

Fact Sheet



***For Draft/Proposed Renewal Permitting Action Under 45CSR30 and
Title V of the Clean Air Act***

Permit Number: **R30-01700158-2024**
Application Received: **March 6, 2024**
Plant Identification Number: **03-54-017-00158**
Permittee: **EQM Gathering Opco, LLC**
Facility Name: **Janus Compressor Station**
Mailing Address: **2200 Energy Drive, Canonsburg, PA 15317**

Physical Location:	West Union, Doddridge County, West Virginia
UTM Coordinates:	516.776 km Easting • 4345.401 km Northing • Zone 17
Directions:	From Charleston, take I77 to Parkersburg Exit 176 and turn right (east) onto state route 50 towards Clarksburg. Travel approximately 40.6 miles and turn right onto Arnolds Creek Rd. (Rt 11). Travel approximately 0.7 miles and bear left onto Left Fork Run Rd. (Rt 11/4). Travel approximately 1.1 miles and turn right onto station road and proceed 0.9 miles up the hill to the Janus Station.

Facility Description

The Janus Compressor Station is an existing natural gas gathering facility covered by Standard Industrial Classification (SIC) 1311. Natural gas and liquids (mostly produced water) from nearby wells undergo compression and dehydration before it is transported to a gas gathering line. The station consists of a total of four (4) natural gas-fired reciprocating engines, two (2) triethylene glycol (TEG) dehydration units each controlled with a flare, two (2) dehydrator reboilers, five (5) natural gas-fired microturbines for generating electricity, two (2) produced fluid tanks controlled with one (1) flare, two (2) natural gas-fired fuel gas heaters, two (2) natural gas-fired suction condensate heaters and other miscellaneous storage tanks of various sizes.

Emissions Summary

Plantwide Emissions Summary [Tons per Year]		
Regulated Pollutants	Potential Emissions	2023 Actual Emissions
Carbon Monoxide (CO)	59.10	12.92
Nitrogen Oxides (NO _x)	127.17	52.67
Particulate Matter (PM _{2.5})	9.19	0.18
Particulate Matter (PM ₁₀)	9.19	0.18
Total Particulate Matter (TSP)	9.19	4.32
Sulfur Dioxide (SO ₂)	0.71	0.31
Volatile Organic Compounds (VOC)	156.98	38.12

PM₁₀ is a component of TSP.

Hazardous Air Pollutants	Potential Emissions	2023 Actual Emissions
Formaldehyde	3.91	2.02
Benzene	1.31	0.24
Toluene	1.61	0.52
Ethylbenzene	0.10	0.03
Xylenes	0.71	0.41
n-Hexane	1.91	0.68
Other HAPs*	13.57	0.11
Total HAPs (*all individual HAPs are <10 TPY)	22.31	4.01

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

Title V Program Applicability Basis

This facility has the potential to emit 127 tpy of NO_x and 157 tpy of VOC. Due to this facility's potential to emit over 100 tons per year of criteria pollutant, EQM Gathering Opco, LLC's Janus 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

To Prevent And Control Particulate Air Pollution From Combustion Of Fuel In Indirect Heat Exchangers

45CSR6	Control Of Air Pollution From Combustion Of Refuse.
45CSR10	To Prevent And Control Air Pollution From The Emission Of Sulfur Oxides
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, And Procedures For Evaluation
45CSR16	Standards Of Performance For New Stationary Sources
WV Code § 22-5-4 (a)(15)	The Secretary can request any pertinent information such as annual emission inventory reporting.
45CSR30	Operating permit requirement.
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, Subpart M	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 64	Compliance Assurance Monitoring
40 C.F.R. Part 82, Subpart F	Ozone depleting substances
<u>State Only:</u>	
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	Permit Determinations or Amendments That Affect the Permit (<i>if any</i>)
R13-3269B	August 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

This is a renewal of the Title V permit which was issued on September 17, 2019. Substantial changes to the current Title V Permit (R30-01700158-2019) consist of the following:

Note: COA means citation of authority in the following discussion.

- 1) **Page 1** – Updated the Permittee address and telephone number
- 2) **Title V Boilerplate changes**
 - **Condition 2.1.3.** – Revised resulting from Rule 30 (45CSR30) revisions.
 - **Condition 2.11.4.** – The COA has been corrected.
 - **Condition 2.17.** – Deleted and marked as reserved resulting from Rule 30 revisions.
 - **Condition 2.22.1.** – The COA has been updated to remove 45CSR38 which has been repealed.
 - **Condition 3.1.6.** – Revised the COA to the current version of the WV Code.
 - **Condition 3.3.1.** – Revised the COA 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.”
 - **Condition 3.5.3.** – This condition was revised to update the US EPA mailing address.
 - **Condition 3.5.4.** – Revised as revised in Rule 30.
 - **Condition 3.5.7.** – Deleted and marked as reserved resulting from Rule 30 revisions.
 - **Condition 3.5.8.a.1.** – Deleted and marked as reserved resulting from Rule 30 revisions.
 - **Condition 3.5.8.a.2.** – Revised as revised in Rule 30.
- 3) **Condition 1.1. - Emission Units Table:**
 - Added the three existing Glycol Dehydrator Flares (001, 002, and 003) to the table.
- 4) **Section 4.0**
 - Conditions 4.2.2. through 4.2.9., 4.4.3. and 4.5.4. – These permit conditions were added to include the Compliance Assurance Monitoring (CAM) requirements. (see discussion below).
 - Conditions 4.5.2. and 4.5.3. – These new permit conditions were added due to changes to 40 CFR 60 Subpart JJJJ

5) Section 5.0

- Revised the language in conditions 5.4.1. and 5.5.1. to match the revised language in the most recent version of 40 CFR 60 Subpart OOOOa.

6) Section 7.0

- Conditions 7.2.4. through 7.2.12., 7.4.3. and 7.5.2. – These permit conditions were added to include the Compliance Assurance Monitoring (CAM) requirements. (see discussion below)

7) Revised Section 9.0

- Revised the language in conditions 9.1.1., 9.1.2., 9.1.3., 9.1.7., 9.4.2. and 9.5.1. to match the revised language in the most recent version of 40 CFR 60 Subpart OOOOa. Also revised the COA wherever affected by the revisions.

40 CFR Part 64 – Compliance Assurance Monitoring (CAM)

CAM has been reviewed for this renewal. The following emission units are equipped with control devices and are potential PSEUs as defined in the CAM rule for the pollutants listed below:

Compressor Engines ENG-001, ENG-002, ENG-003 and ENG-004

Each of the Compressor Engines ENG-001, ENG-002, ENG-003 and ENG-004 is equipped with an oxidation catalyst control device which controls carbon monoxide (CO), formaldehyde (HCHO) and VOC emissions. Each engine has post control emission limits for CO, VOC and HCHO. The uncontrolled (i.e., pre-control device) potential emissions* of CO, VOC and HCHO are 127.60 tpy, 38.75 tpy and 10.33 tpy, respectively. The VOC pre-control device potential emissions are below the major source threshold (i.e., 100 tpy). Therefore, these engines do not meet the applicability requirements of 40 CFR §64.2(a) for VOC and are not subject to CAM for this pollutant. Each engine is a potential PSEU for CO and HCHO with post control device emissions less than the major source threshold. Although, each engine is subject to 40 CFR 60 Subpart JJJJ and 40 CFR 63 Subpart ZZZZ which were both proposed by the Administrator after November 15, 1990, the CO permit limits from R13-3269B are more stringent than the Subpart JJJJ limits. Furthermore, neither Subpart JJJJ nor Subpart ZZZZ have limits for HCHO. The emission limits for HCHO are applicable through R13-3269B. Therefore, the engines do not meet the exemption criteria of 40 CFR §64.2(b)(1)(i) for CO or HCHO and are subject to CAM for CO and HCHO pursuant to 40 CFR §64.2(a).

Condition 4.1.3. requires the temperature to the inlet of the each catalyst (C1, C2, C3, & C4) for ENG-001, ENG-002, ENG-003, and ENG-004 be monitored in accordance with the manufacturer's specifications and that a high temperature alarm shall shut down the engine before thermal deactivation of the catalyst occurs. Condition 4.2.1. requires the permittee to record all instances that the engine operated with a catalyst inlet temperature above 1,350°F or the maximum operating temperature of catalyst and shall include the date, time, duration of the event, root cause of event and corrective action taken. Condition 4.3.1 requires testing every 8760 hours of operation or 3 years, whichever comes first pursuant to 40 CFR §60.4243(b)(2)(ii). An excursion will be defined as any catalyst inlet temperature greater than 1350°F for Indicator No.1 and any results of performance tests indicating the CO and/or HCHO limits are greater than 2.04lb/hr and/or 0.24lb/hr respectively for Indicator No. 2.

**CO and VOC pre control potential emissions were taken from the "Emissions Point Data Summery Sheet" in the R13-3269B application and the HCHO pre control potential emissions were taken and calculated from the engine manufacturer's technical data sheet.*

		ENG-001, ENG-002, ENG-003 and ENG-004	
		Indicator No. 1	Indicator No. 2
I.	Indicator	Pre Catalyst Engine Exhaust Temperature	Stack test results
	Monitoring Approach	Continuous monitoring of the engine exhaust temperature before entering the catalyst using a thermocouple.	Stack testing is performed every 8,760 hours of engine operation or once every three years, whichever comes first per permit condition 4.3.1.
II	Indicator Range	Pre catalyst temperature not to exceed 1350°F.	CO emissions \leq 2.04 lb/hr HCHO emissions \leq 0.24 lb/hr
	A. QIP threshold	The permittee has chosen not to propose a threshold at this time since it is not required for this permitting action by 40 C.F.R. §64.8(a). Although the threshold is not required, the language for a QIP as it relates to other applicable requirements is set forth as permit condition 4.2.8.	The permittee has chosen not to propose a threshold at this time since it is not required for this permitting action by 40 C.F.R. §64.8(a). Although the threshold is not required, the language for a QIP as it relates to other applicable requirements is set forth as permit condition 4.2.8.
III	Performance Criteria	The thermocouple is installed upstream of the catalyst elements in accordance with manufacturer's specifications.	Outlined in submitted and approved test protocol.
	A. Data Representativeness	The thermocouple has an accuracy of +/- 4.0°F	
	B. Verification of Operational Status	All manufacturer's recommendations will be followed.	N/A
	C. QA/QC Practices and Criteria	The thermocouples are calibrated, maintained, and operated in accordance with manufacturer's specifications.	Outlined in submitted and approved test protocol
	D. Monitoring frequency	Continuous	Every 8,760 hours of engine operation or once every three years, whichever comes first
	E. Data Collection Procedure	The pre-catalyst engine exhaust temperature will be continuously monitored and the readings from the thermocouple are stored in EQT servers for a minimum of 5 years.	Readings from the stack tests are reflected in the stack test reports.
	F. Averaging Period	The temperature is monitored continuously to determine if the unit is out of compliance. No averaging is used.	Determined by test method included in the approved test protocol.

Produced Fluids Tanks T-001 and T-002

Each of the Produced Fluids Tanks T-001 and T-002 vent emissions to a Flare (FLARE-003) which controls hydrocarbon (HC), volatile organic compounds (VOC) and hazardous air pollutants (HAP) emissions. Each tank has a VOC emissions limit. However, the uncontrolled (i.e., pre-control device) VOC potential emissions from each of the tanks are 5.09 tpy (as reported in the "Emission Points Data Summary Sheet" in the R13-3269B

application) and are below the major source threshold (i.e., 100 tpy). Therefore, these tanks do not meet the applicability requirements of 40 CFR §64.2(a) and are not subject to CAM.

Dehydration Units/Still Columns DEHY-001 and DEHY-002

Each of the dehydration units/still columns DEHY-001 and DEHY-002 is equipped with a Flare (FLARE-001 and FLARE-002) which controls VOC and HAP emissions. The flares each have an emission limit for VOC HAPs and benzene from the dehydration units/still columns. The uncontrolled potential emissions* of VOC (339.92 tpy for each flare) are above the major source threshold (i.e., 100 tpy). The uncontrolled potential* emissions of total HAPS (147.88 tpy) are above the major source threshold (i.e., 25 TPY) and the uncontrolled benzene potential emissions are above the major source threshold (i.e., 10 TPY). Each dehydrator therefore is a potential PSEU for VOC with post control emissions less than the major source threshold and for HAPs with post control emissions less than the major source threshold. These units are subject to CAM for VOC emissions. The dehydration units are subject to 40 CFR 63 Subpart HH which was proposed after November 15, 1990 and therefore the units are exempt for HAP emissions pursuant to 40 CFR §64.2(b)(1)(i).

Condition 7.1.2.g. requires a system to continuously measure the temperature of the combustion zone of each control device with a mechanism that prohibits the operation of the dehydration unit whenever the temperature of the combustion chamber zone is less than 1400°F for each respective control device.. The temperature measuring device must have a minimum accuracy of ± 4.5 degrees Fahrenheit. Condition 7.4.2. requires the permittee to record all instances that either DEHY-001 or DEHY-002 shuts down as a result of the interlock system established in condition 7.1.2.g An excursion will be defined as any flare combustion zone temperature less than 1400°F or greater than 1800°F. Also, the units are inspected quarterly as per the closed vent requirements of 40 CFR 60 Subpart OOOOa. To further ensure compliance between the quarterly inspections, an increase to a monthly frequency for visual inspections of the closed vent system and bypass valves was selected as a second indicator in the CAM plan. An excursion will be defined as any detected leaks or vapors or open bypass valves discovered during the monthly visual inspections.

**Pre control potential emissions were taken from the “Emissions Point Data Summery Sheet” in the R13-3269B application.*

		DEHY-001 and DEHY-002	
		Indicator No. 1	Indicator No. 2
I.	Indicator	Combustion Zone temperature	Visual inspections of the closed vent system piping and any flare bypass
	Monitoring Approach	Continuous monitoring of the combustion zone using a thermocouple and data collection system at all times the dehydration units are in operation	Monitoring of the closed vent system will ensure that vapors from the dehydrator are sent to FLARE-001/002.
II	Indicator Range	1400°F to 1800°F	The closed vent system is operated with no leaks and vapors from the dehydrator shall not bypass FLARE-001/002.
	A. QIP threshold	The permittee has chosen not to propose a threshold at this time since it is not required for this permitting action by 40 C.F.R. §64.8(a). Although the threshold is not required, the language for a QIP as it relates to other applicable requirements is set forth as permit condition 7.2.11.	The permittee has chosen not to propose a threshold at this time since it is not required for this permitting action by 40 C.F.R. §64.8(a). Although the threshold is not required, the language for a QIP as it relates to other applicable requirements is set forth as permit condition 7.211.

		DEHY-001 and DEHY-002	
		Indicator No. 1	Indicator No. 2
III	Performance Criteria		
	A. Data Representativeness	The thermocouples are installed inside the combustion chamber in accordance with manufacturer’s specifications and must have a minimum accuracy of $\pm 4.5^{\circ}\text{F}$.	EQT representatives inspect the closed vent system to look for leaks and to ensure any bypass devices are closed by the dehydrator is in operation.
	B. Verification of Operational Status	All manufacturer’s recommendations will be followed.	EQT trains personnel in the procedures for the inspection of the closed vent system and in the response procedures in the event a leak or bypass is discovered.
	C. QA/QC Practices and Criteria	The thermocouples are calibrated, maintained, and operated in accordance with manufacturer's specifications.	EQT personnel are properly trained on the inspection procedures.
	D. Monitoring frequency	Continuous	Monthly
	E. Data Collection Procedure	The combustion zone temperature will be continuously monitored and the readings from the thermocouple are stored in EQT servers for a minimum of 5 years.	Visual inspection logs are documented electronically.
	F. Averaging Period	The temperature is monitored continuously to determine proper operation. No averaging is used.	Vent leak inspections are completed monthly.

Non-Applicability Determinations

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

- a. **45CSR21 - Regulation to Prevent and Control Air Pollution from the Emission of Volatile Organic Compounds.** The Janus Compressor Station is not located in Cabell, Kanawha, Putnam, Wayne, nor Wood counties.
- b. **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.”
- c. **40 C.F.R 60 Subpart Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units.** This subpart applies to steam generating units greater than 10 MMBtu/hr and less than 100 MMBtu/hr. Janus Compressor Station does not have any steam generating units greater than 10 MMBtu/hr.
- d. **40 CFR 60 Subpart GG - Standards of Performance for Stationary Gas Turbines.** There are no turbines at the Janus Compressor Station equal to or greater than 10 MMBtu/hr.
- e. **40 CFR 60 Subpart K - Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978.** All tanks at the Janus Compressor Station are below 40,000 gallons in capacity. Therefore, they are

not subject to Subpart K in accordance with 40 CFR §60.110(a)

- f. **40 CFR 60 Subpart Ka - Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984.** All tanks at the Janus Compressor Station are below 40,000 gallons in capacity. Therefore, they are not subject to Subpart K in accordance with 40 CFR §60.110(a)
- g. **40 CFR 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.** Janus Compressor Station is not a “Natural Gas Processing Plant” as defined in §60.631.
- h. **40 CFR 60 Subpart LLL - Standards of Performance for SO₂ Emissions From Onshore Natural Gas Processing for Which Construction, Reconstruction, or Modification Commenced After January 20, 1984, and on or Before August 23, 2011.** There are no sweetening units at the Janus Compressor Station.
- i. **40 CFR 60 Subpart IIII - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines.** All engines at Janus Compressor Station are spark ignition engines.
- j. **40 CFR 60 Subpart KKKK – Standards of Performance for Stationary Combustion Turbines.** There are no turbines at the Janus Compressor Station equal to or greater than 10 MMBtu/hr.
- k. **40 CFR 60 Subparts OOOO - Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution for which Construction, Modification or Reconstruction Commenced After August 23, 2011, and on or before September 18, 2015.** The equipment at the Janus Station was installed after September 18, 2015. Therefore, 40 CFR 60 Subpart OOOO does not apply.
- l. **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.** This MACT standard applies to industrial, commercial, and institutional boilers and process heaters at major sources of HAPs. Janus Compressor Station is not major for HAPS.
- m. **40 CFR 63 Subpart JJJJJ - National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources.** All boilers at the Janus Compressor Station fire natural gas exclusively. Natural gas boilers are exempt from this subpart per 40 CFR §63.11195(e).

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: November 1, 2024

Ending Date: December 2, 2024

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)

Not applicable.