

Fact Sheet



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

Permit Number: **R30-06900143-2024**

Application Received: **May 24, 2023**

Plant Identification Number: **03-54-06900143**

Permittee: **Appalachia Midstream Services, L.L.C.**

Facility Name: **Pioneer Compressor Station**

Mailing Address: **100 Teletech Drive, Suite 2, Moundsville, WV 26041**

Physical Location: Wheeling, Ohio County, West Virginia
UTM Coordinates: 534.794 km Easting • 4,443.746 km Northing • Zone 17
Directions: From West Liberty, WV, head west on Van Meter Way for approximately 1.0 mile. Turn left onto Weidman Run Road / Bethany Road, and travel for approximately 1.7 miles. Take a sharp right onto Elysian Lane (aka Harvey's Road). The destination is straight ahead in approximately 0.3 miles.

Facility Description

The Pioneer Compressor Station receives up to 250 mmscfd of natural gas from local production wells. The natural gas is compressed and dehydrated for delivery to a gathering pipeline. The facility also receives raw field condensate which is stabilized and then sent offsite via tanker trucks.

SIC: 1389, NAICS: 213112

Emissions Summary

Plantwide Emissions Summary [Tons per Year]		
Regulated Pollutants	Potential Emissions	2022 Actual Emissions
Carbon Monoxide (CO)	70.87	13.15
Nitrogen Oxides (NO _x)	92.33	74.57
Particulate Matter (PM _{2.5})	7.59	6.54
Particulate Matter (PM ₁₀)	7.59	6.54
Total Particulate Matter (TSP)	7.59	6.54
Sulfur Dioxide (SO ₂)	0.46	0.37
Volatile Organic Compounds (VOC)	130.77	93.11

PM₁₀ is a component of TSP.

Hazardous Air Pollutants	Potential Emissions	2022 Actual Emissions
Acetaldehyde	2.08	1.87
Acrolein	1.28	1.16
Benzene	0.31	None Reported
1,3-Butadiene	0.07	None Reported
Ethylbenzene	0.41	None Reported
Formaldehyde	7.56	4.80
n-Hexane	2.90	1.06
Methanol	0.85	0.32
Polycyclic Organic Matter (POM/PAH)	0.09	None Reported
Toluene	0.62	0.24
2,2,4-Trimethylpentane	0.26	None Reported
Xylenes	1.32	0.70
Other HAPs	0.08	None Reported
Total HAPs	17.83	10.15

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

Title V Program Applicability Basis

This facility has the potential to emit 130.77 tpy of VOCs. Due to this facility's potential to emit over 100 tons per year of criteria pollutant, Appalachia Midstream Services, L.L.C. 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.
	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.
	45CSR16	Standards of Performance for New Stationary Sources.
	WV Code § 22-5-4 (a) (14)	The Secretary can request any pertinent information such as annual emission inventory reporting.
	45CSR30	Operating Permit Requirements.
	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
	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
R13-3491B	June 01, 2022

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

Appalachia Midstream Services, L.L.C.'s Pioneer Compressor Station is an existing facility that was initially permitted under the General Permit G35-D127. The general permit was superseded by the NSR Permit R13-3491. With the issuance of the Class II Administrative Update Permit R13-3491B, the facility became subject to Title V due to a potential to emit over 100 tpy of volatile organic compounds (VOCs).

This section outlines the applicable requirements that have been included in the initial Title V operating permit.

Section 3.0. – Facility-Wide Requirements

The following conditions were added to Section 3.0.:

Title V Permit Condition	Summary of Permit Condition	Regulatory Citation	R13-3491B Condition
3.1.8.	A Risk Management Plan (RMP) is required if the permittee becomes subject to Part 68. Part 68 is currently inapplicable to the Pioneer Compressor Station as prior to entry into a natural gas processing plant, regulated substances in naturally occurring hydrocarbon mixtures (including condensate, field gas, and produced water) are not considered when determining whether more than a threshold quantity is present at a stationary source, per 40 C.F.R. §68.115(b)(2)(iii).	40 C.F.R. 68	N/A
3.1.9.	Facility-wide HAP emissions are limited to ensure the facility remains a minor source of HAPs.	45CSR13	4.1.1.
3.1.10.	Operation and Maintenance of Air Pollution Control Equipment.	45CSR13	4.1.2., 6.1.7., 8.1.2., and 10.1.6.
3.1.11.	Only the permitted emission units and de minimis sources are authorized at the facility.	45CSR13	4.1.3.
3.1.12.	Fugitive particulate matter may not be discharged beyond the boundary lines of the facility.	45CSR§17-3.1.	N/A

Title V Permit Condition	Summary of Permit Condition	Regulatory Citation	R13-3491B Condition
3.4.1.	Record of Monitoring Information.	45CSR13 45CSR§30-5.1.c.2.A.	4.4.1.
3.4.2.	Retention of Records.	45CSR13 45CSR§30-5.1.c.2.B.	3.4.1.
3.4.4.	Record of Maintenance of Air Pollution Control Equipment.	45CSR13	4.4.2. and 8.3.2.
3.4.5.	Record of Malfunctions of Air Pollution Control Equipment.	45CSR13	4.4.3. and 8.3.3.
3.7.2.	Permit Shield. This condition contains the standards that are currently inapplicable to the facility and for which the permittee requested a permit shield. These determinations have also been included in the Non-Applicability Determinations section of this Fact Sheet.	45CSR§30-5.6.	N/A

Section 4.0. – Compressor Engines [Emission Point IDs: 1E to 4E]

The Pioneer Compressor Station operates four spark ignition (SI) reciprocating internal combustion engines (RICES) (Emission Units: CE-01 to CE-04; Emission Point IDs: 1E to 4E). The RICES are Caterpillar G3616LE-A4 engines, and each has a maximum power rating of 5,350 HP.

The engines are fueled by natural gas. Emissions of carbon monoxide (CO), volatile organic compounds (VOCs), and formaldehyde from the combustion of natural gas in each engine are controlled by an oxidation catalyst (OxCat-01 to -04).

The RICES are subject to the following regulations:

1. **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*
2. **45CSR16** – *Standards of Performance for New Stationary Sources*
3. **40 C.F.R. Part 60 Subpart JJJJ** – *Standards of Performance for Stationary Spark Ignition Internal Combustion Engines*

Construction of the engines CE-01 to CE-04 commenced after July 12, 2006; the manufacture date of each engine is after July 01, 2007; and the maximum engine power of each is greater than 1,350 HP. Therefore, the compressor engines are subject to Subpart JJJJ per 40 C.F.R. §§60.4230(a)(4) and (a)(4)(i).

CE-01 to CE-04 are non-emergency, 4-stroke lean burn (4SLB) engines. Therefore, the engines are subject to the emission standards for NO_x, CO, and VOCs per 40 C.F.R. §60.4233(e). The engines are non-certified under Subpart JJJJ. As the engines CE-01 to CE-04 are non-certified under Subpart JJJJ, compliance with the emission standards is demonstrated through periodic performance tests as specified in §60.4244 as well as the reporting and recordkeeping requirements of §60.4245.

4. **45CSR34** – *Emission Standards for Hazardous Air Pollutants*

5. **40 C.F.R. Part 63 Subpart ZZZZ** – *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Combustion Engines*

According to 40 C.F.R. §63.6590(a)(2)(iii), CE-01 to CE-04 are considered new stationary RICEs as construction of the engines commenced after June 12, 2006. As new stationary RICEs located at an area source of HAPs, these engines demonstrate compliance with the requirements of Subpart ZZZZ through compliance with the requirements of Part 60 Subpart JJJJ per 40 C.F.R. §§63.6590(c) and (c)(1).

The table below describes each condition added to Section 4.0. of the Title V operating permit:

Title V Permit Condition	Summary of Permit Condition	Regulatory Citation	R13-3491B Condition
4.1.1.	Emission limitations for NO _x , CO, VOCs, and Formaldehyde from the engines CE-01 to CE-04. Compliance with the limits is demonstrated by the testing requirements of Condition 4.3.1.	45CSR13	5.1.1. and 5.3.1.
4.1.2.	Requirements for the use of the catalytic reduction devices (OxCat-01 to -04).	45CSR13	5.1.2.
4.1.3.	Applicability of 40 C.F.R. Part 60 Subpart JJJJ to the engines CE-01 to CE-04.	45CSR13 45CSR16 40 C.F.R. §§60.4230(a), (a)(4), (a)(4)(i)	11.1.1.
4.1.4.	Emission Standards of Table 1 to Subpart JJJJ of Part 60 that apply to CE-01 to CE-04.	45CSR13 45CSR16 40 C.F.R. §60.4233(e) Table 1 to Subpart JJJJ of Part 60	11.1.2.
4.1.5.	CE-01 to CE-04 must be operated and maintained to achieve the emissions standards of 40 C.F.R. §60.4233(e) over the entire life of each engine.	45CSR13 45CSR16 40 C.F.R. §60.4234	11.1.3.
4.1.6.	Deadline for installing stationary ICE with a maximum engine power over 500 HP that do not meet the requirements of 40 C.F.R. §60.4233.	45CSR13 45CSR16 40 C.F.R. §60.4236(b)	11.2.1.
4.1.7.	The requirements of 40 C.F.R. §60.4236 do not apply to engines that are modified, reconstructed, or reinstalled at a new location.	45CSR13 45CSR16 40 C.F.R. §60.4236(e)	11.2.2.
4.1.8.	Propane may be used as an alternative fuel during emergency operations for up to 100 hours.	45CSR16 40 C.F.R. §60.4243(e)	N/A
4.1.9.	An air-to-fuel ratio controller must be used with the operation of three-way catalysts/non-selective catalytic reduction.	45CSR16 40 C.F.R. §60.4243(g)	N/A

Title V Permit Condition	Summary of Permit Condition	Regulatory Citation	R13-3491B Condition
4.1.10.	For a new or reconstructed RICE located at an area source, compliance with 40 C.F.R. Part 63 Subpart ZZZZ must be demonstrated upon startup. NOTE: The NSR permit condition contains the date by which an existing SI RICE at an area source of HAPs must be in compliance with the applicable provisions of Subpart ZZZZ, per 40 C.F.R. §63.6595(a)(1). This requirement is inapplicable to the engines at the compressor station which are considered new RICE at an area source under Subpart ZZZZ and has been replaced with the requirement described above.	45CSR13 45CSR34 40 C.F.R. §63.6595(a)(7)	14.1.1.
4.1.11.	Compliance with 40 C.F.R. Part 63 Subpart ZZZZ is demonstrated through compliance with 40 C.F.R. Part 60 Subpart JJJJ.	45CSR13 45CSR34 40 C.F.R. §§63.6590(c) and (c)(1)	14.1.2.
4.2.1.	Monitoring requirements for catalytic oxidizer control devices (OxCat-01 to -04).	45CSR13	5.2.1.
4.2.2.	Requirements for non-certified engines under Subpart JJJJ to demonstrate compliance with the emission standards of 40 C.F.R. §60.4233(e). A performance test of each engine must be completed every 8,760 hours or 3 years, whichever comes first.	45CSR13 45CSR16 40 C.F.R. §§60.4243(b), (b)(2), and (b)(2)(ii)	11.3.1.
4.3.1.	Procedures for performance tests.	45CSR13 45CSR16 40 C.F.R. §60.4244	5.3.1. and 11.4.1.
4.4.1.	Maintain records of maintenance performed on each engine to demonstrate compliance with Condition 4.1.2.	45CSR13	5.4.1.
4.4.2.	Maintain records of maintenance performed on each catalytic reduction device to demonstrate compliance with Condition 4.2.1.	45CSR13	5.4.2.
4.4.3.	Maintain a copy of the site-specific maintenance plan or the manufacturer maintenance plan.	45CSR13	5.4.3.
4.4.4.	Maintain records of 4.4.1. through 4.4.3. in accordance with the requirements for the Retention of Records in Condition 3.4.2. of the operating permit.	45CSR13	5.4.4.
4.4.5.	Recordkeeping requirements from 40 C.F.R. Part 60 Subpart JJJJ that are applicable to uncertified engines.	45CSR13 45CSR16 40 C.F.R. §§60.4245(a), (a)(1), (a)(2), and (a)(4)	11.5.1.a.

Title V Permit Condition	Summary of Permit Condition	Regulatory Citation	R13-3491B Condition
4.5.1.	Initial notification requirements for 40 C.F.R. Part 60 Subpart JJJJ.	45CSR13 45CSR16 40 C.F.R. §60.4245(c)	11.5.1.c.*
4.5.2.	40 C.F.R. Part 60 Subpart JJJJ reporting requirements for each performance test conducted according to Condition 4.3.1.	45CSR13 45CSR16 40 C.F.R. §60.4245(d)	11.5.1.c.*

* Condition 11.5.1. of R13-3491B contains two paragraphs labeled as “c.”

NOTE: The following conditions of R13-3491B have not been included in this operating permit:

1. Condition 11.1.1.b. contains the applicability requirement of 40 C.F.R. §60.4230(a)(5) and applies to stationary SI ICEs that were modified or reconstructed after June 12, 2006. However, as construction of the engines CE-01 to CE-04 commenced after June 12, 2006, this requirement has not been included in the operating permit.
2. Conditions 11.3.1.a. and 11.5.1.a.3. – 11.3.1.a. contains the requirement of 40 C.F.R. §60.4243(b)(1), and 11.5.1.a.3. contains the requirement of §60.4245(a)(3). Both of these conditions are applicable to engines that are certified under 40 C.F.R. Part 60 Subpart JJJJ by the manufacturer. However, as all of the engines at the Pioneer Compressor Station are non-certified, these requirements are inapplicable.

Sections 5.0. and 6.0. – 40 C.F.R. Part 60 Subpart OOOOa Requirements

Sections 5.0. and 6.0. contain the applicable requirements of 40 C.F.R. Part 60 Subpart OOOOa. Subpart OOOOa of the NSPS contains the standards for the control of VOC, SO₂, and Greenhouse Gas (GHG) emissions from crude oil and natural gas facilities. The Pioneer Compressor Station is located prior to the natural gas processing plant (the point of custody transfer to the natural gas transmission and storage segment) and is included in the natural gas production source category.

Subpart OOOOa applies to those affected facilities for which construction, modification, or reconstruction commenced after September 18, 2015. Potential affected facilities at the Pioneer Compressor Station include reciprocating compressors (§60.5365a(c)), pneumatic controllers (§60.5365a(d)), storage vessels (§60.5365a(e)), and the fugitive emissions components (§60.5365a(j)).

1. The Pioneer Compressor Station operates five reciprocating compressors which were constructed after the date of applicability and, therefore, are subject to the requirements of Subpart OOOOa. Four of the compressors are driven by the natural gas-fired engines CE-01 to CE-04 to compress the incoming natural gas. The fifth compressor is an electrically driven compressor associated with the vapor recovery unit (VRU-01). The requirements applicable to the reciprocating compressors have been included in Section 5.0. of this operating permit.
2. A pneumatic controller that is not located at a natural gas processing plant is considered an affected facility under Subpart OOOOa only if the unit is natural gas-driven and high-bleed (operates at a natural gas bleed rate greater than 6 scfh). The pneumatic controllers located at the Pioneer Compressor Station are either compressed air-driven or are low-bleed (operates at a natural gas bleed rate less than or equal to 6 scfh). Therefore, the Pioneer Compressor Station is not subject to the Subpart OOOOa requirements for pneumatic controllers.

3. A storage vessel is an affected facility under Subpart OOOOa if the storage vessel has the potential for VOC emissions equal to or greater than 6 tpy as determined according to the methodology of 40 C.F.R. §60.5365a(e). Each of the tanks located at the Pioneer Compressor Station have potential VOC emissions less than 6 tpy and, therefore, are not subject to the Subpart OOOOa requirements for storage vessels.
4. The collection of fugitive emissions components at a compressor station is an affected facility under Subpart OOOOa. The applicable requirements have been included in Section 6.0. of the operating permit.

On June 30, 2021, a joint resolution of Congress that disapproved the final rule titled “Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources Review”, 85 FR 57018 (September 14, 2020) (the 2020 Policy Rule), was signed into law. Due to this resolution, sources in the production and processing segments of the natural gas industry that are subject to Subpart OOOOa must meet two sets of standards: the VOC standards of 85 FR 57438 (September 15, 2020) and the methane standards of 81 FR 35898 (June 03, 2016) as amended by 83 FR 10638 (March 12, 2018). The applicable VOC standards and methane standards have both been included in this operating permit. However, compliance with the VOC standards may be demonstrated through compliance with the more stringent methane standards.

Section 5.0. – Subpart OOOOa Requirements for the Reciprocating Compressors associated with CE-01 to CE-04 and VRU-01

The five reciprocating compressors are subject to the following regulations:

1. **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*
2. **45CSR16** – *Standards of Performance for New Stationary Sources*
3. **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*

The table below describes each condition added to Section 5.0. of the Title V operating permit:

Title V Permit Condition	Summary of Permit Condition	Regulatory Citation	R13-3491B Condition
5.1.1.	Affected facilities must be maintained and operated in a manner consistent with good air pollution control practice for minimizing emissions.	45CSR16 40 C.F.R. §60.5370a(b)	N/A
5.1.2.	GHG and VOC standards for reciprocating compressor affected facilities.	45CSR13 45CSR16 40 C.F.R. §60.5385a	12.1.1.
5.2.1.	Initial compliance demonstration requirements.	45CSR13 45CSR16 40 C.F.R. §§60.5410a and 60.5410a(c)	12.2.1.
5.2.2.	Continuous compliance demonstration requirements.	45CSR13 45CSR16 40 C.F.R. §60.5415a(c)	12.3.1.

Title V Permit Condition	Summary of Permit Condition	Regulatory Citation	R13-3491B Condition
5.4.1.	Applicable recordkeeping requirements for the reciprocating compressors.	45CSR13 45CSR16 40 C.F.R. §§60.5420a(c), (c)(3), (c)(6) to (c)(9), and (c)(17)	12.4.3.
5.5.1.	Applicable reporting requirements for the reciprocating compressors.	45CSR13 45CSR16 40 C.F.R. §§60.5420a(b), (b)(1), (b)(4), (b)(11), and (b)(12)	12.4.2. and 12.4.3.

NOTE: Condition 12.4.1. of R13-3491B has not been included in this operating permit. This condition requires the permittee to submit the notifications specified in 40 C.F.R. §§60.5420a(a)(1) and (a)(2). However, (a)(1) does not require the notifications of 40 C.F.R. §§60.7(a)(1), (a)(3), and (a)(4) for reciprocating compressors, and the notifications of (a)(2) are applicable to well affected facilities.

Section 6.0. – Subpart OOOOa Requirements for Fugitive Emissions Components

Per 40 C.F.R. §60.5430a, a fugitive emissions component is “any component that has the potential to emit fugitive emissions of methane or VOCs at a compressor station, including but not limited to valves, connectors, pressure relief devices, open-ended lines, flanges, covers and closed vent systems not subject to §60.5411a, thief hatches or other openings on a controlled storage vessel not subject to §60.5395a, compressors, instruments, and meters. Devices that vent as part of normal operations, such as the natural gas-driven pneumatic controllers or natural gas-driven pumps, are not fugitive emissions components, insofar as the natural gas discharged from the device’s vent is not considered a fugitive emission. Emissions originating from other than the device’s vent, such as the thief hatch on a controlled storage vessel, would be considered fugitive emissions.”

Due to the disapproval of the 2020 Policy Rule, the fugitive emissions components are subject to varying requirements for methane and VOCs. The standards, recordkeeping requirements, and reporting requirements have been included in the operating permit as separate conditions for each set of standards.

Additionally, certain Subpart OOOOa requirements related to fugitive emissions components vary from those previously included in R13-3491B. The following applicable requirements included in the operating permit have been updated since initially included in R13-3491B:

1. The methane standards of §60.5397a(h)(2).
2. The VOC standards of §§60.5397a(c)(8), (d), (f)(2), (g)(2), and (h); the recordkeeping requirements of §60.5420a(c)(15); and the reporting requirements of §60.5420a(b)(7).

The fugitive emissions components are subject to the following regulations:

1. **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*
2. **45CSR16** – *Standards of Performance for New Stationary Sources*
3. **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*

The table below describes each condition added to Section 6.0. of the Title V operating permit:

Title V Permit Condition	Summary of Permit Condition	Regulatory Citation	R13-3491B Condition
6.1.1.	Affected facilities must be maintained and operated in a manner consistent with good air pollution control practice for minimizing emissions.	45CSR16 40 C.F.R. §60.5370a(b)	N/A
6.1.2.	Methane standards for fugitive emissions components affected facilities. Refer to 81 FR 35898 (June 03, 2016) as amended by 83 FR 10638 (March 12, 2018).	45CSR13 45CSR16 40 C.F.R. §§60.5397a(a) through (e), (f)(2), (g), (g)(2) through (4), and (h) through (j)	13.1.1.
6.1.3.	VOC standards for fugitive emissions components affected facilities. Compliance with the methane standards in Condition 6.1.2. demonstrates compliance with these VOC standards. Refer to 85 FR 57438 (September 15, 2020).	45CSR13 45CSR16 40 C.F.R. §§60.5397a(a), (a)(1), (b) through (e), (f)(2), (g), (g)(2) through (4), and (h) through (j)	13.1.1.
6.2.1.	Initial compliance demonstration for the VOC and Methane Standards.	45CSR13 45CSR16 40 C.F.R. §§60.5410a and 60.5410a(j)	13.2.1. and 13.2.2.
6.2.2.	Continuous compliance demonstration for the VOC and Methane Standards.	45CSR13 45CSR16 40 C.F.R. §60.5415a(h)	13.3.1.
6.4.1.	Recordkeeping requirements for Methane Standards. Refer to 81 FR 35898 (June 03, 2016) as amended by 83 FR 10638 (March 12, 2018).	45CSR13 45CSR16 40 C.F.R. §§60.5420a(c), (c)(15), and (c)(15)(i) to (ii)	13.4.3.
6.4.2.	Recordkeeping requirements for VOC Standards. Compliance with the recordkeeping requirements in Condition 6.4.1. demonstrates compliance with this condition. Refer to 85 FR 57438 (September 15, 2020).	45CSR13 45CSR16 40 C.F.R. §§60.5420a(c), (c)(15), (c)(15)(i), (c)(15)(vi), and (c)(15)(vii)	13.4.3.
6.5.1.	Reporting requirements for Methane Standards. Refer to 81 FR 35898 (June 03, 2016) as amended by 83 FR 10638 (March 12, 2018).	45CSR13 45CSR16 40 C.F.R. §§60.5420a(b), (b)(1), (b)(7), and (b)(11)	13.4.2.

Title V Permit Condition	Summary of Permit Condition	Regulatory Citation	R13-3491B Condition
6.5.2.	Reporting requirements for VOC Standards. Compliance with the reporting requirements of Condition 6.5.1. demonstrates compliance with this condition. Refer to 85 FR 57438 (September 15, 2020).	45CSR13 45CSR16 40 C.F.R. §§60.5420a(b), (b)(1), (b)(7), and (b)(11)	13.4.2.

NOTE: The following conditions of R13-3491B have not been included in the operating permit:

1. Condition 13.1.1.(g)(4) – This condition contains the requirements of 40 C.F.R. §60.5397a(g)(5). The requirement is inapplicable to the Pioneer Compressor Station as the requirement applies to the collection of fugitive emissions components at a compressor station located within an area that has an average calendar month temperature below 0°Fahrenheit for two of three consecutive calendar months of the quarterly monitoring period.
2. Condition 13.4.1. – This condition requires the permittee to submit the notifications specified in 40 C.F.R. §60.5420a(a)(1). However, (a)(1) does not require the notifications of 40 C.F.R. §§60.7(a)(1), (a)(3), and (a)(4) for the collection of fugitive emissions components at a compressor station.
3. Condition 13.4.3.(iii) – This condition contains the requirement of 40 C.F.R. §60.5420a(c)(15)(iii). This requirement only applies to compressor stations for which a monitoring survey is waived under §60.5397a(g)(5). Therefore, this requirement is inapplicable to the Pioneer Compressor Station.

Section 7.0. – Natural Gas Dehydration Units [Emission Point IDs: 7E through 11E]

Two triethylene glycol (TEG) dehydration units are operated at the facility to remove water vapor from the inlet wet gas stream to meet pipeline specifications. Each dehydrator is comprised of a contactor/absorber tower, a flash tank (Emission Units: DFT-01 and DFT-02; Emission Point IDs: 7E and 9E), and a regenerator/still vent (Emission Units: DSV-01 and DSV-02; Emission Point IDs: 8E and 10E). Each dehydration unit is associated with a reboiler (Emission Units: RBV-01 and RBV-02; Emission Point IDs: 12E and 13E), which have applicable requirements in Section 8.0. of this operating permit.

In the dehydration process, the inlet wet gas stream flows through a contactor tower where the gas is contacted with lean glycol. The lean glycol absorbs the water in the gas stream and becomes rich glycol laden with water and trace amounts of hydrocarbons. The rich glycol is then routed to a flash tank where the glycol pressure is reduced to liberate the lighter hydrocarbons, primarily methane. The lighter hydrocarbons are routed from the flash tank to the reboiler for use as fuel with the excess hydrocarbons vented to the thermal oxidizer (Emission Unit: TO-01; Emission Point ID: 11E). The rich glycol is then sent from the flash tank to the regenerator/still where the TEG is heated to drive off the water vapor and any remaining hydrocarbons. The off-gases from the regenerator/still are vented to TO-01.

The primary pollutants emitted in this process are VOCs and HAPs. The thermal oxidizer TO-01 is operated to achieve a 99.5% control efficiency of these pollutants. TO-01 has a maximum design heat input of 10.00 mMBTU/hr.

The TEG dehydration units and the thermal oxidizer are subject to the following regulations:

1. **45CSR6** – *Control of Air Pollution from Combustion of Refuse*

This rule establishes emission standards to control the particulate matter emissions from the combustion of refuse. Under 45CSR§6-2.7., incineration is defined as “the destruction of combustible refuse by burning in a furnace designed for that purpose. For the purposes of this rule, the destruction of any combustible liquid or gaseous material by burning in a flare or flare stack, thermal oxidizer, or thermal catalytic oxidizer stack shall be considered incineration”. As the thermal oxidizer combusts waste vapors from the dehydration units, the emission standards of 45CSR§6-4 are applicable to TO-01.

- a. Per 45CSR§6-4.1., PM emission limits for each unit are established using the following formula:

$$F \times \text{Incinerator Capacity (tons/hr)} = \text{Emissions (lbs/hr)}$$

The maximum rate at which the gas/waste gas is loaded into the thermal oxidizer is 668 lbs/hr (0.334 tons/hr). Since the incinerator capacity of the thermal oxidizer is less than 15,000 lbs/hr, the factor F is 5.43 for each unit in accordance with Table I of 45CSR§6-4.1.

The PM emission limit of the thermal oxidizer is:

$$5.43 \times 0.334 \text{ tons/hr} = 1.81 \text{ lbs/hr}$$

The thermal oxidizer TO-01 has the potential-to-emit PM at a rate of 0.07 lbs/hr. Therefore, as the limit established above is much greater than the potential emissions from the thermal oxidizer, compliance should be demonstrated through the NSR permit requirements to route waste vapors to the thermal oxidizer (Condition 7.1.3.a.), to operate the thermal oxidizer with a flame present (Condition 7.1.3.b.), and to continuously monitor for the presence of the pilot flame (Condition 7.2.1.).

- b. Although the facility is located in Ohio County, 45CSR§6-4.2. is inapplicable to the thermal oxidizer because industrial incinerators are exempt from the requirement.
- c. The thermal oxidizer must meet the 20% opacity limit of 45CSR§6-4.3., except as specified in 45CSR§6-4.4. As the potential PM emissions from the flare are minimal, compliance with the requirements should be demonstrated by operating the units with no visible emissions except for periods not to exceed five minutes in any two-hour period (Condition 7.1.3.e.), by operating the thermal oxidizer with a flame present (Condition 7.1.3.b.), and by conducting a Method 22 opacity test (Condition 7.3.1.).
- d. The thermal oxidizer is also subject to the standards in 45CSR§§6-4.5. and -4.6. which prohibit the emission of unburned refuse and require the prevention of objectionable odors from the flare, respectively.
- e. At the discretion of the Secretary, the permittee may also be required to conduct stack testing in accordance with 45CSR§§6-7.1. and -7.2.
2. **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*
3. **45CSR34** – *Emission Standards for Hazardous Air Pollutants*
4. **40 C.F.R. Part 63 Subpart HH** – *National Emission Standards for Hazardous Air Pollutants from Oil and Natural Gas Production Facilities*

Subpart HH of the NESHAP is applicable to facilities in the oil and natural gas production source category, which includes compressor stations that transport natural gas prior to a natural gas processing plant or the point of custody transfer. As the Pioneer Compressor Station is located prior to this point, the compressor station is a “production field facility” subject to Subpart HH.

Per the definition of a major source in 40 C.F.R. §63.761, the major source determination for production field facilities is determined by aggregating HAP emissions from only the glycol dehydration units and the storage vessels. As the potential HAP emissions are below major source thresholds, the Pioneer Compressor Station is an area source of HAPs. Therefore, the TEG dehydration units are the only affected sources subject to Subpart HH in accordance with §63.760(b)(2).

Provided that the actual average benzene emissions remain less than 0.90 megagrams per year (1 tpy) from each unit, 40 C.F.R. §§63.764(e)(1) and (e)(1)(ii) exempt the TEG dehydration units from the standards set forth in §63.764(d). With the exemption, the permittee is subject to the general requirement of §63.764(j); the monitoring requirements of §63.772(b)(2)(i); and the recordkeeping requirements of §§63.774(d)(1) and (d)(1)(ii). The conditional requirement of 40 C.F.R. §63.760(c) has also been included in the operating permit; the permittee is subject to this requirement if actual emissions of HAPs exceed or previously exceeded 5 tpy for a single HAP or 12.5 tpy for a combination of HAPs.

The table below describes each condition added to Section 7.0. of the Title V operating permit:

Title V Permit Condition	Summary of Permit Condition	Regulatory Citation	R13-3491B Condition
7.1.1.	The maximum throughput of dry natural gas for each dehydration unit/still column shall not exceed 125 mmscfd.	45CSR13	6.1.1.
7.1.2.	The thermal oxidizer shall be operated to achieve a control efficiency of 99.5% for VOC and HAP emissions from the dehydration units.	45CSR13	6.1.2.
7.1.3.	Design and operation requirements for the thermal oxidizer TO-01. The manufacturer has guaranteed that the thermal oxidizer will achieve the required destruction efficiency when operated at a minimum combustion chamber temperature of 1,650°F. This operating parameter has been specified in paragraph c. of this condition. The applicable emission standards of 45CSR6 have been added as paragraphs f.1. through f.5. of this condition.	45CSR§§6-4.1. and -4.3. through -4.6. 45CSR13 45CSR§30-5.1.c.	6.1.3.
7.1.4.	Maximum hourly and annual emission limits for NO _x , CO, VOCs, and aggregate HAPs from the thermal oxidizer.	45CSR13	6.1.4.
7.1.5.	Major source determination must be updated annually if actual emissions are greater than 5 tpy for a single HAP or 12.5 tpy for aggregate HAPs.	45CSR13 45CSR34 40 C.F.R. §63.760(c)	6.1.5.
7.1.6.	Exemption to the requirements of 40 C.F.R. §63.764(d) if actual average emissions of benzene from the TEG dehydration unit are less than 0.90 megagram per year (1 tpy).	45CSR13 45CSR34 40 C.F.R. §§63.764(e), (e)(1), and (e)(1)(ii)	6.1.6

Title V Permit Condition	Summary of Permit Condition	Regulatory Citation	R13-3491B Condition
7.1.7.	Any affected source must be operated and maintained in a manner consistent with safety and good air pollution control practices for minimizing emissions.	45CSR34 40 C.F.R. §63.764(j)	N/A
7.2.1.	Compliance with the thermal oxidizer's operation requirements in 7.1.3.b. and d. is demonstrated by monitoring the pilot flame with a thermocouple.	45CSR13	6.2.1.
7.2.2.	The dry natural gas throughput to the dehydration unit must be monitored.	45CSR13	6.2.2.
7.2.3.	The combustion chamber temperature shall be continuously monitored and recorded. Any deviations from the minimum temperature must be reported.	45CSR§30-5.1.c.	N/A
7.3.1.	Method 22 visible emissions testing must be conducted for the thermal oxidizer to demonstrate compliance with the requirements of Condition 7.1.3.e.	45CSR13	6.3.1.
7.3.2.	Upon request of the Director, compliance shall be demonstrated with the VOC and HAP emission limits of Condition 7.1.4. using GLYCalc Version 3.0 or higher.	45CSR13	6.3.2.
7.3.3.	Procedure to determine the actual average benzene emissions from the glycol dehydration units.	45CSR13 45CSR34 40 C.F.R. §§63.772(b)(2) and (b)(2)(i)	6.3.3.
7.3.4.	Parameters that must be included if the ProMax model is used as an alternative to the GLYCalc model.	45CSR13	6.3.4.
7.3.5.	The permittee must notify the responsible agency of the use of an alternative model.	45CSR13	6.3.5.
7.3.6.	The permittee must continue to use the ProMax model as an alternative until approved to use another method.	45CSR13	6.3.6.
7.3.7.	Particulate matter emissions testing for each combustor.	45CSR§§6-7.1. and -7.2.	N/A
7.4.1.	Compliance with Condition 7.1.1. must be demonstrated by maintaining records of the dry natural gas throughput for the dehydration units DSV-01 and DSV-02.	45CSR13	6.4.1.

Title V Permit Condition	Summary of Permit Condition	Regulatory Citation	R13-3491B Condition
7.4.2.	To demonstrate compliance with the emission limitations, the HAP major source thresholds, and the benzene exemption, the permittee must maintain records of monitoring data, wet gas sampling, and annual GRI-GLYCalc™/ProMax emission estimates.	45CSR13 45CSR§30-5.1.c.	6.4.2.
7.4.3.	Compliance with Condition 7.3.1. is demonstrated by maintaining records of each visible emission check.	45CSR13	6.4.3.
7.4.4.	Maintain records of the actual average benzene emissions to demonstrate that the permittee is exempt from the requirements of 40 C.F.R. §63.764(d).	45CSR13 45CSR34 40 C.F.R. §§63.764(e), 63.774(d)(1) and (d)(1)(ii)	N/A
7.4.5.	Maintain records of the combustion chamber temperature.	45CSR§30-5.1.c.	N/A
7.4.6.	Maintain a copy of the manufacturer’s operation and maintenance specifications on-site.	45CSR§30-5.1.c.	N/A
7.5.1.	If testing is required to demonstrate compliance with Condition 7.3.3., the permittee must submit testing protocol at least thirty days prior and a notification at least fifteen days prior to testing.	45CSR13	6.5.1.
7.5.2.	The permittee must report any deviations from the allowable visible emission requirements.	45CSR13	6.5.2.
7.5.3.	The permittee must report any deviations from the thermal oxidizer design or operation criteria of Condition 7.1.3.	45CSR13	6.5.3.
7.5.4.	Exemption to the reporting requirements for area sources meeting the benzene exemption and subject to 40 C.F.R. Part 63 Subpart HH.	45CSR34 40 C.F.R. §§63.775(c) and (c)(8)	N/A

Section 8.0. – Dehydration Unit Reboilers [Emission Point IDs: 12E and 13E]

Each TEG dehydration unit is associated with a 2.00 mmBTU/hr reboiler (RBV-01, RBV-02) which supplies heat to the regenerator/still. Lighter hydrocarbons formed in the flash tanks during dehydration operations are routed to the respective reboiler for fuel.

The reboilers are subject to the following regulations:

1. **45CSR2** – *To Prevent and Control Particulate Air Pollution from Combustion of Fuel in Indirect Heat Exchangers*

45CSR2 establishes particulate matter emission standards and requirements for fuel burning units. Per 45CSR§2-2.10., a fuel burning unit includes 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. Therefore, the reboilers are subject to the particulate matter emission standards of this rule.

The reboilers are subject to the visible emissions standards in 45CSR§2-3. The 10% opacity limit of 45CSR§2-3.1. has been included in the operating permit as Condition 8.1.2. Compliance with this limit is demonstrated through visible emission checks conducted in accordance with Method 9 of 40 C.F.R. Part 60 Appendix A, as designated by the Director. The permittee is also required to maintain records of each visible emission check and to report any deviations discovered during the observations.

As the reboilers each have a design heat input less than 10 mmBTU/hr, the permittee is exempt from the weight emission standards of Section 4; the fugitive emissions control standards of Section 5; the registration standards of Section 6; the testing, monitoring, recordkeeping, and reporting requirements of Section 8; and the start-up, shutdown, and malfunction requirements of Section 9 of this rule per 45CSR§2-11.1.

2. **45CSR10** – *To Prevent and Control Air Pollution from the Emission of Sulfur Oxides*

45CSR10 establishes sulfur oxides emission standards and requirements for fuel burning units. Per 45CSR§10-2.8., a fuel burning unit includes any furnace used in the process of burning fuel or other combustible material for the primary purpose of producing heat or power by indirect heat transfer. Therefore, the reboilers are subject to the emission standards of this rule.

However, per 45CSR§10-10.1., fuel burning units with a design heat input of less than 10 mmBTU/hr are exempt from the weight emission standards of Section 3; the registration requirements of Section 6; the permit requirements of Section 7; and the testing, monitoring, recordkeeping, and reporting requirements of Section 8. Furthermore, Section 4 is inapplicable because the reboilers are not part of a manufacturing process, and Section 5 is inapplicable because the units do not combust a refinery or other process gas stream.

Therefore, although the reboilers RBV-01 and RBV-02 are subject to 45CSR10, the emission units currently have no applicable requirements under this rule.

3. **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*

The table below describes each condition added to Section 8.0. of the Title V operating permit:

Title V Permit Condition	Summary of Permit Condition	Regulatory Citation	R13-3491B Condition
8.1.1.	Maximum design heat input of the reboilers.	45CSR13	7.1.1.
8.1.2.	45CSR2 visible emission limit.	45CSR§2-3.1. 45CSR13	7.1.2.
8.2.1.	Method 9 visible emissions observations shall be conducted at times designated by the Secretary.	45CSR13	7.2.1.
8.3.1.	Testing methods for visible emissions observations.	45CSR§2-3.2. 45CSR13	7.3.1.
8.4.1.	Compliance with Condition 8.2.1. shall be demonstrated by maintaining records of each visible emissions check.	45CSR13	7.4.1.

Title V Permit Condition	Summary of Permit Condition	Regulatory Citation	R13-3491B Condition
8.5.1.	The permittee must report any deviations from the allowable visible emissions limit.	45CSR13	7.5.1.

Section 9.0. – Condensate Storage Tanks and Produced Water Storage Tanks [Emission Point IDs: 15E to 22E]

Eight storage tanks with applicable requirements are operated at the Pioneer Compressor Station. Condensate from the condensate stabilizer (Emission Unit: STAB) is stored in six 400 bbl storage tanks (Emission Units: TK-01 to TK-06), and produced water from the inlet separator and the dehydrators are stored in two 400 bbl storage tanks (Emission Units: TK-07 and TK-08).

Gas vapors from the storage tanks are routed to a vapor recovery unit (Control Device: VRU-01) with a backup flare to achieve a 98% control efficiency for VOCs and HAPs. Condensate and produced water are removed from the facility via tanker trucks.

The storage tanks and vapor recovery unit are subject to the following regulations:

1. **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*

The table below describes each condition added to Section 9.0. of the Title V operating permit:

Title V Permit Condition	Summary of Permit Condition	Regulatory Citation	R13-3491B Condition
9.1.1.	VOC and HAP emissions from the tanks TK-01 to TK-08 must be routed to the vapor recovery unit VRU-01 to achieve a 98% control efficiency.	45CSR13	8.1.1.
9.1.2.	Maximum annual throughput of condensate/produced water to each storage tank.	45CSR13	8.1.3.
9.2.1.	The permittee must monitor the throughput of product to the storage tanks.	45CSR13	8.2.1.
9.2.2.	Compliance with Condition 9.1.1. is demonstrated by monitoring VRU-01 according to the plans and specifications and manufacturer’s recommendations.	45CSR13	8.2.2.
9.4.1.	Records for VRU-01 and TK-01 to TK-08 must be kept in accordance with Condition 3.4.2. of this operating permit.	45CSR13	8.3.1.
9.4.2.	Records of the aggregate throughput for the storage tanks must be maintained.	45CSR13	8.3.4.
9.4.3.	Design records, maintenance records, and records of downtime must be kept for VRU-01.	45CSR13	8.3.5.

Title V Permit Condition	Summary of Permit Condition	Regulatory Citation	R13-3491B Condition
9.5.1.	Upon request, the permittee must report deviations of when the control device was operated outside of the parameters of the monitoring plan.	45CSR13	8.4.1.
9.5.2.	The permittee must report if downtime of the VRU is in excess of 2%, based on the 12-month rolling total.	45CSR13	8.4.2.

Section 10.0. – Truck Loading [Emission Point ID: 23E]

Stabilized condensate and produced water collected into the storage tanks is removed from the facility via tanker trucks. Gas vapors from truck loading operations are routed to the vapor recovery unit VRU-01 for a 98% control efficiency of VOCs and HAPs.

The truck loading operations are subject to the following regulations:

1. **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*

The table below describes each condition added to Section 10.0. of the Title V operating permit:

Title V Permit Condition	Summary of Permit Condition	Regulatory Citation	R13-3491B Condition
10.1.1.	All above-ground piping, valves, pumps, etc. shall be installed, maintained, and operated to prevent any substantive fugitive emissions.	45CSR13	9.1.1.
10.1.2.	Maximum annual throughput of produced water in truck loading operations.	45CSR13	9.1.2.
10.1.3.	Maximum annual throughput of condensate in truck loading operations.	45CSR13	9.1.3.
10.1.4.	Truck loading operations must be completed with submerged filling and emissions must be controlled by the vapor recovery unit (VRU-01).	45CSR13	9.1.4.
10.4.1.	Records required in Section 10.4. must be kept in accordance with Condition 3.4.2.	45CSR13	9.3.1.
10.4.2.	Maintain records of the throughput for truck loading operations.	45CSR13	9.3.2.

Section 11.0. – Compressor Blowdown, Pigging, and Condensate Stabilizer Operations controlled by Elevated Flare [Emission Point IDs: 6E, 24E, 25E, and 14E]

Compressor blowdown and emergency shutdown testing (Emission Unit: CBD), pigging operations (Emission Unit: PIG), and condensate stabilizer operations (Emission Unit: STAB) are conducted at the facility. Emissions from CBD and PIG are routed to the elevated flare (Emission Unit: FLR-01). Emissions from STAB are normally captured by the vapor recovery unit VRU-01 and routed to the facility inlet; however, due to downtime for planned preventative

maintenance of the condensate stabilizer overheads compressor, the stabilizer overheads are sent to the elevated flare for up to five days per year. The elevated flare has a control efficiency of 98% for VOCs and HAPs.

The compressor blowdown, pigging, and condensate stabilizer operations and the elevated flare are subject to the following regulations:

1. **45CSR6** – *Control of Air Pollution from Combustion of Refuse*

This rule establishes emission standards to control the particulate matter (PM) emissions from the combustion of refuse. Under 45CSR§6-2.7., incineration is defined as “the destruction of combustible refuse by burning in a furnace designed for that purpose. For the purposes of this rule, the destruction of any combustible liquid or gaseous material by burning in a flare or flare stack, thermal oxidizer, or thermal catalytic oxidizer stack shall be considered incineration.” As the flare combusts waste vapors from the compressor blowdown events, the pigging events, and the condensate stabilizer operations, the emission standards of 45CSR§6-4 are applicable to the flare FLR-01.

- a. Per 45CSR§6-4.1., PM emission limits for each unit are established using the following formula:

$$F \times \text{Incinerator Capacity (tons/hr)} = \text{Emissions (lbs/hr)}$$

Based on the total volume of gas sent to the flare (5,730 scf/hr) and the average density of the gas (0.0585 lbs/scf), the maximum rate at which gas is loaded into the flare is 335.21 lbs/hr (0.1676 tons/hr). Since the incinerator capacity of the flare is less than 15,000 lbs/hr, the factor F is 5.43 in accordance with Table I of 45CSR§6-4.1.

Therefore, the PM emission limit of the flare is:

$$5.43 \times 0.1676 \text{ tons/hr} = 0.91 \text{ lbs/hr}$$

The flare FLR-01 has the potential-to-emit PM at a rate of 0.06 lbs/hr. Therefore, as the limit established above is much greater than the potential emissions from the flare, compliance should be demonstrated through the NSR permit requirements to monitor the waste gas throughput of the flare (Condition 11.1.6.), to operate the flare with a pilot flame when emissions are vented (Condition 11.1.8.), and to continuously monitor for the presence of the pilot flame (Condition 11.2.1.).

- b. Although the facility is located in Ohio County, 45CSR§6-4.2. is inapplicable to FLR-01 because flares are exempt from the requirement.
- c. The flare must meet the 20% opacity limit of 45CSR§6-4.3., except as specified in 45CSR§6-4.4. As the potential PM emissions from the flare are minimal, compliance with the requirements should be demonstrated through maintaining the pilot flame of the flare when emissions are vented as required by Condition 11.1.8. and by conducting Method 9 emission observations as required by Condition 11.3.1.
- d. The flare is also subject to the standards in 45CSR§§6-4.5. and -4.6. which prohibit the emission of unburned refuse and require the prevention of objectionable odors from the flare, respectively.
- e. At the discretion of the Secretary, the permittee may be required to conduct stack testing in accordance with 45CSR§§6-7.1. and -7.2.
2. **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*

The table below describes each condition added to Section 11.0. of the Title V operating permit:

Title V Permit Condition	Summary of Permit Condition	Regulatory Citation	R13-3491B Condition
11.1.1.	The annual limit for the number of compressor blowdown events and the volume per event.	45CSR13	10.1.1.
11.1.2.	The annual limits for the number of low pressure and high pressure pigging events as well as the maximum volume per event.	45CSR13	10.1.2.
11.1.3.	The annual limit for the number of plant shutdowns and the maximum volume per event.	45CSR13	10.1.3.
11.1.4.	The waste gas from compressor blowdown and pigging operations must be controlled at all times to achieve a 98% control efficiency for VOCs and HAPs.	45CSR13	10.1.4.
11.1.5.	NO _x , CO, and VOC emission limits for the elevated flare.	45CSR13	10.1.5.
11.1.6.	Annual limit for the volume of gas consumed in the flare.	45CSR13	10.1.7.
11.1.7.	45CSR6 applicable requirements for the flare, including the visible emissions requirement of Condition 10.1.8. of R13-3491B.	45CSR13 45CSR§§6-4.1. and -4.3. through -4.6.	10.1.8.
11.1.8.	The pilot flame of the flare must be operated at all times when emissions may be vented.	45CSR13	10.1.9.
11.1.9.	The flare shall be designed and operated in accordance with the application for R13-3491.	45CSR13	10.1.10.
11.1.10.	The condensate stabilizer overheads shall be routed to VRU-01, except for 120 hours per year during which the overheads must be routed to FLR-01.	45CSR13	10.1.12.
11.2.1.	Compliance with Condition 11.1.8. will be demonstrated by using a thermocouple to monitor the flare pilot flame.	45CSR13	10.2.1.
11.2.2.	Compliance with Condition 11.1.6. will be demonstrated by monitoring the throughput to the flare.	45CSR13	10.2.2.
11.3.1.	Compliance with the visible emissions limit of Condition 11.1.7.b. shall be demonstrated by conducting Method 9 emission observations as designated by the Secretary.	45CSR13	10.3.1.
11.3.2.	Particulate matter emissions testing for the flare.	45CSR§§6-7.1. and -7.2.	N/A
11.4.1.	Records required in Section 11.4. must be kept in accordance with Condition 3.4.2.	45CSR13	10.4.1.

Title V Permit Condition	Summary of Permit Condition	Regulatory Citation	R13-3491B Condition
11.4.2.	Compliance with 11.1.1. is demonstrated by maintaining a record of compressor blowdown events and the estimated volume per event.	45CSR13	10.4.2.
11.4.3.	Compliance with 11.1.2. is demonstrated by maintaining a record of pigging events and the estimated volume per event.	45CSR13	10.4.3.
11.4.4.	Compliance with 11.1.3. is demonstrated by maintaining a record of shutdown events and the estimated volume per event.	45CSR13	10.4.4.
11.4.5.	Compliance with 11.1.8. and 11.2.1. is demonstrated by maintaining a record of all the times and duration of periods when the pilot flame is absent.	45CSR13	10.4.5.
11.4.6.	Compliance with the visible emission requirement of 11.1.7.b. is demonstrated by maintaining records of testing conducted according to 11.3.1.	45CSR13	10.4.6.
11.4.7.	Records must be kept for the monitoring requirement of Section 11.2. and the testing requirements of Section 11.3.	45CSR13	10.4.7.
11.4.8.	Compliance with 11.1.10. is demonstrated by maintaining records of the hours that stabilization overheads are routed to the flare.	45CSR13	10.4.8.
11.5.1.	The results of visible emissions testing conducted according to 11.3.1. must be submitted within sixty days.	45CSR13	10.5.1.
11.5.2.	Any deviations from the allowable visible emissions limit of 11.1.7.b. must be reported within ten days.	45CSR13	10.5.2.
11.5.3.	Any deviations from the flare design and operation criteria of Condition 11.1.9 and the permit application for R13-3491 must be reported within ten days.	45CSR13	10.5.3.
11.5.4.	Emergency use of the flare must be reported to the Director.	45CSR13	10.5.4.
11.5.5.	The permittee must report any time the flare is not operating when emissions are vented to it.	45CSR13	10.5.5.

NOTE: Condition 10.1.11. of R13-3491B has not been included in this operating permit. This condition requires the permittee to comply with the emergency and affirmative defense requirements contained in Section 2.12. of the NSR permit. However, following the issuance of R13-3491B, the emergency requirements were removed from the general conditions of NSR permits and Title V operating permits as the authority for this section, 45CSR§30-5.7., was removed from the rule.

Non-Applicability Determinations

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

1. **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 Ohio County, and, therefore, the rule is inapplicable.
2. **45CSR27** – *To Prevent and Control the Emissions of Toxic Air Pollutants* – This rule does not apply to the Pioneer 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.
3. **40 C.F.R. Part 60 Subparts D, Da, Db, and Dc** – *Standards of Performance for Steam Generators* – As there are no steam generating units with a maximum design heat input equal to or greater than 10 mmBTU/hr operated at the facility, Subparts D, Da, Db, and Dc do not apply to the Pioneer Compressor Station per 40 C.F.R. §§60.40(a), 60.40Da(a), 60.40b(a), and 60.40c(a), respectively.
4. **40 C.F.R. Part 60 Subparts K, Ka, and Kb** – *Standards of Performance for Storage Vessels for Petroleum Liquids/Volatile Organic Liquids* – Subparts K and Ka do not apply to the Pioneer Compressor Station because construction of the storage vessels used at the facility began after the applicability dates of each subpart (Subpart K – after June 11, 1973 and prior to May 19, 1978; Subpart Ka – after May 18, 1978 and prior to July 23, 1984). Per 40 C.F.R. §60.110b(a), Subpart Kb does not apply to the facility because each volatile organic liquid storage vessel has a capacity less than 75 m³ (471.73 bbl).
5. **40 C.F.R. Part 60 Subpart GG** – *Standards of Performance for Stationary Gas Turbines* – Per 40 C.F.R. §60.330(a), Subpart GG does not apply because no stationary gas turbines with a heat input at peak load equal to or greater than 10 mmBTU/hr, based on the lower heating value, are operated at the facility.
6. **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* – The Pioneer Compressor Station is not a natural gas processing plant as defined in 40 C.F.R. §60.631 and, therefore, is not subject to the provisions of Subpart KKK.
7. **40 C.F.R. Part 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* – Per 40 C.F.R. §60.640(a), Subpart LLL does not apply because no sweetening units are operated at the compressor station.
8. **40 C.F.R. Part 60 Subpart IIII** – *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines* – This subpart does not apply because only spark ignition internal combustion engines are operated at the Pioneer Compressor Station.
9. **40 C.F.R. Part 60 Subpart KKKK** – *Standards of Performance for Stationary Combustion Turbines* – Per 40 C.F.R. §60.4305(a), Subpart KKKK does not apply because no stationary combustion turbines with a heat input at peak load equal to or greater than 10 mmBTU/hr, based on the higher heating value of the fuel, are operated at the facility.
10. **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* – Construction of the Pioneer Compressor Station began after the applicability date, and, therefore, Subpart OOOO does not apply to the facility.
11. **40 C.F.R. Part 63 Subpart HHH** – *National Emission Standards for Hazardous Air Pollutants from Natural Gas Transmission and Storage Facilities* – The Pioneer Compressor Station is not a natural gas transmission and storage facility located prior to a local distribution company or to a final end user. Additionally, the facility is not a major source of HAP emissions. Therefore, per 40 C.F.R. §63.1270(a), the Pioneer Compressor Station is not subject to Subpart HHH.

12. **40 C.F.R. Part 63 Subpart YYYY** – *National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines* – Per 40 C.F.R. §63.6080, Subpart YYYY does not apply because the Pioneer Compressor Station is not a major source of hazardous air pollutants.
13. **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* – Per 40 C.F.R. §63.7485, Subpart DDDDD does not apply because the Pioneer Compressor Station is not a major source of hazardous air pollutants.
14. **40 C.F.R. Part 63 Subpart JJJJJ** – *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources* – Per 40 C.F.R. §63.11195(e), gas-fired boilers are exempt from the standards of Subpart JJJJJ. Therefore, the natural gas-fired reboilers (RBV-01 and RBV-02) operated at the Pioneer Compressor Station are not subject to Subpart JJJJJ.
15. **40 C.F.R. Part 64** – *Compliance Assurance Monitoring (CAM)*

The condensate storage tanks (T-01 to T-06), the produced water tanks (T-07 and T-08), pigging operations (PIG), and condensate stabilizer operations (STAB) do not have pre-control device emissions that exceed the Title V major source thresholds. Therefore, per 40 C.F.R. §64.2(a)(3), the storage tanks, pigging operations, and condensate stabilizer operations are not subject to CAM.

The compressor engines (CE-01 to CE-04) are subject to the provisions of Subpart JJJJ of the NSPS and Subpart ZZZZ of the NESHAP. Therefore, the engines are exempt from CAM per 40 C.F.R. §64.2(b)(1)(i).

The CAM rule is applicable to each of the dehydration units (DFT-01/DSV-01 and DFT-02/DSV-02) and the compressor blowdown operations (CBD) for VOC emissions.

- a. Emissions of VOCs from the dehydration units are controlled by the thermal oxidizer TO-01 (§64.2(a)(2)); the thermal oxidizer is subject to an emission limit for VOCs under the NSR permit (§64.2(a)(1)); and each dehydration unit has pre-control device VOC emissions of 554.91 tpy which exceeds the Title V major source threshold (§64.2(a)(3)).

The dehydration units also meet the CAM applicability requirements for emissions of aggregate HAPs. However, as the dehydration units are subject to Subpart HH of the NESHAP, the dehydration units are exempt from CAM for emissions of aggregate HAPs per §64.2(b)(1)(i).

- b. Emissions of VOCs due to compressor blowdown operations are controlled by the elevated flare FLR-01 (§64.2(a)(2)); the flare is subject to emission limits for VOCs under the NSR permit (§64.2(a)(1)); and the compressor blowdown operations have pre-control device emissions of 189.30 tpy of VOCs which exceeds the Title V major source threshold (§64.2(a)(3)).

However, as the post-control device VOC emissions of the dehydration units and the compressor blowdown operations are below the Title V major source thresholds, each of these units are considered “Other Pollutant-Specific Emissions Units” in accordance with §64.5(b). Therefore, the submission of a CAM Plan is deferred until the renewal application is submitted for this operating permit.

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: March 27, 2024

Ending Date: April 26, 2024

Point of Contact

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

Sarah Barron
West Virginia Department of Environmental Protection
Division of Air Quality
601 57th Street SE
Charleston, WV 25304
304/414-1915
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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)

Not applicable.