

Fact Sheet



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

Permit Number: **R30-09900013-2016**
Application Received: **May 6, 2016**
Plant Identification Number: **099-00013**
Permittee: **Columbia Gas Transmission, LLC**
Facility Name: **Ceredo Compressor Station**
Mailing Address: **1700 MacCorkle Avenue, SE, Charleston, WV 25314**

Revised: N/A

Physical Location: Walker's Branch Road, Wayne County, West Virginia
UTM Coordinates: 366.1 km Easting • 4247.5 km Northing • Zone 17
Directions: Traveling I-64 West from Charleston, take the Kenova-Ceredo exit.
Turn left onto Route 52. Make a left onto Airport Road. Turn right onto
Walker's Branch Road at the Pilgrim Glass Plant, travel 2 miles, the
station is on the left.

Facility Description

The Ceredo Station is a natural gas transmission facility covered by Standard Industrial Code (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) 2800-hp and one (1) 2700-hp natural gas fired reciprocating compressor engines, one (1) 30,399-hp compressor turbine, and numerous storage tanks of various sizes. On-site support equipment includes one (1) 738 hp and one (1) 880 hp emergency generators, one (1) 6.276 MMBtu/hr boiler, and one (1) 0.35 MMBtu/hr and one (1) 1.0 MMBtu/hr line heaters.

Emissions Summary

Plantwide Emissions Summary [Tons per Year]		
Regulated Pollutants	Potential Emissions	2015 Actual Emissions
Carbon Monoxide (CO)	331.74	58.39
Nitrogen Oxides (NO _x)	4,086.90	744.69
Particulate Matter (PM _{2.5})	29.08	7.51
Particulate Matter (PM ₁₀)	29.08	7.51
Total Particulate Matter (TSP)	29.08	7.51
Sulfur Dioxide (SO ₂)	1.18	0.18
Volatile Organic Compounds (VOC)	97.97	17.02

PM₁₀ is a component of TSP.

Hazardous Air Pollutants	Potential Emissions	2015 Actual Emissions
Benzene	1.40	NA
Toluene	0.75	NA
Ethylbenzene	0.50	NA
Xylene	0.23	NA
n-Hexane	0.40	NA
Formaldehyde	41.01	7.75
Acetaldehyde	5.77	NA
Total HAPs	50.04	NA

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

Title V Program Applicability Basis

This facility has the potential to emit 331.74 tons per year of Carbon Monoxide (CO), 4,086.90 tons per year of Nitrogen Oxides (NO_x), 41.01 tons per year of Formaldehyde, and 50.04 tons per year of total HAPs. Due to this facility's potential to emit over 100 tons per year of criteria pollutant, 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 PM limits for Indirect Heat Exchangers

	45CSR6	Open burning prohibited.
	45CSR11	Standby plans for emergency episodes.
	45CSR13	Construction permits
	45CSR16	Standards of Performance for New Stationary Sources.
	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. 60, Subpart JJJJ	Standards of Performance for Stationary Spark Ignition Internal Combustion Engines
	40 C.F.R. 60, Subpart KKKK	Standards of Performance for Stationary Combustion Turbines
	40 C.F.R. Part 61	Asbestos inspection and removal
	40 C.F.R. 63, Subpart ZZZZ	National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines
	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
	40 C.F.R. Part 82, Subpart F	Ozone depleting substances
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 (<i>if any</i>)
R13-1856A	August 30, 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

This is a Title V Permit renewal that also includes the changes requested in Significant Modification Application R30-09900013-2012(SM01) and R13-1856A. The Significant Modification was for the installation of a 30,399 hp Solar Titan 250 Turbine (E10), an 880 hp Waukesha emergency generator (G4), and a 1.0 MMBtu/hr process heater (H2). The following units were removed during the Significant Modification: General Electric 3912R turbine (E08) and General Electric 3112R turbine (E09). The format of this Title V permit was changed from that of the one previously issued in 2012.

4.0 Source Specific Requirements [emission point ID(s): BL2, H1, H2]

Emission units BL2, HTR1, and HTR2 are subject to the visible emission limits of 45CSR2 which are contained in conditions 4.1.1, 4.1.2, and 4.1.11.d.

40 C.F.R. 63 Subpart DDDDD

Emission unit BL2 is new a boiler with a heat input capacity of less than 10 million Btu per hour, but greater than 5 million Btu per hour, and designed to burn natural gas. Thus it requires tune-ups biennially as specified in §63.7540.

Emission unit HTR1 is an existing process heater with a heat input capacity less than 5 million Btu per hour designed to burn natural gas and is located at a major source. As such it is subject to a one-time energy assessment and tune-ups every 5 years.

Emission unit HTR2 is a new process heater with a heat input capacity less than 5 million Btu per hour designed to burn natural gas. As such it is subject to tune-ups every 5 years.

The conditions which contain the requirements for 40 C.F.R. 63 Subpart DDDDD are 4.1.3, 4.1.4, 4.1.5, 4.1.6, 4.1.7, 4.1.8, 4.1.9, 4.1.10, 4.1.11.e, 4.4.1, 4.4.2, 4.5.1, 4.5.2, 4.5.3, 4.5.4, 4.5.5, and 4.5.6.

Conditions 4.1.11 and 4.3.1 are conditions from R13-1856A.

5.0 Source Specific Requirements [emission point ID(s):E01, E02, E03, E04, E05, E06, E07, G3, G4]

40 CFR Part 63, Subpart ZZZZ

Engines E01-E07 are existing, non-emergency, spark-ignition, 2-cycle, lean burn greater than 500-hp constructed before December 19, 2002 and located at a major source of HAPs. These engines have no requirements in accordance with 40 CFR §§63.6590(b)(3)(i) and 63.6600(c).

Engine G3 is an existing, emergency, spark-ignition, 4-cycle, lean burn engine greater than 500-hp located at a major source of HAPs. As such it has to meet the following requirements of 40 C.F.R. 63 Subpart ZZZZ: 40 C.F.R. §63.6640.

Engine G4 is a new emergency generator greater than 500-hp located at a major source. As such engine G4 is subject to the following requirements of 40 C.F.R. 63 Subpart ZZZZ: 40 C.F.R. §63.6640 and §63.6645(f).

40 C.F.R.60 Subpart JJJJ

Engine G4 is subject to 40 C.F.R. 60 Subpart JJJJ. The applicable requirements of this regulation are in conditions 5.1.4.d, 5.1.5, 5.1.6, 5.1.7, 5.1.8, 5.3.2, 5.4.1, and 5.4.2.

6.0 Source Specific Requirements [emission point ID(s):E10]

The Solar Titan 250 (E10) is subject to the R13-1856A conditions and the applicable requirements of 40 C.F.R. 60 Subpart KKKK.

The emission unit must meet the emission limits given in 6.1.1.d. Compliance with the emission limits given in 6.1.1.d is demonstrated by monitoring and recording the hours in which the turbine operated in each of its three modes of operation and the emissions calculated on a monthly and twelve month rolling total using the emission factors from the most recent performance test.

The unit must meet the NO_x emission standard and the Sulfur emission standards of 40 C.F.R. 60 Subpart KKKK given in condition 6.1.1.e. Compliance with the SO₂ and fuel sulfur limits are demonstrated with the use of a FERC tariff as allowed by 40 C.F.R. §60.4365(a). Compliance with NO_x emission standard is demonstrated by annual performance testing under 40 C.F.R. §60.4400.

Non-Applicability Determinations

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

According to 45CSR§2-11.1 the boiler and heaters are exempt from the weight emission standards and MRR (monitoring, recordkeeping and reporting) because they are less than 10 mmBtu/hr.

45CSR10; *To Prevent and Control Air Pollution from The Emission of Sulfur Oxides*: 45CSR10 is not applicable to the facility boiler and heaters because they are less than 10 mmBtu/hr.

45CSR21; *To Prevent and Control Air Pollution from the Emission of Volatile Organic Compounds*: All storage tanks at Ceredo station are below 40,000 gallons in capacity, hence 45CSR§21-28 is not applicable. Ceredo station is not engaged in the extraction or fractionation of natural gas, hence, 45CSR§21-29 is not applicable.

45CSR27; *To Prevent and Control the Emissions of Toxic Air Pollutants*: 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. 60 Subpart Dc; *Standards of Performance for Steam Generating Units*: The boiler and heaters at this facility are less than 10 mmBtu/hr; hence, Subpart Dc is not applicable.

40 C.F.R. 60 Subparts K,Ka; *Standards of Performance for Storage Vessels for Petroleum Liquids*: All tanks at Ceredo station are below 40,000 gallons in capacity.

40 C.F.R. 60 Subpart Kb; *Standards of Performance for Volatile Organic Liquid Storage Vessels*: All tanks at Ceredo station are below 75m³ in capacity.

40 C.F.R. 60 Subpart KKK; *Standards of Performance for Equipment Leaks of VOC From Onshore Natural Gas Processing Plant*: Ceredo 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 C.F.R. 60 Subpart IIII; *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines*: There are no compression ignition engines at this facility.

40 C.F.R. 63 Subpart HHH; *National Emission Standards for Hazardous Air Pollutants from Natural Gas Transmission and Storage Facilities*: The facility does not have a glycol dehydration unit and is therefore not subject to the requirements of this subpart.

40 C.F.R. 63 Subpart YYYY; *Turbine MACT*: The Solar Titan 250 (E10) is subject to 40 C.F.R. 63 Subpart YYYY. Per 40 C.F.R. §63.6095(d), there is a stay of standards for lean premix stationary combustion turbines until EPA takes final action to require compliance with this subpart. The only requirement for the unit is the initial notification requirement of 40 C.F.R. §63.6145, which was satisfied by the preconstruction permit application.

40 C.F.R. 64 – None of the emission units have any add-on controls; therefore, in accordance with 40 C.F.R § 64.2(a), CAM is not applicable to this facility.

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: Monday, November 7, 2016
Ending Date: Wednesday, December 7, 2016

Point of Contact

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

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Division of Air Quality
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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)

The following comment was received from US EPA Region 3 via email on December 15, 2016:

EPA Comment 1: This monitoring requirement (4.2.1) does not assure compliance with the limitations in subsection 4.1 which requires the unit's opacity to be at or less than 10% measured on a 6-minute block average. In order for, the requirement in 4.2.1 to assure compliance it must require that personnel on a "regular" basis, perform a method 22 observation in accordance with the averaging times specified in 4.1.1. The way that the language is written there is no obligation on the part of the facility to monitor the devices in question if the Secretary doesn't require the facility to do so.

Response to EPA Comment 1: There are no visible emissions expected from the boiler or heaters because of their small size and because they are fueled by natural gas. Rule 2 and Rule 13 allows DEP to require testing, but because of the large margin of compliance, it would be unlikely that testing would be required. Also, natural gas boilers are exempt from visible emission testing under 45CSR§2A-3.1 unless required to do so by Director; and natural gas boilers this size (6.276 MMBTU/hr, 0.35 MMBTU/hr, and 1.0 MMBTU/hr) would not be required to conduct visible emissions under any federal regulation (i.e. – no opacity monitoring for natural gas boilers subject to 40 CFR 60 Subpart Dc, only tune-ups for natural gas boilers under the Boiler MACT, no requirements for natural gas boilers under the Boiler GACT). Because of the size and fuel type used in the boiler and heaters, no changes were made to the monitoring requirement in condition 4.2.1.

During the public comment period, Columbia Gas requested the requirements of 40 C.F.R. 60, Subpart OOOOa that were incorporated by reference in condition 3.1.12. be included in the body of the permit. Therefore, the referenced requirements were added.