

Fact Sheet



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

This Fact Sheet serves to address the changes specific to this Significant Modification and shall be considered a supplement to the Fact Sheet corresponding with the Title V operating permit issued on December 22, 2014.

Permit Number: **R30-07300022-2014**

Application Received: **April 30, 2018**

Plant Identification Number: **073-00022**

Permittee: **Pleasants Energy, LLC**

Mailing Address: **10319 South Pleasants Highway, St. Marys, WV 26170**

Permit Action Number: *SM01* Revised: *October 16, 2018*

Physical Location: Waverly, Pleasants County, West Virginia
UTM Coordinates: 468.629 km Easting • 4353.573 km Northing • Zone 17
Directions: Site is located on the eastern side of State Route 2 in Pleasants County, approximately 1 mile east of Waverly

Facility Description

The facility is a 300 MW simple cycle electric generating peaking station operating under SIC 4911. The Pleasants Energy Station includes two General Electric (GE) 7FA class simple cycle combustion turbines, each nominally rated at 167.8 MW (while firing natural gas at an ambient temperature of 59° F and 60% relative humidity) including generator, exciter, and associated auxiliary mechanical and electrical systems. The primary fuel is natural gas. Low sulfur distillate fuel oil is utilized as a backup fuel.

Each gas turbine includes an advanced firing combustion turbine air compressor section, gas combustion system with advanced dry low NO_x control, power turbine, and a 60-Hz, 18 (kV) generator.

This Title V significant modification permit incorporates changes permitted under R14-0034A. The changes to the facility are as follows:

- Increasing the fuel limit for natural gas and fuel oil for the two-existing simple-cycle combustion turbines.
- Installation and operation of five (5) blackstart generators.

Emissions Summary

The potential emissions associated with this facility are now as follows:

Pollutants	Potential Emissions, tons/year
Carbon Monoxide (CO)	477.40
Nitrogen Oxides (NO _x)	465.80
Particulate Matter (PM _{2.5})	83.50
Particulate Matter (PM ₁₀)	83.50
Particulate Matter (PM)	83.50
Sulfur Dioxide (SO ₂)	13.81
Volatile Organic Compounds (VOC)	21.00
H ₂ SO ₄	2.10
Lead	0.01
Total HAPs	5.29

Title V Program Applicability Basis

With the proposed changes associated with this modification, this facility has the potential to emit 465.80 tons per year (TPY) of NO_x and 477.40 tons per year of CO. Due to this facility's potential to emit over 100 tons per year of criteria pollutant, Pleasants Energy, LLC 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.

The modification to this facility has been found to be subject to the following applicable rules:

Federal and State:

- | | |
|---------|--|
| 45CSR14 | Permits for Construction and Major Modification of Major Stationary Sources of Air Pollution for the Prevention of Significant Deterioration |
| 45CSR16 | Standards of Performance for New Stationary Sources Pursuant to 40CFR60. |
| 45CSR30 | Operating permit requirement. |
| 45CSR33 | Acid Rain Provisions and Permits |
| 45CSR34 | Emission Standards for Hazardous Air Pollutants Pursuant to 40 C.F.R. Part 63 |

WV Code § 22-5-4 (a) (14)	The Secretary can request any pertinent information such as annual emission inventory reporting.
40 C.F.R. 60 Subpart KKKK	Standards of Performance for Stationary Combustion Turbines.
40 CFR 60, Subpart IIII	Standards of Performance for Stationary Compression Ignition Internal Combustion Engines
40 C.F.R. Part 63, Subpart ZZZZ	RICE MACT

State Only:

45CSR4	No objectionable odors.
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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>)
R14-0034A	03/13/2018	

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

Title V Permit includes the following changes from R14-0034A:

- Five (5) blackstart generators (Emission Point IDs (EP3, EP4, EP5, EP6 and EP7)) were added to the Emission Units Table. Applicable requirements for these Emission Units were added in section 4 of this permit.
- The fuel limit for natural gas and fuel oil for the two simple-cycle combustion turbines (Emission Point IDs (EP1 and EP2)) were updated in the Emission Units Table. Applicable requirements for these Emission Units were added in section 4 of this permit.
- In R14-0034A, the heat input of EP1 is 1,901 mmbtu/hr (gas) and 2,065 mmbtu/hr (diesel). Per company's request (through email on August 16, 2018), the heat input of EP1 was corrected to 2,013 mmbtu/hr (gas) and 2,180 mmbtu/hr (diesel) in the Emission Units Table of this permit. Emission Point ID-EP1 had a full Advanced Gas Path (AGP) uprate which means that the heat input is slightly higher than Emission Point ID-EP2. This change to the Emission Units Table does not affect any of the emission limits or operating limits in the permit.

- The heat input for Emission Point ID-EP2 was incorrectly listed as 1901 mmbtu/hr (gas) in R14-0034A. The numbers were transposed. Therefore, it was corrected to 1910 mmbtu/hr (gas) in the Emission Units Table of this permit.

- **40 CFR 60, Subpart IIII: Standards of Performance for Stationary Compression Ignition Internal Combustion Engines**

Five (5) blackstart generators (Emission Point IDs (EP3, EP4, EP5, EP6 and EP7)) were installed in 2015, each one is 3,000 kW and has a displacement of 5.29 liters per cylinder (<30 L per cylinder). The engines are considered emergency only (limited to 100 hours per year for testing and maintenance). Pursuant to 40CFR§60.4200, compression ignition engines installed after July 11, 2005 are subject to the subpart. Therefore, Subpart IIII is applicable to the engines and applicable requirements (4.1.21, 4.1.22, 4.1.23, 4.1.24, 4.2.7 and 4.4.11) were added in section 4 of this permit.

The engines are certified, so they don't require testing per Subpart IIII. Company has submitted a certificate through email on 7/31/2018.

- **40 C.F.R. Part 63, Subpart ZZZZ: RICE MACT**

Five (5) blackstart generators (Emission Point IDs (EP3, EP4, EP5, EP6 and EP7)) are 3,000 kW diesel emergency generators constructed after 6/12/2006 and located at an area source of HAPs. Therefore, they are subject to NSPS Subpart IIII. Per 40 CFR §63.6590(c)(1), the permittee shall meet the requirements of 40 CFR 63 Subpart ZZZZ by meeting the requirements of 40 CFR part 60 subpart IIII.

- **40 CFR 60, Subpart KKKK: Standards of Performance for Stationary Combustion Turbines**

Subpart KKKK has requirements related to limiting the emissions of NO_x and SO₂ from combustion turbines. Pursuant to §60.4305(a), Subpart KKKK is applicable to all stationary combustion turbines that commenced construction, modification or reconstruction after February 18, 2005, with a heat input equal to or greater than 10.7 gigajoules per hour (10 MMBtu/hr). With the modifications to the turbines for the uprate, the turbines (Emission Unit IDs- GT1 and GT2) are considered "modified" per Subpart A definitions, since there will be emissions increase on an hourly basis for NO_x (natural gas combustion only) as well as SO₂ (for both fuels). Applicable requirements (4.1.9, 4.1.10, 4.1.13, 4.1.20, 4.2.2, 4.2.8 through 4.2.14, 4.3.4 through 4.3.6 and 4.5.1 through 4.5.4) were added in section 4 of this permit.

- **Cross-State Air Pollution Rule (CSAPR) Requirements:**

CSAPR was promulgated by the EPA under § 110 of the CAA, as amended and under 40 C.F.R. §§ 52.38 and 52.39 as a means of mitigating interstate transport of fine particulates (PM_{2.5}), NO_x, ozone and SO₂. The trading programs applicable to Pleasants Energy include: the CSAPR NO_x Annual Trading Program set forth under 40 C.F.R. part 97, subpart AAAAA; the CSAPR NO_x Ozone Season Group 2 Trading Program set forth under 40 C.F.R. part 97, subpart EEEEE; and the CSAPR SO₂ Group 1 Trading Program set forth under 40 C.F.R. part 97, subpart CCCCC. Implementation for the CSAPR Annual Trading Programs (subparts AAAAA and CCCCC) began on January 1, 2015. Implementation for the CSAPR NO_x Ozone Season Group 2 Trading Program (subpart EEEEE) began on May 1, 2017. CAIR requirements in Conditions 3.1.9, 3.1.10 and 3.1.11 were replaced with CSAPR requirements. Appendix A was also replaced with CSAPR requirements.

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 GG**— *Standards of Performance for Stationary Gas Turbines*. The combustion turbines (Emission Point IDs (EP1 and EP2)) were modified after February 18, 2005 and are therefore not subject to this rule but are subject to 40 CFR 60 Subpart KKKK.
- b. **40 CFR 60 Subpart TTTT** - *Standards of Performance for Greenhouse Gas Emissions for Electric Utility Generating Units (EGUs)*. This regulation was finalized on August 3, 2015 and applies to new units that commenced construction after January 8, 2014 or modification or reconstruction after June 18, 2014. These combustion turbines commenced construction prior to the applicable date and are not considered a “new” source. Further, these combustion turbines do not meet the definition of “reconstructed” or “modified” per the NSPS, so Subpart TTTT is not applicable to the combustion turbines.

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: Wednesday, August 29, 2018
Ending Date: Friday, September 28, 2018

Point of Contact

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

Beena Modi
West Virginia Department of Environmental Protection
Division of Air Quality
601 57th Street SE
Charleston, WV 25304
Phone: 304/926-0499 ext. 1228 • Fax: 304/926-0478
Beena.j.modi@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)

None