect the Permit *(if any)*
None		

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 have been no permit modifications since the last permit renewal. The following changes have been made during this permit renewal:

Emission Units Table - Reciprocating Engine/Generator G3, a 4-stroke lean burn 530 hp emergency engine has been added. Reciprocating Engine/Generator G2 has been removed because it is no longer in service. The storage tanks, which have no applicable requirements, have been removed.

40 CFR 63, Subpart DDDDD - In the previous permit, the boilers and heaters had been classified as "existing small gaseous fuel boilers and process heaters" and exempt per 40CFR§63.7506(c)(3). However, the boiler MACT has been revised. For this renewal, Boiler BL3 and all heaters except H3 are classified as existing, with a heat input capacity of less than or equal to 5 mmBtu/hr, designed to burn gas 1. Heater H3 is classified as existing, with a heat input capacity of less than 10 mmBtu/hr, but greater than 5 mmBtu/hr, designed to burn gas 1. The requirements are listed in Section 4.0 of the permit.

Engine/Generator G3 - is a new, emergency, spark-ignition, 4-stroke lean burn engine greater than 500 hp located at a major source of HAPs. As of the permit issuance date, G3 has not been installed. The engine does not require an NSR permit because the emissions are below the 6 lbs/hr and 10 tpy threshold, and the engine will replace an existing engine (G1) and is exempt in accordance with 45 CSR §13-2.17.f.6. The engine was manufactured in 2008, before the date of January 1, 2009 that would make it subject to 40 CFR 60 Subpart JJJJ. This engine is subject to continuous compliance and monitoring of operating hours from 40 CFR Part 63, Subpart ZZZZ. The requirements are listed in Section 5.0 of the permit.

40 CFR 63, Subpart ZZZZ - Engines E01through E05 are existing, non-emergency, spark-ignition, 2-stroke lean burn engines greater than 500 hp constructed before December 19, 2002 and located at a major source of HAPs. These engines have no applicable requirements in accordance with 40 CFR §63.6590(b)(3)(i).

Engine E07 is an existing, non-emergency, spark-ignition, 4-stroke rich burn engine between 100 hp and 500 hp constructed in 2004. This engine is subject to 40 CFR Part 63, Subpart ZZZZ. The requirements are listed in Section 6.0 of the permit. 40 CFR §63.6595(a) was omitted since the compliance date has passed.

Engine/Generator G1 is an existing, emergency, spark-ignition engine less than 500 hp located at a major source of HAPs and is subject to 40 CFR 63, subpart ZZZZ. The requirements are listed in Section 7.0 of the permit.

45CSR6 - Mass Rate Limit: the density of the gas is 0.064 lb/ft^3. The flare volumetric flow rate is 490.2 ft^3/hr. Multiplying the volumetric flow rate by the density yields (490.2 ft^3/hr) × (0.064 lb/ft^3) = 31.37 lb/hr (0.016 tons/hr). This weight rate has been used in the equation specified by 45CSR§6-4.1., which is included in renewal permit condition 8.1.5. It is expected that the combustion of natural gas will not result in formation of PM, and therefore compliance with this limit is achieved by combusting natural gas. The Director may require the permittee to conduct VE readings to determine compliance with 45CSR6 if there are upset conditions.

Non-Applicability Determinations

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

40 CFR 60 Subpart Dc – *Standards of Performance for Steam Generating Units*: The heaters and heating system boiler at this facility are less than 10 mmBtu/hr; Hence Subpart Dc is not applicable in accordance with 40 CFR §60.40c(a).

40 CFR 60 Subpart GG – *Standards of Performance for Stationary Gas Turbines*: There are no turbine engines at this facility.

40 CFR 60 Subparts K,Ka – *Standards of Performance for Storage Vessels for Petroleum Liquids*: All tanks at the facility are below 40,000 gallons in capacity as specified in 40 CFR §§60.110(a) and 60.110a(a).

40 CFR 60 Subparts Kb – *Standards of Performance for Storage Vessels for Volatile Organic Liquids*: All tanks at the station are between 75 m^3 (19,813 gallons) and 151 m^3 (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 CFR §§60.110b(a) and (b).

40 CFR 60 Subpart KKK – *Standards of Performance for Equipment Leaks of VOC From Onshore Natural Gas Processing Plant*: This compressor 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.

40 CFR 60 Subpart IIII – *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines*: There are no compression ignition engines at this facility.

40 CFR 60 Subpart JJJJ – *Standards of Performance for Stationary Spark Ignition Internal Combustion Engines*: All non-emergency SI engines located at this site were installed before July 12, 2006. These engines are not subject to 40 CFR Part 60 Subpart JJJJ per 40 CFR §60.4230(a)(4). The emergency SI engines were manufactured before January 1, 2009 and are not subject per 40 CFR §60.4230(a)(4)(iv).

40 CFR 60 Subpart KKKK – *Standards of Performance for Stationary Combustion Turbines* – There are no turbine engines at this facility.

40 CFR 60 Subpart OOOO – *Standards of Performance for Crude Oil and Natural Gas Production, Transmission, and Distribution for which Construction, Modification, or Reconstruction Commenced after August 23, 2011 and on or before September 18, 2015*. The storage vessel requirements defined for transmission sources are not applicable to this site because all vessels were constructed, modified, or reconstructed prior to August 23, 2011, in accordance with 40CFR§60.5365(e).

40 CFR 60 Subpart OOOOa – *Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification, or Reconstruction Commenced after September 18, 2015*. The GHG and VOC 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 40 CFR §60.5365a.

40 CFR 63 Subpart HHH – *National Emission Standards for Hazardous Air Pollutants from Natural gas Transmission and Storage Facilities*: The transmission station is not subject to Subpart HHH since there are no affected dehydration units utilized at this site.

40 CFR 63 Subpart YYYY – Turbine MACT: There are no turbine engines at this facility.

40 CFR 63 Subpart JJJJJJ; *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources*: This subpart does not apply to the facility since the line heaters and heating system boiler are fueled by natural gas as defined in 40 CFR §63.11195(e) and the facility is a major source of HAPs.

40 CFR 64 – *Compliance Assurance Monitoring (CAM)*: Most of the facility is exempt per 40 CFR §64.2(a)(2). The only add-on control at this facility is the catalyst on Engine EN07, however it is exempt because it is subject to 40 CFR 63, Subpart ZZZZ in accordance with 40 CFR §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:	Tuesday, June 6, 2017
Ending Date:	Thursday, July 6, 2017

Point of Contact

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

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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.