

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 December 22, 2020.

Permit Number: **R30-09500084-2020 (MM01 & MM02)**

Application Received: **March 9, 2021 & June 7, 2021**

Plant Identification Number: **03-54-095-00084**

Permittee: **Antero Midstream LLC**

Facility Name: **Middlebourne IV Compressor Station**

Mailing Address: **1615 Wynkoop Street, Denver, CO 80202**

Permit Action Number: *MM01 and MM02* Revised: *September 27, 2021*

Physical Location:	Middlebourne, Tyler County, West Virginia
UTM Coordinates:	507.741 km Easting • 4,369.546 km Northing • Zone 17
Directions:	From Middlebourne, WV, drive southwest on WV-18/Main St. Turn right onto Bridgeway Road. Drive for 0.1 miles and turn left onto Middlebourne-Wick/Wick Road. After 1.4 miles the facility will be on the right.

Facility Description

The Middlebourne IV Compressor Station separates, compresses, and dries gas off the inlet pipeline stream. The station includes fifteen (15) compressor engines with oxidation catalysts, three (3) compressor engines with NSCR (Non-Selective Catalytic Reduction) catalysts, two (2) natural gas generators, two (2) 260 MMscfd dehydrators with two (2) reboilers and two (2) flash tanks, one (1) 150 MMscfd dehydrator with one (1) reboiler and one (1) flash tank, five (5) 400-bbl condensate tanks, five (5) 400-bbl produced water tanks, one (1) 500-bbl condensate/produced water settling tank, one (1) 0.5 MMBtu/hr fuel conditioning heater, one (1) 0.75 MMBtu/hr fuel conditioning heater, three (3) thermal oxidizers, three (3) vapor recovery units (VRU), liquid loadout operations, fugitive component emissions, and twelve (12) auxiliary storage tanks.

Emissions Summary

This modification results in the following emission changes:

Pollutants	Change in PTE (TPY)		
	MM01	MM02	Total
Carbon Monoxide (CO)	0	4.04	+ 4.04
Nitrogen Oxides (NO _x)	72.39	12.66	+ 85.05
Volatile Organic Compounds (VOC)	0	7.39	+ 7.39
Particulate Matter-10 (PM ₁₀)	0	0.78	+ 0.78
Formaldehyde	0	0.51	+ 0.51
Total HAPs	0	-2.56	- 2.56

Title V Program Applicability Basis

With the proposed changes associated with this modification, this facility maintains the potential to emit 113.94 tons per year CO, 214.85 tons per year, NO_x, and 207.09 tons per year VOC. 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.

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

Federal and State:

- | | |
|---------|--|
| 45CSR13 | Permits For Construction, Modification, Relocation And Operation Of Stationary Sources Of Air Pollutants, Notification Requirements, Administrative Updates, Temporary Permits, General Permits, And Procedures For Evaluation |
| 45CSR30 | Requirements For Operating Permits |

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>)
R13-3380E	July 19, 2021	

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 minor modification includes MM01 which incorporates revisions associated with the Modification Permit R13-3380D (issued on June 2, 2021) to increase the NOx emission factor of the compressor engines, to update the SIC code to 4922 and to add a requirement for gas vented during cleaning/maintenance events. It also includes MM02 which incorporates revisions associated with the Modification Permit R13-3380E (issued on July 19, 2021) to increase the horsepower of the compressor engines (C-100 – C-1500), to modify aldehydes emissions and to increase the dry gas throughput of the Dehydration Unit Still Vent DEHY3 and Dehydrator Flash Tank DFLSH3. The engine horsepower is increased through the installation of a refresh chip.

Substantial changes to R30-09500084-2020 consist of the following:

- 1) Updated SIC Code on the facility information page (Page 1 of the permit).
- 2) **Section 1.1. Emission Units:**
 - Revised the design capacities for engines C-100 through C-1500.
 - Revised the throughput of Dehydrator Still Vent DEHY3 and Dehydrator Flash Tank DFLSH3.
 - Revised the horsepower rating for the compressor engines in the “Control Devices” Table.
- 3) **Section 1.2. Active R13, R14, and R19 Permits:** The table has been updated to the latest version of R13-3380.
- 4) **Conditions 4.1.1.and 4.1.2.** – These conditions have been revised to include the revised requirements of conditions 5.1.1. and 5.1.2 in R13-3380E.
- 5) **Condition 5.1.1.** - Revised the Throughput for “DEHY3” and revised the language in the last paragraph.
- 6) **Condition 5.1.5.** - Revised the emissions from the thermal oxidizer (TO-3).
- 7) **Condition 13.1.5.** – This condition has been added as a new applicable requirement from permit R13-3380E.
- 8) **Conditions 13.4.2. and 13.5.1.** – Revised to include the new permit condition 13.1.5.

Non-Applicability Determinations

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

None.

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
304/926-0499 ext. 41910
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)

Not applicable.