

Fact Sheet



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

Permit Number: **R30-03900051-2017**
Application Received: **November 28, 2016**
Plant Identification Number: **039-00051**
Permittee: **Dominion Transmission, Inc.**
Facility Name: **Cornwell Station**
Mailing Address: **925 White Oaks Blvd., Bridgeport, WV 26330**

Revised: *N/A*

Physical Location: Clendenin, Kanawha County, West Virginia
UTM Coordinates: 476.19 km Easting • 4,259.58 km Northing • Zone 17
Directions: From I-79, take exit 10 to WV State Route 4, then take Route 4 north to Clendenin, cross Elk River on Queen Shoals Road (Route 1). Turn left onto River Haven Road (Route 1/6) and proceed 2.5 miles to station.

Facility Description

Cornwell Station is a natural gas transmission and production station covered by SIC Code 4922. The natural gas is compressed to a higher pressure by the 13 integral compressors powered by the natural gas-fired reciprocating engines. The station also has one (1) 23 mmscf/day glycol dehydration unit with flare and a 0.62 mmBtu/hr boiler. The dehydration system and engines EN07, EN08, and EN09 are on a production line.

Emissions Summary

Plantwide Emissions Summary [Tons per Year]		
Regulated Pollutants	Potential Emissions	2015 Actual Emissions
Carbon Monoxide (CO)	515.04	235.00
Nitrogen Oxides (NO _x)	3,301.00	812.01
Particulate Matter (PM _{2.5})	17.12	0.06
Particulate Matter (PM ₁₀)	17.12	2.05
Total Particulate Matter (TSP)	23.17	4.07

Regulated Pollutants	Potential Emissions	2015 Actual Emissions
Sulfur Dioxide (SO ₂)	0.39	0.12
Volatile Organic Compounds (VOC)	450.15	200.46
<i>PM₁₀ is a component of TSP.</i>		
Hazardous Air Pollutants	Potential Emissions	2015 Actual Emissions
Formaldehyde	32.57	9.10
Acrolein	4.29	1.37
Acetaldehyde	4.82	1.62
Benzene	1.35	0.72
Ethylbenzene	0.05	0.02
Toluene	1.39	0.51
Xylene	1.18	0.47
Hexanes	0.66	0.22

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

Title V Program Applicability Basis

This facility has the potential to emit 515 tons per year of CO, 3301 tons per year of NO_x, 450 tons per year of VOCs, and 33 tons per year of Formaldehyde. Due to this facility's potential to emit over 100 tons per year of criteria pollutants, over 10 tons per year of a single HAP, and over 25 tons per year of aggregate HAPs, Dominion Transmission, Inc.'s Cornwell 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	PM emissions
45CSR6	Open burning prohibited
45CSR10	SO ₂ emissions
45CSR11	Standby plans for emergency episodes
45CSR13	Construction Permits
45CSR16	Performance Standards 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 requirement
45CSR34	Emission Standards for HAPs
40 CFR Part 60, subpart JJJJ	NSPS for Internal Combustion Engines
40 CFR Part 60, subpart OOOO	NSPS for Natural Gas Production, Transmission, and Distribution
40 CFR Part 61	Asbestos inspection and removal
40 CFR Part 82, Subpart F	Ozone depleting substances
40 CFR Part 63, subpart HH	Natural Gas Production MACT

	40 CFR Part 63, subpart ZZZZ	Reciprocating Internal Combustion Engines MACT
State Only:	45CSR4 45CSR17	No objectionable odors. 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>)
R13-2175D	April 30, 2012	
R13-2346E	May 2, 2017	

Conditions from this facility's Rule 13 permit(s) governing construction-related specifications and timing requirements will not be included in the Title V Operating Permit but will remain independently enforceable under the applicable Rule 13 permit(s). All other conditions from this facility's Rule 13 permit(s) governing the source's operation and compliance have been incorporated into this Title V permit in accordance with the "General Requirement Comparison Table," which may be downloaded from DAQ's website.

Determinations and Justifications

This is a permit renewal for this facility and includes a significant modification incorporating R13-2346D and a minor modification incorporating R13-2346E. The following changes have occurred since the last permit modification was issued:

Title V Boilerplate changes: Conditions 3.5.3., 3.5.5., and 3.5.6. were revised to address electronic submittal of documentation, including the annual certification and semi-annual monitoring reports, to the DEP.

Equipment Table: Removed air compressor, CPR01, from the table because it has been removed from the facility. Added storage tanks as requested by the permittee.

Other changes: Old condition 5.4.1. was deleted because it was redundant with old condition 5.4.9.

Condition 7.4.1.b. was amended to remove references to emergency engines since this is not an emergency engine. Old condition 7.4.1.c. was removed because the initial notification requirement was completed.

R13-2346D: The permittee applied for an amendment to R13-2346C and for a significant modification to the Title V permit on November 28, 2016, to remove the requirements for major sources of Hazardous Air Pollutants (HAPs) under 40 CFR 63 Subpart HH and replace them with the applicable area source requirements under Subpart HH. The significant modification has been combined with this renewal. The changes involve removal of all references to the Subpart HH requirements relating to major sources of HAPs (including Appendix A) and replacing them with the Subpart HH requirements relating to area sources. Conditions 5.1.10., 5.2.5., and 5.4.5. reflect these changes and conditions 3.1.10. and 3.4.4. were deleted. There was no increase in emissions as a result of the changes.

R13-2346E: The permittee applied for an amendment to R13-2346D and for a minor modification to the Title V permit on May 1, 2017 to add a requirement to monitor the flare pilot flame using a thermocouple. Condition 5.2.2. was added to incorporate the requirement.

40 CFR 63, Subpart HH: Cornwell Compressor Station has separate equipment that services a natural gas transmission pipeline system and a production gathering pipeline system. The dehydration unit and associated control device are on the production side. Based on the definition of a *major source* in 40 CFR §63.761, the production side of the Cornwell Compressor station meets the definition of an area source and the applicability requirements of 40 CFR §63.760.

The dehydration plant is subject to 40 CFR Part 63, Subpart HH because the facility processes natural gas prior to entering the transmission and storage process. The existing Glycol Dehydration Unit is the only affected source. The facility is not located in an urbanized area plus offset (UA plus offset) or urban cluster (UC) boundary.

Engine EN09: All requirements for the Ajax engine, EN09, have been moved to Section 7.0. EN09 is subject to 40 CFR part 60, subpart JJJJ. Because the engine is not certified by the manufacturer, Dominion is required to perform performance tests every 8,760 hours or 3 years, whichever comes first. In addition, Dominion is required to maintain and operate the engine in a manner consistent with good air pollution control practices for minimizing emissions, and to keep a maintenance plan. Engine EN09 is a production side engine, however as a new stationary RICE subject to 40 CFR part 60, subpart JJJJ, it meets the requirements of 40 CFR part 63, subpart ZZZZ in accordance with 40 CFR §§63.6590(c) and (c)(1). No further subpart ZZZZ requirements apply for such engines. EN09, is also subject to 40 CFR part 60, subpart OOOO because it was installed between August 23, 2011 and September 18, 2015. Initial compliance requirements from 40 CFR §§60.5385(b) and 60.5410(c) were not included because they have been completed.

40 CFR Part 63, Subpart ZZZZ: Engines EN07 and EN08, which are production side engines, are subject to this MACT. The production side is not a major source of HAPs in accordance with the definition of a major source in 40 CFR § 63.6675. EN07 is an existing, remote, 4-stroke lean burn unit larger than 500 hp and EN08 is an existing 2-stroke lean burn unit less than 500 hp. Both engines are subject to the requirements in Table 2d. Additional Subpart ZZZZ monitoring, testing, recordkeeping and reporting requirements are incorporated in Section 6.0 of the Title V permit.

Engines EN10 through EN19 are transmission side engines and are major for HAPs because of aggregated formaldehyde emissions. They are existing, 2SLB or 4SLB, and have a site rating of more than 500 hp, therefore they have no Subpart ZZZZ requirements in accordance with 40 CFR §§ 63.6590(b)(3)(i) and (ii).

AUX04 is an existing emergency stationary RICE with a rating of more than 500 HP located at a major source of HAP emissions and does not have to meet the requirements of 40 CFR 63 Subpart ZZZZ, including initial notification, in accordance with 40 CFR §63.6590(b)(3)(iii).

Non-Applicability Determinations

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

- a. 45 CSR 10 – Compressor engines (EN07 – EN19) have been excluded from the applicability of SO₂ and H₂S limits. WVDAQ determined that 45CSR10 is not applicable to compressor engines.
- b. 40 CFR 60 Subpart JJJJ – The compressor engines (EN07, EN08, EN10 – EN19) and auxiliary generator (AUX04) are not subject to this subpart since they were manufactured before the applicability date.

- c. 40 CFR 60 Subpart OOOOa – This subpart does not apply to the facility since the facility does not have gas wells, centrifugal compressors, reciprocating compressors, and/or pneumatic controllers constructed, modified, or reconstructed after September 18, 2015. In addition, there has been no increase in compression horsepower at the facility.
- d. 40 CFR 63 Subpart HHH – This subpart does not apply to the facility since the dehydration unit is located on the production section of the facility, which is not subject to this rule.
- e. 40 CFR 63 Subpart DDDDD – The reboiler (RBR01) is not subject to this subpart since the production facility is not a major source of HAPs.
- f. 40 CFR 63 Subpart JJJJJ – The reboiler (RBR01) is not subject to this subpart since it is considered a “process heater,” which is excluded from the definition of “boiler” in 40 CFR §63.11237.
- g. 40 CFR 64 – The dehy unit (DEHY01) is exempt per 40 CFR §64.2(b)(1)(vi) for VOCs since condition 5.2.2. specifies a "continuous compliance determination method". Engine EN09 is not subject to CAM since potential pre-control device emissions are less than major source thresholds per 40 CFR §64.2(a)(3).

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: Tuesday, May 9, 2017

Ending Date: Thursday, June 8, 2017

Point of Contact

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

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Division of Air Quality
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Charleston, WV 25304
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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.