



**COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
AIR QUALITY PROGRAM**

**TITLE V/STATE OPERATING PERMIT**

Issue Date: October 4, 2019

Effective Date: November 1, 2019

Expiration Date: October 31, 2024

In accordance with the provisions of the Air Pollution Control Act, the Act of January 8, 1960, P.L. 2119, as amended, and 25 Pa. Code Chapter 127, the Owner, [and Operator if noted] (hereinafter referred to as permittee) identified below is authorized by the Department of Environmental Protection (Department) to operate the air emission source(s) more fully described in this permit. This Facility is subject to all terms and conditions specified in this permit. Nothing in this permit relieves the permittee from its obligations to comply with all applicable Federal, State and Local laws and regulations.

The regulatory or statutory authority for each permit condition is set forth in brackets. All terms and conditions in this permit are federally enforceable applicable requirements unless otherwise designated as "State-Only" or "non-applicable" requirements.

**TITLE V Permit No: 67-05083**

Federal Tax Id - Plant Code: 81-0611503-2

**Owner Information**

Name: CALPINE MID-MERIT, LLC  
Mailing Address: 717 TEXAS ST STE 1000  
HOUSTON, TX 77002-2743

**Plant Information**

Plant: CALPINE MID MERIT LLC/YORK ENERGY CTR DELTA  
Location: 67 York County 67950 Peach Bottom Township  
SIC Code: 4911 Trans. & Utilities - Electric Services

**Responsible Official**

Name: MARK CLEMENS  
Title: PLANT MGR  
Phone: (717) 456 - 2445

**Permit Contact Person**

Name: PATRICK BLANCHARD  
Title: DIR REGIONAL EHS  
Phone: (713) 830 - 8717

[Signature] \_\_\_\_\_  
WILLIAMR. WEAVER, SOUTHCENTRAL REGION AIR PROGRAMMANAGER



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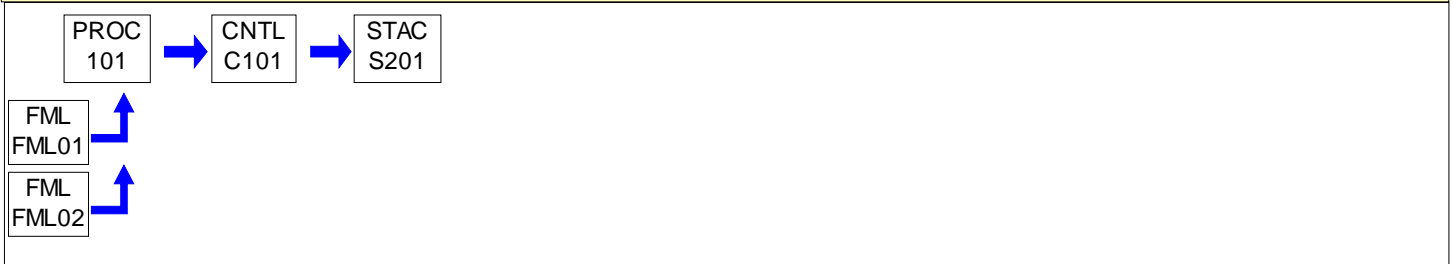
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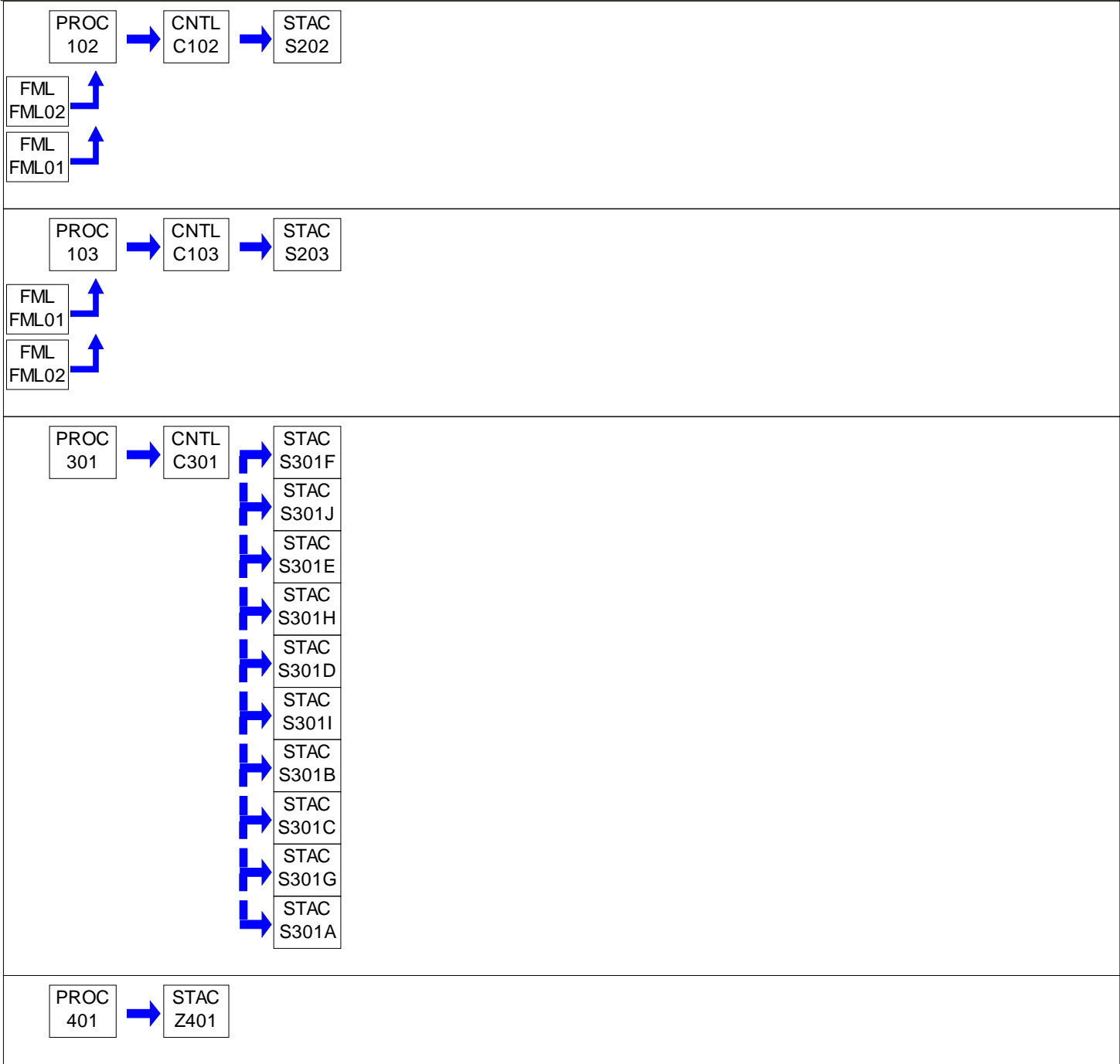
**SECTION A. Site Inventory List**

Source ID	Source Name	Capacity/Throughput		Fuel/Material
101	TURBINE UNIT 1	1,574.000	MMBTU/HR	
		1,575.000	MCF/HR	NATURAL GAS
		11,242.000	Gal/HR	#2 OIL
102	TURBINE UNIT 2	1,574.000	MMBTU/HR	
		1,575.000	MCF/HR	NATURAL GAS
		11,242.000	Gal/HR	#2 OIL
103	TURBINE UNIT 3	1,574.000	MMBTU/HR	
		1,575.000	MCF/HR	NATURAL GAS
		11,242.000	Gal/HR	#2 OIL
301	BLOCK 1 COOLING TOWER	7,546,800.000	Gal/HR	COOLING WATER PUMP (
401	FUEL OIL TANK NO. 1	33.730	Th Gal/HR	ULSD, THE CAPACITY IS I
C101	UNIT 1 SCR			
C102	UNIT 2 SCR			
C103	UNIT 3 SCR			
C301	HIGH EFFICIENCY MIST ELIMINATOR			
FML01	NATURAL GAS			
FML02	ULTRA LOW SULFUR DIESEL (ULSD)			
S201	UNIT 1 COMBINED CYCLE STACK			
S202	UNIT 2 COMBINED CYCLE STACK			
S203	UNIT 3 COMBINED CYCLE STACK			
S301A	BLOCK 1 COOLING TOWER STACK			
S301B	BLOCK 1 COOLING TOWER STACK			
S301C	BLOCK 1 COOLING TOWER STACK			
S301D	BLOCK 1 COOLING TOWER STACK			
S301E	BLOCK 1 COOLING TOWER STACK			
S301F	BLOCK 1 COOLING TOWER STACK			
S301G	BLOCK 1 COOLING TOWER STACK			
S301H	BLOCK 1 COOLING TOWER STACK			
S301I	BLOCK 1 COOLING TOWER STACK			
S301J	BLOCK 1 COOLING TOWER STACK			
Z401	TANK 1 EMISSIONS			

**PERMIT MAPS**



### PERMIT MAPS



**SECTION B. General Title V Requirements****#001 [25 Pa. Code § 121.1]****Definitions**

Words and terms that are not otherwise defined in this permit shall have the meanings set forth in Section 3 of the Air Pollution Control Act (35 P.S. § 4003) and 25 Pa. Code § 121.1.

**#002 [25 Pa. Code § 121.7]****Prohibition of Air Pollution**

No person may permit air pollution as that term is defined in the act.

**#003 [25 Pa. Code § 127.512(c)(4)]****Property Rights**

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

**#004 [25 Pa. Code § 127.446(a) and (c)]****Permit Expiration**

This operating permit is issued for a fixed term of five (5) years and shall expire on the date specified on Page 1 of this permit. The terms and conditions of the expired permit shall automatically continue pending issuance of a new Title V permit, provided the permittee has submitted a timely and complete application and paid applicable fees required under 25 Pa. Code Chapter 127, Subchapter I and the Department is unable, through no fault of the permittee, to issue or deny a new permit before the expiration of the previous permit. An application is complete if it contains sufficient information to begin processing the application, has the applicable sections completed and has been signed by a responsible official.

**#005 [25 Pa. Code §§ 127.412, 127.413, 127.414, 127.446(e) & 127.503]****Permit Renewal**

(a) An application for the renewal of the Title V permit shall be submitted to the Department at least six (6) months, and not more than 18 months, before the expiration date of this permit. The renewal application is timely if a complete application is submitted to the Department's Regional Air Manager within the timeframe specified in this permit condition.

(b) The application for permit renewal shall include the current permit number, the appropriate permit renewal fee, a description of any permit revisions and off-permit changes that occurred during the permit term, and any applicable requirements that were promulgated and not incorporated into the permit during the permit term.

(c) The renewal application shall also include submission of proof that the local municipality and county, in which the facility is located, have been notified in accordance with 25 Pa. Code § 127.413. The application for renewal of the Title V permit shall also include submission of compliance review forms which have been used by the permittee to update information submitted in accordance with either 25 Pa. Code § 127.412(b) or § 127.412(j).

(d) The permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information during the permit renewal process. The permittee shall also promptly provide additional information as necessary to address any requirements that become applicable to the source after the date a complete renewal application was submitted but prior to release of a draft permit.

**#006 [25 Pa. Code §§ 127.450(a)(4) & 127.464(a)]****Transfer of Ownership or Operational Control**

(a) In accordance with 25 Pa. Code § 127.450(a)(4), a change in ownership or operational control of the source shall be treated as an administrative amendment if:

(1) The Department determines that no other change in the permit is necessary;

(2) A written agreement has been submitted to the Department identifying the specific date of the transfer of permit responsibility, coverage and liability between the current and the new permittee; and,

(3) A compliance review form has been submitted to the Department and the permit transfer has been approved by the Department.

**SECTION B. General Title V Requirements**

(b) In accordance with 25 Pa. Code § 127.464(a), this permit may not be transferred to another person except in cases of transfer-of-ownership which are documented and approved to the satisfaction of the Department.

**#007 [25 Pa. Code § 127.513, 35 P.S. § 4008 and § 114 of the CAA]****Inspection and Entry**

(a) Upon presentation of credentials and other documents as may be required by law for inspection and entry purposes, the permittee shall allow the Department of Environmental Protection or authorized representatives of the Department to perform the following:

- (1) Enter at reasonable times upon the permittee's premises where a Title V source is located or emissions related activity is conducted, or where records are kept under the conditions of this permit;
- (2) Have access to and copy or remove, at reasonable times, records that are kept under the conditions of this permit;
- (3) Inspect at reasonable times, facilities, equipment including monitoring and air pollution control equipment, practices, or operations regulated or required under this permit;
- (4) Sample or monitor, at reasonable times, substances or parameters, for the purpose of assuring compliance with the permit or applicable requirements as authorized by the Clean Air Act, the Air Pollution Control Act, or the regulations promulgated under the Acts.

(b) Pursuant to 35 P.S. § 4008, no person shall hinder, obstruct, prevent or interfere with the Department or its personnel in the performance of any duty authorized under the Air Pollution Control Act.

(c) Nothing in this permit condition shall limit the ability of the EPA to inspect or enter the premises of the permittee in accordance with Section 114 or other applicable provisions of the Clean Air Act.

**#008 [25 Pa. Code §§ 127.25, 127.444, & 127.512(c)(1)]****Compliance Requirements**

(a) The permittee shall comply with the conditions of this permit. Noncompliance with this permit constitutes a violation of the Clean Air Act and the Air Pollution Control Act and is grounds for one (1) or more of the following:

- (1) Enforcement action
- (2) Permit termination, revocation and reissuance or modification
- (3) Denial of a permit renewal application

(b) A person may not cause or permit the operation of a source, which is subject to 25 Pa. Code Article III, unless the source(s) and air cleaning devices identified in the application for the plan approval and operating permit and the plan approval issued to the source are operated and maintained in accordance with specifications in the applications and the conditions in the plan approval and operating permit issued by the Department. A person may not cause or permit the operation of an air contamination source subject to 25 Pa. Code Chapter 127 in a manner inconsistent with good operating practices.

(c) For purposes of Sub-condition (b) of this permit condition, the specifications in applications for plan approvals and operating permits are the physical configurations and engineering design details which the Department determines are essential for the permittee's compliance with the applicable requirements in this Title V permit.

**#009 [25 Pa. Code § 127.512(c)(2)]****Need to Halt or Reduce Activity Not a Defense**

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

**#010 [25 Pa. Code §§ 127.411(d) & 127.512(c)(5)]****Duty to Provide Information**

(a) The permittee shall furnish to the Department, within a reasonable time, information that the Department may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit, or

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to determine compliance with the permit.

(b) Upon request, the permittee shall also furnish to the Department copies of records that the permittee is required to keep by this permit, or for information claimed to be confidential, the permittee may furnish such records directly to the Administrator of EPA along with a claim of confidentiality.

**#011 [25 Pa. Code §§ 127.463, 127.512(c)(3) & 127.542]****Reopening and Revising the Title V Permit for Cause**

(a) This Title V permit may be modified, revoked, reopened and reissued or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay a permit condition.

(b) This permit may be reopened, revised and reissued prior to expiration of the permit under one or more of the following circumstances:

(1) Additional applicable requirements under the Clean Air Act or the Air Pollution Control Act become applicable to a Title V facility with a remaining permit term of three (3) or more years prior to the expiration date of this permit. The Department will revise the permit as expeditiously as practicable but not later than 18 months after promulgation of the applicable standards or regulations. No such revision is required if the effective date of the requirement is later than the expiration date of this permit, unless the original permit or its terms and conditions has been extended.

(2) Additional requirements, including excess emissions requirements, become applicable to an affected source under the acid rain program. Upon approval by the Administrator of EPA, excess emissions offset plans for an affected source shall be incorporated into the permit.

(3) The Department or the EPA determines that this permit contains a material mistake or inaccurate statements were made in establishing the emissions standards or other terms or conditions of this permit.

(4) The Department or the Administrator of EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements.

(c) Proceedings to revise this permit shall follow the same procedures which apply to initial permit issuance and shall affect only those parts of this permit for which cause to revise exists. The revision shall be made as expeditiously as practicable.

(d) Regardless of whether a revision is made in accordance with (b)(1) above, the permittee shall meet the applicable standards or regulations promulgated under the Clean Air Act within the time frame required by standards or regulations.

**#012 [25 Pa. Code § 127.543]****Reopening a Title V Permit for Cause by EPA**

As required by the Clean Air Act and regulations adopted thereunder, this permit may be modified, reopened and reissued, revoked or terminated for cause by EPA in accordance with procedures specified in 25 Pa. Code § 127.543.

**#013 [25 Pa. Code § 127.522(a)]****Operating Permit Application Review by the EPA**

The applicant may be required by the Department to provide a copy of the permit application, including the compliance plan, directly to the Administrator of the EPA. Copies of title V permit applications to EPA, pursuant to 25 PA Code §127.522(a), shall be submitted, if required, to the following EPA e-mail box:

R3\_Air\_Apps\_and\_Notices@epa.gov

Please place the following in the subject line: TV [permit number], [Facility Name].

**#014 [25 Pa. Code § 127.541]****Significant Operating Permit Modifications**

When permit modifications during the term of this permit do not qualify as minor permit modifications or administrative amendments, the permittee shall submit an application for significant Title V permit modifications in accordance with



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25 Pa. Code § 127.541. Notifications to EPA, pursuant to 25 PA Code §127.522(a), if required, shall be submitted, to the following EPA e-mail box:

R3\_Air\_Apps\_and\_Notices@epa.gov

Please place the following in the subject line: TV [permit number], [Facility Name].

**#015 [25 Pa. Code §§ 121.1 & 127.462]****Minor Operating Permit Modifications**

The permittee may make minor operating permit modifications (as defined in 25 Pa. Code §121.1), on an expedited basis, in accordance with 25 Pa. Code §127.462 (relating to minor operating permit modifications). Notifications to EPA, pursuant to 25 PA Code §127.462(c), if required, shall be submitted, to the following EPA e-mail box:

R3\_Air\_Apps\_and\_Notices@epa.gov

Please place the following in the subject line: TV [permit number], [Facility Name].

**#016 [25 Pa. Code § 127.450]****Administrative Operating Permit Amendments**

(a) The permittee may request administrative operating permit amendments, as defined in 25 Pa. Code §127.450(a). Copies of request for administrative permit amendment to EPA, pursuant to 25 PA Code §127.450(c)(1), if required, shall be submitted to the following EPA e-mail box:

R3\_Air\_Apps\_and\_Notices@epa.gov

Please place the following in the subject line: TV [permit number], [Facility Name].

(b) Upon final action by the Department granting a request for an administrative operating permit amendment covered under §127.450(a)(5), the permit shield provisions in 25 Pa. Code § 127.516 (relating to permit shield) shall apply to administrative permit amendments incorporated in this Title V Permit in accordance with §127.450(c), unless precluded by the Clean Air Act or the regulations thereunder.

**#017 [25 Pa. Code § 127.512(b)]****Severability Clause**

The provisions of this permit are severable, and if any provision of this permit is determined by the Environmental Hearing Board or a court of competent jurisdiction, or US EPA to be invalid or unenforceable, such a determination will not affect the remaining provisions of this permit.

**#018 [25 Pa. Code §§ 127.704, 127.705 & 127.707]****Fee Payment**

(a) The permittee shall pay fees to the Department in accordance with the applicable fee schedules in 25 Pa. Code Chapter 127, Subchapter I (relating to plan approval and operating permit fees).

(b) Emission Fees. The permittee shall, on or before September 1st of each year, pay applicable annual Title V emission fees for emissions occurring in the previous calendar year as specified in 25 Pa. Code § 127.705. The permittee is not required to pay an emission fee for emissions of more than 4,000 tons of each regulated pollutant emitted from the facility.

(c) As used in this permit condition, the term "regulated pollutant" is defined as a VOC, each pollutant regulated under Sections 111 and 112 of the Clean Air Act and each pollutant for which a National Ambient Air Quality Standard has been promulgated, except that carbon monoxide is excluded.

(d) Late Payment. Late payment of emission fees will subject the permittee to the penalties prescribed in 25 Pa. Code § 127.707 and may result in the suspension or termination of the Title V permit. The permittee shall pay a penalty of fifty percent (50%) of the fee amount, plus interest on the fee amount computed in accordance with 26 U.S.C.A. § 6621(a)(2) from the date the emission fee should have been paid in accordance with the time frame specified in 25 Pa. Code § 127.705(c).

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(e) The permittee shall pay an annual operating permit administration fee according to the fee schedule established in 25 Pa. Code § 127.704(c) if the facility, identified in Subparagraph (iv) of the definition of the term "Title V facility" in 25 Pa. Code § 121.1, is subject to Title V after the EPA Administrator completes a rulemaking requiring regulation of those sources under Title V of the Clean Air Act.

(f) This permit condition does not apply to a Title V facility which qualifies for exemption from emission fees under 35 P.S. § 4006.3(f).

**#019 [25 Pa. Code §§ 127.14(b) & 127.449]****Authorization for De Minimis Emission Increases**

(a) This permit authorizes de minimis emission increases from a new or existing source in accordance with 25 Pa. Code §§ 127.14 and 127.449 without the need for a plan approval or prior issuance of a permit modification. The permittee shall provide the Department with seven (7) days prior written notice before commencing any de minimis emissions increase that would result from either: (1) a physical change of minor significance under § 127.14(c)(1); or (2) the construction, installation, modification or reactivation of an air contamination source. The written notice shall:

- (1) Identify and describe the pollutants that will be emitted as a result of the de minimis emissions increase.
- (2) Provide emission rates expressed in tons per year and in terms necessary to establish compliance consistent with any applicable requirement.

The Department may disapprove or condition de minimis emission increases at any time.

(b) Except as provided below in (c) and (d) of this permit condition, the permittee is authorized during the term of this permit to make de minimis emission increases (expressed in tons per year) up to the following amounts without the need for a plan approval or prior issuance of a permit modification:

- (1) Four tons of carbon monoxide from a single source during the term of the permit and 20 tons of carbon monoxide at the facility during the term of the permit.
- (2) One ton of NO<sub>x</sub> from a single source during the term of the permit and 5 tons of NO<sub>x</sub> at the facility during the term of the permit.
- (3) One and six-tenths tons of the oxides of sulfur from a single source during the term of the permit and 8.0 tons of oxides of sulfur at the facility during the term of the permit.
- (4) Six-tenths of a ton of PM<sub>10</sub> from a single source during the term of the permit and 3.0 tons of PM<sub>10</sub> at the facility during the term of the permit. This shall include emissions of a pollutant regulated under Section 112 of the Clean Air Act unless precluded by the Clean Air Act or 25 Pa. Code Article III.
- (5) One ton of VOCs from a single source during the term of the permit and 5.0 tons of VOCs at the facility during the term of the permit. This shall include emissions of a pollutant regulated under Section 112 of the Clean Air Act unless precluded by the Clean Air Act or 25 Pa. Code Article III.

(c) In accordance with § 127.14, the permittee may install the following minor sources without the need for a plan approval:

- (1) Air conditioning or ventilation systems not designed to remove pollutants generated or released from other sources.
- (2) Combustion units rated at 2,500,000 or less Btu per hour of heat input.
- (3) Combustion units with a rated capacity of less than 10,000,000 Btu per hour heat input fueled by natural gas supplied by a public utility, liquefied petroleum gas or by commercial fuel oils which are No. 2 or lighter, viscosity less than or equal to 5.82 c St, and which meet the sulfur content requirements of 25 Pa. Code § 123.22 (relating to combustion units). For purposes of this permit, commercial fuel oil shall be virgin oil which has no reprocessed, recycled or waste material added.
- (4) Space heaters which heat by direct heat transfer.

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- (5) Laboratory equipment used exclusively for chemical or physical analysis.
- (6) Other sources and classes of sources determined to be of minor significance by the Department.
- (d) This permit does not authorize de minimis emission increases if the emissions increase would cause one or more of the following:
- (1) Increase the emissions of a pollutant regulated under Section 112 of the Clean Air Act except as authorized in Subparagraphs (b)(4) and (5) of this permit condition.
  - (2) Subject the facility to the prevention of significant deterioration requirements in 25 Pa. Code Chapter 127, Subchapter D and/or the new source review requirements in Subchapter E.
  - (3) Violate any applicable requirement of the Air Pollution Control Act, the Clean Air Act, or the regulations promulgated under either of the acts.
  - (4) Changes which are modifications under any provision of Title I of the Clean Air Act and emission increases which would exceed the allowable emissions level (expressed as a rate of emissions or in terms of total emissions) under the Title V permit.
- (e) Unless precluded by the Clean Air Act or the regulations thereunder, the permit shield described in 25 Pa. Code § 127.516 (relating to permit shield) shall extend to the changes made under 25 Pa. Code § 127.449 (relating to de minimis emission increases).
- (f) Emissions authorized under this permit condition shall be included in the monitoring, recordkeeping and reporting requirements of this permit.
- (g) Except for de minimis emission increases allowed under this permit, 25 Pa. Code § 127.449, or sources and physical changes meeting the requirements of 25 Pa. Code § 127.14, the permittee is prohibited from making physical changes or engaging in activities that are not specifically authorized under this permit without first applying for a plan approval. In accordance with § 127.14(b), a plan approval is not required for the construction, modification, reactivation, or installation of the sources creating the de minimis emissions increase.
- (h) The permittee may not meet de minimis emission threshold levels by offsetting emission increases or decreases at the same source.

**#020 [25 Pa. Code §§ 127.11a & 127.215]****Reactivation of Sources**

- (a) The permittee may reactivate a source at the facility that has been out of operation or production for at least one year, but less than or equal to five (5) years, if the source is reactivated in accordance with the requirements of 25 Pa. Code §§ 127.11a and 127.215. The reactivated source will not be considered a new source.
- (b) A source which has been out of operation or production for more than five (5) years but less than 10 years may be reactivated and will not be considered a new source if the permittee satisfies the conditions specified in 25 Pa. Code § 127.11a(b).

**#021 [25 Pa. Code §§ 121.9 & 127.216]****Circumvention**

- (a) The owner of this Title V facility, or any other person, may not circumvent the new source review requirements of 25 Pa. Code Chapter 127, Subchapter E by causing or allowing a pattern of ownership or development, including the phasing, staging, delaying or engaging in incremental construction, over a geographic area of a facility which, except for the pattern of ownership or development, would otherwise require a permit or submission of a plan approval application.
- (b) No person may permit the use of a device, stack height which exceeds good engineering practice stack height, dispersion technique or other technique which, without resulting in reduction of the total amount of air contaminants emitted, conceals or dilutes an emission of air contaminants which would otherwise be in violation of this permit, the Air Pollution Control Act or the regulations promulgated thereunder, except that with prior approval of the Department,

**SECTION B. General Title V Requirements**

the device or technique may be used for control of malodors.

**#022 [25 Pa. Code §§ 127.402(d) & 127.513(1)]****Submissions**

(a) Reports, test data, monitoring data, notifications and requests for renewal of the permit shall be submitted to the:

Regional Air Program Manager  
PA Department of Environmental Protection  
(At the address given on the permit transmittal letter,  
or otherwise notified)

(b) Any report or notification for the EPA Administrator or EPA Region III should be addressed to:

Office of Air Enforcement and Compliance Assistance (3AP20)  
United States Environmental Protection Agency  
Region 3  
1650 Arch Street  
Philadelphia, PA 19103-2029

(c) An application, form, report or compliance certification submitted pursuant to this permit condition shall contain certification by a responsible official as to truth, accuracy, and completeness as required under 25 Pa. Code § 127.402(d). Unless otherwise required by the Clean Air Act or regulations adopted thereunder, this certification and any other certification required pursuant to this permit shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.

**#023 [25 Pa. Code §§ 127.441(c) & 127.463(e); Chapter 139; & 114(a)(3), 504(b) of the CAA]****Sampling, Testing and Monitoring Procedures**

(a) The permittee shall perform the emissions monitoring and analysis procedures or test methods for applicable requirements of this Title V permit. In addition to the sampling, testing and monitoring procedures specified in this permit, the Permittee shall comply with any additional applicable requirements promulgated under the Clean Air Act after permit issuance regardless of whether the permit is revised.

(b) The sampling, testing and monitoring required under the applicable requirements of this permit, shall be conducted in accordance with the requirements of 25 Pa. Code Chapter 139 unless alternative methodology is required by the Clean Air Act (including §§ 114(a)(3) and 504(b)) and regulations adopted thereunder.

**#024 [25 Pa. Code §§ 127.511 & Chapter 135]****Recordkeeping Requirements**

(a) The permittee shall maintain and make available, upon request by the Department, records of required monitoring information that include the following:

- (1) The date, place (as defined in the permit) and time of sampling or measurements.
- (2) The dates the analyses were performed.
- (3) The company or entity that performed the analyses.
- (4) The analytical techniques or methods used.
- (5) The results of the analyses.
- (6) The operating conditions as existing at the time of sampling or measurement.

(b) The permittee shall retain records of the required monitoring data and supporting information for at least five (5) years from the date of the monitoring sample, measurement, report or application. Supporting information includes the calibration data and maintenance records and original strip-chart recordings for continuous monitoring instrumentation, and copies of reports required by the permit.

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(c) The permittee shall maintain and make available to the Department upon request, records including computerized records that may be necessary to comply with the reporting, recordkeeping and emission statement requirements in 25 Pa. Code Chapter 135 (relating to reporting of sources). In accordance with 25 Pa. Code Chapter 135, § 135.5, such records may include records of production, fuel usage, maintenance of production or pollution control equipment or other information determined by the Department to be necessary for identification and quantification of potential and actual air contaminant emissions. If direct recordkeeping is not possible or practical, sufficient records shall be kept to provide the needed information by indirect means.

**#025 [25 Pa. Code §§ 127.411(d), 127.442, 127.463(e) & 127.511(c)]****Reporting Requirements**

(a) The permittee shall comply with the reporting requirements for the applicable requirements specified in this Title V permit. In addition to the reporting requirements specified herein, the permittee shall comply with any additional applicable reporting requirements promulgated under the Clean Air Act after permit issuance regardless of whether the permit is revised.

(b) Pursuant to 25 Pa. Code § 127.511(c), the permittee shall submit reports of required monitoring at least every six (6) months unless otherwise specified in this permit. Instances of deviations (as defined in 25 Pa. Code § 121.1) from permit requirements shall be clearly identified in the reports. The reporting of deviations shall include the probable cause of the deviations and corrective actions or preventative measures taken, except that sources with continuous emission monitoring systems shall report according to the protocol established and approved by the Department for the source. The required reports shall be certified by a responsible official.

(c) Every report submitted to the Department under this permit condition shall comply with the submission procedures specified in Section B, Condition #022(c) of this permit.

(d) Any records, reports or information obtained by the Department or referred to in a public hearing shall be made available to the public by the Department except for such records, reports or information for which the permittee has shown cause that the documents should be considered confidential and protected from disclosure to the public under Section 4013.2 of the Air Pollution Control Act and consistent with Sections 112(d) and 114(c) of the Clean Air Act and 25 Pa. Code § 127.411(d). The permittee may not request a claim of confidentiality for any emissions data generated for the Title V facility.

**#026 [25 Pa. Code § 127.513]****Compliance Certification**

(a) One year after the date of issuance of the Title V permit, and each year thereafter, unless specified elsewhere in the permit, the permittee shall submit to the Department and EPA Region III a certificate of compliance with the terms and conditions in this permit, for the previous year, including the emission limitations, standards or work practices. This certification shall include:

- (1) The identification of each term or condition of the permit that is the basis of the certification.
- (2) The compliance status.
- (3) The methods used for determining the compliance status of the source, currently and over the reporting period.
- (4) Whether compliance was continuous or intermittent.

(b) The compliance certification shall be postmarked or hand-delivered no later than thirty days after each anniversary of the date of issuance of this Title V Operating Permit, or on the submittal date specified elsewhere in the permit, to the Department and EPA in accordance with the submission requirements specified in condition #022 of this section.

**#027 [25 Pa. Code § 127.3]****Operational Flexibility**

The permittee is authorized to make changes within the Title V facility in accordance with the following provisions in 25 Pa. Code Chapter 127 which implement the operational flexibility requirements of Section 502(b)(10) of the Clean Air Act and Section 6.1(i) of the Air Pollution Control Act:

- (1) Section 127.14 (relating to exemptions)

**SECTION B. General Title V Requirements**

- (2) Section 127.447 (relating to alternative operating scenarios)
- (3) Section 127.448 (relating to emissions trading at facilities with federally enforceable emissions caps)
- (4) Section 127.449 (relating to de minimis emission increases)
- (5) Section 127.450 (relating to administrative operating permit amendments)
- (6) Section 127.462 (relating to minor operating permit amendments)
- (7) Subchapter H (relating to general plan approvals and operating permits)

**#028 [25 Pa. Code §§ 127.441(d), 127.512(i) and 40 CFR Part 68]****Risk Management**

(a) If required by Section 112(r) of the Clean Air Act, the permittee shall develop and implement an accidental release program consistent with requirements of the Clean Air Act, 40 CFR Part 68 (relating to chemical accident prevention provisions) and the Federal Chemical Safety Information, Site Security and Fuels Regulatory Relief Act (P.L. 106-40).

(b) The permittee shall prepare and implement a Risk Management Plan (RMP) which meets the requirements of Section 112(r) of the Clean Air Act, 40 CFR Part 68 and the Federal Chemical Safety Information, Site Security and Fuels Regulatory Relief Act when a regulated substance listed in 40 CFR § 68.130 is present in a process in more than the listed threshold quantity at the Title V facility. The permittee shall submit the RMP to the federal Environmental Protection Agency according to the following schedule and requirements:

(1) The permittee shall submit the first RMP to a central point specified by EPA no later than the latest of the following:

- (i) Three years after the date on which a regulated substance is first listed under § 68.130; or,
- (ii) The date on which a regulated substance is first present above a threshold quantity in a process.

(2) The permittee shall submit any additional relevant information requested by the Department or EPA concerning the RMP and shall make subsequent submissions of RMPs in accordance with 40 CFR § 68.190.

(3) The permittee shall certify that the RMP is accurate and complete in accordance with the requirements of 40 CFR Part 68, including a checklist addressing the required elements of a complete RMP.

(c) As used in this permit condition, the term "process" shall be as defined in 40 CFR § 68.3. The term "process" means any activity involving a regulated substance including any use, storage, manufacturing, handling, or on-site movement of such substances or any combination of these activities. For purposes of this definition, any group of vessels that are interconnected, or separate vessels that are located such that a regulated substance could be involved in a potential release, shall be considered a single process.

(d) If the Title V facility is subject to 40 CFR Part 68, as part of the certification required under this permit, the permittee shall:

(1) Submit a compliance schedule for satisfying the requirements of 40 CFR Part 68 by the date specified in 40 CFR § 68.10(a); or,

(2) Certify that the Title V facility is in compliance with all requirements of 40 CFR Part 68 including the registration and submission of the RMP.

(e) If the Title V facility is subject to 40 CFR Part 68, the permittee shall maintain records supporting the implementation of an accidental release program for five (5) years in accordance with 40 CFR § 68.200.

(f) When the Title V facility is subject to the accidental release program requirements of Section 112(r) of the Clean Air Act and 40 CFR Part 68, appropriate enforcement action will be taken by the Department if:

- (1) The permittee fails to register and submit the RMP or a revised plan pursuant to 40 CFR Part 68.

**SECTION B. General Title V Requirements**

(2) The permittee fails to submit a compliance schedule or include a statement in the compliance certification required under Condition #26 of Section B of this Title V permit that the Title V facility is in compliance with the requirements of Section 112(r) of the Clean Air Act, 40 CFR Part 68, and 25 Pa. Code § 127.512(i).

**#029 [25 Pa. Code § 127.512(e)]****Approved Economic Incentives and Emission Trading Programs**

No permit revision shall be required under approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in this Title V permit.

**#030 [25 Pa. Code §§ 127.516, 127.450(d), 127.449(f) & 127.462(g)]****Permit Shield**

(a) The permittee's compliance with the conditions of this permit shall be deemed in compliance with applicable requirements (as defined in 25 Pa. Code § 121.1) as of the date of permit issuance if either of the following applies:

- (1) The applicable requirements are included and are specifically identified in this permit.
- (2) The Department specifically identifies in the permit other requirements that are not applicable to the permitted facility or source.

(b) Nothing in 25 Pa. Code § 127.516 or the Title V permit shall alter or affect the following:

- (1) The provisions of Section 303 of the Clean Air Act, including the authority of the Administrator of the EPA provided thereunder.
- (2) The liability of the permittee for a violation of an applicable requirement prior to the time of permit issuance.
- (3) The applicable requirements of the acid rain program, consistent with Section 408(a) of the Clean Air Act.
- (4) The ability of the EPA to obtain information from the permittee under Section 114 of the Clean Air Act.

(c) Unless precluded by the Clean Air Act or regulations thereunder, final action by the Department incorporating a significant permit modification in this Title V Permit shall be covered by the permit shield at the time that the permit containing the significant modification is issued.

**SECTION C. Site Level Requirements****I. RESTRICTIONS.****Emission Restriction(s).****# 001 [25 Pa. Code §123.1]****Prohibition of certain fugitive emissions**

The permittee shall not allow the emission into the outdoor atmosphere of a fugitive air contaminant from a source other than the following:

- (a) Construction or demolition of buildings or structures.
- (b) Grading, paving, and maintenance of roads and streets.
- (c) Use of roads and streets. Emissions from material in or on trucks, railroad cars, and other vehicular equipment are not considered as emissions from use of roads and streets.
- (d) Clearing of land.
- (e) Stockpiling of materials.
- (f) Open burning of clearing and grubbing wastes (trees, shrubs and other native vegetation which are cleared from land during or prior to the process of construction; does not include demolition wastes and dirt-laden roots).
- (g) Sources and classes of sources other than those identified in (a)-(f), above, for which the permittee has obtained a determination from the Department, in accordance with 25 Pa. Code §123.1(b), that fugitive emissions from the source, after appropriate control, meet the following requirements:
  - (1) The emissions are of minor significance with respect to causing air pollution; and
  - (2) The emissions are not preventing or interfering with the attainment or maintenance of any ambient air quality standard.

**# 002 [25 Pa. Code §123.2]****Fugitive particulate matter**

The permittee shall not allow the emission of fugitive particulate matter into the outdoor atmosphere from a source specified in Section C, Condition #001(a)-(g), if the emissions are visible at the point the emissions pass outside the permittee's property.

**# 003 [25 Pa. Code §123.31]****Limitations**

The permittee shall not allow the emission into the outdoor atmosphere of any malodorous air contaminants from any source in such a manner that the malodors are detectable outside the permittee's property.

**# 004 [25 Pa. Code §123.41]****Limitations**

Unless otherwise stated elsewhere in the permit (e.g., Section E, Group SG01, Condition #007), the permittee shall not allow the emission into the outdoor atmosphere of visible air contaminants in such a manner that the opacity of the emission is either of the following:

- (a) Equal to or greater than 20% for a period or periods aggregating more than three minutes in any one hour.
- (b) Equal to or greater than 60% at any time.

**# 005 [25 Pa. Code §123.42]****Exceptions**

The emission limitations of Section C, Condition #004, shall not apply when:

- (a) The presence of uncombined water is the only reason for failure of the emission to meet the limitations.
- (b) The emission results from the operation of equipment used solely to train and test persons in observing the opacity of visible emissions.



**SECTION C. Site Level Requirements**

(c) The emission results from sources specified in Section C, Condition #001(a)-(g).

**# 006 [25 Pa. Code §127.512]****Operating permit terms and conditions.**

The permittee shall limit annual facility emissions during any consecutive 12-month period to the following:

- (a) Nitrogen oxides (NO<sub>x</sub>) as nitrogen dioxide (NO<sub>2</sub>) - 230.1 tons;
- (b) Volatile organic compounds (VOCs) - 23.1 tons;
- (c) Carbon monoxide (CO) - 219.65 tons;
- (d) Particulate matter (TSP/PM<sub>10</sub>) - 261.65 tons;
- (e) Sulfur dioxide (SO<sub>2</sub>) - 150.5 tons;
- (f) Sulfuric acid mist (H<sub>2</sub>SO<sub>4</sub>) - 23.05 tons;
- (g) Ammonia - 222.25 tons; and
- (h) Hazardous air pollutants (HAPs) - less than 10 tons for any single HAP and less than 25 tons of total HAPs.

[NOTE: THE SOURCES ADDRESSED IN P.A. NO. 67-05083F (RE: YORK ENERGY CENTER BLOCK 2 ELECTRICITY GENERATION PROJECT) ARE NOT INCLUDED AS PART OF THIS OPERATING PERMIT CONDITION]

**# 007 [25 Pa. Code §129.14]****Open burning operations**

- (a) The permittee shall not allow the open burning of material on the permittee's property in a manner such that:
  - (1) The emissions are visible, at any time, at the point such emissions pass outside the permittee's property.
  - (2) Malodorous air contaminants from the open burning are detectable outside the permittee's property.
  - (3) The emissions interfere with the reasonable enjoyment of life or property.
  - (4) The emissions cause damage to vegetation or property.
  - (5) The emissions are or may be deleterious to human or animal health.
- (b) The requirements of (a), above, do not apply when the open burning operations result from:
  - (1) A fire set to prevent or abate a fire hazard, when approved by the Department and set by or under the supervision of a public officer.
  - (2) A fire set for the purpose of instructing personnel in fire fighting, when approved by the Department.
  - (3) A fire set for the prevention and control of disease or pests, when approved by the Department.
  - (4) A fire set solely for recreational or ceremonial purposes.
  - (5) A fire set solely for cooking food.
- (c) This permit condition does not constitute authorization to burn solid waste pursuant to Section 610(3) of the Solid Waste Management Act (SWMA), contained at 35 P.S. Section 6018.610(3), or any other provision of the SWMA.

**SECTION C. Site Level Requirements****II. TESTING REQUIREMENTS.****# 008 [25 Pa. Code §127.512]****Operating permit terms and conditions.**

The Department reserves the right to require exhaust stack testing of the sources referenced in this operating permit to measure emissions for purposes including verification of operating permit condition compliance and estimation of annual air emissions.

**# 009 [25 Pa. Code §139.1]****Sampling facilities.**

Upon the request of the Department, the permittee shall provide adequate sampling ports, safe sampling platforms and adequate utilities for the performance by the Department of tests on any source. In the request, the Department will set forth the time period in which the facilities shall be provided as well as the specifications for such facilities.

**# 010 [25 Pa. Code §139.11]****General requirements.**

(a) As specified in 25 Pa. Code §139.11(1), performance tests shall be conducted while the source is operating at maximum routine operating conditions or under such other conditions, within the capacity of the equipment, as may be requested by the Department.

(b) As specified in 25 Pa. Code §139.11(2), the Department will consider test results for approval where sufficient information is provided to verify the source conditions existing at the time of the test and where adequate data is available to show the manner in which the test was conducted. Information submitted to the Department shall include, at a minimum, all of the following:

- (1) A thorough source description, including a description of any air cleaning devices and the flue.
- (2) Process conditions, for example, turbine load, fuel firing rate, SCR parameters, and other conditions which may affect emissions from the process.
- (3) The location of the sampling ports.
- (4) Effluent characteristics, including velocity, temperature, moisture content, gas density (percentage CO, CO<sub>2</sub>, O<sub>2</sub>, and N<sub>2</sub>), static and barometric pressures.
- (5) Sample collection techniques employed, including procedures used, equipment descriptions, and data to verify that isokinetic sampling for particulate matter collection occurred and that acceptable test conditions were met.
- (6) Laboratory procedures and results.
- (7) Calculated results.

**III. MONITORING REQUIREMENTS.****# 011 [25 Pa. Code §123.43]****Measuring techniques**

The permittee shall measure visible emissions (referenced in Section C, Conditions #004, #005, and #012) using either of the following:

- (a) A device approved by the Department and maintained to provide accurate opacity measurements (e.g., Continuous Opacity Monitor).
- (b) Observers trained and certified in EPA Reference Method 9 to measure plume opacity with the naked eye; or with the aid of any device(s) approved by the Department.

**# 012 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

The permittee shall conduct a daily inspection around the plant periphery during daylight hours when the plant is in production to detect visible emissions, fugitive particulate matter emissions, and malodorous air contaminants. Daily

**SECTION C. Site Level Requirements**

inspections are necessary to determine:

- (a) The presence of visible emissions as stated in Section C, Condition #004. Visible emissions may be measured according to the methods specified in Section C, Condition #011. Alternately, plant personnel who observe visible emissions may report the incidence of visible emissions to the Department within two (2) hours of the incident and make arrangements for a certified observer to measure the visible emissions.
- (b) The presence of fugitive particulate matter emissions beyond the plant property boundaries, as stated in Section C, Condition #002.
- (c) The presence of malodorous air contaminants beyond the plant property boundaries, as stated in Section C, Condition #003.

**IV. RECORDKEEPING REQUIREMENTS.****# 013 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

- (a) The permittee shall maintain records of the daily inspections referenced in Section C, Condition #012. The records shall include, at a minimum, the following information:
  - (1) The name of the company representative monitoring each inspection.
  - (2) The date and time of each inspection.
  - (3) The wind direction during each inspection.
  - (4) A description of the visible emissions, fugitive particulate matter emissions (beyond the plant property boundaries), and malodorous air contaminants (beyond the plant property boundaries) observed, if any, and actions taken to mitigate them. If no visible emissions or fugitive particulate matter emissions or malodors are observed, then document that none were observed.
- (b) The permittee shall retain these records for a minimum of five (5) years. The records shall be made available to the Department upon its request.

**# 014 [25 Pa. Code §127.512]****Operating permit terms and conditions.**

The permittee shall, at the minimum, record the following:

- (a) Monthly fuel consumption.
- (b) 12-month rolling total fuel consumption.
- (c) Daily emissions of TSP/PM10, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOC, H<sub>2</sub>SO<sub>4</sub>, ammonia, individual HAP, and total HAPs.

NO<sub>x</sub> and CO emissions will be measured by CEMS. NH<sub>3</sub> emissions will be monitored by a CMS. SO<sub>2</sub> emissions will be calculated based on fuel consumption and fuel sulfur content in accordance with 40 CFR, Part 75 requirements. The TSP/PM10, H<sub>2</sub>SO<sub>4</sub>, VOC, individual HAP, and total HAPs emissions will be based on fuel consumption and/or emission factors determined during compliant performance (stack) testing. Start-up and shutdown emissions will be calculated based on the recorded number of start-ups and shutdowns and the start-up and shutdown emission rates as approved by the Department.

- (d) 12-month rolling total of TSP/PM10, SO<sub>2</sub>, NO<sub>x</sub>, CO, H<sub>2</sub>SO<sub>4</sub>, VOC, ammonia, individual HAP, and total HAPs in order to demonstrate compliance with Section C, Condition #006.
- (e) Results of fuel sampling.
- (f) The measured SCR parameters, including the ammonia slip and ammonia injection quantity.

**SECTION C. Site Level Requirements****V. REPORTING REQUIREMENTS.****# 015 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

Pursuant to Section C, Category VIII. COMPLIANCE CERTIFICATION below, the permittee shall forward the annual compliance certification report to U.S. EPA electronically, in lieu of a hard copy version, to the following email address: 'R3\_APD\_Permits@epa.gov'.

**# 016 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

The permittee shall report malfunctions to the Department. A malfunction is any sudden, infrequent and not reasonably preventable failure of air pollution control or monitoring equipment, process equipment, or a process to operate in a normal or usual manner that may result in an increase in air emissions. Failures that are caused in part by poor maintenance or careless operation are not malfunctions. Malfunctions shall be reported as follows:

(a) Any malfunction which poses an imminent danger to the public health, safety, welfare, and environment, shall be immediately reported to the Department by telephone. The telephone report of such malfunctions shall occur no later than two (2) hours after the incident. The permittee shall submit a written report of instances of such malfunctions to the Department within three (3) days of the telephone report.

- (1) The notice shall describe the following:
- (i) name and location of the facility;
  - (ii) nature and cause of the malfunction;
  - (iii) time when the malfunction was first observed;
  - (iv) expected duration of excess emissions; and
  - (v) estimated rate of emissions.

(2) The permittee shall notify the Department immediately when corrective measures have been accomplished.

(b) Unless otherwise required by this operating permit, any other malfunction that is not subject to the reporting requirements of part (a), above, shall be reported to the Department, in writing, within five (5) days of malfunction discovery.

(c) Malfunctions shall be reported to the Department at the following address:

PA DEP  
York District Office  
Air Quality Program  
150 Roosevelt Avenue  
York, PA 17401

Telephone reports shall be made to the Department's Air Quality Program at 717.705.4702 during normal business hours or to the Department's Emergency Hotline at any time. The Emergency Hotline phone number is changed/updated periodically. The current Emergency Hotline phone number can be found at:

<https://www.dep.pa.gov/About/Regional/SouthcentralRegion/Pages/default.aspx>

**# 017 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

The permittee shall annually report the greenhouse gas equivalent and the carbon dioxide emissions from the facility, in conjunction with the annual air emissions reporting of Section C, Condition #018(a).

**# 018 [25 Pa. Code §135.3]****Reporting**

(a) An annual air emissions report for a given calendar year is due no later than March 1 of the following year, and shall be submitted via AES\*Online, unless otherwise specified:

(b) The permittee may request an extension of time from the Department for the filing of the air emissions report specified in part (a), above, and the Department may grant the extension for reasonable cause.

**SECTION C. Site Level Requirements****VI. WORK PRACTICE REQUIREMENTS.****# 019 [25 Pa. Code §123.1]****Prohibition of certain fugitive emissions**

The permittee shall take all reasonable actions to prevent particulate matter from becoming airborne from any source specified in Section C, Condition #001(a)-(g). These actions shall include, but are not limited to, the following:

- (a) Use, where possible, of water or chemicals for control of dust in the demolition of buildings or structures, construction operations, the grading of roads, or the clearing of land.
- (b) Application of asphalt, oil, water, or suitable chemicals on dirt roads, material stockpiles and other surfaces which may give rise to airborne dusts.
- (c) Paving and maintenance of roadways.
- (d) Prompt removal of earth or other material from paved streets onto which earth or other material has been transported by trucking or earth moving equipment, erosion by water, or other means.

**# 020 [25 Pa. Code §127.444]****Compliance requirements.**

The permittee shall operate and maintain all sources and any air cleaning devices identified in this operating permit in accordance with the manufacturer's recommendations/specifications, as well as in a manner consistent with good operating and air pollution control practices that minimize air emissions.

**VII. ADDITIONAL REQUIREMENTS.****# 021 [25 Pa. Code §127.512]****Operating permit terms and conditions.**

All emissions shall be determined by the methods found in 40 CFR Part 60, the Plan Approval Application (re: York Energy Center Block 1 Electricity Generation Project) and supplemental materials, and the Continuous Source Monitoring Manual, or any other method(s) approved by the Department.

**VIII. COMPLIANCE CERTIFICATION.**

The permittee shall submit within thirty days of 01/01/2020 a certificate of compliance with all permit terms and conditions set forth in this Title V permit as required under condition #026 of section B of this permit, and annually thereafter.

**IX. COMPLIANCE SCHEDULE.**

No compliance milestones exist.

**\*\*\* Permit Shield In Effect \*\*\***

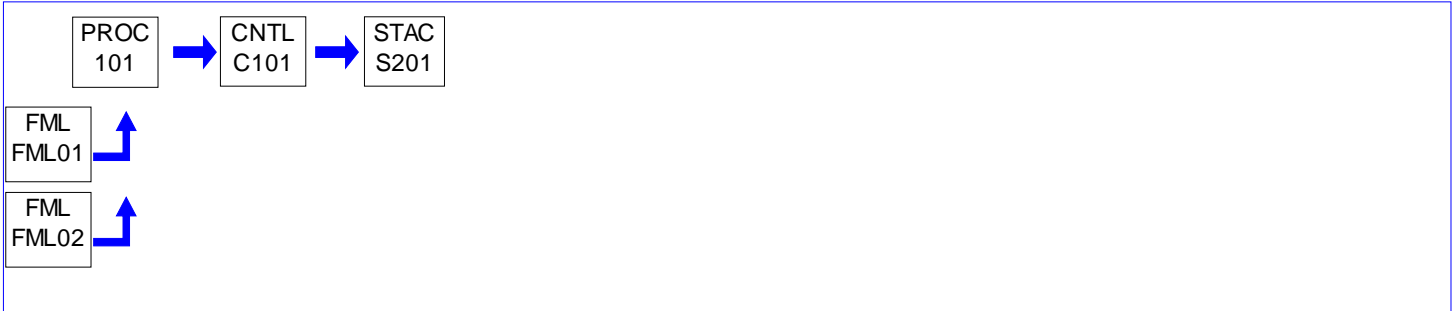
**SECTION D. Source Level Requirements**

Source ID: 101

Source Name: TURBINE UNIT 1

Source Capacity/Throughput:	1,574.000	MMBTU/HR	
	1,575.000	MCF/HR	NATURAL GAS
	11,242.000	Gal/HR	#2 OIL

Conditions for this source occur in the following groups: SG01  
SG02  
SG03  
SG04  
SG05

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**IV. RECORDKEEPING REQUIREMENTS.**

No additional record keeping requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**VI. WORK PRACTICE REQUIREMENTS.**

No additional work practice requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**SECTION D. Source Level Requirements****VII. ADDITIONAL REQUIREMENTS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**\*\*\* Permit Shield in Effect. \*\*\***

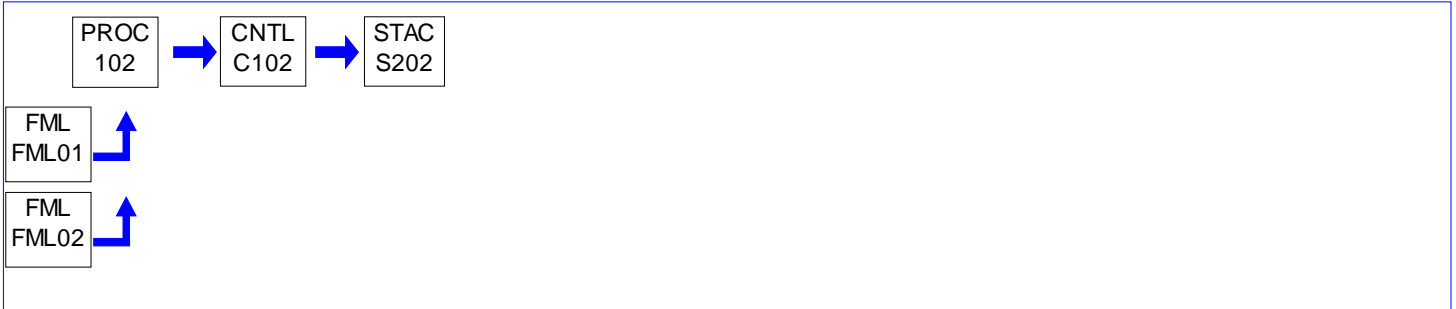
**SECTION D. Source Level Requirements**

Source ID: 102

Source Name: TURBINE UNIT 2

Source Capacity/Throughput:	1,574.000	MMBTU/HR	
	1,575.000	MCF/HR	NATURAL GAS
	11,242.000	Gal/HR	#2 OIL

Conditions for this source occur in the following groups: SG01  
 SG02  
 SG03  
 SG04  
 SG05

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**IV. RECORDKEEPING REQUIREMENTS.**

No additional record keeping requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**VI. WORK PRACTICE REQUIREMENTS.**

No additional work practice requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).



**SECTION D. Source Level Requirements****VII. ADDITIONAL REQUIREMENTS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**\*\*\* Permit Shield in Effect. \*\*\***

**SECTION D. Source Level Requirements**

Source ID: 103

Source Name: TURBINE UNIT 3

Source Capacity/Throughput:	1,574.000	MMBTU/HR	
	1,575.000	MCF/HR	NATURAL GAS
	11,242.000	Gal/HR	#2 OIL

Conditions for this source occur in the following groups: SG01  
 SG02  
 SG03  
 SG04  
 SG05

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**IV. RECORDKEEPING REQUIREMENTS.**

No additional record keeping requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**VI. WORK PRACTICE REQUIREMENTS.**

No additional work practice requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).



## SECTION D. Source Level Requirements

### VII. ADDITIONAL REQUIREMENTS.

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**\*\*\* Permit Shield in Effect. \*\*\***



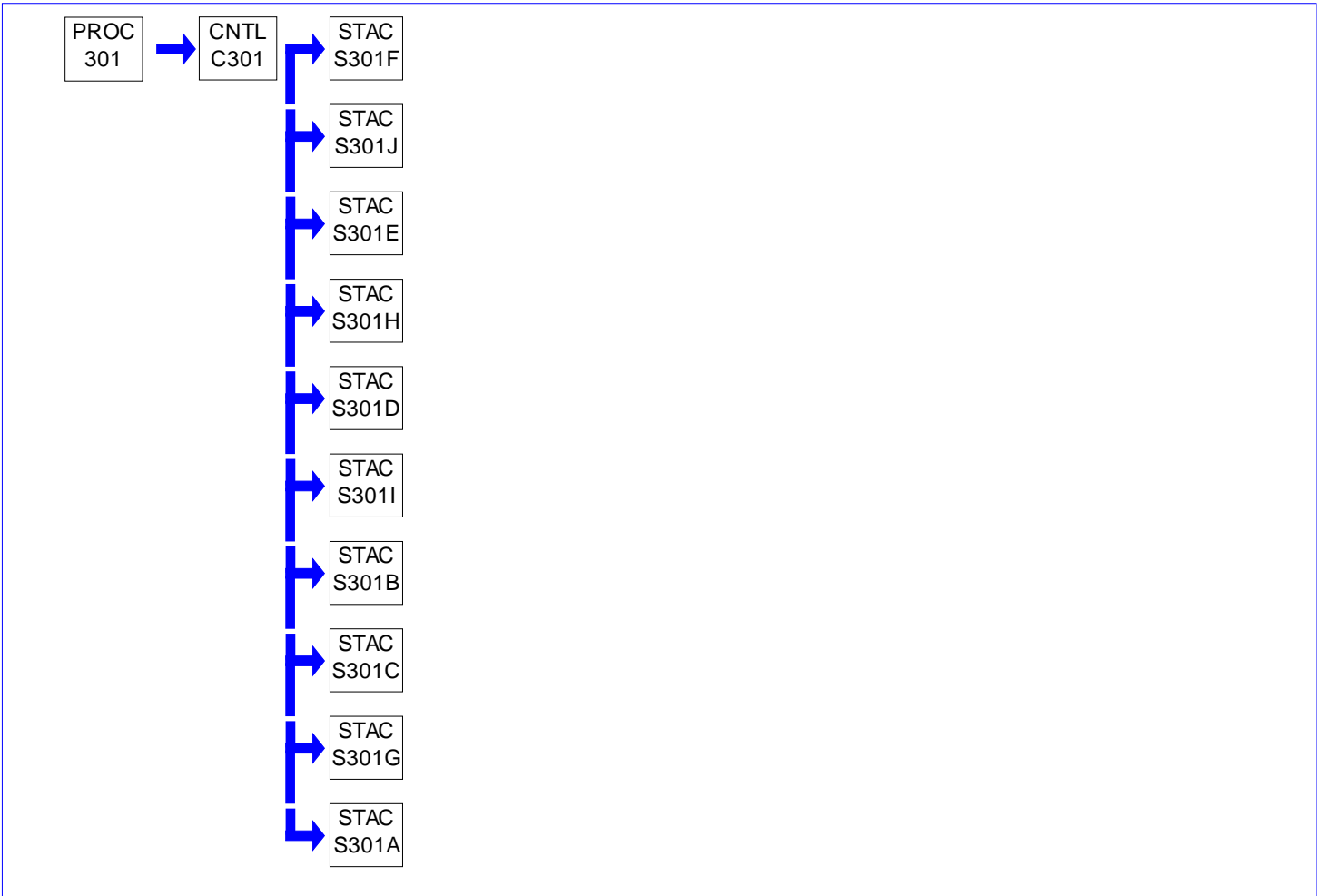
**SECTION D. Source Level Requirements**

Source ID: 301

Source Name: BLOCK 1 COOLING TOWER

Source Capacity/Throughput: \*\*\*\*\* Gal/HR

COOLING WATER PUMP CAPACI



**I. RESTRICTIONS.**

**Emission Restriction(s).**

**# 001 [25 Pa. Code §123.13]**

**Processes**

Pursuant to 25 Pa. Code §123.13(c)(1)(i), particulate matter (PM) emissions from each Source ID 301 exhaust shall not exceed 0.04 grain per dry standard cubic foot.

**# 002 [25 Pa. Code §127.512]**

**Operating permit terms and conditions.**

[Additional authority for this permit condition is also derived from Plan Approval No. 67-05083C]

The permittee shall limit PM emissions from Source ID 301 to 2.6 tons during any consecutive 12-month period.

**# 003 [25 Pa. Code §127.512]**

**Operating permit terms and conditions.**

[Additional authority for this permit condition is also derived from Plan Approval No. 67-05083C]

The total solids concentration in the blowdown water for the cooling tower shall not exceed 1160 mg/L (averaged over each 12-month rolling period).

**SECTION D. Source Level Requirements****# 004 [25 Pa. Code §127.512]****Operating permit terms and conditions.**

[Additional authority for this permit condition is also derived from Plan Approval No. 67-05083C]

The operation of the source shall not result in visible emissions, except uncombined water vapor.

[Compliance with the visible emissions (VE) requirements specified in this streamlined permit condition assures compliance with 25 Pa. Code §123.41]

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**III. MONITORING REQUIREMENTS.****# 005 [25 Pa. Code §127.512]****Operating permit terms and conditions.**

[Additional authority for this permit condition is also derived from Plan Approval No. 67-05083C]

The permittee shall sample the cooling tower blowdown water for total solids twice monthly. Any changes to the sampling methods shall be submitted to the SCRO (Air Quality Program) within 90 days of receiving approval from Water Quality.

**IV. RECORDKEEPING REQUIREMENTS.****# 006 [25 Pa. Code §127.512]****Operating permit terms and conditions.**

[Additional authority for this permit condition is also derived from Plan Approval No. 67-05083C]

The permittee shall record the following:

- (a) Monthly average total solids in the cooling tower blowdown water.
- (b) Monthly volume of water entering the the cooling tower.
- (c) The total solids concentration (mg/L) in the cooling tower blowdown water averaged during each consecutive 12-month period.
- (d) Monthly particulate matter emissions (PM).
- (e) The 12-month rolling total PM emissions.

**V. REPORTING REQUIREMENTS.****# 007 [25 Pa. Code §135.3]****Reporting**

The permittee shall include the following information for the cooling tower in the annual air emissions report referenced in Section C, Condition #018(a):

- (a) Monthly and annual air emissions.
- (b) Annual days and hours of operation.
- (c) Air emission calculations (including emission factors used).

**VI. WORK PRACTICE REQUIREMENTS.****# 008 [25 Pa. Code §127.512]****Operating permit terms and conditions.**

[Additional authority for this permit condition is also derived from Plan Approval No. 67-05083C]

**SECTION D. Source Level Requirements**

No substances containing zinc or chromium shall be used in the water treatment chemicals for the cooling tower.

**VII. ADDITIONAL REQUIREMENTS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**\*\*\* Permit Shield in Effect. \*\*\***

**SECTION D. Source Level Requirements**

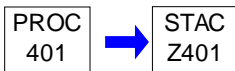
Source ID: 401

Source Name: FUEL OIL TANK NO. 1

Source Capacity/Throughput:

33.730 Th Gal/HR

ULSD, THE CAPACITY IS FOR EA

**I. RESTRICTIONS.****Emission Restriction(s).****# 001 [25 Pa. Code §127.512]****Operating permit terms and conditions.**

[Additional authority for this permit condition is also derived from Plan Approval No. 67-05083C]

The permittee shall limit total VOC emissions from Fuel Oil Tank No. 1 to 0.8 ton during any consecutive 12-month period.

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**IV. RECORDKEEPING REQUIREMENTS.****# 002 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

(a) The permittee shall calculate the monthly VOC emissions from Fuel Oil Tank No. 1 using mass material balance, AP-42 emission factors, manufacturer-supplied emission factors, or other method(s) acceptable to the Department. The permittee shall maintain records of Fuel Oil Tank No. 1's monthly VOC emissions and calculations.

(b) The permittee shall calculate the cumulative Fuel Oil Tank No. 1 VOC emissions for each consecutive 12-month period. The permittee shall maintain records of the cumulative Fuel Oil Tank No. 1 VOC emissions for each consecutive 12-month period in order to demonstrate compliance with Condition #001, above.

(c) The permittee shall retain these records for a minimum of five (5) years. The records shall be made available to the Department upon its request.

**V. REPORTING REQUIREMENTS.****# 003 [25 Pa. Code §135.3]****Reporting**

[Additional authority for this permit condition is also derived from Plan Approval No. 67-05083C]

(a) The permittee shall keep a record of the daily fuel usage and the monthly emissions of VOC.

(b) The permittee shall include the following information for Fuel Oil Tank No. 1 in the annual air emissions report referenced in Section C, Condition #018(a):

(1) Monthly and annual air emissions.

**SECTION D. Source Level Requirements**

(2) Annual days and hours of operation.

(3) Air emission calculations (including emission factors used).

**VI. WORK PRACTICE REQUIREMENTS.**

**# 004 [25 Pa. Code §127.512]**

**Operating permit terms and conditions.**

The permittee shall operate and maintain Fuel Oil Tank No. 1 in accordance with the manufacturer's specifications and with good operating practices for the control of VOC emissions.

**VII. ADDITIONAL REQUIREMENTS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**\*\*\* Permit Shield in Effect. \*\*\***



**SECTION E. Source Group Restrictions.**

Group Name: SG01

Group Description: Combustion Turbines

Sources included in this group

ID	Name
101	TURBINE UNIT 1
102	TURBINE UNIT 2
103	TURBINE UNIT 3

**I. RESTRICTIONS.****Emission Restriction(s).****# 001 [25 Pa. Code §127.1]****Purpose.**

[Additional authority for this permit condition is also derived from Plan Approval No. 67-05083C]

(a) Pursuant to the Best Available Technology (BAT) provisions of 25 Pa. Code §127.1, the permittee shall keep the ammonia emissions from each combustion turbine's SCR to the following limits, as measured by a continuous monitoring system:

- (i) 5 ppmvd, volume corrected to 15 percent oxygen, 24-hour block average and
- (ii) 7 ppmvd, volume corrected to 15 percent oxygen, three-hour average, rolling by 1-hour.

(b) The permittee shall maintain and operate a continuous monitoring system (15-minute average), to monitor and record the ammonia slip to demonstrate compliance with part (a), above.

(c) The permittee shall maintain and operate the continuous monitoring system (1-minute average) for the ammonia injection quantity for the NOx control.

(d) The permittee shall operate and maintain the ammonia continuous monitoring system in accordance with the manufacturer's specifications, and the Department-approved alternate monitoring plan, including but not limited to periodic calibrations to ensure accuracy, as well as in a manner consistent with good operating practice, and Condition #027, below.

**# 002 [25 Pa. Code §127.1]****Purpose.**

[Additional authority for this permit condition is also derived from Plan Approval No. 67-05083C]

Pursuant to the Best Available Technology (BAT) provisions of 25 Pa. Code §127.1, the permittee shall limit the emission of VOC to 1.2 ppmvd, on an hourly basis volume corrected to 15% oxygen under normal operation for natural gas firing and to 1.3 ppmvd during natural gas firing in the diffusion mode and during oil firing. VOC emissions are to be measured as methane.

**# 003 [25 Pa. Code §127.201]****General requirements.**

[Additional authority for this permit condition is also derived from Plan Approval No. 67-05083C]

(a) In accordance with the provisions of 25 Pa. Code Chapter 127, Subchapter E, New Source Review, the permittee was required to secure Department-approved Emission Reduction Credits (ERCs) in the amount of 529 tons of NOx and 680.3 tons of PM2.5 prior to the commencement of operation of the six gas turbines addressed in P.A. No. 67-05083.

(b) The permittee has obtained the ERCs for Block 1, Source IDs 101, 102, and 103, in the amount of 264.5 tons of NOx and 340.15 tons of PM2.5, which is half the credits referenced in part (a), above.

[NOTE: The Block I turbines commenced operation on March 2, 2012, after the required ERCs of 264.5 tons of NOx and 340.15 tons of PM2.5 were procured.]

**SECTION E. Source Group Restrictions.****# 004 [25 Pa. Code §127.205]****Special permit requirements.**

[Additional authority for this permit condition is also derived from Plan Approval No. 67-05083C]

Pursuant to the Lowest Achievable Emission Rate (LAER) provisions of 25 Pa. Code §127.205, the Owner or Operator shall limit the NOx emissions (corrected to 15% O<sub>2</sub>) (and VOC emissions) from each combustion turbine to the following:

## Start-up Limits of Emissions:

Time, Minutes:	Combined Cycle Limits (lb/start)	
	Cold Start 60 min	Hot Start 30 min
Emissions:		
NOx - Natural Gas	151	71
NOx - ULSD	310	172
VOC - Natural Gas	55	54

## Shutdown Limits of Emissions:

Time, Minutes = 20 minutes in duration

Fuel	Natural Gas	ULSD
NOx Emissions, lb/shutdown	44	126
VOC Emissions, lb/shutdown	13	53

**# 005 [25 Pa. Code §127.205]****Special permit requirements.**

[Additional authority for this permit condition is also derived from Plan Approval No. 67-05083C]

Pursuant to the Lowest Achievable Emission Rate (LAER) provisions of 25 Pa Code §127.205, the Owner or Operator shall limit the NOx emissions (corrected to 15% O<sub>2</sub>) from each combustion turbine to the following\*:

1-hour NOx averages calculated from: 3-hour average, rolling by 1-hour.

Mode	Natural Gas	Natural Gas or Liquid Fuel
At 15% Oxygen	Pre-mix burner operation up to & including base load	Peak Load** Diffusion mode operation up to and including peak load* including peak load*
Combined Cycle	2.0 ppmvd	3.5 ppmvd
		6 ppmvd

\* Effective following the start-up covered in Condition #004, above.

\*\* Peak Operation is defined as any operating mode that requires a higher firing temperature than that required to achieve Base Operation ratings. The modes are uniquely defined (as described in Section H of this permit) by the unit control configuration and will be recorded by the Owner or Operator.

[Compliance with this streamlined permit condition assures compliance with the NOx limits of 40 CFR Part 60, Subpart KKKK, Table 1.]

**# 006 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Additional authority for this permit condition is also derived from Plan Approval No. 67-05083C]

The operation of the combustion turbines shall not result in malodorous emissions.

**SECTION E. Source Group Restrictions.**

[Compliance with the malodorous emissions requirements specified in this streamlined permit condition assures compliance with 25 Pa. Code §123.31]

**# 007 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Additional authority for this permit condition is also derived from Plan Approval No. 67-05083C]

The visible air contaminants from each combustion turbine exhaust stack shall not be emitted in such a manner that the opacity of the emission is equal to or greater than 10% for a period or periods aggregating more than 3 minutes in any one hour; or equal to or greater than 30% at any time.

[Compliance with the visible emissions (VE) requirements specified in this streamlined permit condition assures compliance with 25 Pa. Code §123.41]

**# 008 [25 Pa. Code §127.512]****Operating permit terms and conditions.**

[Additional authority for this permit condition is also derived from Plan Approval No. 67-05083C]

Unless expressly provided otherwise (see Condition #009, below), the emission restrictions apply at all times. Start-up and shutdown are defined as follows:

- a. Start-Up: Commences with the fuel ignition in the combustion chambers and ends at the times specified below.
- b. Cold Start-up: Refers to Start-ups made more than 24 hours after shutdown. When operating in the combined cycle mode, a cold start-up shall not exceed 60 minutes.
- c. Hot Start-up: Refers to Start-ups made less than 24 hours after shutdown, and to mode changes and fuel switches. For mode changes and fuel switches, a hot start-up begins at the time the combustion turbine fuel valve changes to the appropriate position (except peak mode in pre-mix). When operating in the combined cycle mode, a hot start-up shall not exceed 30 minutes.
- d. Shutdown: Commences when the combustion turbine load falls below 75% base load and ends when the fuel injection into the combustion chambers is terminated. Shutdown periods shall not exceed 20 minutes per event.
- e. In the event a unit fails to complete a start-up cycle, subsequent attempt(s) to start will be considered the same start-up mode as the failed attempt.

**# 009 [25 Pa. Code §127.83]****Adoption of program.**

[Additional authority for this permit condition is also derived from Plan Approval No. 67-05083C]

Pursuant to the Best Available Control Technology (BACT) provisions of 25 Pa. Code §127.83, the permittee shall limit the emissions from each combustion turbine to the following:

**Combined Cycle Operations - Gas Firing**

CO	6.0 ppmvd on an hourly basis (3 hour average, rolling by 1-hour)
SO <sub>2</sub>	0.0030 lb/mmBtu on an hourly basis
PMPM10	0.0141 lb/mmBtu on an hourly basis
H <sub>2</sub> SO <sub>4</sub> mist	0.00046 lb/mmBtu on an hourly basis

**Combined Cycle Operations - Oil Firing**

CO	6.0 ppmvd on an hourly basis (3 hour average, rolling by 1-hour)
SO <sub>2</sub>	0.051 lb/mmBtu on an hourly basis

**SECTION E. Source Group Restrictions.**

PWPM10 0.0287 lb/mmBtu (HHV) on an hourly basis  
 H2SO4 mist 0.0078 lb/mmBtu on an hourly basis

All ppmvd values are based on dry measurements at 15 percent oxygen. These limits apply at all times including startup and shutdown, except during startup and shutdown for the CO emission limits.

[Compliance with the particulate matter (PM) emissions requirements specified in this streamlined permit condition assures compliance with 25 Pa. Code §123.11(a)(3)]

[Compliance with the SOx (expressed as SO<sub>2</sub>) emissions requirements specified in this streamlined permit condition assures compliance with 25 Pa. Code §123.22(a)(1) and 40 CFR §60.4330(a)(2)]

**# 010 [25 Pa. Code §127.83]****Adoption of program.**

[Additional authority for this permit condition is also derived from Plan Approval No. 67-05083C]

Pursuant to the Best Available Control Technology (BACT) provisions of 25 Pa. Code §127.83, the permittee shall limit the CO emissions from each combustion turbine to the following during each start-up and shutdown event:

Start-up, Combined Cycle Operations, CO emission in lb/start:

Natural Gas: Cold Start 78 lb, Hot Start 66 lb

ULSD: Cold Start 280 lb, Hot Start 268 lb

Shutdown, Combined Cycle Operations, CO emission in lb/shutdown:

Natural Gas: 62 lb

ULSD: 264 lb

**Fuel Restriction(s).****# 011 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Additional authority for this permit condition is also derived from Plan Approval No. 67-05083C]

The natural gas burned in the combustion turbines shall meet the definition of pipeline natural gas as per 40 CFR Part 72.2. Documentation shall be as per Appendix D to 40 Part 75 Section 2.3.1.4 Documentation that a Fuel is Pipeline Natural Gas.

**# 012 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Additional authority for this permit condition is also derived from Plan Approval No. 67-05083C]

Pursuant to the Best Available Technology (BAT) provisions of 25 Pa. Code §127.1, the liquid distillate fuel oil fired in the combustion turbines shall be ultra low sulfur diesel (ULSD) - maximum sulfur content of 15 ppm (as defined in ASTM standard D975, Table 1).

[Compliance with the No. 2 fuel oil sulfur content limitation specified in this streamlined permit condition assures compliance with 25 Pa. Code §123.22(a)(2)(i)]

**# 013 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Additional authority for this permit condition is also derived from Plan Approval No. 67-05083C]

The maximum site daily combustion turbine hours and fuel oil consumption in any 24-hour calendar day are limited to the following:

% S	Turbine Hrs Peak Load	Gallons	Turbine Hrs Base Load*	Gallons
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**SECTION E. Source Group Restrictions.**

0.0015 56 602,000 59.5 612,850

\* Valid only if the combustion turbines are not operated at peak load in the same 24-hour calendar day. If the unit is operated on fuel oil in peak and base load in the same 24-hour day, the daily fuel limit of 612,850 gallons shall apply.

The number of hours of liquid fuel firing shall not exceed 1000 hours per CT on an annual basis. These annual operating hours may be totaled for all installed and operational units, up to three units, on a facility-wide basis (i.e., 3000 hours of oil-fired operation at the facility).

**Operation Hours Restriction(s).****# 014 [25 Pa. Code §127.205]****Special permit requirements.**

[Additional authority for this permit condition is also derived from Plan Approval No. 67-05083C]

With respect to the operating periods specified in Condition #015, below, the permittee may operate the combustion turbines in Diffusion mode during the NOx Budget Rule "Control Period" (as defined in 25 Pa. Code §145.2) only when needed electric power output is not achievable through Pre-mix mode of operation AND one of the following conditions is met: (1) a Maximum Emergency Generation Action has been issued by the PJM Independent System Operator, or (2) a Maximum Generation Alert has been issued by the PJM along with a Request to Purchase Emergency Power, or (3) a local power emergency has occurred or is imminent, or (4) the PJM has directed the loading of a simple cycle combustion turbine that emits at a higher NOx emissions rate than this facility operating in the diffusion mode.

The permittee shall maintain appropriate PJM notification and operating logs and records for a minimum of five years in order to verify compliance.

Within the 200 hours specified in Condition #015, below, the permittee may also operate in diffusion mode for emissions compliance testing, and/or PJM required capacity testing. The permittee may perform diffusion mode stack emissions compliance testing outside of the NOx Budget Rule Control Period. Should the Department require the permittee to perform diffusion mode emissions testing during this time period, any emissions testing hours will not be counted toward consumption of the 200 hour allotment.

For the local power emergency, the Department shall be notified by telephone within 24 hours (or the next business day, whichever is greater) and a written description of the emergency shall be submitted to the Department within seven (7) business days.

This requirement does not apply during startup, shutdown or during periods of operation upset when the unit automatically defaults to diffusion operation as indicated by the loss of the pre-mix release signal. Any diffusion mode operation occurring during start-up, shut down or during periods of operation upset will be counted toward the consumption of the allotments as allowed under Condition #015, below. The permittee may also operate in diffusion mode for annual capacity testing required by PJM for up to eight hours per event.

**# 015 [25 Pa. Code §127.205]****Special permit requirements.**

[Additional authority for this permit condition is also derived from Plan Approval No. 67-05083C]

Persuant to the Lowest Achievable Emission Rate (LAER) provisions of 25 Pa. Code §127.205, the permittee is authorized to operate each of the three combustion turbines in the following modes up to but not greater than the associated hourly limits:

Fuel/Mode	Turbine Load	Annual Operations
Gas Pre-Mix	Peak	100 hrs/12 month rolling period
Gas Pre-Mix	100%	No Restriction
Gas Diffusion	Peak	200 hrs/12 month rolling period
Gas Diffusion	100%	200 hrs/12 month rolling period
Oil Firing	Peak	100 hrs/12 month rolling period
Oil Firing	100%	900 hrs/12 month rolling period

**SECTION E. Source Group Restrictions.**

The permittee shall not operate in diffusion mode (natural gas or oil) each of the three combustion turbines more than 200 hours during each NOx Budget Rule "Control Period" (as defined in 25 Pa. Code §145.2). These hours of operation may be totaled for all installed and operational units, up to three units, on a facility-wide basis (i.e., 600 hours in diffusion gas and oil).

**II. TESTING REQUIREMENTS.****# 016 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Additional authority for this permit condition is also derived from Plan Approval No. 67-05083C]

(a) The permittee shall perform source testing on each of the three combustion turbines to verify and demonstrate compliance once-every-5-calendar-year period using the reference methods, as per 25 Pa. Code Chapter 139. The source tests shall be conducted while each of the three combustion turbines is operating in each of the following modes, unless approved otherwise in writing by the Department.

- (1) Pre-mix maximum normal operating capacity (load) while firing natural gas
- (2) Pre-mix peak load while firing natural gas
- (3) Diffusion peak load while firing natural gas
- (4) Peak load while firing ULSD fuel oil

(b) The performance test shall include the following:

- (1) Visible Emissions
- (2) Volatile Organic Compounds (VOC)
- (3) Ammonia Slip (Emission Rate)
- (4) Particulate matter (PM)
- (5) HAPs [Formaldehyde /Aldehyde(s), Acrolein]

[NOTE: THE ONCE-EVERY-5-CALENDAR-YEAR PERIOD SOURCE TESTING REQUIREMENT OF PARTS (a) & (b)(2), ABOVE, ASSURES COMPLIANCE WITH THE VOC SOURCE TESTING REQUIREMENT OF 25 Pa. Code §129.100(a)(4), AS WELL AS SECTION E (GROUP SG05), CONDITION #002(a)(4), OF THIS OPERATING PERMIT]

(c) Pursuant to 25 Pa. Code §139.3 at least 90 calendar days prior to commencing an emissions testing program, the permittee shall submit a test protocol to the Department for review and approval. The test protocol shall meet all applicable requirements specified in the most current version of the Department's Source Testing Manual.

(d) Pursuant to 25 Pa. Code §139.3 at least 15 calendar days prior to commencing an emission testing program, the permittee shall notify the appropriate Regional Office and the Division of Source Testing and Monitoring of the date and time of the performance test. Notification shall not be made without prior receipt of a protocol acceptance letter from the Department.

(e) Pursuant to 25 Pa. Code §139.53(a)(3) within 15 calendar days after completion of the on-site testing portion of an emission test program, if a complete test report has not yet been submitted, an electronic mail notification shall be sent to the Department's Division of Source Testing and Monitoring and the Southcentral Regional Office indicating the completion date of the on-site testing.

(f) Pursuant to 25 Pa. Code §139.3, the permittee shall submit copies of the completed test reports to the Department no later than 60 calendar days after completion of the on-site testing portion of the emissions test program.

(g) Pursuant to 25 Pa. Code §139.53(b), a complete test report shall include a summary of the emission results on the first page of the report indicating if each pollutant measured is within permitted limits and a statement of compliance or non-compliance with all applicable permit conditions. The summary results will include, at a minimum, the following information:

- (1) A statement that the permittee has reviewed the report from the emissions testing body and agrees with the findings.
- (2) Permit number(s) and condition(s) which are the basis for the evaluation.

**SECTION E. Source Group Restrictions.**

- (3) Summary of results with respect to each applicable permit condition.  
 (4) Statement of compliance or non-compliance with each applicable permit condition.
- (h) Pursuant to 25 Pa. Code §139.3 all submittals shall meet all applicable requirements specified in the most current version of the Department's Source Testing Manual.
- (i) All testing shall be performed in accordance with the provisions of 25 Pa. Code Chapter 139 of the Rules and Regulations of the Department of Environmental Protection.
- (j) Pursuant to 25 Pa. Code §§139.53(a)(1) and 139.53(a)(3), all submittals, besides notifications, shall be accomplished via PSIMS\*Online available via <https://www.depgreenport.state.pa.us/ecom/Login.jsp>. If Internet submittal cannot be accomplished, one paper copy and one digital copy of each submittal shall be made to each of the following:

Southcentral Regional Office:

Paper copy: Program Manager, Air Quality Program, PA DEP Southcentral Regional Office, 909 Elmerton Avenue, Harrisburg, PA 17110-8200

Digital copy: RA-epsctestesting@pa.gov

Bureau of Air Quality:

Paper copy: PA DEP, Bureau of Air Quality, Division of Source Testing and Monitoring, 400 Market Street, 12th Floor Rachael Carson State Office Building, Harrisburg, PA 17105-8468

Digital copy: RA-epstacktesting@pa.gov

**III. MONITORING REQUIREMENTS.****# 017 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Additional authority for this permit condition is also derived from Plan Approval No. 67-05083C]

The permittee shall determine the sulfur content of the fuel being fired in the combustion turbines pursuant to 40 CFR §60.4360 and the frequency of monitoring the sulfur content as applicable shall be in accordance with 40 CFR §60.4370 unless exempted as per 40 CFR §60.4365.

**# 018 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Additional authority for this permit condition is also derived from Plan Approval No. 67-05083C]

The permittee shall install and maintain fuel flow meters for the three combustion turbines in accordance with the requirements of 40 CFR Part 75. The fuel flow will be measured in accordance with Part 75, Appendix D requirements, in lieu of stack exhaust flow monitoring, to allow for calculation of pollutant mass emission rates.

**# 019 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Additional authority for this permit condition is also derived from Plan Approval No. 67-05083C]

The permittee shall measure the following parameters for each SCR system, at least every 15 minutes:

- (a) Catalyst bed inlet gas temperature (based on HP steam drum saturation temperature gauge).
- (b) Ammonia injection rate, in conjunction with Condition #001(c), above.

**IV. RECORDKEEPING REQUIREMENTS.****# 020 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Additional authority for this permit condition is also derived from Plan Approval No. 67-05083C]

The permittee shall, at a minimum, record the following:

- (a) Monthly fuel consumption rate and 12-month rolling total fuel consumption for each combustion turbine.

**SECTION E. Source Group Restrictions.**

- (b) Hours of start-up and shutdown for each combustion turbine.
- (c) Monthly hours of operation for each combustion turbine in each mode.
- (d) The permittee shall retain these records for a minimum of five (5) years. The records shall be made available to the Department upon its request.

**# 021 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Additional authority for this permit condition is also derived from Plan Approval No. 67-05083C]

(a) The permittee shall record each start-up and shutdown event, including date and times of each event. Emissions during start-up and shutdown events will be calculated based upon the emissions estimates approved by the Department and included in the daily and 12-month rolling total air emissions recorded in accordance with Section C, Condition #014(c)&(d), respectively. The permittee shall use this information to demonstrate compliance with the start-up and shutdown emission limits of Conditions #004 (NO<sub>x</sub> and VOC) and #010 (CO), above.

(b) For start-up events the permittee shall record when valve changes occur and duration.

(c) The permittee shall retain these records for a minimum of five (5) years. The records shall be made available to the Department upon its request.

**# 022 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Additional authority for this permit condition is also derived from Plan Approval No. 67-05083C]

(a) The permittee shall maintain records of all air pollution control system performance evaluations and records of calibration checks, adjustments and maintenance performed on all equipment, which is subject to this operating permit.

(b) The permittee shall maintain a copy of the manufacturer's recommendations for the three combustion turbines and air pollution control equipment on-site.

(c) The permittee shall maintain a copy of the manufacturer's recommendations for all CEMS that are required by this operating permit.

(d) The permittee shall keep a record of the date of malfunctions, the time of the malfunction, the cause of the malfunction, and the action taken to correct the malfunction.

(e) The permittee shall retain these records for a minimum of five (5) years. The records shall be made available to the Department upon its request.

**V. REPORTING REQUIREMENTS.****# 023 [25 Pa. Code §135.3]****Reporting**

The permittee shall include the following information for each combustion turbine in the annual air emissions report referenced in Section C, Condition #018(a):

- (a) Monthly and annual air emissions.
- (b) Annual days and hours of operation.
- (c) Air emission calculations (including emission factors used).

**VI. WORK PRACTICE REQUIREMENTS.**

No additional work practice requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).



**SECTION E. Source Group Restrictions.****VII. ADDITIONAL REQUIREMENTS.****# 024 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Additional authority for this permit condition is also derived from Plan Approval No. 67-05083C]

(a) The Department reserves the right to use the CEMS data, stack test results, and the operating parameters recorded during stack testing and their associated air cleaning devices to verify emission rates, to establish emission factors, and to develop compliance assurance measures in the operating permit.

(b) For the start-up and shutdown CEMS verifications, the permittee shall maintain the record of start-up and shutdown details on a quarterly basis, keep the records for five (5) years, and submit the records to the Department when requested.

**# 025 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Additional authority for this permit condition is also derived from Plan Approval No. 67-05083C]

The combustion turbines are subject to the Title V Acid Rain Program of the Clean Air Act Amendments of 1990 and shall comply with all applicable provisions of that Title, to include the following:

- 40 CFR Part 72 Permits Regulation
- 40 CFR Part 73 Sulfur Dioxide Allowance System
- 40 CFR Part 75 Continuous Emission Monitoring
- 40 CFR Part 77 Excess Emissions

**# 026 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

AMMONIA EMISSIONS COMPLIANCE, Section E (Group SG01), Condition #001(d) above:

The permittee shall continuously operate and maintain the ammonia monitoring system in accordance with the manufacturer's specifications, and the Department-approved ammonia emissions monitoring plan of October 29, 2012.

**# 027 [25 Pa. Code §127.512]****Operating permit terms and conditions.**

(a) Each combustion turbine shall not burn ULSD fuel oil for more than 10.0% of the average annual heat input during any three (3) consecutive calendar years or for more than 15.0% of the annual heat input during any one (1) calendar year.

(b) The permittee shall maintain records of each combustion turbine's annual heat input while firing ULSD fuel oil and while firing natural gas during each calendar year.

(c) The permittee shall maintain records of each combustion turbine's annual heat input while firing ULSD fuel oil and while firing natural gas during each consecutive 3-calendar year period. This is necessary in order to demonstrate compliance with part (a), above.

(d) The permittee shall retain these records for a minimum of five (5) years and shall make them available to the Department upon its request.

[NOTE: This permit condition assures that the combustion turbines do not satisfy the definition of "oil-fired electric utility steam generating unit" contained at 40 CFR §63.10042. Therefore, compliance with this permit condition assures that each combustion turbine is not subject to the requirements of 40 CFR Part 63, Subpart UUUUU – National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units pursuant to 40 CFR §63.9981]

\*\*\* **Permit Shield in Effect.** \*\*\*

**SECTION E. Source Group Restrictions.**

Group Name: SG02

Group Description: Cross-State Air Pollution Rule (CSAPR) Requirements

Sources included in this group

ID	Name
101	TURBINE UNIT 1
102	TURBINE UNIT 2
103	TURBINE UNIT 3

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**III. MONITORING REQUIREMENTS.****# 001 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

Description of Transport Rule (TR) Monitoring Provisions

The TR subject units, and the unit-specific monitoring provisions at this source, are identified below. These units are subject to the requirements for the TR NO<sub>x</sub> Annual Trading Program, TR NO<sub>x</sub> Ozone Season Trading Program and TR SO<sub>2</sub> Group 1 Trading Program.

SOURCE ID 101 - COMBUSTION TURBINE UNIT 1, SOURCE ID 102 - COMBUSTION TURBINE UNIT 2 AND SOURCE ID 103 - COMBUSTION TURBINE UNIT 3:

SO<sub>2</sub>: Excepted monitoring system requirements for gas-and oil-fired units pursuant to 40 CFR Part 75, Appendix D

NO<sub>x</sub>: Continuous emission monitoring system or systems (CEMS) requirements pursuant to 40 CFR Part 75, Subpart B (for NO<sub>x</sub> monitoring) and 40 CFR Part 75, Subpart H (for NO<sub>x</sub> monitoring)

HEAT INPUT: Excepted monitoring system requirements for gas-and oil-fired units pursuant to 40 CFR Part 75, Appendix D

1. The above description of the monitoring used by a unit does not change, create an exemption from, or otherwise affect the monitoring, recordkeeping, and reporting requirements applicable to the unit under 40 CFR §§97.430 through 97.435 (TR NO<sub>x</sub> Annual Trading Program), and §§97.530 through 97.535 (TR NO<sub>x</sub> Ozone Season Trading Program). The monitoring, recordkeeping and reporting requirements applicable to each unit are included below in the standard conditions for the applicable TR trading programs.

2. Owners and operators must submit to the Administrator a monitoring plan for each unit in accordance with 40 CFR §§75.53, 75.62 and 75.73, as applicable. The monitoring plan for each unit is available at U.S. EPA's website at <http://www.epa.gov/airmarkets/emissions/monitoringplans.html>.

3. Owners and operators that want to use an alternative monitoring system must submit to the Administrator a petition requesting approval of the alternative monitoring system in accordance with 40 CFR Part 75, Subpart E and 40 CFR §§75.66 and 97.435 (TR NO<sub>x</sub> Annual Trading Program), and 40 CFR §97.535 (TR NO<sub>x</sub> Ozone Season Trading Program). The Administrator's response approving or disapproving any petition for an alternative monitoring system is available on U.S. EPA's website at <http://www.epa.gov/airmarkets/emissions/petitions.html>.

4. Owners and operators that want to use an alternative to any monitoring, recordkeeping, or reporting requirement under 40 CFR §§97.430 through 97.434 (TR NO<sub>x</sub> Annual Trading Program), and 40 CFR §§97.530 through 97.534 (TR NO<sub>x</sub> Ozone Season Trading Program), must submit to the Administrator a petition requesting approval of the alternative in accordance with 40 CFR §§75.66 and 97.435 (TR NO<sub>x</sub> Annual Trading Program), and §97.535 (TR NO<sub>x</sub> Ozone Season Trading Program). The Administrator's response approving or disapproving any petition for an alternative to a monitoring,

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recordkeeping, or reporting requirement is available on U.S. EPA's website at <http://www.epa.gov/airmarkets/emissions/petitions.html>.

5. The descriptions of monitoring applicable to the unit included above meet the requirement of 40 CFR §§97.430 through 97.434 (TR NOx Annual Trading Program), and 40 CFR §§97.530 through 97.534 (TR NOx Ozone Season Trading Program), and therefore minor operating permit modification procedures, in accordance with 40 CFR §70.7(e)(2)(i)(B) or 40 CFR §71.7(e)(1)(i)(B), may be used to add to or change this unit's monitoring system description.

**IV. RECORDKEEPING REQUIREMENTS.**

No additional record keeping requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**VI. WORK PRACTICE REQUIREMENTS.**

No additional work practice requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**VII. ADDITIONAL REQUIREMENTS.****# 002 [25 Pa. Code §127.512]****Operating permit terms and conditions.**

Transport Rule (TR) NOx Annual Trading Program requirements (40 CFR §97.406)

(a) Designated representative requirements.

The owners and operators shall comply with the requirement to have a designated representative, and may have an alternate designated representative, in accordance with 40 CFR §§97.413 through 97.418.

(b) Emissions monitoring, reporting, and recordkeeping requirements.

(1) The owners and operators, and the designated representative, of each TR NOx Annual source and each TR NOx Annual unit at the source shall comply with the monitoring, reporting, and recordkeeping requirements of 40 CFR §§97.430 (general requirements, including installation, certification, and data accounting, compliance deadlines, reporting data, prohibitions, and long-term cold storage), 97.431 (initial monitoring system certification and recertification procedures), 97.432 (monitoring system out-of-control periods), 97.433 (notifications concerning monitoring), 97.434 (recordkeeping and reporting, including monitoring plans, certification applications, quarterly reports, and compliance certification), and 97.435 (petitions for alternatives to monitoring, recordkeeping, or reporting requirements).

(2) The emissions data determined in accordance with 40 CFR §§97.430 through 97.435 shall be used to calculate allocations of TR NOx Annual allowances under 40 CFR §§97.411(a)(2) and (b) and 97.412 and to determine compliance with the TR NOx Annual emissions limitation and assurance provisions under paragraph (c), below, provided that, for each monitoring location from which mass emissions are reported, the mass emissions amount used in calculating such allocations and determining such compliance shall be the mass emissions amount for the monitoring location determined in accordance with 40 CFR §§97.430 through 97.435 and rounded to the nearest ton, with any fraction of a ton less than 0.50 being deemed to be zero.

(c) NOx emissions requirements.

(1) TR NOx Annual emissions limitation.

(i) As of the allowance transfer deadline for a control period in a given year, the owners and operators of each TR NOx Annual source and each TR NOx Annual unit at the source shall hold, in the source's compliance account, TR NOx Annual allowances available for deduction for such control period under 40 CFR §97.424(a) in an amount not less than the tons of

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total NOx emissions for such control period from all TR NOx Annual units at the source.

(ii) If total NOx emissions during a control period in a given year from the TR NOx Annual units at a TR NOx Annual source are in excess of the TR NOx Annual emissions limitation set forth in paragraph (c)(1)(i), above, then:

(A) The owners and operators of the source and each TR NOx Annual unit at the source shall hold the TR NOx Annual allowances required for deduction under 40 CFR §97.424(d); and

(B) The owners and operators of the source and each TR NOx Annual unit at the source shall pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the Clean Air Act, and each ton of such excess emissions and each day of such control period shall constitute a separate violation of 40 CFR Part 97, Subpart AAAAA and the Clean Air Act.

(2) TR NOx Annual assurance provisions.

(i) If total NOx emissions during a control period in a given year from all TR NOx Annual units at TR NOx Annual sources in the state exceed the state assurance level, then the owners and operators of such sources and units in each group of one or more sources and units having a common designated representative for such control period, where the common designated representative's share of such NOx emissions during such control period exceeds the common designated representative's assurance level for the state and such control period, shall hold (in the assurance account established for the owners and operators of such group) TR NOx Annual allowances available for deduction for such control period under 40 CFR §97.425(a) in an amount equal to two times the product (rounded to the nearest whole number), as determined by the Administrator in accordance with 40 CFR §97.425(b), of multiplying:

(A) The quotient of the amount by which the common designated representative's share of such NOx emissions exceeds the common designated representative's assurance level divided by the sum of the amounts, determined for all common designated representatives for such sources and units in the state for such control period, by which each common designated representative's share of such NOx emissions exceeds the respective common designated representative's assurance level; and

(B) The amount by which total NOx emissions from all TR NOx Annual units at TR NOx Annual sources in the state for such control period exceed the state assurance level.

(ii) The owners and operators shall hold the TR NOx Annual allowances required under paragraph (c)(2)(i) above, as of midnight of November 1 (if it is a business day), or midnight of the first business day thereafter (if November 1 is not a business day), immediately after such control period.

(iii) Total NOx emissions from all TR NOx Annual units at TR NOx Annual sources in the State during a control period in a given year exceed the state assurance level if such total NOx emissions exceed the sum, for such control period, of the state NOx Annual trading budget under 40 CFR §97.410(a) and the state's variability limit under 40 CFR §97.410(b).

(iv) It shall not be a violation of 40 CFR Part 97, Subpart AAAAA or of the Clean Air Act if total NOx emissions from all TR NOx Annual units at TR NOx Annual sources in the State during a control period exceed the state assurance level or if a common designated representative's share of total NOx emissions from the TR NOx Annual units at TR NOx Annual sources in the state during a control period exceeds the common designated representative's assurance level.

(v) To the extent the owners and operators fail to hold TR NOx Annual allowances for a control period in a given year in accordance with paragraphs (c)(2)(i) through (iii), above,

(A) The owners and operators shall pay any fine, penalty, or assessment or comply with any other remedy imposed under the Clean Air Act; and

(B) Each TR NOx Annual allowance that the owners and operators fail to hold for such control period in accordance with paragraphs (c)(2)(i) through (iii), above, and each day of such control period shall constitute a separate violation of 40 CFR Part 97, Subpart AAAAA and the Clean Air Act.

(3) Compliance periods.

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(i) A TR NOx Annual unit shall be subject to the requirements under paragraph (c)(1), above, for the control period starting on the later of January 1, 2015, or the deadline for meeting the unit's monitor certification requirements under 40 CFR §97.430(b) and for each control period thereafter.

(ii) A TR NOx Annual unit shall be subject to the requirements under paragraph (c)(2), above, for the control period starting on the later of January 1, 2017 or the deadline for meeting the unit's monitor certification requirements under 40 CFR §97.430(b) and for each control period thereafter.

(4) Vintage of allowances held for compliance.

(i) A TR NOx Annual allowance held for compliance with the requirements under paragraph (c)(1)(i), above, for a control period in a given year must be a TR NOx Annual allowance that was allocated for such control period or a control period in a prior year.

(ii) A TR NOx Annual allowance held for compliance with the requirements under paragraphs (c)(1)(ii)(A) and (2)(i) through (iii), above, for a control period in a given year must be a TR NOx Annual allowance that was allocated for a control period in a prior year or the control period in the given year or in the immediately following year.

(5) Allowance Management System requirements. Each TR NOx Annual allowance shall be held in, deducted from, or transferred into, out of, or between Allowance Management System accounts in accordance with 40 CFR Part 97, Subpart AAAAA.

(6) Limited authorization. A TR NOx Annual allowance is a limited authorization to emit one ton of NOx during the control period in one year. Such authorization is limited in its use and duration as follows:

(i) Such authorization shall only be used in accordance with the TR NOx Annual Trading Program; and

(ii) Notwithstanding any other provision of 40 CFR Part 97, the Administrator has the authority to terminate or limit the use and duration of such authorization to the extent the Administrator determines is necessary or appropriate to implement any provision of the Clean Air Act.

(7) Property right. A TR NOx Annual allowance does not constitute a property right.

(d) Title V permit revision requirements.

(1) No Title V permit revision shall be required for any allocation, holding, deduction, or transfer of TR NOx Annual allowances in accordance with 40 CFR Part 97, Subpart AAAAA.

(2) This permit incorporates the TR emissions monitoring, recordkeeping and reporting requirements pursuant to 40 CFR §§97.430 through 97.435, and the requirements for a continuous emission monitoring system (pursuant to 40 CFR Part 75, Subparts B and H), an excepted monitoring system (pursuant to 40 CFR Part 75, Appendices D and E), a low mass emissions excepted monitoring methodology (pursuant to 40 CFR §75.19), and an alternative monitoring system (pursuant to 40 CFR Part 75, Subpart E). Therefore, the Description of TR Monitoring Provisions table for units identified in this permit may be added to, or changed, in this Title V permit using minor permit modification procedures in accordance with 40 CFR §§97.406(d)(2) and 70.7(e)(2)(i)(B) or 71.7(e)(1)(i)(B).

(e) Additional recordkeeping and reporting requirements.

(1) Unless otherwise provided, the owners and operators of each TR NOx Annual source and each TR NOx Annual unit at the source shall keep on-site at the source each of the following documents (in hardcopy or electronic format) for a period of 5 years from the date the document is created. This period may be extended for cause, at any time before the end of 5 years, in writing by the Administrator.

(i) The certificate of representation under 40 CFR §97.416 for the designated representative for the source and each TR NOx Annual unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such certificate of representation and documents are superseded because of the submission of a new

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certificate of representation under 40 CFR §97.416 changing the designated representative.

(ii) All emissions monitoring information, in accordance with 40 CFR Part 97, Subpart AAAAA.

(iii) Copies of all reports, compliance certifications, and other submissions and all records made or required under, or to demonstrate compliance with the requirements of, the TR NOx Annual Trading Program.

(2) The designated representative of a TR NOx Annual source and each TR NOx Annual unit at the source shall make all submissions required under the TR NOx Annual Trading Program, except as provided in 40 CFR §97.418. This requirement does not change, create an exemption from, or otherwise affect the responsible official submission requirements under a Title V operating permit program in 40 CFR Parts 70 and 71.

(f) Liability.

(1) Any provision of the TR NOx Annual Trading Program that applies to a TR NOx Annual source or the designated representative of a TR NOx Annual source shall also apply to the owners and operators of such source and of the TR NOx Annual units at the source.

(2) Any provision of the TR NOx Annual Trading Program that applies to a TR NOx Annual unit or the designated representative of a TR NOx Annual unit shall also apply to the owners and operators of such unit.

(g) Effect on other authorities.

No provision of the TR NOx Annual Trading Program or exemption under 40 CFR §97.405 shall be construed as exempting or excluding the owners and operators, and the designated representative, of a TR NOx Annual source or TR NOx Annual unit from compliance with any other provision of the applicable, approved state implementation plan, a federally enforceable permit, or the Clean Air Act.

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 Transport Rule (TR) NOx Ozone Season Trading Program Requirements (40 CFR §97.506)

(a) Designated representative requirements.

The owners and operators shall comply with the requirement to have a designated representative, and may have an alternate designated representative, in accordance with 40 §§CFR 97.513 through 97.518.

(b) Emissions monitoring, reporting, and recordkeeping requirements.

(1) The owners and operators, and the designated representative, of each TR NOx Ozone Season source and each TR NOx Ozone Season unit at the source shall comply with the monitoring, reporting, and recordkeeping requirements of 40 CFR §§97.530 (general requirements, including installation, certification, and data accounting, compliance deadlines, reporting data, prohibitions, and long-term cold storage), 97.531 (initial monitoring system certification and recertification procedures), 97.532 (monitoring system out-of-control periods), 97.533 (notifications concerning monitoring), 97.534 (recordkeeping and reporting, including monitoring plans, certification applications, quarterly reports, and compliance certification), and 97.535 (petitions for alternatives to monitoring, recordkeeping, or reporting requirements).

(2) The emissions data determined in accordance with 40 CFR §§97.530 through 97.535 shall be used to calculate allocations of TR NOx Ozone Season allowances under 40 CFR §§97.511(a)(2) and (b) and 97.512 and to determine compliance with the TR NOx Ozone Season emissions limitation and assurance provisions under paragraph (c), below, provided that, for each monitoring location from which mass emissions are reported, the mass emissions amount used in calculating such allocations and determining such compliance shall be the mass emissions amount for the monitoring location determined in accordance with 40 CFR §§97.530 through 97.535 and rounded to the nearest ton, with any fraction of a ton less than 0.50 being deemed to be zero.

(c) NOx emissions requirements.

**SECTION E. Source Group Restrictions.****(1) TR NOx Ozone Season emissions limitation.**

(i) As of the allowance transfer deadline for a control period in a given year, the owners and operators of each TR NOx Ozone Season source and each TR NOx Ozone Season unit at the source shall hold, in the source's compliance account, TR NOx Ozone Season allowances available for deduction for such control period under 40 CFR §97.524(a) in an amount not less than the tons of total NOx emissions for such control period from all TR NOx Ozone Season units at the source.

(ii) If total NOx emissions during a control period in a given year from the TR NOx Ozone Season units at a TR NOx Ozone Season source are in excess of the TR NOx Ozone Season emissions limitation set forth in paragraph (c)(1)(i), above, then:

(A) The owners and operators of the source and each TR NOx Ozone Season unit at the source shall hold the TR NOx Ozone Season allowances required for deduction under 40 CFR §97.524(d); and

(B) The owners and operators of the source and each TR NOx Ozone Season unit at the source shall pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the Clean Air Act, and each ton of such excess emissions and each day of such control period shall constitute a separate violation of 40 CFR Part 97, Subpart BBBBBB and the Clean Air Act.

**(2) TR NOx Ozone Season assurance provisions.**

(i) If total NOx emissions during a control period in a given year from all TR NOx Ozone Season units at TR NOx Ozone Season sources in the state exceed the state assurance level, then the owners and operators of such sources and units in each group of one or more sources and units having a common designated representative for such control period, where the common designated representative's share of such NOx emissions during such control period exceeds the common designated representative's assurance level for the state and such control period, shall hold (in the assurance account established for the owners and operators of such group) TR NOx Ozone Season allowances available for deduction for such control period under 40 CFR §97.525(a) in an amount equal to two times the product (rounded to the nearest whole number), as determined by the Administrator in accordance with 40 CFR §97.525(b), of multiplying:

(A) The quotient of the amount by which the common designated representative's share of such NOx emissions exceeds the common designated representative's assurance level divided by the sum of the amounts, determined for all common designated representatives for such sources and units in the state for such control period, by which each common designated representative's share of such NOx emissions exceeds the respective common designated representative's assurance level; and

(B) The amount by which total NOx emissions from all TR NOx Ozone Season units at TR NOx Ozone Season sources in the state for such control period exceed the state assurance level.

(ii) The owners and operators shall hold the TR NOx Ozone Season allowances required under paragraph (c)(2)(i), above, as of midnight of November 1 (if it is a business day), or midnight of the first business day thereafter (if November 1 is not a business day), immediately after such control period.

(iii) Total NOx emissions from all TR NOx Ozone Season units at TR NOx Ozone Season sources in the state during a control period in a given year exceed the state assurance level if such total NOx emissions exceed the sum, for such control period, of the State NOx Ozone Season trading budget under 40 CFR §97.510(a) and the state's variability limit under 40 CFR §97.510(b).

(iv) It shall not be a violation of 40 CFR Part 97, Subpart BBBBBB or of the Clean Air Act if total NOx emissions from all TR NOx Ozone Season units at TR NOx Ozone Season sources in the state during a control period exceed the state assurance level or if a common designated representative's share of total NOx emissions from the TR NOx Ozone Season units at TR NOx Ozone Season sources in the state during a control period exceeds the common designated representative's assurance level.

(v) To the extent the owners and operators fail to hold TR NOx Ozone Season allowances for a control period in a given year in accordance with paragraphs (c)(2)(i) through (iii), above:

(A) The owners and operators shall pay any fine, penalty, or assessment or comply with any other remedy imposed under the Clean Air Act; and



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(B) Each TR NO<sub>x</sub> Ozone Season allowance that the owners and operators fail to hold for such control period in accordance with paragraphs (c)(2)(i) through (iii), above, and each day of such control period shall constitute a separate violation of 40 CFR Part 97, Subpart BBBBBB and the Clean Air Act.

(3) Compliance periods.

(i) A TR NO<sub>x</sub> Ozone Season unit shall be subject to the requirements under paragraph (c)(1), above, for the control period starting on the later of May 1, 2015 or the deadline for meeting the unit's monitor certification requirements under 40 CFR §97.530(b) and for each control period thereafter.

(ii) A TR NO<sub>x</sub> Ozone Season unit shall be subject to the requirements under paragraph (c)(2), above, for the control period starting on the later of May 1, 2017 or the deadline for meeting the unit's monitor certification requirements under 40 CFR §97.530(b) and for each control period thereafter.

(4) Vintage of allowances held for compliance.

(i) A TR NO<sub>x</sub> Ozone Season allowance held for compliance with the requirements under paragraph (c)(1)(i), above, for a control period in a given year must be a TR NO<sub>x</sub> Ozone Season allowance that was allocated for such control period or a control period in a prior year.

(ii) A TR NO<sub>x</sub> Ozone Season allowance held for compliance with the requirements under paragraphs (c)(1)(ii)(A) and (2)(i) through (iii), above, for a control period in a given year must be a TR NO<sub>x</sub> Ozone Season allowance that was allocated for a control period in a prior year or the control period in the given year or in the immediately following year.

(5) Allowance Management System requirements. Each TR NO<sub>x</sub> Ozone Season allowance shall be held in, deducted from, or transferred into, out of, or between Allowance Management System accounts in accordance with 40 CFR Part 97, Subpart BBBBBB.

(6) Limited authorization. A TR NO<sub>x</sub> Ozone Season allowance is a limited authorization to emit one ton of NO<sub>x</sub> during the control period in one year. Such authorization is limited in its use and duration as follows:

(i) Such authorization shall only be used in accordance with the TR NO<sub>x</sub> Ozone Season Trading Program; and

(ii) Notwithstanding any other provision of 40 CFR Part 97, Subpart BBBBBB, the Administrator has the authority to terminate or limit the use and duration of such authorization to the extent the Administrator determines is necessary or appropriate to implement any provision of the Clean Air Act.

(7) Property right. A TR NO<sub>x</sub> Ozone Season allowance does not constitute a property right.

(d) Title V permit revision requirements.

(1) No Title V permit revision shall be required for any allocation, holding, deduction, or transfer of TR NO<sub>x</sub> Ozone Season allowances in accordance with 40 CFR Part 97, Subpart BBBBBB.

(2) This permit incorporates the TR emissions monitoring, recordkeeping and reporting requirements pursuant to 40 CFR §§97.530 through 97.535, and the requirements for a continuous emission monitoring system (pursuant to 40 CFR Part 75, Subparts B and H), an excepted monitoring system (pursuant to 40 CFR Part 75, Appendices D and E), a low mass emissions excepted monitoring methodology (pursuant to 40 CFR §75.19), and an alternative monitoring system (pursuant to 40 CFR Part 75, Subpart E). Therefore, the Description of TR Monitoring Provisions table for units identified in this permit may be added to, or changed, in this Title V permit using minor permit modification procedures in accordance with 40 CFR §§97.506(d)(2) and 70.7(e)(2)(i)(B) or 71.7(e)(1)(i)(B).

(e) Additional recordkeeping and reporting requirements.

(1) Unless otherwise provided, the owners and operators of each TR NO<sub>x</sub> Ozone Season source and each TR NO<sub>x</sub> Ozone Season unit at the source shall keep on site at the source each of the following documents (in hardcopy or electronic format) for a period of 5 years from the date the document is created. This period may be extended for cause, at any time



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before the end of 5 years, in writing by the Administrator.

(i) The certificate of representation under 40 CFR §97.516 for the designated representative for the source and each TR NOx Ozone Season unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such certificate of representation and documents are superseded because of the submission of a new certificate of representation under 40 CFR §97.516 changing the designated representative.

(ii) All emissions monitoring information, in accordance with 40 CFR Part 97, Subpart BBBBB.

(iii) Copies of all reports, compliance certifications, and other submissions and all records made or required under, or to demonstrate compliance with the requirements of, the TR NOx Ozone Season Trading Program.

(2) The designated representative of a TR NOx Ozone Season source and each TR NOx Ozone Season unit at the source shall make all submissions required under the TR NOx Ozone Season Trading Program, except as provided in 40 CFR §97.518. This requirement does not change, create an exemption from, or otherwise affect the responsible official submission requirements under a Title V operating permit program in 40 CFR Parts 70 and 71.

(f) Liability.

(1) Any provision of the TR NOx Ozone Season Trading Program that applies to a TR NOx Ozone Season source or the designated representative of a TR NOx Ozone Season source shall also apply to the owners and operators of such source and of the TR NOx Ozone Season units at the source.

(2) Any provision of the TR NOx Ozone Season Trading Program that applies to a TR NOx Ozone Season unit or the designated representative of a TR NOx Ozone Season unit shall also apply to the owners and operators of such unit.

(g) Effect on other authorities.

No provision of the TR NOx Ozone Season Trading Program or exemption under 40 CFR §97.505 shall be construed as exempting or excluding the owners and operators, and the designated representative, of a TR NOx Ozone Season source or TR NOx Ozone Season unit from compliance with any other provision of the applicable, approved state implementation plan, a federally enforceable permit, or the Clean Air Act.

TR SO<sub>2</sub> Group 1 Trading Program requirements (40 CFR §97.606)

(a) Designated representative requirements.

The owners and operators shall comply with the requirement to have a designated representative, and may have an alternate designated representative, in accordance with 40 CFR §§97.613 through 97.618.

(b) Emissions monitoring, reporting, and recordkeeping requirements.

(1) The owners and operators, and the designated representative, of each TR SO<sub>2</sub> Group 1 source and each TR SO<sub>2</sub> Group 1 unit at the source shall comply with the monitoring, reporting, and recordkeeping requirements of 40 CFR §§97.630 (general requirements, including installation, certification, and data accounting, compliance deadlines, reporting data, prohibitions, and long-term cold storage), 97.631 (initial monitoring system certification and recertification procedures), 97.632 (monitoring system out-of-control periods), 97.633 (notifications concerning monitoring), 97.634 (recordkeeping and reporting, including monitoring plans, certification applications, quarterly reports, and compliance certification), and 97.635 (petitions for alternatives to monitoring, recordkeeping, or reporting requirements).

(2) The emissions data determined in accordance with 40 CFR §§97.630 through 97.635 shall be used to calculate allocations of TR SO<sub>2</sub> Group 1 allowances under 40 CFR §§97.611(a)(2) and (b) and 97.612 and to determine compliance with the TR SO<sub>2</sub> Group 1 emissions limitation and assurance provisions under paragraph (c), below, provided that, for each monitoring location from which mass emissions are reported, the mass emissions amount used in calculating such

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allocations and determining such compliance shall be the mass emissions amount for the monitoring location determined in accordance with 40 CFR §§97.630 through 97.635 and rounded to the nearest ton, with any fraction of a ton less than 0.50 being deemed to be zero.

(c) SO<sub>2</sub> emissions requirements.

(1) TR SO<sub>2</sub> Group 1 emissions limitation.

(i) As of the allowance transfer deadline for a control period in a given year, the owners and operators of each TR SO<sub>2</sub> Group 1 source and each TR SO<sub>2</sub> Group 1 unit at the source shall hold, in the source's compliance account, TR SO<sub>2</sub> Group 1 allowances available for deduction for such control period under 40 CFR §97.624(a) in an amount not less than the tons of total SO<sub>2</sub> emissions for such control period from all TR SO<sub>2</sub> Group 1 units at the source.

(ii) If total SO<sub>2</sub> emissions during a control period in a given year from the TR SO<sub>2</sub> Group 1 units at a TR SO<sub>2</sub> Group 1 source are in excess of the TR SO<sub>2</sub> Group 1 emissions limitation set forth in paragraph (c)(1)(i), above, then:

(A) The owners and operators of the source and each TR SO<sub>2</sub> Group 1 unit at the source shall hold the TR SO<sub>2</sub> Group 1 allowances required for deduction under 40 CFR §97.624(d); and

(B) The owners and operators of the source and each TR SO<sub>2</sub> Group 1 unit at the source shall pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the Clean Air Act, and each ton of such excess emissions and each day of such control period shall constitute a separate violation 40 CFR Part 97, Subpart CCCCC and the Clean Air Act.

(2) TR SO<sub>2</sub> Group 1 assurance provisions.

(i) If total SO<sub>2</sub> emissions during a control period in a given year from all TR SO<sub>2</sub> Group 1 units at TR SO<sub>2</sub> Group 1 sources in the state exceed the state assurance level, then the owners and operators of such sources and units in each group of one or more sources and units having a common designated representative for such control period, where the common designated representative's share of such SO<sub>2</sub> emissions during such control period exceeds the common designated representative's assurance level for the state and such control period, shall hold (in the assurance account established for the owners and operators of such group) TR SO<sub>2</sub> Group 1 allowances available for deduction for such control period under 40 CFR §97.625(a) in an amount equal to two times the product (rounded to the nearest whole number), as determined by the Administrator in accordance with 40 CFR §97.625(b), of multiplying:

(A) The quotient of the amount by which the common designated representative's share of such SO<sub>2</sub> emissions exceeds the common designated representative's assurance level divided by the sum of the amounts, determined for all common designated representatives for such sources and units in the state for such control period, by which each common designated representative's share of such SO<sub>2</sub> emissions exceeds the respective common designated representative's assurance level; and

(B) The amount by which total SO<sub>2</sub> emissions from all TR SO<sub>2</sub> Group 1 units at TR SO<sub>2</sub> Group 1 sources in the state for such control period exceed the state assurance level.

(ii) The owners and operators shall hold the TR SO<sub>2</sub> Group 1 allowances required under paragraph (c)(2)(i), above, as of midnight of November 1 (if it is a business day), or midnight of the first business day thereafter (if November 1 is not a business day), immediately after such control period.

(iii) Total SO<sub>2</sub> emissions from all TR SO<sub>2</sub> Group 1 units at TR SO<sub>2</sub> Group 1 sources in the state during a control period in a given year exceed the state assurance level if such total SO<sub>2</sub> emissions exceed the sum, for such control period, of the state SO<sub>2</sub> Group 1 trading budget under 40 CFR §97.610(a) and the state's variability limit under 40 CFR §97.610(b).

(iv) It shall not be a violation of 40 CFR Part 97, Subpart CCCCC or of the Clean Air Act if total SO<sub>2</sub> emissions from all TR SO<sub>2</sub> Group 1 units at TR SO<sub>2</sub> Group 1 sources in the state during a control period exceed the state assurance level or if a common designated representative's share of total SO<sub>2</sub> emissions from the TR SO<sub>2</sub> Group 1 units at TR SO<sub>2</sub> Group 1 sources in the state during a control period exceeds the common designated representative's assurance level.

**SECTION E. Source Group Restrictions.**

(v) To the extent the owners and operators fail to hold TR SO<sub>2</sub> Group 1 allowances for a control period in a given year in accordance with paragraphs (c)(2)(i) through (iii), above:

(A) The owners and operators shall pay any fine, penalty, or assessment or comply with any other remedy imposed under the Clean Air Act; and

(B) Each TR SO<sub>2</sub> Group 1 allowance that the owners and operators fail to hold for such control period in accordance with paragraphs (c)(2)(i) through (iii), above and each day of such control period shall constitute a separate violation of 40 CFR Part 97, Subpart CCCCC and the Clean Air Act.

(3) Compliance periods.

(i) A TR SO<sub>2</sub> Group 1 unit shall be subject to the requirements under paragraph (c)(1), above for the control period starting on the later of January 1, 2015 or the deadline for meeting the unit's monitor certification requirements under 40 CFR §97.630(b) and for each control period thereafter.

(ii) A TR SO<sub>2</sub> Group 1 unit shall be subject to the requirements under paragraph (c)(2), above for the control period starting on the later of January 1, 2017 or the deadline for meeting the unit's monitor certification requirements under 40 CFR §97.630(b) and for each control period thereafter.

(4) Vintage of allowances held for compliance.

(i) A TR SO<sub>2</sub> Group 1 allowance held for compliance with the requirements under paragraph (c)(1)(i), above for a control period in a given year must be a TR SO<sub>2</sub> Group 1 allowance that was allocated for such control period or a control period in a prior year.

(ii) A TR SO<sub>2</sub> Group 1 allowance held for compliance with the requirements under paragraphs (c)(1)(ii)(A) and (2)(i) through (iii), above, for a control period in a given year must be a TR SO<sub>2</sub> Group 1 allowance that was allocated for a control period in a prior year or the control period in the given year or in the immediately following year.

(5) Allowance Management System requirements. Each TR SO<sub>2</sub> Group 1 allowance shall be held in, deducted from, or transferred into, out of, or between Allowance Management System accounts in accordance with 40 CFR Part 97, Subpart CCCCC.

(6) Limited authorization. A TR SO<sub>2</sub> Group 1 allowance is a limited authorization to emit one ton of SO<sub>2</sub> during the control period in one year. Such authorization is limited in its use and duration as follows:

(i) Such authorization shall only be used in accordance with the TR SO<sub>2</sub> Group 1 Trading Program; and

(ii) Notwithstanding any other provision of 40 CFR Part 97, Subpart CCCCC, the Administrator has the authority to terminate or limit the use and duration of such authorization to the extent the Administrator determines is necessary or appropriate to implement any provision of the Clean Air Act.

(7) Property right. A TR SO<sub>2</sub> Group 1 allowance does not constitute a property right.

(d) Title V permit revision requirements.

(1) No Title V permit revision shall be required for any allocation, holding, deduction, or transfer of TR SO<sub>2</sub> Group 1 allowances in accordance with 40 CFR Part 97, Subpart CCCCC.

(2) This permit incorporates the TR emissions monitoring, recordkeeping and reporting requirements pursuant to 40 CFR §§97.630 through 97.635, and the requirements for a continuous emission monitoring system (pursuant to 40 CFR Part 75, Subparts B and H), an excepted monitoring system (pursuant to 40 CFR Part 75, Appendices D and E), a low mass emissions excepted monitoring methodology (pursuant to 40 CFR Part 75.19), and an alternative monitoring system (pursuant to 40 CFR Part 75, Subpart E). Therefore, the Description of TR Monitoring Provisions table for units identified in this permit may be added to, or changed, in this Title V permit using minor permit modification procedures in accordance with 40 CFR §§97.606(d)(2) and 70.7(e)(2)(i)(B) or 71.7(e)(1)(i)(B).

**SECTION E. Source Group Restrictions.****(e) Additional recordkeeping and reporting requirements.**

(1) Unless otherwise provided, the owners and operators of each TR SO<sub>2</sub> Group 1 source and each TR SO<sub>2</sub> Group 1 unit at the source shall keep on site at the source each of the following documents (in hardcopy or electronic format) for a period of 5 years from the date the document is created. This period may be extended for cause, at any time before the end of 5 years, in writing by the Administrator.

(i) The certificate of representation under 40 CFR §97.616 for the designated representative for the source and each TR SO<sub>2</sub> Group 1 unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such certificate of representation and documents are superseded because of the submission of a new certificate of representation under 40 CFR §97.616 changing the designated representative.

(ii) All emissions monitoring information, in accordance with 40 CFR Part 97, Subpart CCCCC.

(iii) Copies of all reports, compliance certifications, and other submissions and all records made or required under, or to demonstrate compliance with the requirements of, the TR SO<sub>2</sub> Group 1 Trading Program.

(2) The designated representative of a TR SO<sub>2</sub> Group 1 source and each TR SO<sub>2</sub> Group 1 unit at the source shall make all submissions required under the TR SO<sub>2</sub> Group 1 Trading Program, except as provided in 40 CFR §97.618. This requirement does not change, create an exemption from, or otherwise affect the responsible official submission requirements under a Title V operating permit program in 40 CFR Parts 70 and 71.

**(f) Liability.**

(1) Any provision of the TR SO<sub>2</sub> Group 1 Trading Program that applies to a TR SO<sub>2</sub> Group 1 source or the designated representative of a TR SO<sub>2</sub> Group 1 source shall also apply to the owners and operators of such source and of the TR SO<sub>2</sub> Group 1 units at the source.

(2) Any provision of the TR SO<sub>2</sub> Group 1 Trading Program that applies to a TR SO<sub>2</sub> Group 1 unit or the designated representative of a TR SO<sub>2</sub> Group 1 unit shall also apply to the owners and operators of such unit.

**(g) Effect on other authorities.**

No provision of the TR SO<sub>2</sub> Group 1 Trading Program or exemption under 40 CFR §97.605 shall be construed as exempting or excluding the owners and operators, and the designated representative, of a TR SO<sub>2</sub> Group 1 source or TR SO<sub>2</sub> Group 1 unit from compliance with any other provision of the applicable, approved state implementation plan (SIP), a federally enforceable permit, or the Clean Air Act.

**# 003 [25 Pa. Code §127.512]****Operating permit terms and conditions.**

(a) The Group SG02 combustion turbines are subject to the Transport Rule (TR) Trading Program Title V Requirements outlined in this Source Group.

(b) The Transport Rule (TR) is also known as the "Cross-State Air Pollution Rule" (CSAPR). It includes the regulations found at 40 CFR §§52.38, 52.39, 52.2040 and 52.2041, and 40 CFR Part 97, Subparts AAAAA, BBBBB and CCCC (relating to TR NO<sub>x</sub> Annual trading program; TR NO<sub>x</sub> Ozone Season trading program; and TR SO<sub>2</sub> Group 1 trading program).

**# 004 [25 Pa. Code §127.512]****Operating permit terms and conditions.**

In the event that 40 CFR 97 Subpart(s) are revised, the permittee shall comply with the revised version of the subpart(s), and shall not be required to comply with any provisions in this permit designated as having the subpart as their authority, to the extent that such permit provisions would be inconsistent with the applicable provisions of the revised subpart.

\*\*\* **Permit Shield in Effect.** \*\*\*

**SECTION E. Source Group Restrictions.**

Group Name: SG03

Group Description: 40 CFR 60, NSPS, Subpart KKKK, Gas Turbines

Sources included in this group

ID	Name
101	TURBINE UNIT 1
102	TURBINE UNIT 2
103	TURBINE UNIT 3

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**II. TESTING REQUIREMENTS.**

**# 001 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.4405]  
Subpart KKKK - Standards of Performance for Stationary Combustion Turbines  
How do I perform the initial performance test if I have chosen to install a NOX-diluent CEMS?**

[Additional authority for this permit condition is also derived from Plan Approval No. 67-05083C]

If you elect to install and certify a NOx-diluent CEMS under 40 CFR §60.4345, then the initial performance test required under 40 CFR §60.8 may be performed in the following alternative manner:

- (a) Perform a minimum of nine RATA reference method runs, with a minimum time per run of 21 minutes, at a single load level, within plus or minus 25 percent of 100 percent of peak load. The ambient temperature must be greater than 0°F during the RATA runs.
- (b) For each RATA run, concurrently measure the heat input to the unit using a fuel flow meter (or flow meters) and measure the electrical and thermal output from the unit.
- (c) Use the test data both to demonstrate compliance with the applicable NOx emission limit under 40 CFR §60.4320 and to provide the required reference method data for the RATA of the CEMS described under 40 CFR §60.4335.
- (d) Compliance with the applicable emission limit in 40 CFR §60.4320 is achieved if the arithmetic average of all of the NOx emission rates for the RATA runs, expressed in units of ppm or lb/MWh, does not exceed the emission limit.

[NOTE: THE DEPARTMENT CERTIFIED THE NOx CEMS FOR EACH GROUP SG03 COMBUSTION TURBINE ON 10/22/15]

**III. MONITORING REQUIREMENTS.**

**# 002 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.4335]  
Subpart KKKK - Standards of Performance for Stationary Combustion Turbines  
How do I demonstrate compliance for NOX if I use water or steam injection?**

[Additional authority for this permit condition is also derived from Plan Approval No. 67-05083C]

Install, certify, maintain, and operate a continuous emission monitoring system (CEMS) consisting of a NOx monitor and a diluent gas (oxygen (O2) or carbon dioxide (CO2)) monitor, to determine the hourly NOx emission rate in parts per million (ppm) or pounds per million British thermal units (lb/mmBTU).

[NOTE: THE DEPARTMENT CERTIFIED THE NOx CEMS FOR EACH GROUP SG03 COMBUSTION TURBINE ON 10/22/15]

[40 CFR §60.4335(b)(1)]

**# 003 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.4340]  
Subpart KKKK - Standards of Performance for Stationary Combustion Turbines  
How do I demonstrate continuous compliance for NOX if I do not use water or steam injection?**

[Additional authority for this permit condition is also derived from Plan Approval No. 67-05083C]

As an alternative to the annual NOx emission testing in 40 CFR §60.4340(a), you may install, calibrate, maintain and operate a continuous monitoring system as described in 40 CFR §§60.4335(b) and 60.4345.

**SECTION E. Source Group Restrictions.**

[NOTE: THE DEPARTMENT CERTIFIED THE NO<sub>x</sub> CEMS FOR EACH GROUP SG03 COMBUSTION TURBINE ON 10/22/15]

[40 CFR §60.4340(b)(1)]

**# 004 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.4345]**

**Subpart KKKK - Standards of Performance for Stationary Combustion Turbines**

**What are the requirements for the continuous emission monitoring system equipment, if I choose to use this option?**

[Additional authority for this permit condition is also derived from Plan Approval No. 67-05083C]

If the option to use a NO<sub>x</sub> CEMS is chosen:

(a) Each NO<sub>x</sub> diluent CEMS must be installed and certified according to Performance Specification 2 (PS 2) in appendix B to this part (40 CFR Part 60), except the 7-day calibration drift is based on unit operating days, not calendar days. With state approval, Procedure 1 in appendix F to this part (40 CFR Part 60) is not required. Alternatively, a NO<sub>x</sub> diluent CEMS that is installed and certified according to appendix A of part 75 of this chapter (40 CFR Part 75) is acceptable for use under this subpart (40 CFR Part 60, Subpart KKKK). The relative accuracy test audit (RATA) of the CEMS shall be performed on a lb/mmBTU basis.

(b) As specified in 40 CFR §60.13(e)(2), during each full unit operating hour, both the NO<sub>x</sub> monitor and the diluent monitor must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each 15-minute quadrant of the hour, to validate the hour. For partial unit operating hours, at least one valid data point must be obtained with each monitor for each quadrant of the hour in which the unit operates. For unit operating hours in which required quality assurance and maintenance activities are performed on the CEMS, a minimum of two valid data points (one in each of two quadrants) are required for each monitor to validate the NO<sub>x</sub> emission rate for the hour.

(c) Each fuel flowmeter shall be installed, calibrated, maintained, and operated according to the manufacturer's instructions. Alternatively, with state approval, fuel flowmeters that meet the installation, certification, and quality assurance requirements of appendix D to part 75 of this chapter (Chapter I) are acceptable for use under this subpart (40 CFR Part 60, Subpart KKKK).

(d) Each watt meter, steam flow meter, and each pressure or temperature measurement device shall be installed, calibrated, maintained, and operated according to manufacturer's instructions.

(e) The owner or operator shall develop and keep on-site a quality assurance (QA) plan for all of the continuous monitoring equipment described in paragraphs (a), (c), and (d) of this section (40 CFR §60.4345). For the CEMS and fuel flow meters, the owner or operator may, with state approval, satisfy the requirements of this paragraph (40 CFR §60.4345(e)) by implementing the QA program and plan described in section 1 of appendix B to part 75 of this chapter (Chapter I).

[NOTE: THE DEPARTMENT CERTIFIED THE NO<sub>x</sub> CEMS FOR EACH GROUP SG03 COMBUSTION TURBINE ON 10/22/15]

[40 CFR §60.4345(a)-(e)]

**# 005 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.4350]**

**Subpart KKKK - Standards of Performance for Stationary Combustion Turbines**

**How do I use data from the continuous emission monitoring equipment to identify excess emissions?**

[Additional authority for this permit condition is also derived from Plan Approval No. 67-05083C]

For purposes of identifying excess emissions:

(a) All CEMS data must be reduced to hourly averages as specified in 40 CFR §60.13(h).

(b) For each unit operating hour in which a valid hourly average, as described in 40 CFR §60.4345(b), is obtained for both NO<sub>x</sub> and diluent monitors, the data acquisition and handling system must calculate and record the hourly NO<sub>x</sub> emission rate in units of ppm or lb/mmBTU, using the appropriate equation from method 19 in appendix A of this part (40 CFR Part 60). For any hour in which the hourly average O<sub>2</sub> concentration exceeds 19.0 percent O<sub>2</sub> (or the hourly average CO<sub>2</sub> concentration is less than 1.0 percent CO<sub>2</sub>), a diluent cap value of 19.0 percent O<sub>2</sub> or 1.0 percent CO<sub>2</sub> (as applicable) may be used in the emission calculations.

**SECTION E. Source Group Restrictions.**

(c) Correction of measured NOx concentrations to 15 percent O2 is not allowed.

(d) If you have installed and certified a NOx diluent CEMS to meet the requirements of part 75 of this chapter (Chapter I), states can approve that only quality assured data from the CEMS shall be used to identify excess emissions under this subpart (40 CFR Part 60, Subpart KKKK). Periods where the missing data substitution procedures in subpart D of part 75 are applied are to be reported as monitor downtime in the excess emissions and monitoring performance report required under 40 CFR §60.7(c).

(e) All required fuel flow rate, steam flow rate, temperature, pressure, and megawatt data must be reduced to hourly averages.

(f) Calculate the hourly average NOx emission rates, in units of the emission standards under 40 CFR §60.4320, using ppm for units complying with the concentration limit. [Abridged]

(g) For simple cycle units without heat recovery, use the calculated hourly average emission rates from paragraph (f) of this section (40 CFR §60.4350) to assess excess emissions on a 4-hour rolling average basis, as described in 40 CFR §60.4380(b)(1).

(h) For combined cycle and combined heat and power units with heat recovery, use the calculated hourly average emission rates from paragraph (f) of this section (40 CFR §60.4350) to assess excess emissions on a 30 unit operating day rolling average basis, as described in 40 CFR §60.4380(b)(1).

[NOTE: THE DEPARTMENT CERTIFIED THE NOx CEMS FOR EACH GROUP SG03 COMBUSTION TURBINE ON 10/22/15]

[40 CFR §60.4350(a)-(e), (f) Abridged, (g)-(h)]

**# 006 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.4365]  
Subpart KKKK - Standards of Performance for Stationary Combustion Turbines  
How can I be exempted from monitoring the total sulfur content of the fuel?**

[Additional authority for this permit condition is also derived from Plan Approval No. 67-05083C]

You may elect not to monitor the total sulfur content of the fuel combusted in the turbine, if the fuel is demonstrated not to exceed potential sulfur emissions of 26 ng SO<sub>2</sub>/J (0.060 lb SO<sub>2</sub>/mmBTU) heat input for units located in continental areas and 180 ng SO<sub>2</sub>/J (0.42 lb SO<sub>2</sub>/mmBTU) heat input for units located in noncontinental areas or a continental area that the Administrator determines does not have access to natural gas and that the removal of sulfur compounds would cause more environmental harm than benefit. You must use the following source of information to make the required demonstration:

(a) The fuel quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the fuel, specifying that the maximum total sulfur content for oil use in continental areas is 0.05 weight percent (500 ppmw) or less and 0.4 weight percent (4,000 ppmw) or less for noncontinental areas, the total sulfur content for natural gas use in continental areas is 20 grains of sulfur or less per 100 standard cubic feet and 140 grains of sulfur or less per 100 standard cubic feet for noncontinental areas, has potential sulfur emissions of less than less than 26 ng SO<sub>2</sub>/J (0.060 lb SO<sub>2</sub>/mmBTU) heat input for continental areas and has potential sulfur emissions of less than less than 180 ng SO<sub>2</sub>/J (0.42 lb SO<sub>2</sub>/mmBTU) heat input for noncontinental areas.

[40 CFR §60.4365(a)]

**IV. RECORDKEEPING REQUIREMENTS.**

No additional record keeping requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**V. REPORTING REQUIREMENTS.**

**# 007 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.4375]  
Subpart KKKK - Standards of Performance for Stationary Combustion Turbines  
What reports must I submit?**



**SECTION E. Source Group Restrictions.**

[Additional authority for this permit condition is also derived from Plan Approval No. 67-05083C]

(a) For each affected unit required to continuously monitor parameters or emissions, or to periodically determine the fuel sulfur content under this subpart, you must submit reports of excess emissions and monitor downtime, in accordance with 40 CFR §60.7(c). Excess emissions must be reported for all periods of unit operation, including start-up, shutdown, and malfunction.

(b) For each affected unit that performs annual performance tests in accordance with 40 CFR §60.4340(a), you must submit a written report of the results of each performance test before the close of business on the 60th day following the completion of the performance test.

In accordance with 40 CFR §60.4395, all reports required under 40 CFR §60.7(c) must be postmarked by the 30th day following the end of each 6-month period.

[40 CFR §§60.4375 and 60.4395]

**# 008 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.4380]**

**Subpart KKKK - Standards of Performance for Stationary Combustion Turbines**

**How are excess emissions and monitor downtime defined for NOX ?**

[Additional authority for this permit condition is also derived from Plan Approval No. 67-05083C]

For the purpose of reports required under 40 CFR Part §60.7(c), periods of excess emissions and monitor downtime that must be reported are defined as follows:

(b) For turbines using continuous emission monitoring, as described in 40 CFR §§60.4335(b) and 60.4345:

(1) An excess emissions is any unit operating period in which the 4-hour or 30-day rolling average NOx emission rate exceeds the applicable emission limit in 40 CFR §60.4320. For the purposes of this subpart (40 CFR Part 60, Subpart KKKK), a "4-hour rolling average NOx emission rate" is the arithmetic average of the average NOx emission rate in ppm or ng/J (lb/MWh) measured by the continuous emission monitoring equipment for a given hour and the three unit operating hour average NOx emission rates immediately preceding that unit operating hour. Calculate the rolling average if a valid NOx emission rate is obtained for at least 3 of the 4 hours. For the purposes of this subpart (40 CFR Part 60, Subpart KKKK), a "30-day rolling average NOx emission rate" is the arithmetic average of all hourly NOx emission data in ppm or ng/J (lb/MWh) measured by the continuous emission monitoring equipment for a given day and the twenty-nine unit operating days immediately preceding that unit operating day. A new 30-day average is calculated each unit operating day as the average of all hourly NOx emissions rates for the preceding 30 unit operating days if a valid NOx emission rate is obtained for at least 75 percent of all operating hours.

(2) A period of monitor downtime is any unit operating hour in which the data for any of the following parameters are either missing or invalid: NOx concentration, CO2 or O2 concentration, fuel flow rate, steam flow rate, steam temperature, steam pressure, or megawatts. The steam flow rate, steam temperature, and steam pressure are only required if you will use this information for compliance purposes.

(3) For operating periods during which multiple emissions standards apply, the applicable standard is the average of the applicable standards during each hour. For hours with multiple emissions standards, the applicable limit for that hour is determined based on the condition that corresponded to the highest emissions standard.

[NOTE: THE DEPARTMENT CERTIFIED THE NOx CEMS FOR EACH GROUP SG03 COMBUSTION TURBINE ON 10/22/15]

[40 CFR §60.4380(b)]

**VI. WORK PRACTICE REQUIREMENTS.**

**# 009 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.4333]**

**Subpart KKKK - Standards of Performance for Stationary Combustion Turbines**

**What are my general requirements for complying with this subpart?**

[Additional authority for this permit condition is also derived from Plan Approval No. 67-05083C]



**SECTION E. Source Group Restrictions.**

You must operate and maintain your stationary combustion turbine, air pollution control equipment, and monitoring equipment in a manner consistent with good air pollution control practices for minimizing emissions at all times including during startup, shutdown, and malfunction.

[40 CFR §60.4333(a)]

**VII. ADDITIONAL REQUIREMENTS.****# 010 [25 Pa. Code §127.512]****Operating permit terms and conditions.**

[Additional authority for this permit condition is also derived from Plan Approval No. 67-05083C]

In the event that 40 CFR Part 60, Subpart KKKK - Standards of Performance for Stationary Combustion Turbines (NSPS Subpart KKKK) is revised, the permittee shall comply with the revised version of NSPS Subpart KKKK, and shall not be required to comply with any provisions in this operating permit (O.P. No. 67-05083) designated as having NSPS Subpart KKKK as their authority, to the extent that such operating permit provisions would be inconsistent with the applicable provisions of the revised NSPS Subpart KKKK.

**# 011 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.4305]****Subpart KKKK - Standards of Performance for Stationary Combustion Turbines****Does this subpart apply to my stationary combustion turbine?**

[Additional authority for this permit condition is also derived from Plan Approval No. 67-05083C]

The Group SG03 turbines are subject to 40 CFR Part 60, Subpart KKKK - Standards of Performance for Stationary Combustion Turbines. The permittee shall comply with all applicable standards, compliance provisions, performance test, monitoring, record keeping, and reporting requirements contained at 40 CFR §§60.4300 through 60.4420, including all applicable portions of 40 CFR Part 60, Subpart A - General Provisions. The permittee shall comply with 40 CFR §60.4, which requires submission of copies of all requests, reports, applications, submittals, and other communications to both the U.S. Environmental Protection Agency (U.S. EPA) and the Department. The U.S. EPA copies shall be forwarded to:

Director  
Air Protection Division  
U.S. EPA, Region III (3AP00)  
1650 Arch Street  
Philadelphia, PA 19103-2029

The Department copies shall be forwarded to:

Regional Air Program Manager  
PA Department of Environmental Protection  
909 Elmerton Avenue  
Harrisburg, PA 17110-8200

\*\*\* **Permit Shield in Effect.** \*\*\*

**SECTION E. Source Group Restrictions.**

Group Name: SG04

Group Description: CEMS Revision 8 Requirements Incorporated in PA 67-05083C in 5/2012, Read in Conjunction

Sources included in this group

ID	Name
101	TURBINE UNIT 1
102	TURBINE UNIT 2
103	TURBINE UNIT 3

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**III. MONITORING REQUIREMENTS.****# 001 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Additional authority for this permit condition is also derived from Plan Approval No. 67-05083C]

Continuous emission monitoring for NO<sub>x</sub> (ppmv) and CO (ppmv) shall meet the following minimum data availability requirements:

(a) In accordance with 25 Pa. Code §139.101(12), required monitoring shall, at a minimum, meet one of the following data availability requirements unless otherwise stipulated in this permit, a plan approval, Title 25 or an order issued under Section 4 of the Air Pollution Control Act:

(1) In each calendar month, at least 90% of the time periods for which each emission standard applies, shall be valid as set forth in the Quality Assurance section of Revision No.8 of the Department's Continuous Source Monitoring Manual, 274-0300-001, or

(2) In each calendar quarter, at least 95% of the hours shall be valid as set forth in the Quality Assurance section of Revision No. 8 of the Department's Continuous Source Monitoring Manual, 274-0300-001.

(b) Compliance with any subsequently issued revisions to the Continuous Source Monitoring Manual will constitute compliance with this permit condition.

**# 002 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Additional authority for this permit condition is also derived from Plan Approval No. 67-05083C]

The following continuous emission monitoring systems (CEMS) must be installed, approved by the Department, operated and maintained in accordance with the requirements of 25 Pa. Code Chapter 139, Subchapter C (relating to requirements for source monitoring for stationary sources), and the Submittal and Approval, Record Keeping and Reporting, and Quality Assurance requirements of Revision No. 8 of the Department's Continuous Source Monitoring Manual, 274-0300-001, and As Specified In Phase I, Phase II, And Phase III Approval Issued By The Department.

**1. NO<sub>x</sub>CEMS**

- a. Source Combination to be Monitored: Source IDs 101, 102, 103
- b. Parameter to be Reported: NO<sub>2</sub>
- c. Units of Measurement to be Reported: ppmv
- d. Moisture Basis of Measurement to be Reported: Dry
- e. Correction basis of Measurements to be Reported: 15 percent oxygen
- f. NO<sub>2</sub> Emission Standards: see Section E (Group SG01), Condition #005

**SECTION E. Source Group Restrictions.****2. CO CEMS**

- a. Source Combination to be Monitored: Source IDs 101, 102, 103
- b. Parameter to be Reported: CO
- c. Units of Measurement to be Reported: ppmv
- d. Moisture Basis of Measurement to be Reported: Dry
- e. Correction basis of Measurements to be Reported: 15 percent oxygen
- f. CO Emission Standards: see Section E (Group SG01), Condition #009

Compliance with any subsequently issued revisions to the Continuous Source Monitoring Manual will constitute compliance with this permit condition.

The NO<sub>x</sub> CEMS must also comply with the requirements of 40 CFR §60.4345 as required by NSPS Subpart KKKK - Standards of Performance for Stationary Gas Turbines.

The permittee shall operate the CEMS during periods of start-up and shutdown in a manner consistent with the requirements set forth in 40 CFR Part 75. The permittee shall assure that data obtained during those periods are valid and suitable for inclusion into reporting.

**IV. RECORDKEEPING REQUIREMENTS.****# 003 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Additional authority for this permit condition is also derived from Plan Approval No. 67-05083C]

Recordkeeping Requirements:

The permittee shall comply with the recordkeeping requirements established in 25 Pa. Code Chapter 139, Subchapter C (relating to requirements for source monitoring for stationary sources), and the "Record Keeping and Reporting" requirements in the Department's Continuous Source Monitoring Manual, Revision No. 8, 274-0300-001.

Records shall be retained for at least 5 years and shall be made available to the Department upon request.

Compliance with any subsequently issued revision to the Continuous Source Monitoring Manual will constitute compliance with this permit condition.

**V. REPORTING REQUIREMENTS.****# 004 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Additional authority for this permit condition is also derived from Plan Approval No. 67-05083C]

[Additional authority for this permit condition is also derived from 40 CFR 60, Subpart KKKK (i.e., Section E (Group SG03), Conditions #007 and #008, of this permit), and 25 Pa. Code §§139.101(1)(iv), 139.101(10), and 139.101(12)]

Reporting Requirements:

The permittee shall submit quarterly reports of continuous emission monitoring to the Department in accordance with the requirements established in 25 Pa. Code Chapter 139, Subchapter C (relating to requirements for source monitoring for stationary sources), and the "Record Keeping and Reporting" requirements as established in the Department's Continuous Source Monitoring Manual, Revision No. 8, 274-0300-001, and the reporting requirements established in 40 CFR 60, Subpart KKKK, referenced above.

The permittee shall report emissions for all periods of unit operation, including startup, shutdown and malfunction.

Initial quarterly reports following system certification shall be submitted to the Department within 35 days following the date upon which the Department notifies the owner or operator, in writing, of the approval of the continuous source monitoring system for use in determining compliance with applicable emission standards.

Subsequent quarterly reports shall be submitted to the Department within 30 days after the end of each calendar quarter.

**SECTION E. Source Group Restrictions.**

Failure to submit required reports of continuous emission monitoring within the time periods specified in this permit condition shall constitute violations of this permit, unless approved in advance by the Department in writing.

Compliance with any subsequently issued revision to the Continuous Source Monitoring Manual will constitute compliance with this permit condition.

[Compliance with this streamlined permit condition assures compliance with 40 CFR §60.4375]

**VI. WORK PRACTICE REQUIREMENTS.****# 005 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Additional authority for this permit condition is also derived from Plan Approval No. 67-05083C, 40 CFR §§60.4333(a), 60.4345, and 60.4350, as well as 25 Pa. Code §§139.101(1)(iv), 139.101(2), 139.101(3), 139.101(4), 139.101(6), 139.101(7), 139.101(8), 139.101(12), 139.101(14), and 139.101(15)]

Quality Assurance Requirements:

Continuous Emission Monitoring Systems (CEMS) and components must be operated and maintained in accordance with the requirements established in 25 Pa. Code Chapter 139, Subchapter C (relating to requirements for source monitoring for stationary sources), and the "Quality Assurance" requirements in the Department's Continuous Source Monitoring Manual, Revision No. 8, 274-0300-001.

Compliance with any subsequently issued revision to the Continuous Source Monitoring Manual will constitute compliance with this permit condition.

[Compliance with this streamlined permit condition assures compliance with 40 CFR §60.4333(a) (i.e., Section E (Group SG03), Condition #009, of this permit)]

**VII. ADDITIONAL REQUIREMENTS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**\*\*\* Permit Shield in Effect. \*\*\***

**SECTION E. Source Group Restrictions.**

Group Name: SG05

Group Description: Combustion Turbines Subject to RACT 2

Sources included in this group

ID	Name
101	TURBINE UNIT 1
102	TURBINE UNIT 2
103	TURBINE UNIT 3

**I. RESTRICTIONS.****Emission Restriction(s).****# 001 [25 Pa. Code §129.97]****Presumptive RACT requirements, RACT emission limitations and petition for alternative compliance schedule.**

25 Pa. Code §129.97 - Presumptive RACT requirements, RACT emission limitations and petition for alternative compliance schedule.

(a) The owner and operator of a source listed in one or more of parts (b)-(h), below, located at a major NO<sub>x</sub>-emitting facility or major VOC-emitting facility subject to 25 Pa. Code §129.96 (relating to applicability) shall comply with the applicable presumptive RACT requirement or RACT emission limitation, or both, beginning with the specified compliance date as follows, unless an alternative compliance schedule is submitted and approved under parts (k)-(m) or 25 Pa. Code §129.99 (relating to alternative RACT proposal and petition for alternative compliance schedule):

(1) January 1, 2017, for a source subject to 25 Pa. Code §129.96(a).

(2) [N/A - THE GROUP SG05 TURBINES ARE NOT SUBJECT TO 25 Pa. Code §129.96(b)]

(b) The owner and operator of a source specified in this part (25 Pa. Code §129.97(b)), which is located at a major NO<sub>x</sub>-emitting facility or major VOC-emitting facility subject to 25 Pa. Code §129.96 shall comply with the following:

(1) [N/A - THE GROUP SG05 TURBINES ARE NOT COMBUSTION UNITS]

(2) [N/A - THE GROUP SG05 TURBINES ARE NOT COMBUSTION UNITS]

(3) The applicable recordkeeping requirements of 25 Pa. Code §129.100(d), (e) or (f) (relating to compliance demonstration and recordkeeping requirements).

(c) [N/A - THE GROUP SG05 TURBINES DO NOT SATISFY ANY OF THE CATEGORIES SPECIFIED IN PARTS (1)-(8) OF THIS SUBSECTION (25 Pa. Code §129.97(c))]

(d) Except as specified under part (c), above, the owner and operator of a combustion unit or other combustion source located at a major VOC-emitting facility subject to 25 Pa. Code §129.96 shall install, maintain and operate the source in accordance with the manufacturer's specifications and with good operating practices for the control of the VOC emissions from the combustion unit or other combustion source.

(e) [N/A - THE FACILITY IS NOT A MUNICIPAL SOLID WASTE LANDFILL]

(f) [N/A - THE GROUP SG05 TURBINES ARE NOT MUNICIPAL WASTE COMBUSTORS]

(g) Except as specified under part (c), above, the owner and operator of a NO<sub>x</sub> air contamination source specified in this part (25 Pa. Code §129.97(g)), which is located at a major NO<sub>x</sub>-emitting facility or a VOC air contamination source specified in this part (25 Pa. Code §129.97(g)), which is located at a major VOC-emitting facility subject to 25 Pa. Code §129.96 may not cause, allow or permit NO<sub>x</sub> or VOCs to be emitted from the air contamination source in excess of the applicable presumptive RACT emission limitation:

(1) [N/A - THE GROUP SG05 TURBINES ARE NOT COMBUSTION UNITS OR PROCESS HEATERS]

(2) A combustion turbine:

**SECTION E. Source Group Restrictions.**

(i) For a combined cycle or combined heat and power combustion turbine with a rated output equal to or greater than 1,000 bhp and less than 180 MW when firing:

(A) Natural gas or a noncommercial gaseous fuel, 42 ppmvd NO<sub>x</sub> @ 15% oxygen. [NOTE: THIS NO<sub>x</sub> EMISSION LIMIT IS SUPERSEDED BY THE NO<sub>x</sub> EMISSION LIMITS OF SECTION E (GROUP SG01), CONDITIONS #004 & #005, OF THIS OPERATING PERMIT]

(B) Fuel oil, 96 ppmvd NO<sub>x</sub> @ 15% oxygen. [NOTE: THIS NO<sub>x</sub> EMISSION LIMIT IS SUPERSEDED BY THE NO<sub>x</sub> EMISSION LIMITS OF SECTION E (GROUP SG01), CONDITIONS #004 & #005, OF THIS OPERATING PERMIT]

(C) Natural gas or a noncommercial gaseous fuel, 5 ppmvd VOC (as propane) @ 15% oxygen. [NOTE: THIS VOC EMISSION LIMIT IS SUPERSEDED BY THE VOC EMISSION LIMITS OF SECTION E (GROUP SG01), CONDITIONS #002 & #004, OF THIS OPERATING PERMIT]

(D) Fuel oil, 9 ppmvd VOC (as propane) @ 15% oxygen. [NOTE: THIS VOC EMISSION LIMIT IS SUPERSEDED BY THE VOC EMISSION LIMITS OF SECTION E (GROUP SG01), CONDITIONS #002 & #004, OF THIS OPERATING PERMIT]

(ii) [N/A - THE GROUP SG05 TURBINES EACH HAVE A RATED OUTPUT LESS THAN 180 MW]

(iii) [N/A - THE GROUP SG05 TURBINES ARE COMBINED CYCLE COMBUSTION TURBINES]

(iv) [N/A - THE GROUP SG05 TURBINES ARE COMBINED CYCLE COMBUSTION TURBINES]

(3) [N/A - THE GROUP SG05 TURBINES ARE NOT STATIONARY INTERNAL COMBUSTION ENGINES]

(4) [N/A - THE GROUP SG05 TURBINES DO NOT FIRE MULTIPLE FUELS]

(h) [N/A - THE GROUP SG05 TURBINES ARE NOT PORTLAND CEMENT KILNS]

(i) [N/A - THE GROUP SG05 TURBINES WERE NEVER THE SUBJECT OF A PREVIOUSLY ISSUED RACT OPERATING PERMIT]

(j) [N/A - THE GROUP SG05 TURBINES ARE NOT SUBJECT TO THE REQUIREMENTS AND EMISSION LIMITATIONS OF 25 Pa. Code §§129.201-129.205, 145.111-145.113 and 145.141-145.146]

(k) [N/A - AN ALTERNATIVE COMPLIANCE SCHEDULE IS NOT REQUIRED]

(l) [N/A - AN ALTERNATIVE COMPLIANCE SCHEDULE IS NOT REQUIRED]

(m) [N/A - AN ALTERNATIVE COMPLIANCE SCHEDULE IS NOT REQUIRED]

**Throughput Restriction(s).**

**# 002 [25 Pa. Code §127.512]**

**Operating permit terms and conditions.**

The Group SG05 combustion turbines (including the proportional contribution from its associated steam turbine) shall not be modified to achieve a rated output of equal to or greater than 180 MW at ISO conditions unless prior approval from the Department has been granted, in writing. So long as the rated output of each turbine is less than 180 MW at ISO conditions, the NO<sub>x</sub> and VOC emission limits of 25 Pa. Code §129.97(g)(2)(i) are applicable.

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**SECTION E. Source Group Restrictions.****III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**IV. RECORDKEEPING REQUIREMENTS.****# 003 [25 Pa. Code §129.100]****Compliance demonstration and recordkeeping requirements.**

25 Pa. Code §129.100 - Compliance demonstration and recordkeeping requirements.

(a) Except as provided in part (c), below, the owner and operator of an air contamination source subject to a NO<sub>x</sub> requirement or RACT emission limitation or VOC requirement or RACT emission limitation, or both, listed in 25 Pa. Code §129.97 (relating to presumptive RACT requirements, RACT emission limitations and petition for alternative compliance schedule) shall demonstrate compliance with the applicable RACT requirement or RACT emission limitation by performing the following monitoring or testing procedures:

(1) For an air contamination source with a CEMS, monitoring and testing in accordance with the requirements of Chapter 139, Subchapter C (relating to requirements for source monitoring for stationary sources) using a 30-day rolling average, except municipal waste combustors. [NOTE: THE GROUP SG05 TURBINES ARE EACH EQUIPPED WITH NO<sub>x</sub> CEMS; HOWEVER, THE GROUP SG05 TURBINES ARE EACH NOT EQUIPPED WITH VOC CEMS]

(i) [N/A - THE GROUP SG05 TURBINES ARE NOT COMBUSTION UNITS]

(ii) A 30-day rolling average emission rate for each applicable RACT emission limitation shall be calculated for an affected air contamination source for each consecutive operating day.

(iii) Each 30-day rolling average emission rate for an affected air contamination source must include the emissions that occur during the entire operating day, including emissions from startups, shutdowns and malfunctions.

[NOTE: VIA A 3/26/19 E-MAIL, THE PERMITTEE HAS SATISFACTORILY DEMONSTRATED TO THE DEPARTMENT THAT THE NO<sub>x</sub> EMISSION LIMITS FOR EACH OF THE GROUP SG05 TURBINES CONTAINED AT SECTION E (GROUP SG01), CONDITIONS #004 & #005, ARE MORE STRINGENT THAN THE PRESUMPTIVE NO<sub>x</sub> RACT 2 EMISSION LIMITS OF 25 Pa. Code §129.97(g)(2)(i)(A)&(B) [i.e., SECTION E (GROUP SG05), CONDITION #001(g)(2)(i)(A)&(B)]; THEREFORE, THE PERMITTEE WILL USE THE NO<sub>x</sub> CEMS REQUIREMENTS OF SECTION E (GROUP SG04) IN LIEU OF THE AFOREMENTIONED 30-OPERATING DAY ROLLING AVERAGE TO DEMONSTRATE COMPLIANCE WITH THE AFOREMENTIONED PRESUMPTIVE NO<sub>x</sub> RACT 2 EMISSION LIMITS FOR EACH OF THE GROUP SG05 TURBINES]

(2) [N/A - THE GROUP SG05 TURBINES ARE NOT PORTLAND CEMENT KILNS]

(3) [N/A - THE GROUP SG05 TURBINES ARE NOT MUNICIPAL WASTE COMBUSTORS]

(4) For an air contamination source without a CEMS, monitoring and testing in accordance with a Department-approved emissions source test that meets the requirements of Chapter 139, Subchapter A (relating to sampling and testing methods and procedures). The source test shall be conducted one time in each 5-year calendar period. [NOTE: THE GROUP SG05 TURBINES ARE EACH NOT EQUIPPED WITH VOC CEMS; HOWEVER, THE GROUP SG05 TURBINES ARE EACH EQUIPPED WITH NO<sub>x</sub> CEMS; THE PERMITTEE CONDUCTED THE INITIAL VOC SOURCE TESTING OF EACH OF THE GROUP SG05 TURBINES BETWEEN 10/24/16 AND 11/22/16 AND THE SOURCE TEST REPORT RESULTS WERE APPROVED BY THE DEPARTMENT]

(b) Except as provided in 25 Pa. Code §§129.97(k) and 129.99(i) (relating to alternative RACT proposal and petition for alternative compliance schedule), the owner and operator of an air contamination source subject to part (a), above, shall demonstrate compliance with the applicable RACT requirement or RACT emission limitation in accordance with the procedures in part (a), above, not later than:

(1) January 1, 2017, for a source subject to 25 Pa. Code §129.96(a) (relating to applicability).

(2) [N/A - THE GROUP SG05 TURBINES ARE NOT SUBJECT TO 25 Pa. Code §129.96(b)]

**SECTION E. Source Group Restrictions.**

- (c) [N/A - THE PERMITTEE (OWNER) HAS NOT REQUESTED A WAIVER]
- (d) The owner and operator of an air contamination source subject to this section (25 Pa. Code §129.100) and 25 Pa. Code §§129.96 - 129.99 shall keep records to demonstrate compliance with 25 Pa. Code §§129.96 - 129.99 in the following manner:
- (1) The records must include sufficient data and calculations to demonstrate that the requirements of 25 Pa. Code §§129.96 - 129.99 are met.
  - (2) Data or information required to determine compliance shall be recorded and maintained in a time-frame consistent with the averaging period of the requirement.
- (e) [N/A - THE GROUP SG05 TURBINES ARE NOT EXEMPT FROM THE NO<sub>x</sub> REQUIREMENTS OF 25 Pa. Code §129.97]
- (f) [N/A - THE GROUP SG05 TURBINES ARE NOT EXEMPT FROM THE VOC REQUIREMENTS OF 25 Pa. Code §129.97]
- (g) [N/A - THE GROUP SG05 TURBINES ARE NOT COMBUSTION UNITS]
- (h) [N/A - THE GROUP SG05 TURBINES ARE NOT PORTLAND CEMENT KILNS]
- (i) The records shall be retained by the owner or operator for five (5) years and made available to the Department or appropriate approved local air pollution control agency upon receipt of a written request from the Department or appropriate approved local air pollution control agency.

**V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**VI. WORK PRACTICE REQUIREMENTS.**

No additional work practice requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**VII. ADDITIONAL REQUIREMENTS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**\*\*\* Permit Shield in Effect. \*\*\***





**SECTION F. Alternative Operation Requirements.**

No Alternative Operations exist for this Title V facility.



**SECTION G. Emission Restriction Summary.**

No emission restrictions listed in this section of the permit.

**SECTION H. Miscellaneous.**

#001. This operating permit incorporates the provisions of the following plan approvals:

1. The original P.A. No. 67-05083: It was issued on January 5, 2007, the Revision 2 was issued on September 22, 2010 with expiration on June 30, 2012.
2. P.A. No. 67-05083B: ERCs, for Block 1 turbines and part of the ERCs for Block 2 turbines.
3. P.A. No. 67-05083C, modification to the startup and shutdown CO limit, and to delete the simple cycle operation.

#002. In the final paragraph of Section E (Group SG01), Condition #008, the "base operation ratings" refers to the electrical output achievable while operating the combustion turbine (CT) at the fuel specific base load Outlet Temperature Control (OTC) setting, which is approximately 975 degrees F for gas operation and 950 degrees F for oil operation. Outlet Temperature Control varies CT exhaust temperature to maintain an approximately constant firing temperature when operating at various ambient temperatures. Base operation is indicated by an operator selected base operation signal and a control system signal indicating that the CT is in OTC control. Peak operation allows the CT to operate at the fuel specific peak load OTC setting, which is approximately 1025 degrees F for gas operation and 990 degrees F for oil operation. Peak operation is indicated by an operator selected peak operation signal and a control system signal indicating that the CT is in OTC Control. The OTC temperature settings are set for each CT individually during commissioning and periodic engine tuning, and may vary from each other by a few degrees[1].

Diffusion mode operation may be determined (indicated), for each combustion chamber, while the unit is operating by the diffusion valve "open" signal, and by the pilot gas control valve "closed" signal, as well as the premix valve "closed" signal. Conversely, premix operation may be indicated by the premix valve "open" signal, and by the pilot gas control valve "open" signal, as well as the diffusion valve "closed" signal.

The following are the signals that are sent from the Siemens Unit to the PLC to indicate operating mode [2]:

Start-Up Mode Signals:

- 0 = Off Line
- 1 = Normal Operation (After start-up and before shutdown)
- 2 = Cold Start
- 3 = Hot Start
- 4 = Shutdown

Unit Operating Mode Signals:

- 1 = CC Base Gas PreMix
- 2 = CC Peak Gas PreMix
- 3 = CC Base Gas Diffusion
- 4 = CC Peak Gas Diffusion
- 5 = CC Base FO Diffusion
- 6 = CC Peak FO Diffusion

The combination of these two types of signals determines the applicable emission limits. The limits for each mode are stored in the CEMS, to be applied at the appropriate time. The unit operating signals are from a selector switch that the operators use when operating the Combustion Turbine.

[1] Submitted via email from Gary Helm, Conectiv dated 7/19/2005.

[2] Submitted via email from Gary Helm, Conectiv dated 8/15/2005.

#003. The following sources do not require any work practice standards, or restrictions, monitoring, recordkeeping, and reporting standards:

- (a) Source ID 401: No. 2 fuel oil storage tank that contains the back-up fuel for the three combustion turbines. [NOTE: Source ID 401's normal capacity is 4,000,000 gallons; its high-level alarm is at 92% of capacity (i.e., 3,680,000)]
- (b) Ammonia storage tank
- (c) Miscellaneous liquid storage tanks, subject to the liquid vapor pressure equal to or greater than 1.5 psia, covered under 25 Pa.

**SECTION H. Miscellaneous.**

Code Sections 129.56(a), and 129.57, with the applicable tanks installed pressure relief valve(s).



\*\*\*\*\* End of Report \*\*\*\*\*

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