

Fact Sheet



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

Permit Number: **R30-10900017-2012**
Application Received: **December 5, 2011**
Plant Identification Number: **03-54-109-00017**
Permittee: **Cranberry Pipeline Corporation**
Facility Name: **Bradley Compressor Station**
Mailing Address: **5 Penn Center West, Suite 401, Pittsburgh, PA 15276-0120**

Physical Location: Fanrock, Wyoming County, West Virginia
UTM Coordinates: 443.5 km Easting • 4155.3 km Northing • Zone 17
Directions: From the town of Pineville, travel west on WV State Route 97 for approximately 14 miles and then turn south (left) onto Brier Creek Road. Once on Brier Creek Road, travel 4 miles to the compressor station on the right.

Facility Description

Cranberry Pipeline Corporation's Bradley Compressor Station is covered by SIC Code 1311 and NAICS Code 211111. The Bradley Compressor Station compresses low pressure natural gas to a high pressure pipeline system. Before the natural gas enters the high pressure pipeline system, a triethylene glycol dehydration unit extracts water from the wet natural gas stream. The station consists of one (1) 515 HP, one (1) 1100 HP, one (1) 1150 HP, and one (1) 1775 HP natural gas compressor engines; one (1) 2,000 ft³/hour Petrofab dehydrator unit with a reboiler; and nine (9) storage tanks of various sizes.

The facility has the potential to operate twenty-four (24) hours per day, seven days per week, and fifty-two (52) weeks per year.

Emissions Summary

Plantwide Emissions Summary [Tons per Year]		
Regulated Pollutants	Potential Emissions	2010 Actual Emissions
Carbon Monoxide (CO)	101.57	101.57
Nitrogen Oxides (NO _x)	65.48	65.48
Particulate Matter (PM ₁₀)	1.51	1.51
Total Particulate Matter (TSP)	1.51	1.51
Sulfur Dioxide (SO ₂)	0.09	0.09
Volatile Organic Compounds (VOC)	20.97	20.91
<i>PM₁₀ is a component of TSP.</i>		
	Potential Emissions	2010 Actual Emissions
Benzene	0.27	0.2693
Hexane	0.22	0.2164
Formaldehyde	7.57	7.5444
Toluene	0.33	0.3261
Xylene	0.7448	0.7448
Total HAPs	9.1348	9.101
<i>Some of the above HAPs may be counted as PM or VOCs.</i>		

Title V Program Applicability Basis

This facility has the potential to emit 101.57 tons per of Carbon Monoxide (CO). Due to this facility's potential to emit over 100 tons per year of criteria pollutant, Cranberry Pipeline Corporation's Bradley 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 | Opacity requirement for dehydrator |
| | 45CSR6 | Open burning prohibited. |
| | 45CSR10 | Sulfur Oxides emission |

	45CSR11	Standby plans for emergency episodes.
	45CSR13	Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits, and Procedures for Evaluation
	WV Code § 22-5-4 (a) (14)	The Secretary can request any pertinent information such as annual emission inventory reporting.
	45CSR30	Operating permit requirement.
	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	Particulate fugitive

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>)
R13-2127E	August 7, 2007	

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 B," which may be downloaded from DAQ's website.

Determinations and Justifications

Since R30-10900017-2007 was issued, there have been no changes to the Cranberry Pipeline Corporation Bradley Compressor Station Title V Permit.

The following updates were made to the renewal permit:

1. The Emission Unit Table 1.1 was revised to include 9 storage tanks at the facility. These tanks have no applicable requirements.
2. The regulatory language for Sections 3.1.1 and 3.1.2, 45CSR§§6-3.1 and 3.2, was updated.
3. 45CSR34 incorporates and is now cited with 40 C.F.R. Part 61 because 45CSR15 was repealed. The citation for 3.1.3 has been revised accordingly.
4. The boilerplate language for Section 3.3.1 was revised with the addition of Section 3.3.1.d and the citation was also revised to expand the authority of the West Virginia state code.
5. In Section 3.5.3, the US EPA Region 3's address was revised. This is a general change to the boiler plate language.
6. Replaced "N/A" in Section 3.7.2 of the second renewal Title V permit with a table of non-applicable requirements.
7. Section 4.4.1 from previous Title V permit was removed since the two (2) 825 HP engines (001-05 and 001-06) were removed and the 515 HP engine (001-03) was installed in 2007.
8. 40 C.F.R. Part 63 Subpart ZZZZ area source requirements were incorporated in Sections 4.1.9 through 4.1.15, 4.2.1, 4.3.1 through 4.3.4, 4.4.1 through 4.4.3, and 4.5.1 through 4.5.9.
9. The language in Section 5.2.3 was revised to provide clarifications for GLYCalc emission modeling. This new language lists actual operating parameters to be measured and used in the modeling and provides operating parameter default values that can be also be used.
10. The language in Section 5.3.1 was revised. The previous Section 5.3.1 required wet gas sampling and GRI-GLYCalc emission estimates within 180 days of permit issuance or within 180 days of start-up of the dehydration unit with subsequent testing based on HAP emissions. For a source such as the Bradley Compressor Station, with HAP emissions 85 percent or less than major source thresholds (10 TPY of a single HAP or 25 TPY of aggregate HAPs), no further testing was required except as ordered by the Director. The new language included as Sections 5.3.1 and 5.5.1 requires wet gas sampling within the 3rd year of the permit term with submittal of the emission summary which incorporates the wet gas sampling results the following year.
11. Section 5.4.2 has been included for maintaining records of annual GLYCalc emission estimates, wet gas sampling, and monitoring data. The annual GLYCalc emission estimates are for documenting compliance with the emission limitations for the dehydration still vent, as well as the 1 ton per year benzene exemption.

Cranberry Pipeline Corporation has not submitted any modifications to the Bradley Compressor Station that triggered a PSD permit; therefore, the requirements of the GHG tailoring rule do not apply.

40 C.F.R. Part 63 Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

The Cranberry Pipeline Corporation Bradley Compressor Station has 1775 HP, 1150 HP, and 1100 HP reciprocating engines, each with integral compressors that are subject to the area source provisions of 40 C.F.R. Part 63 Subpart ZZZZ. These reciprocating engines with integral compressors were constructed prior to June 12, 2006. The facility shall comply with all applicable requirements of 40 C.F.R. Part 63 Subpart ZZZZ by October 19, 2013 per 40 C.F.R. § 63.6595 (see Section 4.1.9.).

Although non-major area source MACT provisions under 40 C.F.R. Part 63 Subpart ZZZZ are excluded from state delegation in 45CSR34, these requirements are applicable requirements under 45CSR§30-2.6.d, which includes any requirement subject to §112 of the CAA.

The 1100 HP (001-09), 1150 HP (001-00B), and 1775 HP (001-00C) engines are existing spark-ignition (SI) four-stroke lean burn (4SLB) Reciprocating Engines/Integral Compressors greater than 500 HP, located at an area source of HAPs.

Engines (001-09, 001-00B, 001-00C) are subject to the requirements for a non-emergency, non-black start 4SLB stationary RICE (limit concentration of CO in the stationary RICE exhaust to 47 ppmvd at 15 percent O₂; or reduce CO emissions by 93 percent or more) in Table 2d, Item 8.

Following, are the applicable RICE MACT requirements according to the “Summary of Requirements” table provided by EPA.

Emission Unit ID	Emission Limitations	Operating Limitations	Performance Testing	Monitoring Requirements	Initial Compliance	Continuous Compliance	Notification Requirements	Record-keeping Requirements	Reporting Requirements
001-09	§ 63.6603	§ 63.6603	§ 63.6612	§§ 63.6625	§ 63.6630	§ 63.6605	§ 63.6645	§§63.6655	§§ 63.6650
001-0B	Table 2d	Table 2b	§ 63.6615	(a), (b), (h),	Table 5	§ 63.6635		(a), (b),	(a) – (f)
001-0C			§ 63.6620	(k)		§ 63.6640		(d)	
			Table 3						
			Table 4						
			Table 5						

Engines (001-09, 001-00B, and 001-00C) are also subject to the general provisions of 40 C.F.R. Part 63.

The 515 HP (001-03) is a 4-stroke lean burn reciprocating engine with integral compressor at an area source that was manufactured on February 27, 2007 and installed on November 19, 2007. According to 40 C.F.R. § 63.6590 (a) (2) (iii), the 515 HP is a new stationary RICE under 40 C.F.R. Part 63 Subpart ZZZZ. 40 C.F.R. § 63.6590 (c) (1) states that a new stationary RICE located at an area source must meet the requirements of 40 C.F.R. Part 63 Subpart ZZZZ by meeting the requirements of 40 C.F.R. Part 60 Subpart JJJJ for spark ignition engines. Since the 515 HP was manufactured before the applicable dates for 40 C.F.R. Part 60 Subpart JJJJ specified in 40 C.F.R. § 60.4230 (a) (4) (i), the 515 HP does not have to meet any requirements of 40 C.F.R. Part 60 Subpart JJJJ or 40 C.F.R. Part 63 Subpart ZZZZ.

Non-Applicability Determinations

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

45 C.S.R. 21	To Prevent and Control Air Pollution from the Emission of Volatile Organic Compounds. The Bradley Compressor Station is not located in Cabell, Kanawha, Putnam, Wayne, or Wood counties.
45 C.S.R. 27	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. C.S.R. § 45-27-2.4 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.”
40 C.F.R. Part 60 Subpart GG	Standards of Performance for Stationary Gas Turbines. There are no turbines located at the Bradley Compressor Station.
40 C.F.R. Part 60 Subparts K, Ka	Standards of Performance for Storage Vessels for Petroleum Liquids. All tanks at the Bradley Compressor Station are below 40,000 gallons in capacity.

40 C.F.R. Part 60 Subpart Kb	Standards of Performance for Volatile Organic Liquid Storage Vessels. All tanks storing volatile organic liquids at the Bradley Compressor Station are below 75 m ³ in capacity.
40 C.F.R. Part 60 Subpart KKK	Standards of Performance for Equipment Leaks of VOC from Onshore Natural Gas Processing Plants. The Bradley Compressor Station is not engaged in the extraction of natural gas liquids from field gas or in the fractionation of mixed natural gas liquids to natural gas products.
40 C.F.R. Part 60 Subpart IIII	Standards of Performance for Stationary Compression Ignition Internal Combustion Engines. The 1775 HP, 1150 HP, 1100 HP, and 515 HP reciprocating engines with integral compressors are not fired by diesel fuel. Thus, these engines are not subject to 40 C.F.R. Part 60 Subpart IIII.
40 C.F.R. Part 60 Subpart JJJJ	Standards of Performance for Stationary Spark Ignition Internal Combustion Engines. The 1775 HP, 1150 HP, and 1100 HP are 4-stroke lean burn reciprocating engines with integral compressors that were constructed before June 12, 2006 and are fired by natural gas at an area source. The 515 HP is a 4-stroke lean burn reciprocating engine with integral compressor fired by natural gas at an area source and was manufactured on February 27, 2007 and installed on November 19, 2007. According to 40 C.F.R. § 63.6590 (a) (2) (iii), the 515 HP is a new stationary RICE under 40 C.F.R. Part 63 Subpart ZZZZ. 40 C.F.R. § 63.6590 (c) (1) states that a new stationary RICE located at an area source must meet the requirements of 40 C.F.R. Part 63 Subpart ZZZZ by meeting the requirements of 40 C.F.R. Part 60 Subpart JJJJ for spark ignition engines. Since the 515 HP was manufactured before the applicable dates for 40 C.F.R. Part 60 Subpart JJJJ specified in 40 C.F.R. § 60.4230 (a) (4) (i), the 515 HP does not have to meet any requirements of 40 C.F.R. Part 60 Subpart JJJJ or 40 C.F.R. Part 63 Subpart ZZZZ.
40 C.F.R. Part 63 Subpart HHH	National Emission Standards for Hazardous Air Pollutants From Natural Gas Transmission and Storage Facilities. The Bradley Compressor Station is not subject to Subpart HHH since the station is not a major source of HAPs.
40 C.F.R. Part 63 Subpart ZZZZ	National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines. The 515 HP is a 4-stroke lean burn reciprocating engine with integral compressor at an area source of HAPs that was manufactured before the applicable dates in 40 C.F.R. § 60.4230 (a) (4) (i). The 515 HP does not have to meet any requirements of 40 C.F.R. Part 60 Subpart JJJJ or 40 C.F.R. Part 63 Subpart ZZZZ.
40 C.F.R. Part 64	This is the second permit renewal for this facility. During the first renewal, it was determined that CAM is not applicable to the engines and dehydration unit since they do not have add-on controls in accordance with 40 C.F.R § 64.2 (a). Therefore, a CAM determination is not required.

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 28, 2012
 Ending Date: April 27, 2012

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

Wayne Green
Title V Permit Writer
West Virginia Department of Environmental Protection
Division of Air Quality
601 57th Street SE
Charleston, WV 25304

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.

Point of Contact

Wayne Green
West Virginia Department of Environmental Protection
Division of Air Quality
601 57th Street SE
Charleston, WV 25304
Phone: 304/926-0499 ext. 1258 • Fax: 304/926-0478

Response to Comments (Statement of Basis)

Not applicable.