

Fact Sheet



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

Permit Number: **R30-05100100-2022**
Application Received: **August 19, 2021**
Plant Identification Number: **03-054-05100100**
Permittee: **Columbia Gas Transmission, LLC**
Facility Name: **Adaline Compressor Station**
Mailing Address: **1700 MacCorkle Avenue SE, Charleston, WV 25314**

Physical Location:	Cameron, Marshall County, West Virginia
UTM Coordinates:	530.456 km Easting • 4,401.860 km Northing • Zone 17
Directions:	Located in Liberty District, Marshall County and south of Cameron, which is 25 miles south of Wheeling on US Rt 250. From intersection in Cameron, travel west a short distance to a “Y” intersection. Go left, cross bridge, then up a hill on a brick road. Proceed south along this road (Cameron Ridge Rd) for approximately 7 miles to station that is on left side of the road and partially visible.

Facility Description

The Adaline facility is a natural gas transmission facility covered by Standard Industrial Classification (SIC) Code 4922. The facility has the capacity to operate twenty-four (24) hours per day, seven (7) days per week, fifty-two (52) weeks per year. The station consists of three (3) 880 hp Clark HRA-8, 2SLB engines, two (2) 2,000 hp Clark TLA-6, 2SLB engines, and one (1) 440 hp Waukesha VGF18GL, 4SLB emergency generator, one (1) 1,080 hp Solar Saturn T-1001 turbine, one (1) 1.0 MM Btu/hr natural gas line heater, three (3) 0.55 MMBtu/hr reboiler heaters, three (3) DEG dehydration units rated at 117 MMscf/d each, and one (1) 3.48 MMBtu/hr heating system boiler, all of which are fueled by natural gas.

Emissions Summary

Plantwide Emissions Summary [Tons per Year]		
Regulated Pollutants	Potential Emissions	2021 Actual Emissions
Carbon Monoxide (CO)	134.86	27.04
Nitrogen Oxides (NO _x)	842.36	161.27
Particulate Matter (PM _{2.5})	13.4	2.77
Particulate Matter (PM ₁₀)	13.4	2.77
Total Particulate Matter (TSP)	13.4	2.77
Sulfur Dioxide (SO ₂)	0.26	0.06
Volatile Organic Compounds (VOC)	37.92	18.85
<i>PM₁₀ is a component of TSP.</i>		
Hazardous Air Pollutants	Potential Emissions	2021 Actual Emissions
Benzene	0.53	0.36
Toluene	0.3	0.28
Ethylbenzene	0.03	0.13*
Xylene	0.1	0.19*
n-Hexane	0.3	0.04
Formaldehyde	16.27	2.77
Acetaldehyde	2.01	0
Acrolein	2.00	0
Methanol	0.86	0.35
2,2,4 - Trimethylpentane	0.22	0
Other HAPs	0.7	0
Total HAPs	23.32	4.12

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

- In the 2022 renewal application an updated gas composition was used in estimating the proposed PTE of the dehydration unit in GRI-GLYCalc, and as the result the PTE for Ethylbenzene and Xylene decreased. The actual emissions of Ethylbenzene and Xylene reported in SLEIS for calendar year 2021 (0.13 TPY of Ethylbenzene and 0.19 TPY of Xylene) were based on the “old” gas composition and even though they are above the new PTEs, they are below the “old” PTEs (0.37 TPY for Ethylbenzene and 0.47 TPY for Xylene).

Title V Program Applicability Basis

This facility has the potential to emit 134.86 tpy of CO, 842.36 tpy of NOx, and 16.27 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 a single HAP, Columbia Gas Transmission, LLC's Adaline Compressor Station 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 WV Code § 22-5-4 (a) (14) 45CSR30 45CSR34 40 C.F.R. Part 61 40 C.F.R. 63 Subpart HHH 40 C.F.R. 63 Subpart ZZZZ 40 C.F.R. 63 Subpart DDDDD 40 C.F.R. Part 82, Subpart F	PM from Indirect Heat Exchangers Open burning prohibited. Standby plans for emergency episodes. Permits for construction/modification The Secretary can request any pertinent information such as annual emission inventory reporting. Operating permit requirement. Emission Standards for HAPs Asbestos inspection and removal Natural Gas Transmission MACT Major/Area Source RICE MACT Major Source Boiler & Process Htr. MACT Ozone depleting substances
State Only:	45CSR4 45CSR17	No objectionable odors. 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>
R13-2149D	May 21, 2018	

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 Title V permit renewal was approved on March 14, 2017, the following changes took place:

1. The significant modification (SM01) issued 07/10/2018 (based on the permit R13-2149D) covered a replacement of the existing glycol dehydration units' (GDU) 2.5 mmBtu/hr flare (FLLP1) with a larger 6.0 mmBtu/hr enclosed flare (FLLP2).
2. Emission Units Table 1.0 – pressurized Tank A07 was deleted from the Table per the company's request because it's pressurized and not considered an emission unit. There are no applicable requirements for this Tank in the permit.
3. Requirement 3.7.2 – added boilers BLR5, BLR6 and BLR7 to the permit shields for 45CSR10 and 40 C.F.R. 60 Subpart Dc; added a permit shield for 40 C.F.R. 60 Subpart OOOOa.
4. Requirement 5.1.1 – added a footnote “1” of the 40 C.F.R 63 Subpart ZZZZ Table 2c.
5. Requirement 5.1.4 – removed vacated sections of 40 C.F.R. §63.6640(f)(2)(ii) and (2)(iii). Also, removed a reference to these sections from condition 5.4.2.
6. Requirement 5.5.3 – was added to include applicable reporting requirement of the 40 C.F.R. 63 Subpart ZZZZ §63.6650(h) for the Emergency Generator 081G3.
7. Requirement 6.5.2 – corrected a typo (reference to permit condition “5.1.1” was changed to reference to permit condition “6.1.2”).

Non-Applicability Determinations

The following requirements have been determined not to be applicable to the subject facility due to the following (condition 3.7.2, Permit Shield):

- a. **45CSR10 – To Prevent and Control Air Pollution from the Emission of Sulfur Oxides** – This rule is not applicable to the facility's boilers (BLR4, BLR5, BLR6 and BLR7) and heater (HTR2) because their maximum design heat input (DHI) is less than 10 MMBtu/hr.
- b. **45CSR21– To Prevent and Control Air Pollution from the Emission of Volatile Organic Compounds** – 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.
- c. **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.
- d. **40 C.F.R. 60 Subpart Dc – Standards of Performance for Steam Generating Units** – The heating system boilers (BLR4, BLR5, BLR6 and BLR7) and line heater (HTR2) at this facility are both less than 10 mmBtu/hr; Hence Subpart Dc is not applicable in accordance with §60.40c(a).
- e. **40 C.F.R. 60 Subpart 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 §§60.110(a) and 60.110a(a).
- f. **40 C.F.R. 60 Subpart Kb – Standards of Performance for Volatile Organic Liquid Storage Vessels** – All tanks at the facility are below 75m³ (19,813 gallons) in capacity as specified in §60.110b(a).

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- g. 40 C.F.R. 60 Subpart GG – *Standards of Performance for Stationary Gas Turbines*** – The Solar Turbine was installed in 1966 which predates this NSPS’s applicability trigger date of October 3, 1977 as defined in §60.330(b).
 - h. 40 C.F.R. 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.
 - i. 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.
 - j. 40 C.F.R. 60 Subpart JJJJ – *Standards of Performance for Stationary Spark Ignition Internal Combustion Engines***: All engines at the facility were constructed, reconstructed, or modified prior to the June 12, 2006 applicability date listed in §60.4230(a)(4).
 - k. 40 C.F.R. 60 Subpart KKKK – *Standards of Performance for Stationary Combustion Turbines*** – The Solar Turbine was installed in 1966, which predates this NSPS’s applicability date of February 18, 2005 as specified in §60.4305(a).
 - l. 40 C.F.R. 60 Subpart OOOO – *Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution*** – This subpart does not apply to the facility since the facility is a transmission facility. So it is exempt from the requirements for gas wells, centrifugal compressors, reciprocating compressors, and/or pneumatic controllers. Although this applies to storage vessels located at transmission facilities, there have been no storage vessels constructed, modified, or reconstructed after August 23, 2011, and on or before September 18, 2015 in accordance with §60.5365(e).
 - m. 40 C.F.R. 60 Subpart OOOOa – *Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After September 18, 2015***. None of the storage vessels and compressors at the facility were constructed, modified, or reconstructed after September 18, 2015. Therefore, this subpart does not apply to the facility.
 - n. 40 C.F.R. 60 Subpart YYYY – *Turbine MACT*** – The Solar Turbine which was installed in 1966 was constructed prior to the January 14, 2003 compliance date, and is therefore considered an exempt existing source in accordance with §63.6090(b)(4).
 - o. 40 C.F.R. Part 64 – *Compliance Assurance Monitoring (CAM)*** – There are no add-on controls at this facility, with the exception of the DEG dehyds, which are subject to 40 C.F.R. 63, Subpart HHH; therefore, in accordance with 40 C.F.R. §64.2(b)(1)(i), CAM is not applicable to HAPs emitted from these sources. Moreover, the DEG Dehyds are not subject to any other non-exempt pollutant limitation (such as VOC or PM), thereby not meeting the applicability criterion in §64.2(a)(1). Based upon these facts, CAM does not apply to any source at the 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: June 13, 2022

Ending Date: July 13, 2022

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 57th Street SE
Charleston, WV 25304
Phone: 304/926-0499 ext. 41250 • Fax: 304/926-0478
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)

On July 12, 2022 we received a minor comment from EPA' Region III Justin Leary via email:

“EPA has reviewed the permit, and we do not have any significant comments to offer on the draft/proposed Title V. One administrative edit needs to be made. EPA's R3 office has moved, so please change the address in page 18 of the permit to:

United States Environmental Protection Agency
Region III, Enforcement & Compliance Assurance Division
Air, RCRA and Toxics Branch (3ED21)
Four Penn Center
1600 John F. Kennedy Boulevard
Philadelphia, PA 19103-2852”

As the result of this comment the EPA' Region III office address in condition 3.5.3 was updated accordingly.