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: **R30-01700163-2025**
Application Received: **August 2, 2024**
Plant Identification Number: **03-54-017-00163**
Permittee: **Antero Midstream LLC**
Facility Name: **South Canton Compressor Station**
Mailing Address: **1615 Wynkoop Street, Denver, CO 80202**

Physical Location:	West Union, Doddridge County, West Virginia
UTM Coordinates:	516.949 km Easting • 4,353.883 km Northing • Zone 17
Directions:	From the intersection of U.S. 50 and WV-18 near West Union, WV, head north on WV-18 for 0.5 miles. Take a right on Main Street and then a left on Davis Street. In 0.2 miles at the roundabout, keep to the right to stay on Davis Street. After 0.2 miles, turn right on WV-18/Sistersville Pike and drive for 5.1 miles. Turn right on Nutter Fork Road (Route 28) and drive 0.8 miles. The facility driveway is on the left.

Facility Description

The South Canton Compressor Station separates, compresses, and dries gas off the inlet pipeline stream. The station operates twelve 2,675-HP compressor engines with oxidation catalysts; one 649-HP generator engine; three 150-mmscfd TEG dehydration units each consisting of a still vent, flash tank, and reboiler; three 400-bbl condensate tanks; three 400-bbl produced water tanks; one 500-bbl settling tank; one 0.5-mmBTU/hr fuel conditioning heater; six auxiliary storage tanks; and liquid load out operations. The facility also operates one 4.8-mmBTU/hr flare and two vapor recovery units to control emissions from various emission units.

This Title V permit renewal incorporates the revisions made with the Class I Administrative Update R13-3354F and the Title V minor modification R30-01700163-2020 (MM03). With this revision application, the emission limits for the dehydration systems were revised and the condition's introduction was corrected to better represent the facility's process and control systems. This revision did not change the facility's potential emissions.

NAICS: 486210, SIC: 4922

Emissions Summary

Plantwide Emissions Summary [Tons per Year]

Regulated Pollutants	Potential Emissions	2023 Actual Emissions
Carbon Monoxide (CO)	71.73	18.66
Nitrogen Oxides (NO_X)	164.85	107.05
Particulate Matter ($PM_{2.5}$)	11.15	6.31
Particulate Matter (PM_{10})	11.15	6.49
Total Particulate Matter (TSP)	11.15	6.49
Sulfur Dioxide (SO_2)	0.59	0.37
Volatile Organic Compounds (VOC)	156.70	83.03

PM_{10} is a component of TSP.

Hazardous Air Pollutants	Potential Emissions	2023 Actual Emissions
Acetaldehyde	5.38	2.54
Acrolein	3.33	1.56
Benzene	0.68	0.14
Ethylbenzene	0.08	0.02
Formaldehyde	6.70	5.72
Hexane	2.09	0.51
Methanol	1.66	0.76
Toluene	1.05	0.14
Xylene	0.31	0.14
Other HAPs	0.96	0.52
Total HAPs	22.24	12.05

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

Title V Program Applicability Basis

This facility has the potential to emit 164.85 tpy of Nitrogen Oxides and 156.70 tpy of Volatile Organic Compounds. Due to this facility's potential to emit over 100 tons per year of criteria pollutant, Antero Midstream 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	Control of Particulate Matter Air Pollution from the Combustion of Fuel in Indirect Heat Exchangers.
	45CSR6	Control of Air Pollution from Combustion of Refuse.
	45CSR11	Standby plans for emergency episodes.
	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.
	WV Code § 22-5-4 (a) (15)	The Secretary can request any pertinent information such as annual emission inventory reporting.
	45CSR16	Standards of Performance for New Stationary Sources.
	45CSR30	Requirements for Operating Permits.
	45CSR34	Emission Standards for Hazardous Air Pollutants.
	40 C.F.R. Part 60 Subpart JJJJ	Standards of Performance for Stationary Spark Ignition Internal Combustion Engines.
	40 C.F.R. Part 60 Subpart OOOOa	Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification, or Reconstruction Commenced after September 18, 2015 and on or before December 6, 2022.
	40 C.F.R. Part 61	Asbestos inspection and removal.
	40 C.F.R. Part 63 Subpart HH	National Emission Standards for Hazardous Air Pollutants from Oil and Natural Gas Production Facilities.
	40 C.F.R. Part 63 Subpart ZZZZ	National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.
	40 C.F.R. Part 82, Subpart F	Ozone depleting substances.
State Only:	45CSR4	No objectionable odors.
	45CSR17	To 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
R13-3354F	February 12, 2025

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 following revisions have been made to the Title V operating permit:

1. Section 3.0. – Facility-Wide Requirements

    a. The citation of Condition 3.1.6. was revised to refer to the current version of the WV Code.

    b. Condition 3.1.10. of the operating permit contains the requirements to operate and maintain air pollution control equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions. A reference to Condition 8.1.2. of R13-3354F was added to the authority of this condition. (See 3.a. of this fact sheet.)

    c. The citation of Condition 3.3.1. was revised to refer to the current version of the WV Code.

    d. The following was added to Condition 3.3.1.b.: “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.”

    e. Condition 3.4.4. of the operating permit contains the requirements to maintain a record of any malfunction or operational shutdown of air pollution control equipment. A reference to Condition 8.3.3. of R13-3354F was added to the authority of this condition. (See 3.b. of this fact sheet.)

    f. The permit shield in Condition 3.7.2. was updated as follows:

        i. The reference to the provision which exempts the condensate/produced water settling tank (T04) from the requirements of 40 C.F.R. Part 60 Subpart Kb was corrected to §60.110b(d)(4).

        ii. Various regulations from 40 C.F.R. Parts 60 and 63 as well as 45CSR21 and 45CSR27 are non-applicable to the South Canton Compressor Station and were added to the permit shield. (See Items 1. through 11. of the Non-Applicability Determinations section of this fact sheet.)

2. Section 5.0. – Source-Specific Hazardous Air Pollutant Requirements (Natural Gas Dehydration Units controlled by a Flare Control Device)

   a. The heading of Section 5.0. was updated as follows:

      i. The statement that the dehydration units are "not subject to MACT standards" was removed. Although the dehydration units qualify for the exemption of 40 C.F.R. §63.764(e)(1), the dehydration units remain subject to the applicable standards, testing requirements, and recordkeeping provisions under 40 C.F.R. Part 63 Subpart HH.

      ii. The list of emission units with applicable requirements under this section was updated to include the TEG dehydration unit reboilers (DREB1 to DREB3). The emissions from the flash tanks are controlled by and used to fuel the reboilers, which are also subject to the design and operation requirements under Condition 5.1.5. of the operating permit.

   b. In accordance with the revisions requested in the application for R13-3354F and R30-01700163-2020 (MM03), Condition 5.1.2. was updated as follows:

      i. The introduction was updated to reflect that the emission limits of this condition are applicable to each dehydration system (DEHY1/DFLSH1, DEHY2/DFLSH2, and DEHY3/DFLSH3), rather than only to the flare.

      ii. The emission limits were updated to the potential emissions expected from each individual dehydration system rather than the combined potential emissions for all the dehydration systems.

   c. The standards of 45CSR§§6-4.4., -4.5., and -4.6. and the testing requirements of 45CSR§§6-7.1. and -7.2. are applicable to the flare and were added to the operating permit.

      i. Under 45CSR§6-4.4., the provisions of 45CSR§6-4.3. (Condition 5.1.7. of the operating permit) are not applicable to smoke which is less than 40% opacity for a period aggregating no more than 8 minutes per start-up or 6 minutes in any 60-minute period for stoking operations. This exception was included in the operating permit under Condition 5.1.8.

      ii. The standards of 45CSR§§6-4.5. and -4.6. prohibit the emissions of unburned refuse and require the prevention of objectionable odors from the flare, respectively. These requirements were added to the operating permit under Conditions 5.1.9. and 5.1.10.

      iii. In accordance with 45CSR§§6-7.1. and -7.2., the permittee may be required, at such times as the Secretary may designate, to conduct stack testing to determine particulate matter loading. These requirements were included under Condition 5.3.8.

   d. The Subpart HH requirements of 40 C.F.R. §§63.760(c), 63.764(j), and 63.775(c)(8) are applicable to the facility and have been added to the operating permit under Conditions 5.1.11., 5.1.12., and 5.5.4., respectively.

      i. §63.760(c) requires any source that is determined not to be a major source but that has actual emissions of any single HAP or aggregate HAPs which meet or exceed 50% of the Title V major source thresholds to update its major source determination annually using gas composition data measured during the preceding 12 months.

      ii. §63.764(j) requires any affected source under Subpart HH to be operated and maintained in a manner consistent with safety and good air pollution control practices for minimizing emissions.

iii. Under §63.775(c)(8), area sources which are subject to Subpart HH and meet the exemption from §63.764(d), per §63.764(e)(1)(ii), are also exempt from the reporting requirements of §§63.775(c)(1) through (c)(7).

e. The authority of Condition 5.4.8. was updated to include a reference to 40 C.F.R. §§63.764(e)(1) and (e)(1)(ii).

3. Section 7.0. – Source-Specific Requirements (Storage Tanks)

a. Condition 7.1.2. was reserved. Condition 7.1.2. previously contained the Operation and Maintenance of Air Pollution Control Equipment requirements for the vapor recovery system (VRU-100 and VRU-200). These requirements are also included in Condition 3.1.10. as a facility-wide requirement that is applicable to all air pollution control equipment listed in Section 1.0. Therefore, the requirements were removed from Condition 7.1.2., and the authority of Condition 3.1.10. was updated to include a reference to Condition 8.1.2. of R13-3354F.

b. Condition 7.4.3. was reserved. Condition 7.4.3. previously contained the requirement to maintain records of malfunctions of the vapor recovery system. These requirements are also included in Condition 3.4.4. as a facility-wide requirement that is applicable to all air pollution control equipment in Section 1.0. Therefore, the requirements have been removed from Condition 7.4.3., and the authority of Condition 3.4.4. was updated to include a reference to Condition 8.3.3. of R13-3354F.

4. Section 9.0. – 40 C.F.R. Part 60 Subpart JJJJ Requirements

a. Condition 9.1.1. contains the provisions of 40 C.F.R. §60.4233(e) which requires the permittee to meet the emission standards of Table 1 to Subpart JJJJ for stationary spark ignition (SI) internal combustion engines (ICE) with a maximum engine power greater than or equal to 100 HP. The emission standards for non-emergency SI, natural gas-fired engines with a maximum engine power greater than 500 HP and a manufacture date after July 1, 2010 are applicable to the compressor engines C-100 to C-1200 and the generator engine GEN1. These emission standards were added to this condition.

For the compressor engines, the hourly emission limits of Condition 4.1.1. are more stringent than the emission standards of Subpart JJJJ, and, for the generator engine, the hourly emission limits of Condition 4.1.2. are equal to the emission standards of Subpart JJJJ. Therefore, streamlining language was added to Condition 9.1.1. to specify that compliance with Conditions 4.1.1. and 4.1.2. assures compliance with the Subpart JJJJ emission standards of 40 C.F.R. §60.4233(e) and Condition 9.1.1.

b. In accordance with 40 C.F.R. §60.4245(a)(3), the reference to 40 C.F.R. Part 90 was removed from Condition 9.4.1.c. For certified stationary SI ICEs, the permittee must maintain documentation from the manufacturer that the engine is certified to meet the emission standards and information as required in 40 C.F.R. Parts 1048, 1054, and 1060, as applicable.

c. §60.4245(j) contains the provisions for maintaining records required by Subpart JJJJ electronically and was added to the operating permit as Condition 9.4.2.

d. Condition 9.5.1. of R30-01700163-2020 (MM02) contained the provisions of 40 C.F.R. §60.4245(c) which required the permittee to submit an initial notification of construction as required under 40 C.F.R. §60.7(a)(1) as well as the information specified in §§60.4245(c)(1) to (c)(5) for any uncertified, stationary SI ICE with a rating greater than or equal to 500 HP. The required information was submitted to the DAQ in a notification of construction on November 16, 2017 as well as a notification of startup on March 6, 2018. Therefore, the requirements of 40 C.F.R. §60.4245(c) were met, and Condition 9.5.1. was reserved.

e. The reporting requirements of Condition 9.5.2. were updated.

i. Paragraph a. of this condition requires the permittee to submit a copy of each performance test conducted in accordance with §60.4245(d) and 10.6.1.d of R13-3354F. The specifications for reports using EPA Method 18, EPA Method 320, or ASTM D6348-03 and the electronic reporting requirements of §60.4245(d) were incorporated into this condition of the operating permit.

ii. The electronic reporting requirements for performance test results under §60.4245(f) and the electronic reporting requirements for notifications and reports under §60.4245(g) were included in the operating permit as paragraphs b. and c., respectively.

5. Section 10.0 – 40 C.F.R. Part 60 Subpart OOOOa Requirements (Reciprocating Compressor Engines)

a. On October 31, 2018, the WV DAQ received the annual report required by Subpart OOOOa for several of Antero Midstream, LLC's facilities, including the South Canton Compressor Station. The initial report provided information for the engines C-100 to C-1200 and covered the compliance period from August 2, 2017 (operation of the South Canton Compressor Station commenced February 16, 2018, per the notification received March 6, 2018) to August 1, 2018. Therefore, the initial compliance demonstration requirements of §60.5385a(b) and §60.5410a(c) have been met, and Conditions 10.1.1.b. and 10.2.1. have been reserved in the operating permit.

b. In accordance with §60.5370a(b), affected facilities subject to Subpart OOOOa must be operated in a manner consistent with good air pollution control practice for minimizing emissions. This requirement was added to the operating permit as Condition 10.1.2.

c. The notification requirements of §60.5420a(a) are included in R13-3354F under Condition 11.4.1. and in R30-01700163-2020 (MM02) under Condition 10.5.1. This provision requires the permittee to submit the notifications specified in §§60.5420a(a)(1) and (a)(2). However, §60.5420a(a)(1) does not require the notifications of §§60.7(a)(1), (a)(3), and (a)(4) and §60.15(d) for reciprocating compressors, and the notifications of §60.5420a(a)(2) are applicable only to well affected facilities. Therefore, these requirements were removed from the operating permit, and Condition 10.5.1. was reserved.

d. As the facility is a compressor station, the requirement to include the U.S. Well ID or U.S. Well ID associated with the affected facility in reports has been removed from Condition 10.5.2.a.1.

e. The Subpart OOOOa electronic reporting requirements under §60.5420a(b)(11) were added to the operating permit as Condition 11.5.2.c.

f. The Subpart OOOOa reporting and recordkeeping requirements for reciprocating compressors were included by reference in Condition 10.5.3. of the operating permit in accordance with Condition 11.4.3. of R13-3354F. However, the recordkeeping and reporting requirements are also included by reference in Condition 10.1.1.d., and the recordkeeping and reporting requirements used to demonstrate compliance with the compressor rod packing replacement standards were written out in Conditions 10.4.1. and 10.5.2. Therefore, Condition 10.5.3. was removed from the operating permit, and the authorities of Conditions 10.1.1., 10.4.1., and 10.5.2. were updated to include Condition 11.4.3. of R13-3354F.

6. Section 11.0 – 40 C.F.R. Part 60 Subpart OOOOa Requirements (Fugitive Emissions Components)

a. Since the issuance of R30-01700163-2020, Subpart OOOOa was amended. The following conditions were updated accordingly in this operating permit renewal:

i. In accordance with §60.5397a, the permittee may elect to comply with the requirements of §60.5398b as an alternative to the Subpart OOOOa requirements for fugitive emissions components.

ii. In accordance with §60.5397a(c)(8)(iii), the procedures for calibration of the monitoring instrument were added as paragraph c.8.iii. of 11.1.1.

iii. The fugitive emissions monitoring plan requirements of 11.1.1.d.1. through 3. were revised in accordance with §60.5397a(d).

iv. Condition 11.1.1.g. was updated in accordance with §60.5397a(g).

1. The phrase "within a company-defined area" was removed from paragraph g.2. of the operating permit.

2. The provisions of §60.5397a(g)(5), which were added to Subpart OOOOa with these amendments, are applicable to the collection of fugitive emissions components at a well site and, therefore, were not included in the operating permit.

v. In accordance with §60.5397a(h), the requirements for the repair of sources of fugitive emissions were updated in Condition 11.1.1.h. As this facility is a compressor station, the references to well sites in these requirements were not included in the operating permit.

vi. The phrase "or replace" was removed from Condition 11.2.3.b. in accordance with §60.5415a(h)(2).

vii. In paragraphs a. through c. of Condition 11.4.1., the recordkeeping requirements applicable to the collection of fugitive emissions components at a compressor station have been updated in accordance with §60.5420a(c)(15). Additionally, the recordkeeping requirements for the alternative fugitive emissions standards §60.5399a and §60.5398b have been added under paragraphs d. and e. of this condition.

viii. In paragraphs a. and b. of Condition 11.5.2., the reporting requirements applicable to the collection of fugitive emissions components at a compressor station have been updated in accordance with §§60.5420a(b)(1) and (7). Additionally, the reporting requirements for the alternative fugitive emissions standards §60.5399a and §60.5398b have been incorporated under Conditions 11.5.2.b.3. and 11.5.2.b.4., respectively.

b. As the facility is a compressor station, the requirements for and the references to fugitive emissions components located at a well site are inapplicable and have been removed from the following conditions: Conditions 11.1.1.b., 11.1.1.f.1., 11.1.1.g.1., 11.1.1.j., 11.2.3., 11.4.1., and 11.5.2.

c. On October 31, 2018, the WV DAQ received the annual report required by Subpart OOOOa for several of Antero Midstream, LLC's facilities, including the South Canton Compressor Station. The report covered the compliance period from August 2, 2017 (operation of the South Canton Compressor Station commenced February 16, 2018, per the notification received March 6, 2018) to August 1, 2018. According to the annual report, the initial monitoring survey was conducted on February 27, 2018, and the identified sources of fugitive emissions were repaired.

i. Condition 11.1.1.f.2. previously contained the provisions of §60.5397a(f)(2) and required the permittee to perform an initial monitoring survey for the collection of fugitive emissions components at a compressor station. The requirements of §60.5397a(f)(2) have been met and, therefore, were removed from the operating permit.

ii. Conditions 11.2.1. and 11.2.2. previously contained the initial compliance demonstration requirements of §60.5410a and §60.5410a(j), respectively, and required the permittee to develop a fugitive emissions monitoring plan, conduct an initial monitoring survey, repair each identified source of fugitive emissions, maintain the records required under §60.5420a(c)(15), and submit the initial annual report. As the initial

monitoring survey was conducted, the initial compliance demonstration requirements were removed from the operating permit.

The continuous compliance demonstration requirements of §60.5415a(h), the recordkeeping requirements of §60.5420a(c), and the reporting requirements of §60.5420a(b) remain in the operating permit.

d. In accordance with §60.5370a(b), affected facilities subject to Subpart OOOOa must be operated in a manner consistent with good air pollution control practice for minimizing emissions. This requirement was added to the operating permit as Condition 11.1.2.

e. The notification requirements of §60.5420a(a) and (a)(1) are included in R13-3354F under Condition 12.4.1. and in the previous operating permit under Condition 11.5.1. However, §60.5420a(a)(1) does not require the notifications of §§60.7(a)(1), (a)(3), and (a)(4) and §60.15(d) for the collection of fugitive emissions components at a compressor station. Therefore, these requirements were removed from the operating permit, and Condition 11.5.1. was reserved.

f. Reports required under Subpart OOOOa must be submitted to the EPA via CEDRI. The updated electronic reporting requirements of §60.5420a(b)(11) have been incorporated into the operating permit as Condition 11.5.2.c.

7. Section 13.0 – Source-Specific Requirements (Blowdown, Compressor Startup and Pigging Operations)

a. With the revisions made in R13-3354D and R30-01700163-2020 (MM01), the limit for the maximum volume of gas vented during the vessel cleaning/maintenance events was added to the operating permit under Condition 13.1.5., and the recordkeeping requirements were updated to specify that compliance with this limit would be demonstrated through Condition 13.4.2. However, Condition 13.4.2. specifies that records of blowdown and pigging events must be maintained. Therefore, in this operating permit renewal, the reference to Condition 13.1.5. was removed from Condition 13.4.2., and Condition 13.4.4. was added to the operating permit with the requirement that the permittee must maintain a record of the estimated volume of gas vented during the vessel cleaning/maintenance events on a monthly and rolling twelve-month total.

b. Condition 13.4.2. of the previous operating permit specified that a record of the blowdown and pigging events and the estimated volume per event would be used to demonstrate compliance with Conditions 13.1.1. through 13.1.5.

i. However, Condition 13.1.2. contains limits for compressor startup events. With R30-01700163-2020, a separate recordkeeping requirement was established to demonstrate compliance with these limits by maintaining a record of the number of compressor startup events and the estimated volume per event.

ii. As discussed in paragraph 7.a. of this fact sheet, the reference to Condition 13.1.5. was also removed from this requirement.

Therefore, Condition 13.4.2. was revised in this operating permit to only reference the blowdown and pigging event limitations of Conditions 13.1.1., 13.1.3., and 13.1.4.

Non-Applicability Determinations

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

1. **40 C.F.R. Part 60 Subpart Kb** – *Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for which Construction, Reconstruction, or Modification Commenced After July 23, 1984, and On or Before October 4, 2023* – Subpart Kb applies to storage vessels with a capacity greater than or equal to 75 cubic meters (19,812.9 gal). Although the condensate/produced water settling tank (T04) is a 21,000-gallon tank, Subpart Kb does not apply to storage vessels with a design capacity

less than or equal to 1,589.874 cubic meters that are used for petroleum or condensate storage prior to custody transfer per §60.110b(d)(4).

2. **40 C.F.R. Part 60 Subpart Kc** – *Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for which Construction, Reconstruction, or Modification Commenced After October 4, 2023* – Subpart Kc is inapplicable to the South Canton Compressor Station because construction of the storage tanks commenced prior to the applicability date.

3. **40 C.F.R. Part 60 Subpart KKK** – *Standards of Performance for Equipment Leaks of VOC from Onshore Natural Gas Processing Plants for which Construction, Reconstruction, or Modification Commenced After January 20, 1984, and On or Before August 23, 2011* – Subpart KKK inapplicable to the South Canton Compressor Station because construction of the facility commenced after the applicability dates.

4. **40 C.F.R. Part 60 Subpart LLL** – *Standards of Performance for SO_2 Emissions from Onshore Natural Gas Processing for which Construction, Reconstruction, or Modification Commenced After January 20, 1984, and On or Before August 23, 2011* – Subpart LLL is inapplicable to the South Canton Compressor Station because construction of the facility commenced after the applicability dates.

5. **40 C.F.R. Part 60 Subpart OOOO** – *Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification, or Reconstruction Commenced After August 23, 2011, and On or Before September 18, 2015* – Subpart OOOO is inapplicable to the South Canton Compressor Station because the construction of the facility commenced after the applicability dates.

6. **40 C.F.R. Part 60 Subpart OOOOb** – *Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification, or Reconstruction Commenced After December 6, 2022* – Subpart OOOOb is inapplicable to the South Canton Compressor Station as construction of the facility commenced prior to the applicability date.

7. **40 C.F.R. Part 63 Subpart HHH** – *National Emission Standards for Hazardous Air Pollutants from Natural Gas Transmission and Storage Facilities* – Per 40 C.F.R. §63.1270(a), Subpart HHH applies to natural gas transmission and storage facilities that transport or store natural gas prior to entering the pipeline to a local distribution company and that are major sources of hazardous air pollutants. As the South Canton Compressor Station is an area source of hazardous air pollutants, Subpart HHH is inapplicable to the facility.

8. **40 C.F.R. Part 63 Subpart EEEE** – *National Emission Standards for Hazardous Air Pollutants: Organic Liquids Distribution (Non-Gasoline)* – Per 40 C.F.R. §63.2334(a), Subpart EEEE applies to major source of hazardous air pollutants. The South Canton Compressor Station is an area source of hazardous air pollutants and, therefore, is not subject to Subpart EEEE.

9. **40 C.F.R. Part 63 Subpart DDDDD** – *National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters* – Subpart DDDDD applies to major sources of hazardous air pollutants per 40 C.F.R. §63.7485. The South Canton Compressor Station is an area source of hazardous air pollutants and, therefore, is not subject to Subpart DDDDD.

10. **45CSR21** – *Regulation to Prevent and Control Air Pollution from the Emission of Volatile Organic Compounds* – This rule applies to sources located in Putnam County, Kanawha County, Cabell County, Wayne County, and Wood County. The facility is located in Doddridge County, and, therefore, the rule is inapplicable.

11. **45CSR27** – *To Prevent and Control the Emissions of Toxic Air Pollutants* – This rule does not apply to the South Canton Compressor Station because, per 45CSR§27-2.4., the equipment used in the production and distribution of petroleum products is not considered a chemical processing unit, provided that such equipment does not produce or contact materials containing more than 5% benzene by weight.

12. **40 C.F.R. Part 64** – *Compliance Assurance Monitoring (CAM)* – The CAM rule is currently inapplicable to the South Canton Compressor Station, as follows:

    a. Emissions of CO, VOCs, and Formaldehyde from the twelve compressor engines (C-100 to C-1200) are controlled by the oxidation catalysts OxCat (1C) to OxCat (12C). However, the pre-control device emissions from each engine are 68.3 tpy of CO, 13.7 tpy of VOCs, and 4.3 tpy of Formaldehyde. Therefore, as the compressor engines do not have pre-control device emissions which surpass the Title V major source thresholds for criteria pollutants or any HAPs, the engines are not pollutant specific emission units under CAM, per §64.2(a)(3).

    b. The dehydration units operated at the South Canton Compressor Station are each comprised of a still vent (DEHY1 to DEHY3) and a flash tank (DFLSH1 to DFLSH3).

        i. A condenser and flare are used to control emissions of VOCs and HAPs from the still vents. Each control device has a 98% control efficiency for VOCs and HAPs.

        In the application for R13-3354, the controlled potential emissions of VOCs and HAPs from the still vents were determined using GRI-GLYCalc 4.0 and the 98% control efficiency of the flare (the 98% control efficiency of the condenser was not accounted for in the calculations). The potential emissions have not been revised as of the writing of this Title V renewal permit. Based on these calculations, the uncontrolled potential emissions from one still vent are 71.7 tpy of VOCs, 5.08 tpy of Benzene, 0.72 tpy of Ethylbenzene, 1.82 tpy of Hexane, 11.46 tpy of Toluene, 2.56 tpy of Xylene, and 21.6 tpy of aggregate HAPs.

        The still vents do not have uncontrolled potential emissions of VOCs, aggregate HAPs, or any individual HAPs other than Toluene which surpass the Title V major source thresholds. Therefore, the still vents are not subject to CAM for any of these pollutants, per §64.2(a)(3).

        Toluene is the only regulated pollutant with uncontrolled potential emissions from the still vents which surpass the Title V major source thresholds. However, the dehydration units at the South Canton Compressor Station are subject to the 40 C.F.R. Part 63 Subpart HH HAP emission requirements for area sources. Therefore, the dehydration unit still vents are exempt from CAM for emissions of Toluene per §64.2(b)(1)(i).

        ii. During normal operation, the vent gases from the flash tanks are routed to the reboilers associated with the dehydration units to be used as fuel, which reduces emissions of VOCs and HAPs from the flash tanks by 98%. Alternatively, in the event of an excess amount of vent gas from the flash tanks or of a reboiler being offline, the vent gas is routed to the storage tanks (T01 to T07) and ultimately to the vapor recovery units (VRU-100 with VRU-200 as a back-up) to maintain the 98% control efficiency of VOC and HAP emissions from the flash tanks.

        In the application for R13-3354, the controlled potential emissions of VOCs and HAPs from the flash tanks were calculated using GRI-GLYCalc 4.0 and a 98% control efficiency. The potential emissions have not been revised as of the writing of this Title V renewal permit. The uncontrolled potential emissions from one flash tank are 214.2 tpy of VOCs, 0.42 tpy of Benzene, 0.018 tpy of Ethylbenzene, 4.71 tpy of Hexane, 0.56 tpy of Toluene, 0.040 tpy of Xylene, and 5.75 tpy of aggregate HAPs.

        The flash tanks do not have uncontrolled potential emissions of any individual HAP or aggregate HAPs which surpass the Title V major source thresholds. Therefore, the flash tanks are not subject to CAM for any of these pollutants, per §64.2(a)(3).

VOCs are the only regulated pollutant with uncontrolled potential emissions from the flash tanks that surpass the Title V major source thresholds. Under §64.1, however, the definition of a control device states that "For the purposes of this part, a control device does not include passive control measures that act to prevent pollutants from forming, such as the use of seals, lids, or roofs to prevent the release of pollutants, use of low-polluting fuel or feedstocks, or the use of combustion or other process design features or characteristics." The reboilers provide heat for the dehydration unit operations. The vent gases from the flash tanks are routed to the flame zone of the reboiler and are combusted as the primary fuel source of the reboiler with natural gas as a supplemental fuel. Although this use of the vent gases reduces VOC emissions from each flash tank to a level below the Title V major source thresholds, the reboilers are a necessary part of the dehydration unit process and, therefore, are not considered a control device for the purposes of the CAM rule.

c. Emissions of VOCs and HAPs from the condensate storage tanks (T01 to T03), the settling tank (T04), and the produced water storage tanks (T05 to T07) are collectively controlled by the vapor recovery units (VRU-100 with VRU-200 as a back-up). In the application for R13-3354, the pre-control device emissions from the storage tank battery were calculated using ProMax and an assumed 98% control efficiency. The uncontrolled potential emissions from the tanks are collectively 373 tpy of VOCs and 9 tpy of aggregate HAPs.

   The storage tanks do not have uncontrolled potential emissions of any individual or aggregate HAPs which surpass the Title V major source thresholds. Therefore, the storage tanks are not subject to CAM for any of these pollutants, per §64.2(a)(3).

   VOCs are the only regulated pollutant with uncontrolled potential emissions from the storage tanks that surpass the Title V major source thresholds. The VRUs reduce emissions of VOCs and HAPs by capturing the vapors from the storage tanks and recycling the vapors into the gas system prior to the facility's initial filter scrubber. Under §64.1, inherent process equipment is defined as "equipment that is necessary for the proper or safe functioning of the process, or material recovery equipment that the owner or operator documents is installed and operated primarily for purposes other than compliance with air pollution regulations." As the VRUs serve to prevent the loss of the natural gas product, the VRUs are considered inherent process equipment. Therefore, although the VRUs reduce VOC emissions from the flash tanks to a level below the Title V major source thresholds, the VRUs are not considered a control device under CAM.

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: April 4, 2025
Ending Date: May 5, 2025

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)

None.