

Fact Sheet



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

Permit Number: **R30-01700003-2015**
Application Received: **December 8, 2014**
Plant Identification Number: **017-00003**
Permittee: **Dominion Transmission, Inc.**
Facility Name: **L. L. Tonkin Compressor Station**
Mailing Address: 445 West Main Street; Clarksburg, WV 26301

Revised: N/A

Physical Location:	West Union, Doddridge County, West Virginia
UTM Coordinates:	518.82 km Easting • 4351.18 km Northing • Zone 17
Directions:	Take Route 50 east from Parkersburg. After approximately 45 miles take West Union Exit, Route 18 North. Go approximately 3.5 miles – L. L. Tonkin station is on the left.

Facility Description

The L. L. Tonkin Station is a natural gas transmission facility covered by Standard Industrial Classification (SIC) 4922.

A significant modification application, R30-01700003-2010 (SM01), was also addressed as part of this renewal permitting action. The application was for the installation of two new combustion turbines to compress natural gas for transmission and an upgrade to the combustion controller on the existing turbine. These changes will expand the transmission capacity of the compressor station. Additionally, a new boiler and emergency generator will be installed. The modifications to this facility were approved under R13-1077A.

Emissions Summary

Plantwide Emissions Summary [Tons per Year]		
Regulated Pollutants	Potential Emissions	2013 Actual Emissions
Carbon Monoxide (CO)	122.1	0.1
Nitrogen Oxides (NO _x)	80.3	0.24
Particulate Matter (PM _{2.5})	2.5	- ^a
Particulate Matter (PM ₁₀)	13.0	- ^a
Total Particulate Matter (TSP)	13.0	0.02
Sulfur Dioxide (SO ₂)	0.67	0
Volatile Organic Compounds (VOC)	13.9	1.90

PM₁₀ is a component of TSP.

Hazardous Air Pollutants	Potential Emissions	2013 Actual Emissions
Acetaldehyde	0.3	0
Acrolein	0.08	0
Benzene	0.27	0
Ethylbenzene	0.03	0
Formaldehyde	0.94	0
Hexane	0.25	0
Toluene	0.07	0
Xylene	0.10	0

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

^aInformation not available.

Title V Program Applicability Basis

This facility has the potential to emit 122.1 TPY of CO. Due to this facility's potential to emit over 100 tons per year of criteria pollutant, Dominion Transmission, Inc. 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	Particulate Air Pollution from Combustion of Fuel in Indirect Heat Exchangers.
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45CSR6	Open burning prohibited.
45CSR11	Standby plans for emergency episodes.
45CSR13	NSR permits.
45CSR16	Standards of Performance for New Stationary Sources Pursuant to 40 C.F.R. Part 60
45CSR17	Fugitive Particulate Matter
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 C.F.R. 60 Subpart GG	Turbine NSPS
40 C.F.R. 60 Subpart JJJJ	SI RICE NSPS
40 C.F.R. 60 Subpart KKKK	Stationary Combustion Turbines NSPS
40 C.F.R. Part 61	Asbestos inspection and removal
40 C.F.R. 63 Subpart ZZZZ	RICE MACT
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 (<i>if any</i>)
R13-1077A	March 26, 2015	

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

New Equipment

With this permit renewal, the following equipment was added to this Title V permit with a planned installation year of 2016:

Emission Unit ID	Emission Unit Description
001-02	Solar Centaur 50 Combustion Turbine #2 with Gas Compressor Configuration
001-03	Solar Centaur 50 Combustion Turbine #3 with Gas Compressor Configuration
002-02	Caterpillar CG137-12 Generator Set w/ Spark Ignition Engine Using Natural Gas
004-02	Ajax WRF-1750 Boiler Natural Gas Fired

R13-1077A

R13-1077 was written in the old NSR permit format, and all applicable requirements from this permit were previously incorporated into section 3.0 of the Title V permit. R13-1077A was rewritten in the new NSR permit format. Due to this format change and additional requirements added to R13-1077A, most NSR requirements were removed from section 3.0 of the Title V permit and placed in new sections of this permit renewal. These new sections added with this permit renewal are as follows:

- Section 4.0: Turbines and Boilers
- Section 5.0: RICE MACT Requirements
- Section 6.0: SI NSPS Requirements

Section 4.0: Turbines and Boilers

This section was added with this renewal to address all turbine and boiler requirements applicable to this facility. The new Ajax Boiler (004-02) is subject to the 10% opacity requirements of 45CSR§2-3.1. The new turbines (001-02 and 001-03) are subject to 40 C.F.R. 60 Subpart KKKK, and the older turbine (001-01) is subject to 40 C.F.R. 60 Subpart GG. Each permit condition is summarized as follows:

- Condition 4.1.1 limits CO, NO_x (limited by a SoLoNO_x system), and VOC emissions for Combustion Turbine#1 (ID 001-01). It can combust only pipeline quality natural gas with a maximum sulfur content of 0.8 percent by weight. This condition references condition 4.1.1 from R13-1077A.
- Condition 4.1.2 limits CO, NO_x, SO₂, and VOC emissions for Combustion Turbines #2 and #3 (ID 001-02 & 001-03). Additionally, these turbines can only combust pipeline quality natural gas. This condition references condition 4.1.2 from R13-1077A.
- Condition 4.1.3 limits NO_x and CO emissions from the boiler (ID #004-02). This condition also specifies a maximum design heat input and specifies that the boiler use only pipeline quality natural gas. This condition references condition 4.1.3 from R13-1077A.
- Condition 4.1.4 places a 10% opacity limit on both boilers (004-01 and 004-02), as specified in 45CSR§2-3.1. This was condition 3.1.9 of the previous Title V permit.
- To demonstrate compliance with conditions 4.1.1 and 4.1.2, condition 4.2.1 requires monitoring and recording of the hours each turbine is operated at normal conditions, low-load conditions, and low-temperature conditions. This condition references condition 4.2.1 from R13-1077A.
- To demonstrate compliance with condition 4.1.3, condition 4.2.2 requires records of the amount of natural gas consumed by the boiler and calculation of a rolling 12-month total. This condition references condition 4.2.2 from R13-1077A.
- To demonstrate compliance with the NO_x emission limit in Condition 4.1.1., condition 4.3.1 requires a performance test within 180 days after the initial restart of the turbine from completing the SoLoNO_x upgrade. This condition references condition 4.3.1 from R13-1077A.
- To demonstrate compliance with the NO_x emission standards in Condition 4.1.2., condition 4.3.2 requires an initial performance test within 60 days after achieving maximum output of turbines

001-02 and 001-03, but no later than 180 days after initial startup. Subsequent testing is required every year or every two years depending on the results of the previous test. This condition references condition 4.3.2 from R13-1077A.

- Condition 4.4.1 requires a calculation and records of the rolling total of pollutant emissions to demonstrate compliance with conditions 4.1.1 and 4.1.2. This condition references condition 4.4.4 from R13-1077A.
- Condition 4.4.2 requires current and valid documentation that the natural gas consumed by the combustion turbines has a total sulfur content of 20 grains of sulfur or less per 100 cubic feet of natural gas. This condition references condition 4.4.5 from R13-1077A.
- Condition 4.5.1 requires a notification to the Director of the initial start-up of the Combustion Turbines #2 and #3 (001-02 and 001-03). This condition references condition 4.5.1 from R13-1077A.

Section 5.0: RICE MACT Requirements

The Cummins GTA-743 Reciprocating Engine/Auxiliary Generator (AUX01) is subject to 40 C.F.R. 63, Subpart ZZZZ. This particular engine is an existing emergency Spark Ignition (SI) engine ≤500 hp located at an area source of HAPs. The 40 C.F.R. 63, Subpart ZZZZ requirements were not included in the previous permit, therefore, the following applicable requirements were added to this Title V permit:

- Condition 5.1.1 was added specifying continuous compliance requirements of 40 C.F.R. §63.6605.
- Condition 5.1.2 was added specifying the maintenance requirements of 40 C.F.R. §63.6603 and Table 2d.
- Condition 5.1.3 was added requiring a non-resettable hour meter be installed for the engine, as specified in 40 C.F.R. §63.6625(f).
- Condition 5.1.4 requires the permittee to minimize idle time during startup and minimize the engine's startup time, as specified in 40 C.F.R. §63.6625(h).
- Condition 5.1.5 was added specifying that the engine be operated and maintained according to the manufacturer's emission-related instructions or that the permittee develop its own plan as specified in 40 C.F.R. §§63.6625(e), 63.6640(a), and Table 6.
- Condition 5.1.6 gives the requirements for the engine to be considered an emergency engine, as specified in 40 C.F.R. §63.6640(f).
- Condition 5.4.1 requires records to show compliance with Table 6 to 40 C.F.R. 63, Subpart ZZZZ, as specified in 40 C.F.R. §63.6655(d).
- Condition 5.4.2 requires maintenance records to show the permittee performed maintenance in accordance with their maintenance plan, as specified in 40 C.F.R. §63.6655(e).
- Condition 5.4.3 requires records of the hours of operation recorded on the non-resettable hour meter, as specified in 40 C.F.R. §63.6655(f).
- Condition 5.5.1 gives the reporting requirements from 40 C.F.R. §63.6650(h).

Section 6.0: SI NSPS Requirements

The emergency generator (002-02) is a new emergency SI engine rated at over 100 hp. The engine is subject to 40 C.F.R. 60, Subpart JJJJ and 40 C.F.R. 63, Subpart ZZZZ. According to 40 C.F.R. §63.6590(c)(1), a new stationary RICE located at an area source must meet the requirements of 40 C.F.R. 63, Subpart ZZZZ by meeting the requirements of 40 C.F.R. 60, Subpart JJJJ for spark ignition engines. Therefore, the following applicable requirements were added to this Title V permit:

- Condition 6.1.1 was added, which references condition 4.1.4 of R13-1077A. This condition contains several requirements. These requirements are as follows:
 - Condition 6.1.1.a lists CO, NO_x, and VOC emissions, as specified in 40 C.F.R. §60.4233(e) and Table 1 to 40 C.F.R. 60, Subpart JJJJ.

- Condition 6.1.1.b requires that compliance with the limits in 6.1.1.a shall be determined using the appropriate equations listed in 40 C.F.R. §60.4244.
- Condition 6.1.1.c outlines usage restrictions for the engine during non-emergency situations, as specified in 40 C.F.R. §60.4243(d).
- Condition 6.1.1.d requires the engine to be equipped with a non-resettable hour meter, as required by 40 C.F.R. §60.4237(a).
- Condition 6.1.1.e requires a maintenance plan and requires the engine to be operated according to good air pollution control practices, as specified in 40 C.F.R. §60.4243(b)(2)(ii).
- Condition 6.1.1.f requires the engine to combust pipeline quality natural gas.
- Condition 6.1.2 was added specifying that the requirements of condition 6.1.1.a apply for the entire life of the engine, as specified in 40 C.F.R. §60.4234.
- Condition 6.1.3 was added to address proper use of the air-to-fuel ratio controllers, as specified in 40 C.F.R. §60.4243(g).
- Condition 6.1.4 was added stating that the general provisions of 40 C.F.R. 60 apply with the exceptions of 40 C.F.R. §§60.13 and 18, as specified in 40 CFR §60.4246.
- Condition 6.2.1 was added requiring records of the hours of operation of the engine, as specified in 40 CFR §60.4245(b). This condition references condition 4.2.3 of R13-1077A.
- Condition 6.3.1 was added providing initial performance testing and subsequent performance testing frequency, as specified in 40 C.F.R. §60.4243(b)(2)(ii). This condition references condition 4.3.3 of R13-1077A.
- Condition 6.3.2 was added providing performance testing procedures, as specified in 40 C.F.R. §60.4244.
- Condition 6.4.1 was added to provide recordkeeping requirements for the engine, as specified in 40 C.F.R. §60.4245(a).
- Condition 6.5.1 was added to provide annual reporting requirements for the engine, as specified in 40 C.F.R. §60.4245 (e).

Non-Applicability Determinations

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

- a. 40 C.F.R. 60 Subpart OOOO – This subpart does not apply to the facility since the facility is a transmission facility that has tanks with potential emissions below 6 tons VOC/yr and additionally those tanks have not been constructed, modified, or reconstructed after August 23, 2011.
- b. 40 C.F.R. 63 Subpart HH – This subpart does not apply to the facility since the facility is not a natural gas production facility.
- c. 40 C.F.R. 63 Subpart HHH – This subpart does not apply to the facility since the facility is not a major source of HAPs.
- d. 40 C.F.R. 63 Subpart DDDDD – The boilers (BLR01 and BLR02) are not subject to this subpart since the facility is not a major source of HAPs.
- e. 40 C.F.R. 63 Subpart JJJJJ – The boilers (BLR01 and BLR02) are not subject to this subpart since they are considered “gas-fired boilers” (i.e. burn only natural gas) and are exempt based on §63.11195(e).
- f. 40 C.F.R. 64 – Potential pre-control device emissions from the pollutant-specific emission units are below the major source threshold. Therefore, according to 40C.F.R§64.2(a), CAM is not applicable to any pollutant-specific emission units at this facility.

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, June 30, 2015
Ending Date: Thursday, July 30, 2015

Point of Contact

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

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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.