

INTERNAL PERMITTING DOCUMENT TRACKING MANIFEST

Company Name Pleasant Energy 073-00022
 Permitting Action Number R13-2373B Total Days 104 DAQ Days 76

Permitting Action:

- | | | |
|---|------------------------------------|---|
| <input type="radio"/> Permit Determination | <input type="radio"/> Temporary | <input checked="" type="radio"/> Modification |
| <input type="radio"/> General Permit | <input type="radio"/> Relocation | <input type="radio"/> PSD (Rule 14) |
| <input type="radio"/> Administrative Update | <input type="radio"/> Construction | <input type="radio"/> NNSR (Rule 19) |

Documents Attached:

- | | |
|--|--|
| <input checked="" type="radio"/> Engineering Evaluation/Memo. | <input type="radio"/> Completed Database Sheet |
| <input checked="" type="radio"/> Draft Permit | <input type="radio"/> Withdrawal |
| <input checked="" type="radio"/> Notice | <input type="radio"/> Letter |
| <input type="radio"/> Denial | <input type="radio"/> Other (specify) _____ |
| <input type="radio"/> Final Permit/General Permit Registration | _____ |

Date	From	To	Action Requested
10-8-15	Steven Pursley	Bev	Mess review
10/19	Bev	Steve	Auto Notice

NOTE: Retain a copy of this manifest for your records when transmitting your document(s).

AIR QUALITY PERMIT NOTICE

Notice of Intent to Approve

On June 25, 2015, Pleasants Energy, LLC applied to the WV Department of Environmental Protection, Division of Air Quality (DAQ) for a permit to modify a natural gas fired electric peaking facility located along State Route 2, near Waverly, but in Pleasants County, WV at latitude 39.3335 and longitude -81.3646. A preliminary evaluation has determined that all State and Federal air quality requirements will be met by the proposed facility. The DAQ is providing notice to the public of its preliminary determination to issue the permit as R13-2373B.

The following increase potential emissions will be authorized by this permit action: Particulate Matter less than 10 microns, 2.60 tons per year (TPY); Particulate Matter, 2.60 TPY; Sulfur Dioxide, 0.12 TPY; Oxides of Nitrogen, 39.4 TPY; Carbon Monoxide, 8.66 TPY; Volatile Organic Compounds, 2.36 TPY; Hazardous Air Pollutants, 7.94 TPY.

Written comments or requests for a public meeting must be received by the DAQ before 5:00 p.m. on **DRAFT**. A public meeting may be held if the Director of the DAQ determines that significant public interest has been expressed, in writing, or when the Director deems it appropriate.

The purpose of the DAQ's permitting process is to make a preliminary determination if the proposed modification will meet all State and Federal air quality requirements. The purpose of the public review process is to accept public comments on air quality issues relevant to this determination. Only written comments received at the address noted below within the specified time frame, or comments presented orally at a scheduled public meeting, will be considered prior to final action on the permit. All such comments will become part of the public record.

Steven R. Pursley, PE
WV Department of Environmental Protection
Division of Air Quality
601 57th Street, SE
Charleston, WV 25304
Telephone: 304/926-0499, ext. 1218
FAX: 304/926-0478

Additional information, including copies of the draft permit, application and all other supporting materials relevant to the permit decision may be obtained by contacting the engineer listed above. The draft permit and engineering evaluation can be downloaded at:

www.dep.wv.gov/daq/Pages/NSRPermitsforReview.aspx



west virginia department of environmental protection

Division of Air Quality
601 57th Street SE
Charleston, WV 25304
Phone (304) 926-0475 • FAX: (304) 926-0479

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
www.dep.wv.gov

ENGINEERING EVALUATION / FACT SHEET

BACKGROUND INFORMATION

Application No.: R13-2373B
Plant ID No.: 073-00022
Applicant: Pleasants Energy, LLC
Facility Name: Waverly Facility
Location: Pleasants County
NAICS Code: 221112
Application Type: Modification
Received Date: June 25, 2015
Engineer Assigned: Steven R. Pursley, PE
Fee Amount: \$2,000.00
Date Received: June 29, 2015
Complete Date: July 24, 2015
Due Date: October 22, 2015
Applicant Ad Date: June 27, 2015
Newspaper: *Pleasants County Leader*
UTM's: Easting: 468.629 km Northing: 4,353.573 km Zone: 17
Description: Application to add two TurboPhase systems to the existing turbines and change permitting status of five emergency generators.

DESCRIPTION OF PROCESS

The existing Pleasants Energy facility is a 300 MW simple cycle electric generating peaking stations. The facility includes two GE 7FA simple cycle combustion turbines each rated at 167.8 MW (natural gas, 59°F, 60% humidity). The turbines primary fuel is natural gas but low sulfur distillate fuel oil is utilized as a backup fuel.

In 2015, Pleasants Energy installed five 3-MW generators under general permit registration G60-C067. With this permit application, Pleasants requests to cover those engines in this permit and change the status from emergency to non-emergency under the NSPS (Subpart IIII). However, the engines will retain an annual operation limit 500 hours per year.

The project will include the addition of a TurboPhase system to increase the output of the existing combustion turbines by approximately 18 MW. The project will include one TurboPhase system for each turbine. The TurboPhase system injects externally supplied air into the combustion turbine after compressor discharge at the inlet to the combustor. This increases air mass flow through the turbines and, consequently, generator output.

Promoting a healthy environment.

The air will be supplied by multistage compressors driven by internal combustion engines. Each combustion turbine will have one TurboPhase system consisting of four 2,750 hp spark ignition, natural gas fired engine. Each of the systems will be limited to 3,250 hours of operation per year.

SITE INSPECTION

No site inspection of the facility was deemed necessary for this permitting action. However, the writer is familiar with the facility and its location. The facility is located at the Pleasants County Industrial Center adjacent to Route 2 in Pleasants county (just across the county line from Wood county). Other than the industrial park, the immediate area is fairly rural (the site is adjacent to a farm), however, the town of Waverly is located approximately 1 mile west of the site.

ESTIMATE OF EMISSIONS BY REVIEWING ENGINEER

Increased emissions from this project occur due to emissions from the TurboPhase engines and increased emissions from the turbines themselves. Note that emissions from the backup generators are NOT increasing. They are simply being transferred from a general permit to R13-2373B. The generators are being moved because Pleasants wishes to classify them as "non-emergency" under 40 CFR 60 Subpart IIII. However, they will retain the annual 500 hours of operation limit. Additionally, since Pleasants used the more stringent non emergency emission limits from the NSPS in the original general permit application, neither the hourly nor annual emission limits will change.

All annual emissions from the TurboPhase engines are based on 3,250 hours of operation per year. Emissions of NO_x, CO, PM/PM₁₀/PM_{2.5} and VOCs from the natural gas fired TurboPhase engines are based on vendor data. Emissions of SO₂ are based on AP-42 Table 3.2-1 while emissions of H₂SO₄ are based on a mass balance.

Pleasants has agreed to keep the existing annual emission limits for the turbines in place. However, hourly emissions will increase when the TurboPhase engines are in operation.

Maximum Criteria Pollutant emissions from the existing facility (taken directly from permit R13-2373A and general permit registration G60C-067):

Source ¹	CO		NO _x		VOCs		PM/PM ₁₀ /PM _{2.5}		SO ₂	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
Turbines ²	64.0	116.0	130.0	241.0	6.0	12.0	36.0	75.0	5.0	53.0
Turbines ³	144.0		940.0		16.0		78.0		206.0	
Generators	125.90	31.47	24.10	6.03	14.39	3.60	3.60	0.90	0.27	0.07
Total	269.9	147.5	964.1	247	30.39	15.6	81.6	75.9	206.3	53.07

¹Two turbines combined and 5 generators combined.

²When firing Natural Gas

³When firing Fuel Oil

Maximum criteria pollutant emissions from the modified facility will be as follows:

Source ¹	CO		NO _x		VOCs		PM/PM ₁₀ /PM _{2.5}		SO ₂	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
Turbines ²	72.0	116.0	150.0	241.0	6.8	12.0	40.40	75.0	5.60	53.0
Turbines ³	144.0		940.0		16.0		78.0		206.0	
TP engines	5.34	8.66	24.26	39.4	1.46	2.36	1.60	2.60	0.08	0.12
Generators	125.90	31.47	24.10	6.03	14.39	3.60	3.60	0.90	0.27	0.07
Total	275.2	156.1	988.4	286.4	31.85	17.96	83.2	78.5	206.4	53.19

¹Two turbines combined, 8 TurboPhase engines combined and 5 generators combined.

²When firing Natural Gas

³When firing Fuel Oil

Therefore, the maximum increase in permitted emissions due to this modification is as follows:

CO		NO _x		VOCs		PM/PM ₁₀ /PM _{2.5}		SO ₂	
lb/hr	tpy	lb/hr	tpy	lb/yr	tpy	lb/hr	tpy	lb/hr	tpy
5.34	8.66	24.26	39.4	1.46	2.36	1.60	2.60	0.08	0.12

Maximum Non Criteria pollutant emissions from the existing facility (taken directly from permit R13-2373A and general permit registration G60C-067):

Source ¹	Formaldehyde		H ₂ SO ₄		PAHs		Total HAPs	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
Turbines ²	3.40	7.00	--	5.60	--	1.20	3.40	8.20
Turbines ³	--		22.00		--			
Generators	--	--	--	--	--	--	0.04	0.17
Total	3.40	7.00	22.00	5.60	--	1.20	3.44	8.37

¹Two turbines combined and 5 generators combined.

²When firing Natural Gas

³When firing Fuel Oil

Maximum non criteria pollutant emissions from the modified facility will be as follows:

Source ¹	Formaldehyde ⁴		H ₂ SO ₄		Acrolein		Acetaldehyde		Hexane		Methanol		PAHs		Total HAPs	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
Turbines ²	0.64	2.64	--	5.60	--	0.1	--	0.5	--	--	--	--	--	1.20	4.68	7.60
Turbines ³	--		22.00		--		--		--		--		--		--	
TP Engines	3.59	5.84	--	--	0.35	0.57	0.57	0.92	0.08	0.12	0.17	0.28	0.02	0.04	4.91	7.94
Generators	--	--	--	--	0.01	0.03	--	--	--	--	--	--	--	--	0.65	0.17
Total	4.23	8.48	22.0	5.60	0.36	0.61	0.57	0.97	0.08	0.12	0.17	0.28	0.02	1.24	10.24	16.69

¹Two turbines combined, 8 TurboPhase engines combined and 5 generators combined.

²When firing Natural Gas

³When firing Fuel Oil

⁴Formaldehyde emissions for the turbines change to due updated emission factor (Roy Sims EPA Memo "HAP Emission Control Technology for New Stationary Combustion Turbines")

It should be noted that comparing the two tables above do not give a true picture of the increase in HAP emissions. This is because HAP emissions from the post modification turbines appear to be going down. This is not actually the case. It only appears to be going down because an updated (much lower) emission factor is being used to calculate Formaldehyde emissions. In reality, the emission factors are all based on heat input to the turbines and since the heat input isn't changing, there should be no change in HAP emissions from the turbines. Therefore, the HAP emissions from the new TurboPhase engines will be assumed to equal the facility wide increase in HAP emissions.

REGULATORY APPLICABILITY

The proposed modification is subject to the following state and federal rules:

STATE RULES

45CSR13: Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Administrative Updates, Temporary Permits, General Permits, and Procedures for Evaluation

The proposed modification of the Waverly Facility has a potential to emit in excess of six (6) lbs/hour and ten (10) TPY of a regulated pollutant and, therefore, pursuant to §45-13-2.24, the modification is defined as a "stationary source" under 45CSR13. Pursuant to §45-13-5.1, "[n]o person shall cause, suffer, allow or permit the construction . . . and operation of any stationary source to be commenced without . . . obtaining a permit to construct." Therefore, Pleasants is required to obtain a permit under 45CSR13 for the modification and operation of the facility.

As required under §45-13-8.3 ("Notice Level A"), Pleasants Energy placed a Class I legal advertisement in a "newspaper of general circulation in the area where the source

is . . . located." The ad ran on June 27, 2015 in the *Pleasants County Leader* and the affidavit of publication for this legal advertisement was submitted on July 1, 2015.

45CSR14: Permits for Construction and Major Modification of Major Stationary Sources of Air Pollution for the Prevention of Significant Deterioration

The existing facility is not a major source as defined in 45CSR14. However, with the issuance of this permit, permitted emissions of NO_x will exceed the 250 tpy threshold necessary to classify the facility as major. Therefore, the new facility will be classified as a major stationary source.

45CSR30: Requirements for Operating Permits

45CSR30 provides for the establishment of a comprehensive air quality permitting system consistent with the requirements of Title V of the Clean Air Act. The Pleasants Energy, LLC facility is an existing Title V source with an issued Title V permit. Pleasants will be required to modify that permit in accordance with the timing requirements of 45CSR30.

FEDERAL RULES

40 CFR 60, Subpart GG: Standards of Performance for Stationary Gas Turbines

It should be noted that the turbines are subject to Subpart GG and not Subpart KKKK because they were constructed before February 18, 2005. Additionally, in the opinion of the writer, the addition of the TurboPhase system does not constitute a modification to the turbines as defined in Subpart A.

Subpart GG of 40 CFR 60 establishes limits for NO_x and SO₂ emissions from stationary gas-fired turbines with a heat input at peak load equal to or greater than 10.7 gigajoules per hour (10MMBTU/hr), based on the lower heating value of the fuel fired. The Pleasants Energy Project turbines will each have a heat input (fuel flow) of approximately 1, 571 MMBTU per hour at 59°F at full load, making each turbine subject to the requirements of Subpart GG as per 40 CFR 60.332(b). Subpart GG contains emission standards (for NO_x and SO₂) in addition to notification, monitoring and testing requirements. The applicable standard limiting the discharge of NO_x into the atmosphere from each turbine is expressed as:

$$\text{STD} = 0.0075 * (14.4/Y) + F$$

where:

STD = allowable NO_x emissions (percent volume at 15 percent oxygen and on a dry basis)

Y = manufacturer=s rated heat rate at manufacturers rated load (kilojoules per watt hour) or, actual measured heat rate based on lower heating value of fuel as measured at actual peak load for the facility. The value of Y shall not to exceed 14.4 kilojoules per watt hour.

F = NO_x emission allowance for fuel-bound nitrogen as defined in paragraph (a)(3) of this section.

The heat input rate for each of the GE 7FA turbines on natural gas firing is 9.87 kW/hr at 100% load and 59° F. Therefore, the NSPS limitation for NO_x is 109 ppmvd at 15% oxygen. The anticipated emission rate for the Pleasants Energy Project turbines is 9.0 ppmvd at 15% O₂ while combusting natural gas and 56 ppmvd at 15% O₂ when combusting fuel oil both of which are well below the NSPS emission limit for NO_x. The emissions limit set forth in the permit will be more stringent than the limit specified under the NSPS.

Under the Subpart GG NSPS, SO₂ is limited to 0.015% SO₂ by volume (150 ppmvd corrected to 15 percent O₂), and fuel sulfur content is limited to less than 0.8 percent by weight. The Pleasants Energy Project will meet these criteria by using natural gas as the primary fuel source. The natural gas is expected to contain sulfur at approximately 0.6 lb/MMCF (0.0007 percent by weight). Further, the distillate fuel oil that is proposed as a backup fuel is limited to 0.05 percent sulfur by weight. Fuel sulfur content for the Pleasants Energy Project will, therefore, be below the NSPS requirements. The corresponding maximum flue gas SO₂ concentrations will also be well below the NSPS standards, with SO₂ emissions of about 1 ppmvd corrected to 15 percent O₂ during gas firing and 10 ppmvd corrected to 15 percent O₂ during oil firing.

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

Subpart IIII contains requirements relating to the performance of compression ignition engines. In 2015, Pleasants Energy installed five 3-MW generators under general permit registration G60-C067. With this permit application, Pleasants requests to cover those engines in this permit and change the status from emergency to non-emergency under the NSPS (Subpart IIII). The following discusses the substantive applicable requirements of Subpart IIII relating to the facility.

Subpart IIII Applicability - Section §60.4200

Pursuant to §60.4200, compression ignition engines manufactured after July 11, 2005 are subject to the subpart. Therefore, Subpart IIII is applicable to the engines.

Subpart IIII Emission Standards

Engines that are operated (per the subpart) as emergency engines have to meet the emission requirements of §60.4202. However, since Pleasants has stated that the engines will no longer be operated as emergency engines they must meet the requirements of §60.4204(b). §60.4204(b) references §60.4201(c) which in turn references §1039.102. Table 7 of §1039.102 sets the following standards for the generator engines (all standards converted from g/kW-hr to g/hp-hr):

NO _x	CO	PM	NMHC
0.50	2.61	0.07	0.30

Compliance with these standards are met primarily by purchasing an engine certified to the emission standards. Pleasants Energy has provided an EPA Certificate of Conformity showing this engine family is certified as in compliance with Subpart IIII.

40 CFR 60, Subpart JJJJ: Standards of Performance for Stationary Spark Ignition Internal Combustion Engines

Subpart JJJJ of 40 CFR 60 is the NSPS for stationary spark ignition internal combustion engines. Section §60.4230 states that "provisions of [Subpart JJJJ] are applicable to manufacturers, owners, and operators of stationary spark ignition (SI) internal combustion engines (ICE)." Specifically, §60.4230(a)(4) states that Subpart JJJJ applies to "Owners and operators of stationary SI ICE that commence construction after July 12, 2006, where the stationary SI ICE are manufactured:

- (i) On or after July 1, 2007, for engines with a maximum engine power greater than or equal to 500 HP"

Pleasants Energy has proposed the construction of eight (8) new SI ICE TurboPhase engines (manufactured in 2015 or later) that are subject to Subpart JJJJ. Based on the standards for owner/operators of SI ICE's under §60.4233(e), the following table details the emission standards for the engine (g/hp-hr):

NO _x	CO	VOCs
1.0	2.0	0.7

In their application Pleasants stated that the manufacturer of the TurboPhase engines has indicated that the engines will NOT be certified. Therefore, Pleasants will have to demonstrate compliance with the above standards in accordance with §60.4243(b)(2)(ii). Specifically, they will have to "keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test and conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance."

40 CFR 63, Subpart ZZZZ: National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

According to Pleasant Energy's application, the facility is a minor source of HAPs and, therefore, the generators and TurboPhase engines are subject to the area source provisions of the MACT. In order to comply with the area source provisions of Subpart ZZZZ Pleasants Energy has to comply with 40 CFR 60 Subpart IIII and 40 CFR 60 Subpart JJJJ.

TOXICITY OF NON-CRITERIA REGULATED POLLUTANTS

This section provides an analysis for those regulated pollutants that may be emitted from the Waverly Facility and that are not classified as "criteria pollutants." Criteria pollutants are defined as Carbon Monoxide (CO), Lead (Pb), Oxides of Nitrogen (NO_x), Ozone, Particulate Matter (PM), Particulate Matter less than 10 microns (PM₁₀), Particulate Matter less than 2.5 microns (PM_{2.5}), and Sulfur Dioxide (SO₂). These pollutants have National Ambient Air Quality Standards (NAAQS) set for each that are designed to protect the public health and welfare. Other pollutants of concern, although designated as non-criteria and without national concentration standards, are regulated through various federal programs designed to limit their emissions and public exposure. These programs include federal source-specific Hazardous Air Pollutants (HAPs) standards promulgated under 40 CFR 61 (NESHAPS) and 40 CFR 63 (MACT). Any potential applicability to these programs were discussed above under REGULATORY APPLICABILITY.

The majority of non-criteria regulated pollutants fall under the definition of HAPs which, with some revision since, were 188 compounds identified under Section 112(b) of the Clean Air Act (CAA) as pollutants or groups of pollutants that EPA knows or suspects may cause cancer or other serious human health effects. Pleasants included the HAPs listed in the following table as emitted in substantive amounts (at least 0.01 lb/hr or 0.01 tpy) in their emissions estimate. The following table lists each HAP's carcinogenic risk (as based on analysis provided in the Integrated Risk Information System (IRIS)):

HAPs	Type	Known/Suspected Carcinogen	Classification
Acetaldehyde	VOC	Yes	B2 - Probable Human Carcinogen
Acrolein	VOC	No	Not Assessed
Benzene	VOC	Yes	A - Human Carcinogen
2,2,4-Trimethylpentane	VOC	No	Inadequate Data
Formaldehyde	VOC	Yes	B1 - Probable Human Carcinogen
Hexane	VOC	No	Inadequate Data
Biphenyl	VOC	No	D- Not Classifiable
1,3-Butadiene	VOC	Yes	Carcinogenic
Methanol	VOC	No	Inadequate Data
Toluene	VOC	No	Inadequate Data
Xylene	VOC	No	Inadequate Data

AIR QUALITY IMPACT ANALYSIS

Since the existing facility is not a major source as defined in 45CSR14, no modeling was performed.

MONITORING OF OPERATIONS

R13-2373B will require Pleasants Energy to monitor and record the following:

- * The hours of operation of each TurboPhase engine.
- * Maintenance performed on each TurboPhase engine.
- * The hours of operation of each generator.
- * Maintenance performed on each generator.
- * The amount of natural gas consumed by the turbines.
- * The amount of distillate fuel consumed by the turbines.
- * The sulfur content of the natural gas combusted by the turbines.
- * The sulfur content of the distillate fuel combusted by the turbines.

CHANGES TO PERMIT R13-2373A

R13-2373B will practically be an entirely new permit except it will retain a few turbine emission limits and monitoring requirements.

RECOMMENDATION TO DIRECTOR

Information supplied in the application indicates that compliance with all applicable regulations will be achieved. Therefore it is the recommendation of the writer that permit R13-2373B to install two TurboPhase systems at their plant near Waverly be granted to Pleasants Energy, LLC



Steven R. Pursley, PE
Engineer

10-1-15

October 1, 2015

West Virginia Department of Environmental Protection

Division of Air Quality

*Earl Ray Tomblin
Governor*

*Randy C. Huffman
Cabinet Secretary*

Permit to Modify



R13-2373B

This permit is issued in accordance with the West Virginia Air Pollution Control Act (West Virginia Code §§ 22-5-1 et seq.) and 45 C.S.R. 13 — Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits and Procedures for Evaluation. The permittee identified at the facility listed below is authorized to construct the stationary sources of air pollutants identified herein in accordance with all terms and conditions of this permit.

Issued to:
Pleasants Energy, LLC
Waverly Facility
073-00022

*William F. Durham
Director*

Issued: DRAFT

This permit will supercede and replace Permit R13-R13-2373A and general permit registration G60-C067.

Facility Location: Waverly, Pleasants County, West Virginia

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

Facility Description: Electric Generating Peaking Station

NAICS Codes: 221112

UTM Coordinates: 468.629 km Easting • 4,353.573 km Northing • Zone 17

Permit Type: Modification

Description of Change:

Modification to add two TurboPhase systems (8 engines) to the existing turbines and change the status of five emergency generators to non-emergency use.

Any person whose interest may be affected, including, but not necessarily limited to, the applicant and any person who participated in the public comment process, by a permit issued, modified or denied by the Secretary may appeal such action of the Secretary to the Air Quality Board pursuant to article one [§§ 22B-1-1 et seq.], Chapter 22B of the Code of West Virginia. West Virginia Code §22-5-14.

The source is subject to 45CSR30. Changes authorized by this permit must also be incorporated into the facility's Title V operating permit. Commencement of the operations authorized by this permit shall be determined by the appropriate timing limitations associated with Title V permit revisions per 45CSR30.

Table of Contents

1.0. Emission Units 4

2.0. General Conditions 5

 2.1. Definitions 5

 2.2. Acronyms 5

 2.3. Authority 6

 2.4. Term and Renewal 6

 2.5. Duty to Comply 6

 2.6. Duty to Provide Information 6

 2.7. Duty to Supplement and Correct Information 6

 2.8. Administrative Permit Update 6

 2.9. Permit Modification 7

 2.10. Major Permit Modification 7

 2.11. Inspection and Entry 7

 2.12. Emergency 7

 2.13. Need to Halt or Reduce Activity Not a Defense 8

 2.14. Suspension of Activities 8

 2.15. Property Rights 8

 2.16. Severability 8

 2.17. Transferability 8

 2.18. Notification Requirements 8

 2.19. Credible Evidence 8

3.0. Facility-Wide Requirements 9

 3.1. Limitations and Standards 9

 3.2. Monitoring Requirements 9

 3.3. Testing Requirements 9

 3.4. Recordkeeping Requirements 10

 3.5. Reporting Requirements 11

4.0. Source-Specific Requirements 12

 4.1. Limitations and Standards 12

 4.2. Monitoring Requirements 14

 4.3. Testing Requirements 15

 4.4. Recordkeeping Requirements 15

CERTIFICATION OF DATA ACCURACY 17

1.0 Emission Units

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
DG1	EP3	Caterpillar C175-16 Diesel Gen.	2015	3MW	SCR
DG2	EP4	Caterpillar C175-16 Diesel Gen.	2015	3MW	SCR
DG3	EP5	Caterpillar C175-16 Diesel Gen.	2015	3MW	SCR
DG4	EP6	Caterpillar C175-16 Diesel Gen.	2015	3MW	SCR
DG5	EP7	Caterpillar C175-16 Diesel Gen.	2015	3MW	SCR
TP1A	EP8	TuboPhase Module (engine)	TBD	2,750 HP	OxCat
TP1B	EP8	TuboPhase Module (engine)	TBD	2,750 HP	OxCat
TP1C	EP8	TuboPhase Module (engine)	TBD	2,750 HP	OxCat
TP1D	EP8	TuboPhase Module (engine)	TBD	2,750 HP	OxCat
TP2A	EP9	TuboPhase Module (engine)	TBD	2,750 HP	OxCat
TP2B	EP9	TuboPhase Module (engine)	TBD	2,750 HP	OxCat
TP2C	EP9	TuboPhase Module (engine)	TBD	2,750 HP	OxCat
TP2D	EP9	TuboPhase Module (engine)	TBD	2,750 HP	OxCat
GT1	EP1	GE Model 7FA Turbine	2001	1,571 mmbtu/hr	N
GT2	EP2	GE Model 7FA Turbine	2001	1,571 mmbtu/hr	N

2.0. General Conditions

2.1. Definitions

- 2.1.1. All references to the "West Virginia Air Pollution Control Act" or the "Air Pollution Control Act" mean those provisions contained in W.Va. Code §§ 22-5-1 to 22-5-18.
- 2.1.2. The "Clean Air Act" means those provisions contained in 42 U.S.C. §§ 7401 to 7671q, and regulations promulgated thereunder.
- 2.1.3. "Secretary" means the Secretary of the Department of Environmental Protection or such other person to whom the Secretary has delegated authority or duties pursuant to W.Va. Code §§ 22-1-6 or 22-1-8 (45 CSR § 30-2.12.). The Director of the Division of Air Quality is the Secretary's designated representative for the purposes of this permit.

2.2. Acronyms

CAAA	Clean Air Act Amendments	pph	Pounds per Hour
CBI	Confidential Business Information	ppm	Parts per Million
CEM	Continuous Emission Monitor	Ppmv or ppmv	Parts per million by volume
CES	Certified Emission Statement	PSD	Prevention of Significant Deterioration
C.F.R. or CFR	Code of Federal Regulations	psi	Pounds per Square Inch
CO	Carbon Monoxide	SIC	Standard Industrial Classification
C.S.R. or CSR	Codes of State Rules	SIP	State Implementation Plan
DAQ	Division of Air Quality	SO ₂	Sulfur Dioxide
DEP	Department of Environmental Protection	TAP	Toxic Air Pollutant
dscm	Dry Standard Cubic Meter	TPY	Tons per Year
FOIA	Freedom of Information Act	TRS	Total Reduced Sulfur
HAP	Hazardous Air Pollutant	TSP	Total Suspended Particulate
HON	Hazardous Organic NESHAP	USEPA	United States Environmental Protection Agency
HP	Horsepower	UTM	Universal Transverse Mercator
lbs/hr	Pounds per Hour	VEE	Visual Emissions Evaluation
LDAR	Leak Detection and Repair	VOC	Volatile Organic Compounds
M	Thousand	VOL	Volatile Organic Liquids
MACT	Maximum Achievable Control Technology		
MDHI	Maximum Design Heat Input		
MM	Million		
MMBtu/hr or mmbtu/hr	Million British Thermal Units per Hour		
MMCF/hr or mmcf/hr	Million Cubic Feet per Hour		
NA	Not Applicable		
NAAQS	National Ambient Air Quality Standards		
NESHAPS	National Emissions Standards for Hazardous Air Pollutants		
NO _x	Nitrogen Oxides		
NSPS	New Source Performance Standards		
PM	Particulate Matter		
PM _{2.5}	Particulate Matter less than 2.5µm in diameter		
PM ₁₀	Particulate Matter less than 10µm in diameter		
Ppb	Pounds per Batch		

2.3. Authority

This permit is issued in accordance with West Virginia Air Pollution Control Law W.Va. Code §§22-5-1 et seq. and the following Legislative Rules promulgated thereunder:

- 2.3.1. 45CSR13 – *Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits and Procedures for Evaluation;*

2.4. Term and Renewal

- 2.4.1. This permit supercedes and replaces previously issued Permit R13-2373A and general permit registration G60-C067. This permit shall remain valid, continuous and in effect unless it is revised, suspended, revoked or otherwise changed under an applicable provision of 45CSR13 or any applicable legislative rule.

2.5. Duty to Comply

- 2.5.1. The permitted facility shall be constructed and operated in accordance with the plans and specifications filed in Permit Application R13-2373, R13-2373A, R13-2373B and G60-C067 and any modifications, administrative updates, or amendments thereto. The Secretary may suspend or revoke a permit if the plans and specifications upon which the approval was based are not adhered to; [45CSR§§13-5.11 and 13-10.3]
- 2.5.2. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the West Virginia Code and the Clean Air Act and is grounds for enforcement action by the Secretary or USEPA;
- 2.5.3. Violations of any of the conditions contained in this permit, or incorporated herein by reference, may subject the permittee to civil and/or criminal penalties for each violation and further action or remedies as provided by West Virginia Code 22-5-6 and 22-5-7;
- 2.5.4. Approval of this permit does not relieve the permittee herein of the responsibility to apply for and obtain all other permits, licenses and/or approvals from other agencies; i.e., local, state and federal, which may have jurisdiction over the construction and/or operation of the source(s) and/or facility herein permitted.

2.6. Duty to Provide Information

The permittee shall furnish to the Secretary within a reasonable time any information the Secretary may request in writing to determine whether cause exists for administratively updating, modifying, revoking or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Secretary copies of records to be kept by the permittee. For information claimed to be confidential, the permittee shall furnish such records to the Secretary along with a claim of confidentiality in accordance with 45CSR31. If confidential information is to be sent to USEPA, the permittee shall directly provide such information to USEPA along with a claim of confidentiality in accordance with 40 C.F.R. Part 2.

2.7. Duty to Supplement and Correct Information

Upon becoming aware of a failure to submit any relevant facts or a submittal of incorrect information in any permit application, the permittee shall promptly submit to the Secretary such supplemental facts or corrected information.

2.8. Administrative Update

The permittee may request an administrative update to this permit as defined in and according to the

procedures specified in 45CSR13.
[45CSR§13-4]

2.9. Permit Modification

The permittee may request a minor modification to this permit as defined in and according to the procedures specified in 45CSR13.
[45CSR§13-5.4.]

2.10. Major Permit Modification

The permittee may request a major modification as defined in and according to the procedures specified in 45CSR14 or 45CSR19, as appropriate.
[45CSR§13-5.1]

2.11. Inspection and Entry

The permittee shall allow any authorized representative of the Secretary, upon the presentation of credentials and other documents as may be required by law, to perform the following:

- a. At all reasonable times (including all times in which the facility is in operation) enter upon the permittee's premises where a source is located or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- c. Inspect at reasonable times (including all times in which the facility is in operation) any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit;
- d. Sample or monitor at reasonable times substances or parameters to determine compliance with the permit or applicable requirements or ascertain the amounts and types of air pollutants discharged.

2.12. Emergency

- 2.12.1. An "emergency" means any situation arising from sudden and reasonable unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.
- 2.12.2. Effect of any emergency. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions of Section 2.12.3 are met.
- 2.12.3. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - a. An emergency occurred and that the permittee can identify the cause(s) of the emergency;
 - b. The permitted facility was at the time being properly operated;
 - c. During the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and,

- d. The permittee submitted notice of the emergency to the Secretary within one (1) working day of the time when emission limitations were exceeded due to the emergency and made a request for variance, and as applicable rules provide. This notice must contain a detailed description of the emergency, any steps taken to mitigate emission, and corrective actions taken.

2.12.4. In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof.

2.12.5. The provisions of this section are in addition to any emergency or upset provision contained in any applicable requirement.

2.13. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a permittee in an enforcement action that it should have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. However, nothing in this paragraph shall be construed as precluding consideration of a need to halt or reduce activity as a mitigating factor in determining penalties for noncompliance if the health, safety, or environmental impacts of halting or reducing operations would be more serious than the impacts of continued operations.

2.14. Suspension of Activities

In the event the permittee should deem it necessary to suspend, for a period in excess of sixty (60) consecutive calendar days, the operations authorized by this permit, the permittee shall notify the Secretary, in writing, within two (2) calendar weeks of the passing of the sixtieth (60) day of the suspension period.

2.15. Property Rights

This permit does not convey any property rights of any sort or any exclusive privilege.

2.16. Severability

The provisions of this permit are severable and should any provision(s) be declared by a court of competent jurisdiction to be invalid or unenforceable, all other provisions shall remain in full force and effect.

2.17. Transferability

This permit is transferable in accordance with the requirements outlined in Section 10.1 of 45CSR13. [45CSR§13-10.1]

2.18. Notification Requirements

The permittee shall notify the Secretary, in writing, no later than thirty (30) calendar days after the actual startup of the operations authorized under this permit.

2.19. Credible Evidence

Nothing in this permit shall alter or affect the ability of any person to establish compliance with, or a violation of, any applicable requirement through the use of credible evidence to the extent authorized by law. Nothing in this permit shall be construed to waive any defense otherwise available to the permittee including, but not limited to, any challenge to the credible evidence rule in the context of any future proceeding.

3.0. Facility-Wide Requirements

3.1. Limitations and Standards

- 3.1.1. **Open burning.** The open burning of refuse by any person, firm, corporation, association or public agency is prohibited except as noted in 45CSR§6-3.1.
[45CSR§6-3.1.]
- 3.1.2. **Open burning exemptions.** The exemptions listed in 45CSR§6-3.1 are subject to the following stipulation: Upon notification by the Secretary, no person shall cause, suffer, allow or permit any form of open burning during existing or predicted periods of atmospheric stagnation. Notification shall be made by such means as the Secretary may deem necessary and feasible.
[45CSR§6-3.2.]
- 3.1.3. **Asbestos.** The permittee is responsible for thoroughly inspecting the facility, or part of the facility, prior to commencement of demolition or renovation for the presence of asbestos and complying with 40 C.F.R. § 61.145, 40 C.F.R. § 61.148, and 40 C.F.R. § 61.150. The permittee, owner, or operator must notify the Secretary at least ten (10) working days prior to the commencement of any asbestos removal on the forms prescribed by the Secretary if the permittee is subject to the notification requirements of 40 C.F.R. § 61.145(b)(3)(i). The USEPA, the Division of Waste Management and the Bureau for Public Health - Environmental Health require a copy of this notice to be sent to them.
[40CFR§61.145(b) and 45CSR§34]
- 3.1.4. **Odor.** No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor at any location occupied by the public.
[45CSR§4-3.1 State-Enforceable only.]
- 3.1.5. **Permanent shutdown.** A source which has not operated at least 500 hours in one 12-month period within the previous five (5) year time period may be considered permanently shutdown, unless such source can provide to the Secretary, with reasonable specificity, information to the contrary. All permits may be modified or revoked and/or reapplication or application for new permits may be required for any source determined to be permanently shutdown.
[45CSR§13-10.5.]
- 3.1.6. **Standby plan for reducing emissions.** When requested by the Secretary, the permittee shall prepare standby plans for reducing the emissions of air pollutants in accordance with the objectives set forth in Tables I, II, and III of 45 C.S.R. 11.
[45CSR§11-5.2.]

3.2. Monitoring Requirements

- 3.2.1 **Emission Limit Averaging Time.** Unless otherwise specified, compliance with all annual limits shall be based on a rolling twelve month total. A rolling twelve month total shall be the sum of the measured parameter for the previous twelve calendar months.

3.3. Testing Requirements

- 3.3.1. **Stack testing.** As per provisions set forth in this permit or as otherwise required by the Secretary, in accordance with the West Virginia Code, underlying regulations, permits and orders, the permittee shall conduct test(s) to determine compliance with the emission limitations set forth in this permit and/or established or set forth in underlying documents. The Secretary, or his duly authorized representative, may at his option witness or conduct such test(s). Should the Secretary exercise his option to conduct such test(s), the operator shall provide all necessary sampling connections and sampling ports to be located in such manner as the Secretary may require, power for test equipment and the required safety equipment, such as scaffolding, railings and ladders, to comply with generally

accepted good safety practices. Such tests shall be conducted in accordance with the methods and procedures set forth in this permit or as otherwise approved or specified by the Secretary in accordance with the following:

- a. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with 40 C.F.R. Parts 60, 61, and 63 in accordance with the Secretary's delegated authority and any established equivalency determination methods which are applicable. If a testing method is specified or approved which effectively replaces a test method specified in the permit, the permit may be revised in accordance with 45CSR§13-4 or 45CSR§13-5.4 as applicable.
- b. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with applicable requirements which do not involve federal delegation. In specifying or approving such alternative testing to the test methods, the Secretary, to the extent possible, shall utilize the same equivalency criteria as would be used in approving such changes under Section 3.3.1.a. of this permit. If a testing method is specified or approved which effectively replaces a test method specified in the permit, the permit may be revised in accordance with 45CSR§13-4 or 45CSR§13-5.4 as applicable.
- c. All periodic tests to determine mass emission limits from or air pollutant concentrations in discharge stacks and such other tests as specified in this permit shall be conducted in accordance with an approved test protocol. Unless previously approved, such protocols shall be submitted to the Secretary in writing at least thirty (30) days prior to any testing and shall contain the information set forth by the Secretary. In addition, the permittee shall notify the Secretary at least fifteen (15) days prior to any testing so the Secretary may have the opportunity to observe such tests. This notification shall include the actual date and time during which the test will be conducted and, if appropriate, verification that the tests will fully conform to a referenced protocol previously approved by the Secretary.
- d. The permittee shall submit a report of the results of the stack test within sixty (60) days of completion of the test. The test report shall provide the information necessary to document the objectives of the test and to determine whether proper procedures were used to accomplish these objectives. The report shall include the following: the certification described in paragraph 3.5.1.; a statement of compliance status, also signed by a responsible official; and, a summary of conditions which form the basis for the compliance status evaluation. The summary of conditions shall include the following:
 1. The permit or rule evaluated, with the citation number and language;
 2. The result of the test for each permit or rule condition; and,
 3. A statement of compliance or noncompliance with each permit or rule condition.

[WV Code § 22-5-4(a)(14-15) and 45CSR13]

3.4. Recordkeeping Requirements

- 3.4.1. **Retention of records.** The permittee shall maintain records of all information (including monitoring data, support information, reports and notifications) required by this permit recorded in a form suitable and readily available for expeditious inspection and review. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation. The files shall be maintained for at least five (5) years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent two (2) years of data shall be maintained on site. The remaining three (3) years of data may be maintained off site, but must remain accessible within a reasonable time. Where appropriate, the permittee may maintain records electronically (on a computer, on computer floppy disks, CDs, DVDs, or magnetic tape disks), on microfilm, or on microfiche.

- 3.4.2. **Odors.** For the purposes of 45CSR4, the permittee shall maintain a record of all odor complaints received, any investigation performed in response to such a complaint, and any responsive action(s) taken.
[45CSR§4. *State-Enforceable only.*]

3.5. Reporting Requirements

- 3.5.1. **Responsible official.** Any application form, report, or compliance certification required by this permit to be submitted to the DAQ and/or USEPA shall contain a certification by the responsible official that states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.
- 3.5.2. **Confidential information.** A permittee may request confidential treatment for the submission of reporting required by this permit pursuant to the limitations and procedures of W. Va. Code § 22-5-10 and 45CSR31.
- 3.5.3. **Correspondence.** All notices, requests, demands, submissions and other communications required or permitted to be made to the Secretary of DEP and/or USEPA shall be made in writing and shall be deemed to have been duly given when delivered by hand, or mailed first class with postage prepaid to the address(es) set forth below or to such other person or address as the Secretary of the Department of Environmental Protection may designate:

If to the DAQ:

Director
WVDEP
Division of Air Quality
601 57th Street, SE
Charleston, WV 25304-2345

If to the USEPA:

Associate Director
Office of Air Enforcement and Compliance Assistance
(3AP20)
U. S. Environmental Protection Agency
Region III
1650 Arch Street
Philadelphia, PA 19103-2029

3.5.4. Operating Fee.

- 3.5.4.1. In accordance with 45CSR30 – Operating Permit Program, the permittee shall submit a Certified Emissions Statement (CES) and pay fees on an annual basis in accordance with the submittal requirements of the Division of Air Quality. A receipt for the appropriate fee shall be maintained on the premises for which the receipt has been issued, and shall be made immediately available for inspection by the Secretary or his/her duly authorized representative.
- 3.5.5. **Emission inventory.** At such time(s) as the Secretary may designate, the permittee herein shall prepare and submit an emission inventory for the previous year, addressing the emissions from the facility and/or process(es) authorized herein, in accordance with the emission inventory submittal requirements of the Division of Air Quality. After the initial submittal, the Secretary may, based upon the type and quantity of the pollutants emitted, establish a frequency other than on an annual basis.

4.0. Source-Specific Requirements

4.1. Limitations and Standards

4.1.1. Maximum Criteria Pollutant emissions from the facility shall not exceed the following:

Source ¹	CO		NO _x		VOCs		PM/PM ₁₀ /PM _{2.5}		SO ₂	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
Turbines ²	72.0	116.0	150.0	241.0	6.8	12.0	40.40	75.0	5.60	53.0
Turbines ³	144.0		940.0		16.0		78.0		206.0	
TP engines	5.34	8.66	24.26	39.4	1.46	2.36	1.60	2.60	0.08	0.12
Generators	125.90	31.47	24.10	6.03	14.39	3.60	3.60	0.90	0.27	0.07
Total	275.2	156.1	988.4	286.4	31.85	17.96	83.2	78.5	206.4	53.19

¹Two turbines combined, 8 TurboPhase engines combined and 5 generators combined.

²When firing Natural Gas

³When firing Fuel Oil

4.1.2 Maximum non criteria pollutant emissions from the facility shall not exceed the following:

Source ¹	Formaldehyde		H ₂ SO ₄		Acrolein		Acetaldehyde		Hexane		Methanol		PAHs		Total HAPs	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
Turbines ²	0.64	2.64	--	5.60	0.02	0.1	0.12	0.5	--	--	--	--	0.29	1.20	4.68	7.60
Turbines ³	--		22.00		0.02		0.12		--		0.29		4.68			
TP Engines	3.59	5.84	--	--	0.35	0.57	0.57	0.92	0.08	0.12	0.17	0.28	0.02	0.04	4.91	7.94
Generators	--	--	--	--	0.01	0.03	--	--	--	--	--	--	--	--	0.65	0.17
Total	4.23	8.48	22.0	5.60	0.36	0.61	0.57	0.97	0.08	0.12	0.17	0.28	0.02	1.24	10.24	16.69

¹Two turbines combined, 8 TurboPhase engines combined and 5 generators combined.

²When firing Natural Gas

³When firing Fuel Oil

4.1.3 Combustion Turbines (GT1 and GT2) shall not combust more than 14.02 x 10⁹ scf/yr of natural gas cumulatively. Additionally, whenever fuel oil is combusted this limit shall be reduced by 889 cubic feet of natural gas for each gallon of fuel oil combusted.

4.1.4 When low sulfur distillate fuel oil is fired, water injection shall be utilized to control NO_x emissions.

4.1.5 A dry low NO_x combustion system shall be installed, maintained, and operated so as to control NO_x emissions from the combustion turbines (GT1 and GT2) when natural gas is fired.

4.1.6 The annual average sulfur content of the low sulfur distillate fuel shall not exceed 0.05 percent.

4.1.7 The annual average sulfur content of the natural gas shall not exceed 0.5 grains per 100 scf.

4.1.8 On and after the date of the performance test required by §60.8 is completed, every owner or operator subject to the provisions of this subpart as specified in paragraphs (b), (c) and (d) the following, except as provided in paragraphs (e), (f), (g), (h), (I), (j), (k), and (l) of this section.
 [§60.332(a)]

4.1.9 No owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any stationary gas turbine, any gases which contain nitrogen oxides in excess of:

$$STD = 0.0075 * (14.4/Y) + F$$

where:

STD = allowable NOx emissions (percent volume at 15 percent oxygen and on a dry basis)

Y = manufacturer's rated heat rate at manufacturers rated load (kilojoules per watt hour) or, actual measured heat rate based on lower heating value of fuel as measured at actual peak load for the facility. The value of Y shall not to exceed 14.4 kilojoules per watt hour.

F = NOx emission allowance for fuel-bound nitrogen as defined in paragraph (a)(3) of this section.
[§60.332(a)(1)]

4.1.10 Electric utility stationary gas turbines with a heat input at peak load greater than 107.2 gigajoules per hour (100 million Btu/hour) based on the lower heating value of the fuel fired shall comply with the provisions of paragraph (a)(1) of this section.
[§60.332(b)]

4.1.11 On and after the date on which the performance test required to be conducted by §60.8 is completed, every owner or operator subject of the provision of this subpart shall comply with one or the other of the following conditions:

(a) No owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any stationary gas turbine any gases which contain sulfur dioxide in excess of 0.015 percent by volume at 15 percent oxygen and on a dry basis.

(b) No owner or operator subject to the provisions of this subpart shall burn in any stationary gas turbine any fuel which contains sulfur in excess of 0.8 percent by weight.
[§60.333]

4.1.12 The owner or operator of any stationary gas turbine subject to the provisions of this subpart and using water injection to control NOX emissions shall install and operate a continuous monitoring system to monitor and record the fuel consumption and the ratio of water to fuel being fired in the turbine. This system shall be accurate to within + 5.0 percent and shall be approved by the administrator.
[§60.334(a)]

4.1.13 Each TurboPhase engine (TP1A-4A, TP2A-2D) shall not operate more than 3,250 hours per year. Compliance with this condition shall be based on a rolling 12 month total. A rolling 12 month total shall be the sum of the operating hours for the previous twelve calendar months.

4.1.14 Emissions from each TurboPhase engine (TP1A-4A, TP2A-2D) shall not exceed the following:

NO _x	CO	VOCs
1.0 g/hp-hr	2.0 g/hp-hr	0.7 g/hp-hr

[40 CFR §60.4233(e)]

4.1.15 The permittee shall keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the TurboPhase engines in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test and conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance.
[40 CFR §60.4243(b)(2)(ii)]

4.1.16 Each Caterpillar C175-16 Diesel Generator (DG1-DG5) shall not operate more than 500 hours per year. Compliance with this condition shall be based on a rolling 12 month total. A rolling 12 month total shall be the sum of the operating hours for the previous twelve calendar months.

4.1.17 Emissions from each Caterpillar C175-16 Diesel Generator (DG1-DG5) shall not exceed the following:

NO _x	CO	PM	NMHC
0.50	2.61	0.07	0.30

[40 CFR §60.4204(b)]

4.1.18 The permittee shall meet the requirements of 40 CFR 63 Subpart ZZZZ by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines.

[40 CFR §63.6590(c)(1)]

4.1.19. **Operation and Maintenance of Air Pollution Control Equipment.** The permittee shall, to the extent practicable, install, maintain, and operate all pollution control equipment listed in Section 1.0 and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary.

[45CSR§13-5.11.]

4.2. Monitoring Requirements

4.2.1. For the purposes of determining compliance with maximum combustion limit set forth in 4.1.3, the applicant shall maintain certified daily records, utilizing the form identified as Attachment A to permit R13-2373. Such records shall be retained by the permittee for at least five (5) years. Certified records shall be made available to the Director or his duly authorized representative upon request.

4.2.2 For the purposes of determining compliance with the 4.1.6 and 4.1.7 the permittee shall use the following fuel monitoring program:

4.2.2.1 Natural Gas

Sulfur monitoring shall be conducted twice monthly for six months. If this monitoring shows little variability in fuel sulfur content, and indicates consistent compliance with 40 CFR 60.333, then sulfur monitoring shall be conducted once per quarter for six quarters. If the sulfur content still shows little variability and consistent compliance with sulfur dioxide limits in 40 CFR 60.333, sampling shall be conducted twice per annum thereafter during the first and third quarters. Analysis for the fuel sulfur content of natural gas shall be conducted using one of the approved ASTM methods referenced in 40 CFR 60.333 or approved alternative.

4.2.2.2 Fuel Oil

The permittee shall test the No. 2 distillate fuel oil for sulfur and nitrogen content on each occasion that fuel is transferred (as referenced below) to the storage tank, from any other source. Fuel oil sulfur content shall be determined using ASTM D2880-78 or another approved ASTM method incorporated in 40 CFR 60 by reference. Fuel oil nitrogen content shall be determined by following current ASTM procedures approved by the Administrator of the EPA. Initial test methods and changes to test methods used by the permittee to determine sulfur and nitrogen content shall be submitted to and approved by the WVDEP.

(a) Fuel oil transport/shipment is defined for sampling purposes as a series of truck transport loads from one specific fuel oil tank belonging to a vendor.

- (b) Upon receipt of delivered fuel oil, the receiving tank(s) at the facility will be sampled for fuel bound nitrogen and sulfur content prior to combustion.
 - (c) If no deliveries of fuel oil have been recorded at the Facility prior to the last time fuel oil was combusted no additional sampling and analysis will be conducted and the last analysis will be utilized.
 - (d) If fuel oil is delivered while oil is being combusted, the fuel oil to the combustor will be sampled after delivery of the last tanker truck from either one specific fuel oil tank belonging to the vendor or vendor certification that all deliveries were from same fuel oil source.
- 4.2.3 In order to determine compliance with 4.1.13 the permittee shall monitor and record the hours of operation of each TurboPhase engine (TP1A-TP1D and TP2A-TP2D) on a daily basis.
- 4.2.4 In order to determine compliance with 4.1.16 the permittee shall monitor and record the hours of operation of each Caterpillar C175-16 Diesel Generator (DG1-DG5) on a daily basis.
- 4.2.5 In order to determine compliance with the NO_x limits of condition 4.1.1 of this permit, the permittee shall install a continuous emissions monitoring system (CEMS). Said CEMS shall be designed, installed, operated and maintained in accordance with 40 CFR 60.13 or 40 CFR 75, as appropriate.

4.3. Testing Requirements

- 4.3.1. The permittee shall conduct an initial performance test and conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first, on each TurboPhase engine (TP1A-TP1D and TP2A-TP2D) in accordance with 40 CFR §60.4244.
[40 CFR §60.4243(b)(2)(ii)]
- 4.3.2 Within 90 days of startup of the TurboPhase system, the permittee shall perform or have performed EPA approved stack tests to determine compliance with the turbine CO emission limits of 4.1.1.4

4.4. Recordkeeping Requirements

- 4.4.1. **Record of Monitoring.** The permittee shall keep records of monitoring information that include the following:
- a. The date, place as defined in this permit and time of sampling or measurements;
 - b. The date(s) analyses were performed;
 - c. The company or entity that performed the analyses;
 - d. The analytical techniques or methods used;
 - e. The results of the analyses; and
 - f. The operating conditions existing at the time of sampling or measurement.
- 4.4.2. **Record of Maintenance of Air Pollution Control Equipment.** For all pollution control equipment listed in Section 1.0, the permittee shall maintain accurate records of all required pollution control equipment inspection and/or preventative maintenance procedures.
- 4.4.3. **Record of Malfunctions of Air Pollution Control Equipment.** For all air pollution control equipment listed in Section 1.0, the permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the air pollution control equipment during which excess emissions occur. For each such case, the following information shall be recorded:

- a. The equipment involved.
- b. Steps taken to minimize emissions during the event.
- c. The duration of the event.
- d. The estimated increase in emissions during the event.

For each such case associated with an equipment malfunction, the additional information shall also be recorded:

- e. The cause of the malfunction.
 - f. Steps taken to correct the malfunction.
 - g. Any changes or modifications to equipment or procedures that would help prevent future recurrences of the malfunction.
- 4.4.4. Except as specified in paragraphs (a) and (b) of §60.116b, vessels either with a capacity greater than or equal to 151m³ storing a liquid with a maximum true vapor pressure less than 3.5 kPa or with a capacity greater than or equal to 75 m³ but less than 151 m³ storing a liquid with a maximum true vapor pressure less than 15.0 kPa are exempt from the General Provisions (part 60, subpart A) and from the provisions of this subpart.
[§60.110b(c)]
- 4.4.5 The owner or operator shall keep copies of all records required by this section, except for the record required by paragraph (b) of this section, for at least 2 years. The record required by paragraph (b) of this section will be kept for the life of the source.
[§60.116b(a)]
- 4.4.6 The owner or operator of each storage vessel as specified in §60.110b(a) shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel.
[§60.116b(b)]
- 4.4.7 Compliance with the turbines NO_x emission limit of 4.1.1 shall be determined using the CEMS required by 4.2.5. Compliance with all other annual limits of 4.1.1 shall be determined by multiplying the monthly hours of operation by the applicable hourly limit. At the end of the month, that months emissions shall be added to the previous 12 months emissions to determine compliance.

CERTIFICATION OF DATA ACCURACY

I, the undersigned, hereby certify that, based on information and belief formed after reasonable inquiry, all information contained in the attached _____, representing the period beginning _____ and ending _____, and any supporting documents appended hereto, is true, accurate, and complete.

Signature¹ _____ Date _____
(please use blue ink) Responsible Official or Authorized Representative

Name and Title _____ Title _____
(please print or type) Name

Telephone No. _____ Fax No. _____

This form shall be signed by a "Responsible Official." "Responsible Official" means one of the following:

- a. For a corporation: The president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit and either:
 - (I) the facilities employ more than 250 persons or have a gross annual sales or expenditures exceeding \$25 million (in second quarter 1980 dollars), or
 - (ii) the delegation of authority to such representative is approved in advance by the Director;
- b. For a partnership or sole proprietorship: a general partner or the proprietor, respectively;
- c. For a municipality, State, Federal, or other public entity: either a principal executive officer or ranking elected official. For the purposes of this part, a principal executive officer of a Federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., a Regional Administrator of USEPA); or
- d. The designated representative delegated with such authority and approved in advance by the Director.



west virginia department of environmental protection

Division of Air Quality
601 57th Street SE
Charleston, WV 25304
Phone (304) 926-0475 • FAX: (304) 926-0479

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
www.dep.wv.gov

July 24, 2015

Gerald Gatti, Plant Manager
Pleasants Energy, LLC
10319 South Pleasants Highway
St. Marys, WV 26170

RE: Application Status: Complete
Pleasants Energy, LLC
Waverly Facility
Permit Application R13-2373B
Plant ID No. 073-00022

Dear Mr. Gatti:

Your application for a modification permit for a natural gas fired electric peaking station was received by this Division on June 25, 2015 and assigned to the writer for review. Upon review of said application, it has been determined that the application is complete as submitted and, therefore, the statutory review period commenced on July 24, 2015.

This determination of completeness shall not relieve the permit applicant of the requirement to subsequently submit, in a timely manner, any additional or corrected information deemed necessary for a final permit determination.

Should you have any questions, please contact me at (304) 926-0499 ext. 1227.

Sincerely,

Steven R. Pursley, PE
Engineer

NON-CONFIDENTIAL

Steve

GDF SUEZ

June 30, 2015



Beverly McKeone
West Virginia Department of Environmental Protection
Division of Air Quality
601 57th Street, SE
Charleston, WV 25304

Re: Minor Source Air Permit Application
Pleasants Energy, LLC
Waverly Facility
Plant ID No. 073-00022
Application No. R13-2373B

Dear Ms. McKeone:

In response to the email from Sandra K Adkins on June 29, 2015, enclosed please find the original Affidavit of Publication for the legal notice required for the above referenced permit application. Also enclosed is a CD with an electronic copy of the application, as requested.

Please contact me directly if you have any questions regarding the enclosed documents.

Regards,

Gerald M. Gatti
Plant Manager
Pleasants Energy, LLC
10319 South Pleasants Highway
St. Marys, WV 26170
Direct 304-665-4201
Fax 304-665-4218
gerald.gatti@gdfsuezna.com

NON-CONFIDENTIAL

INVOICE AND AFFIDAVIT OF PUBLICATION



Pleasants County Leader

Ph. 304.684.2424 • Fax 304.684.2426
P.O. Box 27, St. Marys, WV 26170

WEST CENTRAL PUBLISHING
FEDERAL I.D. NO. 55-06700561
STATE OF WEST VIRGINIA
COUNTY OF PLEASANTS, to wit:

I, Randa Gregg, being first duly sworn upon my oath, do depose and say:

- that I am General Manager of Pleasants County Leader, a Republican newspaper,
- that I have been duly authorized to execute this affidavit,
- that such newspaper is regularly published weekly for at least fifty weeks during the calendar year, in the municipality of St. Marys, Pleasants County, West Virginia.
- that such newspaper is a newspaper of "general circulation" as defined in Art. 3, Chap. 59 of the Code of West Virginia 1931 as amended, within St. Marys and Pleasants County
- that such newspaper averages in length four or more pages, exclusive of any cover, per issue;
- that such newspaper is circulated to the general public at a definite price or consideration;
- that such newspaper is a newspaper to which the general public resorts for passing events or a political, religious, commercial and social nature and for current happenings, announcements, miscellaneous reading matters, advertisements and other notices;
- and that the annexed notice described as follows:

Air Quality Permit Notice

WAS PUBLISHED IN SAID NEWSPAPER AS FOLLOWS:

TIMES	DATES
One	June 27, 2015

PUBLICATION CHARGES	\$45.54
---------------------	---------

CERTIF-BILL TO

Pleasants Energy, LLC
Attn: Gerald M. Gatti
10319 S Pleasants Hwy
St. Marys, WV 26270

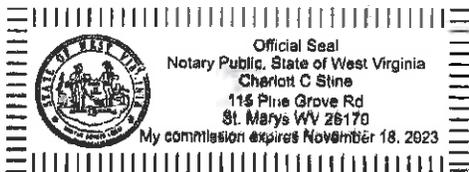
(signed) Randa Gregg

NOTARIZATION

Taken, sworn to and subscribed before me this 27th
day of June, 20 15

Charlott C Stine

Notary Public



AIR QUALITY PERMIT NOTICE
Notice of Application

Notice is given that **Pleasants Energy, LLC** has applied to the West Virginia Department of Environmental Protection, Division of Air Quality, for a **45CSR13 Construction Permit** for the installation of eight natural gas-fired engines to power two TurboPhase systems to increase the output of the existing combustion turbines, an increase in the hourly emission limits for the simple cycle combustion turbines (but no overall annual emissions increase), and the status change of five diesel generators from emergency status to non-emergency status. The facility is located on **Latitude: 21.384, Longitude: 79.910, 10319 South Pleasants Highway, St. Marys** in **Pleasants County, West Virginia**.

The applicant estimates the potential to discharge the following Regulated Air Pollutants will be: **NOx: 39.41 tpy, CO: 8.67 tpy, VOC: 2.36 tpy, SO2: 0.13 tpy, PM10: 2.60 tpy, Total HAPs: 7.94 tpy**

Startup of operation is planned to begin on or about the **First day of April, 2016**. Written comments will be received by the West Virginia Department of Environmental Protection, Division of Air Quality, 601 57th Street, SE., Charleston, WV 25304, for at least 30 calendar days from the date of publication of this notice.

Any questions regarding this permit application should be directed to the DAQ at (304) 926-0499, extension 1227, during normal business hours.

Dated this the **Twenty-second** day of **June, 2015**.

By: **Pleasants Energy, LLC**
Gerald Gatti
Plant Manager
10319 South Pleasants Highway
St. Marys, WV 26170

6-27 L



PLEASE RETURN A COPY OF THIS INVOICE WITH YOUR PAYMENT TO:
P.O. BOX 27, ST. MARYS, WV 26170

NON-CONFIDENTIAL

Pursley, Steven R

From: Adkins, Sandra K
Sent: Monday, June 29, 2015 4:08 PM
To: gerald.gatti@gdfsuezna.com
Cc: McKeone, Beverly D; Pursley, Steven R
Subject: WV DAQ Permit Application Status for Pleasants Energy, LLC; Waverly

**RE: Application Status
Pleasants Energy, LLC
Waverly Facility
Plant ID No. 073-00022
Application No. R13-2373B**

Mr. Gatti,

Your application for a modification permit for the Waverly facility was received by this Division on June 25, 2015, and was assigned to Steve Pursley. The following items were not included in the initial application submittal:

Original affidavit for Class I legal advertisement not submitted.

Original and two (2) copies of the application not submitted.

**only one copy was submitted – we would prefer a CD copy*

These items are necessary for the assigned permit writer to continue the 30-day completeness review.

Within 30 days, you should receive a letter from Steve Pursley stating the status of the permit application and, if complete, given an estimated time frame for the agency's final action on the permit.

Any determination of completeness shall not relieve the permit applicant of the requirement to subsequently submit, in a timely manner, any additional or corrected information deemed necessary for a final permit decision.

Should you have any questions, please contact the assigned engineer, Steve Pursley, at 304-926-0499, extension 1218.

CONFIDENTIAL

Meeting Agenda



Meeting Subject: Pleasants Energy PSD Air Permit Application
 Meeting Date: March 30, 2015
 Start Time: 1:00 PM CDT (2:00 PM EDT)
 End Time: 2:00 PM CDT (3:00 PM EDT)
 Location: Conference Call

Project Name: Pleasants Energy Air Permitting

073 6622

FILE
COMPANY Pleasants Energy
UTILITY Waverly
REGION 2 REG. 13-2373B

<u>Invitee</u>	<u>Organization</u>	<u>Invitee</u>	<u>Organization</u>
Beverly McKeone	WV DEP	Gerald Gatti	Pleasants Energy
Joseph Kessler	WV DEP	Gary Vierling	Pleasants Energy
Steve Pursley	WV DEP	Carl Carlsson	Pleasants Energy
✓ Mary Hauner-Davis	BMcD	✓ Bruce Birbeck	Pleasants Energy - 1 hour CDF
✓ Emily Robbins	BMcD	Don Stacey	Pleasants Energy - 1 hour CDF
		Peter Homnick	Pleasants Energy

Agenda:

Pleasants Energy is contemplating submitting a PSD air permit application to increase the hours of operation of the combustion turbines and add Turbophase to the combustion turbines to increase output. This call is to discuss the permit application and modeling requirements for the Project.

1. Project Description

- Emissions estimates *≈ 400 tpy NO_x*

2. Air Dispersion Modeling

- Sources to model *Ozone Limiting Method*
- Tier III NO_x modeling – will submit OLM protocol
- Refined modeling likely for NO_x, PM10, PM2.5, and possibly CO
 - Inventories? *lost out 20-25 km then use judgement to remove from modeling.*
- Intermittent sources/operational scenarios (1-hour standards)
 - Engines *up to 500 hours*
 - Combustion turbines start-up *up to 200 hrs/year include in modeling? - could be "intermittent" which would mean maybe no modeling.*
- Meteorological data – Comments?
 - Surface Data: Parkersburg Wood County Airport (station #03804)

NON-CONFIDENTIAL

Meeting Agenda (continued)



March 30, 2015
Page 2

- Upper air data: Wilmington Airborne Park (station # 94823)
- Years 2009 to 2013
- Ozone data: Quaker City Station with Lawrenceville Station (Pittsburgh) to fill in missing years - may have visibility info avail (at least for O₃ season)
- Class II visibility modeling - VISCREEN? ✓
- Secondary PM2.5 formation need to look at state monitor info to get NO_x speciation data.
- Class I Areas Holly Sods, ~~and~~
 - Visibility analysis (Q/D <10)
 - Increment modeling requirements - still have to do analysis but can be qualitative i.e. if class II shows results < class I impact, (just like Moundsville power).
- Any other state specific modeling requirements?

3. Application

- BACT analysis for combustion turbines, Turbophase engines, and blackstart engines
- Additional impacts analysis
- Public notice requirements

4. Schedule - hope to submit in next 3 months

5. Other Items