West Virginia Department of Environmental Protection
Division of Air Quality

Fact Sheet

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

Permit Number: **R30-03900044-2019**
Application Received: **August 31, 2018**
Plant Identification Number: **039-00044**
Permittee: **Cranberry Pipeline Corporation**
Facility Name: **Staten Run Compressor Station**
Mailing Address: **102 3rd Street; Glasgow, WV 25086**

Physical Location:	Montgomery, Kanawha County, West Virginia
UTM Coordinates:	471.75 km Easting • 4226.49 km Northing • Zone 17
Directions:	Travel approximately 1.25 miles west of Smithers on U.S. Route 60 and the facility will be located on the right-hand side of the road.

Facility Description

Staten Run Compressor Station is a natural gas production facility covered by Standard Industrial Classification (SIC) Code 1311. The station has the potential to operate twenty-four (24) hours per day, seven (7) days per week, fifty-two (52) weeks per year. The station consists of one (1) TEG dehydrator, one (1) dehydrator reboiler, two (2) 412 HP natural gas compressor engines, one (1) 375 HP natural gas compressor engine, one (1) 115 HP natural gas compressor engine and five (5) storage tanks of various sizes.

Emissions Summary

Plantwide Emissions Summary [Tons per Year]

Regulated Pollutants	Potential Emissions	2017 Actual Emissions[1]
Carbon Monoxide (CO)	11.97	-
Nitrogen Oxides (NO_X)	180.27	-
Particulate Matter ($PM_{2.5}$)	1.20	-
Particulate Matter (PM_{10})	1.20	-
Total Particulate Matter (TSP)	1.20	-
Sulfur Dioxide (SO_2)	0.03	-
Volatile Organic Compounds (VOC)	24.53	-

PM_{10} is a component of TSP.

Hazardous Air Pollutants	Potential Emissions	2017 Actual Emissions[1]
Benzene	0.58	-
Toluene	0.96	-
Ethylbenzene	0.03	-
Xylene	0.62	-
n-Hexane	0.54	-
Formaldehyde	1.38	-
Other HAPs	0.52	-
Total HAPs	4.63	-

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

[1]This information is not available. This facility was not known to be a Title V source until early 2018. Therefore, no emissions have been reported for previous years.

Title V Program Applicability Basis

This facility has the potential to emit 180.27 TPY of NO_x. Due to this facility's potential to emit over 100 tons per year of criteria pollutant, Cranberry Pipeline Corporation 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	Indirect Heat Exchangers
	45CSR6	Open burning prohibited.

	45CSR11	Standby plans for emergency episodes.
	45CSR13	NSR permit
	WV Code § 22-5-4 (a) (14)	The Secretary can request any pertinent information such as annual emission inventory reporting.
	45CSR30	Operating permit requirement.
	45CSR34	HAP emission standards
	40 C.F.R. Part 61	Asbestos inspection and removal
	40 C.F.R. Part 63, Subpart HH	Oil and Natural Gas Production NESHAP
	40 C.F.R. Part 63, Subpart ZZZZ	RICE MACT
	40 C.F.R. Part 64	CAM
	40 C.F.R. Part 82, Subpart F	Ozone depleting substances
State Only:	45CSR4	No objectionable odors.

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 *(if any)*
R13-2863B	July 31, 2018	
CO-R13,30-E-2018-03	June 5, 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

Consent Order: CO-R13,30-E2018-03

On October 27, 2017, personnel from the DAQ conducted an inspection at the Staten Run Compressor Station. The most recent permit application (R13-2863A) for the Staten Run Station did not include the facility-wide potential to emit (PTE), and during the inspection, the DAQ requested the updated facility-wide PTE. On February 16, 2018, Cranberry Pipeline Corporation provided updated facility-wide PTE. Facility-wide total NO_x emissions of 180.4 tons per year were reported. Since NOx emissions were above 100 tons per year, Cranberry Pipeline Corporation was issued a Notice of Violation (NOV) on March 6, 2018, and the company was required to submit a Title V permit application.

Compliance Assurance Monitoring (CAM)
In accordance with 40 C.F.R § 64.2(a), CAM is applicable to the natural gas Dehydration Unit (Emission Point IDs: 001-04A and 001-04B).

The Dehydration Unit has pre-controlled potential emissions that exceed major source thresholds for volatile organic compounds (VOC), and is equipped with a JATCO No. 5-96 BTEX Eliminator that is used to comply with federally-enforceable emission limits associated with the dehy operation. A monitoring plan was submitted in accordance with 40 CFR §64.4(f). The submitted plan meets the requirements of the CAM rule for the Dehydration Unit (Emission Point IDs: 001-04A and 001-04B) and the JATCO No. 5-96 BTEX Eliminator controlling VOCs from the dehydration unit.

Monitoring per the CAM Plan for VOC emissions was included in Section 5.0 of this permit and is as follows:

			Indicator No. 1
I.	**Indicator**		BTEX Condenser exit gas temperature
	Monitoring Approach		Use of thermocouple to detect the presence of flame
II.	**Indicator Range or Designated Condition**		Excursion is a temperature greater than 125 °F
III.	**Performance Criteria**		Temperature of the BTEX condenser exit gas will be measured using a thermocouple with thermal well inserted into the center of the gas piping. The thermocouple shall have an of ±2.5°F.
	A.	**Data Representativeness**	
	B.	**Verification of Operational Status**	The operation of the monitoring device will be checked on a daily basis by gas control within their Supervisory Control and Data Acquisition (SCADA) system.
	C.	**QA/QC Practices and Criteria**	The monitor shall be calibrated at least once annual to ensure continuing validity.
	D.	**Monitoring Frequency**	Once per 24 hour period
		Data Collection Procedures	Logging to Electronic SCADA system
		Data averaging periods	Averaging periods are not applicable to this device.

Section 3.0: Facility-Wide Requirements
In addition to Title V boilerplate language, the following additions were made in this permit:

- Condition 3.1.9. was added to this permit requiring the facility to be a minor HAP source. This condition references condition 4.1.2 of R13-2863B.
- Condition 3.4.1. requires records of monitoring information. A reference to condition 4.1.1. of R13-2863B was added.

Section 4.0: BTEX Elimination System [Control Device ID(s): 1C]
This section contains two NSR permit requirements for this system:

- Condition 4.1.1. requires operation and maintenance of the system in accordance with safety and good air pollution control practices. This condition references condition 4.1.3. of R13-2863B.
- Condition 4.4.1. contains recordkeeping requirements for malfunctions of air pollution control equipment. This condition references condition 4.1.4. of R13-2863B.

Section 5.0: Natural Gas Dehydration Unit [emission point ID(s): 001-04A and 001-04B]
This section addresses the natural gas dehydration unit, and applicable requirements are summarized in the table below. The natural gas dehydration unit is subject to:

- NSR permit requirements
- 40CFR63, Subpart HH
- 45CSR2
- 40CFR64

Condition Number	Summary of Permit Condition	Regulatory Citation	R13-2863B Condition
5.1.1.	Throughput limit	N/A	5.1.1.
5.1.2.	Maximum design heat input	N/A	5.1.2.
5.1.3.	Gas consumption limit for reboiler	N/A	5.1.3.
5.1.4.	Reboiler emission limits	N/A	5.1.4.
5.1.5.	Aggregate emission limits from still vent and flash tank	N/A	5.1.5.
5.1.6.	Operation of dehydration unit	N/A	5.1.6.
5.1.7.	1 TPY benzene exemption (40 CFR63, Subpart HH)	45CSR34; 40CFR§63.764(e)(1)(ii)	5.1.7.
5.1.8.	10% opacity limit	45CSR§2-3.1	N/A
5.2.1.	Monitoring of gas throughput	N/A	5.2.1.
5.2.2.	Monitor throughput of liquid gathered in storage from condenser	N/A	5.2.2.
5.2.3.	No usage limit for regeneration gas heater	N/A	5.2.3.
5.2.4.	Monitor temperature of building storing BTEX elimination system	N/A	5.2.4.
5.2.5.	Compliance with benzene exemption	45CSR34; 45CSR§13-5.10; 40CFR§63.772(b)(2)	5.2.5.
5.2.6.[1]	Monitor the temperature of the BTEX condenser exit gas using a thermocouple	45CSR§30-5.1.c; 40 C.F.R. §§64.6(c), 64.7(b), 64.7(c), 64.7(d)	N/A
5.2.7.[1]	Proper maintenance of monitoring equipment	45CSR§30-5.1.c; 40 C.F.R. §64.7(b)	N/A
5.2.8.[1]	Continued operation	45CSR§30-5.1.c; 40 C.F.R. §64.7(c)	N/A
5.2.9.[1]	Response to excursions or exceedances	45CSR§30-5.1.c; 40 C.F.R. §64.7(d)	N/A
5.2.10.[1]	Documentation of need for improved monitoring	45CSR§30-5.1.c; 40 C.F.R. §64.7(e)	N/A
5.2.11.[1]	Quality improvement plan (QIP)	40 C.F.R. §64.8; 45CSR§30-5.1.c	N/A
5.4.1.	Records of natural gas throughput	N/A	5.3.1.
5.4.2.	Records of condensate gathered	N/A	5.3.2.
5.4.3.	Records of gas consumed by reboiler	N/A	5.3.3.
5.4.4.	Temperature records of building storing BTEX elimination system	N/A	5.3.4.
5.4.5.	Records of PTE HAP calculation	N/A	5.3.5.
5.4.6.	Records of actual average benzene emissions	45CSR34; 40CFR§63.774(d)(1)(ii)	N/A
5.4.7.[1]	Records of the temperature of the BTEX condenser exit gas	45CSR§30-5.1.c; 40 C.F.R. §64.9(b)	N/A

Condition Number	Summary of Permit Condition	Regulatory Citation	R13-2863B Condition
5.4.8.[1]	Records documenting periodic testing/checks, calibration, and/or maintenance of the thermocouple	45CSR§30-5.1.c; 40 C.F.R. §64.9(b)	N/A
5.4.9.[1]	General recordkeeping requirements for 40 C.F.R. Part 64 (CAM).	45CSR§30-5.1.c; 40 C.F.R. §64.9(b)	N/A
5.5.1.[1]	General reporting requirements for 40 C.F.R. Part 64 (CAM)	40 C.F.R. § 64.9(a); 45CSR§30-5.1.c	N/A

[1]CAM Requirement

Section 6.0: AJAX DPC 120 Compressor Engine [emission point ID(s): 001-005]
This section contains NSR permit requirements for the AJAX Compressor Engine:

Condition Number	Summary of Permit Condition	R13-2863B Condition
6.1.1.	Natural gas consumption rate	6.1.1.
6.1.2.	Emission limits	6.1.2.
6.4.1.	Records of gas consumption and hours of operation	6.2.1.

Section 7.0: Engines: 40CFR63, Subpart ZZZZ Requirements [emission point ID(s): 001-02, 001-03, 001-05, 001-005]

The engines at this facility are non-emergency engines rated below 500 hp at an area source of HAPs. They are all natural gas-fired four stroke rich burn or two stroke lean burn engines. The applicable requirements for these engines are summarized below:

Condition Number	Summary of Permit Condition	Regulatory Citation	R13-2863B Condition
7.1.1.	Emission and operating limitations	45CSR34; 40 C.F.R. §§63.6603(a) and 63.6625(h); Table 2d of 40CFR63, Subpart ZZZZ	7.1.1.
7.1.2.	Operate according to emission related instructions or develop maintenance plan	45CSR34; 40CFR§63.6625(e)	N/A
7.1.3.	Oil analysis program option	45CSR34; 40CFR§63.6625(j)	N/A
7.1.4.	Compliance requirements	45CSR34; 40CFR§63.6605	N/A
7.1.5.	General provisions from 40CFR63	45CSR34; 40CFR§§63.6645(a)(5) and 63.6665	N/A
7.1.6.	Continuous compliance	45CSR34; 40CFR§63.6640(a); Table 6 of 40CFR63, Subpart ZZZZ	N/A
7.4.1.	Records for continuous compliance and maintenance	45CSR34; 40CFR§§63.6655(d) and (e)	N/A
7.5.1.	Report when the permittee did not meet the requirements in Table 8 of 40CFR63, Subpart ZZZZ	45CSR34; 40CFR63.6640(e)	N/A

Section 8.0: Storage Tanks [emission point ID(s): T03, T05, T06]
This section contains NSR permit requirements for the storage tanks:

Condition Number	Summary of Permit Condition	R13-2863B Condition
8.1.1.	Maximum throughput	8.1.1.
8.1.2.	Tank sizes and material stored	8.1.2.
8.4.1.	Records of maximum aggregate throughput	8.2.1.
8.4.2.	Maintenance and availability of records	8.2.2.

Section 9.0: Pipeline Liquids Truck Loadout [emission point ID(s): TL-1]
This section contains NSR permit requirements for pipeline liquids truck loadout:

Condition Number	Summary of Permit Condition	R13-2863B Condition
9.1.1.	Maximum quantity of pipeline liquids to be loaded	9.1.1.
9.1.2.	Loading using submerged-fill method	9.1.2.
9.4.1.	Records of amount of pipeline liquids loaded	9.2.1.
9.4.2.	Maintenance and availability of records	9.2.2.

Section 10.0: Compressor Blowdowns and Fugitive Emissions [emission point ID(s): Blowdowns]
This section contains NSR permit requirements for compressor blowdowns and fugitive emissions:

Condition Number	Summary of Permit Condition	R13-2863B Condition
10.1.1.	Annual compressor blowdown limit	10.1.1.
10.1.2.	Operate to prevent substantive fugitive emissions	10.1.2.
10.2.1.	Monitoring and recordkeeping of blowdowns	10.2.1.
10.5.1.	Reporting of blowdowns	10.3.1.

Non-Applicability Determinations

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

a. 40 CFR 60 Subpart Dc – Standards of Performance for Steam Generating Units: The reboiler at this facility is less than 10 mmBtu/hr; hence Subpart Dc is not applicable in accordance with 40CFR§60.40c(a).

b. 40 CFR 60 Subparts K,Ka – Standards of Performance for Storage Vessels for Petroleum Liquids: All tanks at the facility are below 40,000 gallons in capacity and are not subject as specified in 40CFR§§60.110(a) and 60.110a(a).

c. 40 CFR 60 Subpart Kb – Standards of Performance for Volatile Organic Liquid Storage Vessels: All tanks at the facility are below 75m^3 (19,813 gallons) in capacity and are not subject as specified in 40CFR§60.110b(a).

d. 40 CFR 60 Subpart KKK – Standards of Performance for Equipment Leaks of VOC From Onshore Natural Gas Processing Plants: This compressor station is not engaged in the extraction or fractionation of natural gas liquids from field gas, the fractionation of mixed natural gas liquids to natural gas products, or both.

e. 40 CFR 60 Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines: There are no compression ignition engines at this facility.

f. 40 CFR 60 Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines: All engines at the facility were constructed, reconstructed, or modified prior to the June 12, 2006 applicability date listed in 40CFR§60.4230(a)(4).

g. 40 CFR 60 Subpart 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: Compressor Engine #4 does not meet the definition of "modification" under the NSPS since it was relocated and not "reconstructed" or "physically modified" and therefore is not subject to this subpart. Also, the Storage Vessel requirements for pipeline liquids tanks T03, T05, & T06 were found not to be applicable because potential emissions are well below 6 tpy of VOC in accordance with 40CFR§60.5365(e). No other affected sources were identified at this site.

h. 40 CFR 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 GHG and VOC requirements defined by this NSPS are not applicable to this site because there were no affected sources that commenced construction, modification, or relocation after September 18, 2015 in accordance with 40CFR§60.5365a.

i. 40 CFR 63 Subpart HHH – National Emission Standards for Hazardous Air Pollutants from Natural Gas Transmission and Storage Facilities: This rule does not apply because this facility is not a natural gas transmission or storage facility transporting or storing natural gas prior to local distribution and is not a major source of HAP emissions, as specified in §63.1270(a).

j. 40 C.F.R. 63 Subpart DDDDD – National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters: This subpart does not apply to the facility since it is not a major source of HAPs as defined in 40CFR§63.7575.

k. 40 C.F.R. 63 Subpart JJJJJJ – National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources: This subpart does not apply to the facility since the reboiler is fueled by natural gas as defined in 40CFR§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:	Saturday, December 29, 2018
Ending Date:	Monday, January 28, 2019

Point of Contact

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

Rex Compston, P.E.
West Virginia Department of Environmental Protection
Division of Air Quality
601 57th Street SE
Charleston, WV 25304
Phone: 304/926-0499 ext. 1209 • Fax: 304/926-0478
Rex.E.Compston@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)

On January 28, 2019, the permittee provided the following comments regarding the CAM temperature limit on the dehydration condenser:

> The language within condition 5.2.6 should be changed to reflect that an excursion is defined as a temperature "greater" than 125 °F as follows:
>
> 5.2.6 The permittee shall monitor, once per 24-hour period, the temperature of the BTEX condenser exit gas using a thermocouple with thermal well insert into the center of the gas piping. The thermocouple shall have a minimum acceptable accuracy of ± 2.5 °F. An excursion is defined as a temperature ~~less~~ greater than 125 °F. Excursions trigger a system inspection and corrective action.
>
> All manufacturer's recommendations regarding periodic testing/checks for proper installation and operation of the thermocouple shall be followed. Calibration and maintenance of the thermocouple shall be conducted annually in accordance with manufacturer's specifications.
> **[45CSR§30-5.1.c; 40 C.F.R. §§64.6(c), 64.7(b), 64.7(c), 64.7(d)]**
>
> If the condenser is cooling the gas to no more than 125 °F then it is working as designed. It's only when this temperature threshold is exceeded that the condenser's efficiency would decline beyond what was used to calculate the unit's emission limits.
>
> This also affects condition 5.4.7 within the recordkeeping section, which refers to this limit. Specifically, "below" should be changed to "above".

The WV Division of Air Quality (DAQ) agrees with the requested change, and the revisions were made to the permit.