

Fact Sheet



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

This Fact Sheet serves to address the changes specific to this Minor Modification and shall be considered a supplement to the Fact Sheet corresponding with the Title V operating permit issued on October 11, 2022.

Permit Number: **R30-07700017-2022**

Application Received: **June 19, 2024**

Plant Identification Number: **03-54-077-00017**

Permittee: **Columbia Gas Transmission, LLC**

Facility Name: **Terra Alta Compressor Station**

Mailing Address: **1700 MacCorkle Avenue SE, 5th Floor, Charleston, WV 25314**

Permit Action Number: *MM02* Revised: *November 6, 2024*

| | |
|--------------------|---|
| Physical Location: | Terra Alta, Preston County, West Virginia |
| UTM Coordinates: | 625.137 km Easting • 4364.582 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 five (5) heaters, five (5) 1100-hp and one (1) 239-hp natural gas fired reciprocating engines, one (1) 530-hp emergency engine/generator, three (3) 2,250-hp electric motor drive reciprocating compressors, one (1) 3.57 mmBtu/hr heating system boiler, one (1) 10,000 gallon methanol tank, one (1) 7,500 gallon methanol tank, a loading rack and five (5) 30,000 gallon pipeline liquids tanks.

Emissions Summary

This modification results in the following emission increases:

| Plantwide Emissions Changes [Tons per Year] | |
|---|------------------------------|
| Regulated Pollutants | Potential Emissions Increase |
| Carbon Monoxide (CO) | 5.47 |
| Nitrogen Oxides (NO _x) | 6.29 |
| Particulate Matter (PM ₁₀ /PM _{2.5}) | 0.16 |
| Sulfur Dioxide (SO ₂) | 0.03 |
| Volatile Organic Compounds (VOC) | 0.40 |
| Total HAPs | 0.12 |

Title V Program Applicability Basis

With the proposed changes associated with this modification, this facility maintains the potential to emit 610.29 TPY of NO_x and 11.25 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 Terra Alta 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.

The modification to this facility has been found to be subject to the following applicable rules:

Federal and State:

| | |
|---------|---|
| 45CSR2 | Control of Particulate Matter Air Pollution From The Combustion Of Fuel In Indirect Heat Exchangers |
| 45CSR10 | Control Of Air Pollution From The Emission Of Sulfur Oxides |
| 45CSR13 | Permits For Construction, Modification, Relocation And Operation Of Stationary Sources Of Air Pollutants, Notification Requirements, Administrative Updates, Temporary Permits, General Permits, Permission to Commence Construction, And Procedures For Evaluation |
| 45CSR30 | Requirements For Operating Permits. |

State Only:

NA

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

The active permits/consent orders affected by this modification are as follows:

| Permit or Consent Order Number | Date of Issuance | Permit Determinations or Amendments That Affect the Permit (<i>if any</i>) |
|--------------------------------|------------------|--|
| R13-3431F | August 20, 2024 | |

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

The revisions made in association with this minor modification incorporate the revisions made in R13-3431F Class II Administrative Update which is for the removal of an existing grandfathered heater, installation of a new heater, update to existing RICE (E07) to match nameplate horsepower, update to the blowdown volumes and update to five (5) storage vessel descriptions.

Note: Current permit means R30-07700017-2022 (MM01) and COA means Citation of Authority in the following discussions.

- 1) **Table of Contents** – Deleted “Indirect” from the Section 4.0 Title.
- 2) **Section 1.1. - Emission Units Table**
 - Deleted Emission Unit HTR6.
 - Added Emission Unit HTR10.
 - Updated the horsepower rating of Emission Unit 04907 to the actual nameplate rating.
 - The horsepower rating was incorrect and did not match the nameplate and therefore has been corrected. The applicable requirements from 40 CFR 63 Subpart ZZZZ in Section 6.0 of the permit for which this engine is subject have not changed and hence no revisions have been made in Section 6.0.
 - Revised the description of Emission Units A-09, A-10, A-11, A-12 and A-13 by replacing “Produced Fluids” with “Pipeline Liquids” in the Emission Unit Description column.
- 3) **Section 1.2. - Active R13, R14, and R19 Permits Table** - Updated R13-3431E to R13-3431F and updated the date of issue.
- 4) **Section 4.0.**
 - Heater HTR10 is a new regeneration heater that directly transfers heat and has been added to Section 4.0 of the Title V permit. Since the existing emission units contained in this section of the permit are indirect heat transfer units and HTR10 is not, “Indirect” has been removed from the Section 4.0 title and H10 has been added to the emission point IDs. Also, Heater HTR6 has been removed from service and therefore H6 has been deleted from the emission point IDs in the section title and throughout Section 4.0.
 - HTR10 is not subject to 45CSR2 (Rule 2), 45CSR10 (Rule 10), 40 CFR 60 Subpart Dc or 40 CFR 63 Subpart DDDDD (see regulatory discussions below). Therefore, in the permit conditions where the

requirements from these rules and regulations are applicable to all the emission units listed in the section title, except for HTR10, “(BL3, H5, H7, H8 and H9)” has been added after the COA.

- Condition 4.1.9. - Added requirements from R13-3431F for HTR10.
- Condition 4.1.10. – Revised as revised in R13-3431F by removing the PM₁₀ and SO₂ limits and adding emission limits for HTR10;
 - Since the Rule 2 and Rule 10 allowable limits for HTR7, HTR8 and HTR9 were streamlined with the R13-3431E limits and there are no longer PM limits in R13-3431F, the Rule 2 and Rule 10 limits have been added in place of the R13 limits. Furthermore, the allowable limits in these rules are determined as a “lb/hr” basis and therefore no “tpy” limits have been added to this condition. (see regulatory discussions below)
 - New versions of 45CSR2 and 45CSR10 became effective on June 1, 2024. As a result, the COA of this condition has been revised to update the Rule 2 & 10 subsection numbering.
- Condition 4.2.2. – Updated the COA to reflect the revised Rule2 subsection numbering.

5) Section 7.0.

- Condition 7.1.1. – Revised as revised in R13-3431F.
- Condition 7.1.2. – Revised as revised in R13-3431F to remove the PM_{2.5} and PM₁₀ limits.

6) Section 9.0.

- Condition 9.1.1. – – Revised as revised in R13-3431F to increase the maximum volume of the blowdowns.

Regulatory Discussion

45CSR2 - Control of Particulate Matter Air Pollution From The Combustion Of Fuel In Indirect Heat Exchangers

Pursuant to 45CSR§2-14.; “*Indirect Heat Exchanger*” means a device that combusts any fuel and produces steam or heats water or any other heat transfer medium. This term includes any duct burner that combusts fuel and is part of a combined cycle system. This term does not include process heaters as defined in subsection 2.26. HTR10 transfers heat directly and is not defined as an indirect heat exchanger and therefore is not subject to 45CSR2.

HTR7, HTR8, and HTR9 are indirect heat exchangers each with a capacity greater than 10 mmBtu/hr and therefore subject to 45CSR2 as Type ‘b’ fuel burning units. The opacity requirements are contained in condition 4.1.1 of the current permit and have not changed. The weight emission limits are streamlined with the PM limits of R13-3431E in the current permit. Since R13-3431F has removed the PM limits, the allowable limits from this rule can no longer be streamlined and therefore have been added in place of the R13 limits in condition 4.1.10. of the permit. For type ‘b’ fuel burning units, pursuant to 45CSR§2-4.1.2., the lb/hr limits are determined by the product of 0.09 and the design heat inputs. For HTR7- $0.09 \times 11.07 = 1.0$ lb/hr; For HTR8 and HTR9 – $0.09 \times 15.22 = 1.37$ lb/hr each. The actual PM potential design emissions are significantly lower (HTR7-0.08 lb/hr, HTR8 & HTR9 - 0.11 lb/hr each) and therefore the heaters will be in compliance with the Rule 2 limits. Since the heaters only combust natural gas, pursuant to 45CSR§2-8.4.2., they are exempt from the testing requirements of 45CSR§2-8.1.1 and the monitoring requirements of 45CSR§2-8.2. Also, the heaters are subject to 40 CFR 60 Subpart Dc and 40 CFR 63 Subpart DDDDD further ensuring compliance with Rule 2.

45CSR10 - Control Of Air Pollution From The Emission Of Sulfur Oxides

This rule establishes emission standards for sulfur oxides from fuel burning units and sets forth the registration, permitting, reporting, testing, recordkeeping and exemption requirements. (45CSR§10-1.1.1.) Pursuant to 45CSR§10-2.8.; “*Fuel Burning Unit*” means and include any furnace, boiler apparatus, device, mechanism, stack or structure used in the process of burning fuel or other combustible material for the primary purpose of producing heat or power by indirect heat transfer. Similarly, as discussed under 45CSR2 above, HTR10 transfers heat directly and is not defined as an indirect heat exchanger (45CSR§10-2.9.) and therefore does not meet the definition of a “Fuel Burning Unit” in Rule 10 and thus, HTR10 is not subject to 45CSR10.

HTR7, HTR8, and HTR9 are defined as Type ‘b’ fuel burning units subject to Rule 10 each with a capacity greater than 10 mmBtu/hr. The weight emission limits are streamlined with the SO₂ limits of R13-3431E in the current permit. Since R13-3431F has removed the SO₂ limits, the allowable limits from this rule can no longer be streamlined and therefore have been added in place of the R13 limits in condition 4.1.10. of the permit. For type ‘b’ fuel burning units, pursuant to 45CSR§10-3.3.6., the lb/hr limits are determined by the product of 3.2 and the design heat inputs. For HTR7- $3.2 \times 11.07 = 35.42$ lb/hr; For HTR8 and HTR9 – $3.2 \times 15.22 = 48.70$ lb/hr each. The actual SO₂ potential design emissions are significantly lower (HTR7-0.007 lb/hr, HTR8 & HTR9 - 0.01 lb/hr each) and therefore the heaters will be in compliance with the Rule 10 limits. Since the heaters combust natural gas alone, pursuant to 45CSR§10-3., they are exempt from the testing, monitoring, recordkeeping, and reporting requirements of 45CSR§10-8. Also, the heaters are subject to 40 CFR 60 Subpart Dc and 40 CFR 63 Subpart DDDDD further ensuring compliance with Rule 10.

40 CFR 60 Subpart Dc Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units

This subpart is applicable to each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/h)) or less, but greater than or equal to 2.9 MW (10 MMBtu/h). Pursuant to 40CFR §60.41c, *Steam generating unit means a device that combusts any fuel and produces steam or heats water or heats any heat transfer medium. This term includes any duct burner that combusts fuel and is part of a combined cycle system. This term does not include process heaters as defined in this subpart.*

The regeneration heater (HTR10) does not produce steam or heat water or heat any heat transfer medium but transfers heat directly. Therefore, HTR10 is not subject to this subpart.

40 CFR 63 Subpart DDDDD National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters

This subpart is applicable to an industrial, commercial, or institutional boiler or process heater as defined in 40 CFR §63.7575 that is located at, or is part of, a major source of HAP. Pursuant to 40 CFR §63.7575, the definition for a process heater states in part: *Process heater means an enclosed device using controlled flame, and the unit's primary purpose is to transfer heat indirectly to a process material (liquid, gas, or solid) or to a heat transfer material (e.g., glycol or a mixture of glycol and water) for use in a process unit, instead of generating steam. Process heaters are devices in which the combustion gases do not come into direct contact with process materials...*

The regeneration heater (HTR10) transfers heat directly and does not transfer heat indirectly. Therefore, HTR10 is not subject to this subpart.

Non-Applicability Determinations

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

45CSR2, 45CSR10, 40 CFR 60 Subpart Dc and 40 CFR 63 Subpart DDDDD are not applicable to the new regeneration heater (HTR10). (See “Regulatory Discussion” above)

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: Not Applicable for minor modifications
Ending Date: N/A

Point of Contact

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

Frederick Tipane
West Virginia Department of Environmental Protection
Division of Air Quality
601 57th Street SE
Charleston, WV 25304
304/414-1910
frederick.tipane@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)

The following boilerplate changes have been made to the permit. These changes to the boilerplate became effective September 23, 2024.

- **Condition 3.1.6.** – Revised the COA to refer to the current version of the WV Code.
- **Condition 3.3.1.** – Revised the COA to refer to the current version of the WV Code.
- **Condition 3.3.1.b.** – Added “If a testing method is specified or approved which effectively replaces a test method specified in the permit, the permit shall be revised in accordance with 45CSR§30-6.4 or 45CSR§30-6.5 as applicable.”