



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
AIR QUALITY PROGRAM

STATE ONLY NATURAL MINOR OPERATING PERMIT

Issue Date: March 11, 2021

Effective Date: August 7, 2025

Revision Date: August 7, 2025

Expiration Date: March 11, 2026

Revision Type: Amendment

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 unless otherwise designated.

State Only Permit No: 30-00089

Natural Minor

Federal Tax Id - Plant Code: 55-0629203-14

Owner Information

Name: EASTERN GAS TRANS & STORAGE INC

Mailing Address: 10700 ENERGY WAY
GLEN ALLEN, VA 23060-9243

Plant Information

Plant: EASTERN GAS TRANS & STORAGE/CRAYNE STA

Location: 30 Greene County 30908 Franklin Township

SIC Code: 4922 Trans. & Utilities - Natural Gas Transmission

Responsible Official

Name: JOHN MLAMB

Title: VP EASTERN PIPELINE OPR

Phone: (681) 842 - 3550

Email: matt.lamb@bhegts.com

Permit Contact Person

Name: SARAH CRANE

Title: ENV SPECIALIST 2

Phone: (804) 965 - 3360

Email: sarah.crane@bhegts.com

[Signature] _____

MARK R. GOROG, P.E., ENVIRONMENTAL PROGRAM MANAGER, SOUTHWEST REGION



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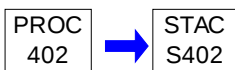
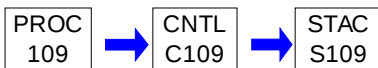
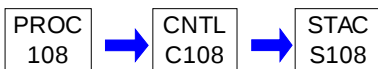
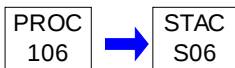
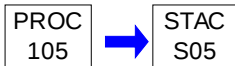
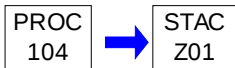
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**SECTION A. Site Inventory List**

Source ID	Source Name	Capacity/Throughput	Fuel/Material
104	FUGITIVE EMISSIONS	N/A	
105	7700 BHP, SOLAR TAURUS 60, COMBUSTION TURBINE 1	68.470 MMBTU/HR	
		67.127 MCF/HR	Natural Gas
106	7700 BHP, SOLAR TAURUS 60, COMBUSTION TURBINE 2	68.470 MMBTU/HR	
		67.127 MCF/HR	Natural Gas
108	7700 BHP, SOLAR TAURUS 60-7800S TURBINE #3 (7,700 HP @ ISO)	63.410 MMBTU/HR	
109	SOLAR TAURUS 60-7800S TURBINE #4 (7,684 HP @ ISO)	73.300 MMBTU/HR	
402	(4) MICROTURBINES (268 HP EACH)	2.300 MCF/HR	Natural Gas
C108	TAURUS 60 TURBINE #3 OXIDATION CATALYST		
C109	TAURUS 60 TURBINE #4 OXIDATION CATALYST		
S05	SOURCE 105 STACK		
S06	SOURCE 106 STACK		
S108	TAURUS 60 TURBINE #3 STACK		
S109	TAURUS 60 TURBINE #4 STACK		
S402	STACKS FOR (4) MICROTURBINES		
Z01	FUGITIVE EMISSIONS		

PERMIT MAPS

**SECTION B. General State Only 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 in 25 Pa. Code § 121.1.

#002 [25 Pa. Code § 127.446]**Operating Permit Duration.**

- (a) 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.
- (b) The terms and conditions of the expired permit shall automatically continue pending issuance of a new operating 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.

#003 [25 Pa. Code §§ 127.412, 127.413, 127.414, 127.446 & 127.703(b)]**Permit Renewal.**

- (a) The permittee shall submit a timely and complete application for renewal of the operating permit to the appropriate Regional Air Program Manager. The application for renewal of the operating permit shall be submitted at least six (6) months and not more than 18 months before the expiration date of this permit.
- (b) The application for permit renewal shall include the current permit number, a description of any permit revisions that occurred during the permit term, and any applicable requirements that were promulgated and not incorporated into the permit during the permit term. 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.
- (c) The permittee shall submit with the renewal application a fee for the processing of the application as specified in 25 Pa. Code § 127.703(b). The fees shall be made payable to "The Commonwealth of Pennsylvania Clean Air Fund" and submitted with the fee form to the respective regional office.
- (d) 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.
- (e) The application for renewal of the operating permit shall also include submission of supplemental compliance review forms in accordance with the requirements of 25 Pa. Code § 127.412(b) and § 127.412(j).
- (f) 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 as necessary to address any requirements that become applicable to the source after the permittee submits a complete application, but prior to the date the Department takes action on the permit application.

#004 [25 Pa. Code § 127.703]**Operating Permit Fees under Subchapter I.**

- (a) The permittee shall pay the annual operating permit maintenance fee according to the following fee schedule in either paragraph (1) or (2) in accordance with 25 Pa. Code § 127.703(d) on or before December 31 of each year for the next calendar year.
 - (1) For a synthetic minor facility, a fee equal to:
 - (i) Four thousand dollars (\$4,000) for calendar years 2021—2025.
 - (ii) Five thousand dollars (\$5,000) for calendar years 2026—2030.
 - (iii) Six thousand three hundred dollars (\$6,300) for the calendar years beginning with 2031.

**SECTION B. General State Only Requirements**

(2) For a facility that is not a synthetic minor, a fee equal to:

- (i) Two thousand dollars (\$2,000) for calendar years 2021—2025.
- (ii) Two thousand five hundred dollars (\$2,500) for calendar years 2026—2030.
- (iii) Three thousand one hundred dollars (\$3,100) for the calendar years beginning with 2031.

(b) The applicable fees shall be made payable to "The Commonwealth of Pennsylvania Clean Air Fund" with the permit number clearly indicated and submitted to the respective regional office.

#005 [25 Pa. Code §§ 127.450 (a)(4) and 127.464]**Transfer of Operating Permits.**

(a) This operating permit may not be transferred to another person, except in cases of transfer-of-ownership that are documented and approved by the Department.

(b) In accordance with 25 Pa. Code § 127.450(a)(4), a change in ownership of the source shall be treated as an administrative amendment if the Department determines that no other change in the permit is required and 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 a compliance review form has been submitted to, and the permit transfer has been approved by, the Department.

(c) This operating permit is valid only for those specific sources and the specific source locations described in this permit.

#006 [25 Pa. Code § 127.441 and 35 P.S. § 4008]**Inspection and Entry.**

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

(1) Enter at reasonable times upon the permittee's premises where a 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, at reasonable times, any records that are kept under the conditions of this permit;

(3) Inspect at reasonable times, any 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, any 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 or regulations adopted thereunder including denying the Department access to a source at this facility. Refusal of entry or access may constitute grounds for permit revocation and assessment of criminal and/or civil penalties.

(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.

#007 [25 Pa. Code §§ 127.441 & 127.444]**Compliance Requirements.**

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

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- (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 for the source is 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 State-Only permit. Nothing in this sub-condition shall be construed to create an independent affirmative duty upon the permittee to obtain a predetermination from the Department for physical configuration or engineering design detail changes made by the permittee.

#008 [25 Pa. Code § 127.441]**Need to Halt or Reduce Activity Not a Defense.**

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

#009 [25 Pa. Code §§ 127.442(a) & 127.461]**Duty to Provide Information.**

(a) The permittee shall submit reports to the Department containing information the Department may prescribe relative to the operation and maintenance of each source at the facility.

(b) The permittee shall furnish to the Department, in writing, information that the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Department copies of records that the permittee is required to maintain in accordance with this permit.

#010 [25 Pa. Code § 127.461]**Revising an Operating Permit for Cause.**

This operating permit may be terminated, modified, suspended or revoked and reissued if one or more of the following applies:

- (1) The permittee constructs or operates the source subject to the operating permit so that it is in violation of the Air Pollution Control Act, the Clean Air Act, the regulations thereunder, a plan approval, a permit or in a manner that causes air pollution.
- (2) The permittee fails to properly or adequately maintain or repair an air pollution control device or equipment attached to or otherwise made a part of the source.
- (3) The permittee has failed to submit a report required by the operating permit or an applicable regulation.
- (4) The EPA determines that the permit is not in compliance with the Clean Air Act or the regulations thereunder.

#011 [25 Pa. Code §§ 127.450, 127.462, 127.465 & 127.703]**Operating Permit Modifications**

(a) The permittee is authorized to make administrative amendments, minor operating permit modifications and significant operating permit modifications, under this permit, as outlined below:

**SECTION B. General State Only Requirements**

(b) Administrative Amendments. The permittee shall submit the application for administrative operating permit amendments (as defined in 25 Pa. Code § 127.450(a)), according to procedures specified in § 127.450 unless precluded by the Clean Air Act or its regulations.

(c) Minor Operating Permit Modifications. The permittee shall submit the application for minor operating permit modifications (as defined 25 Pa. Code § 121.1) in accordance with 25 Pa. Code § 127.462.

(d) Significant Operating Permit Modifications. The permittee shall submit the application for significant operating permit modifications in accordance with 25 Pa. Code § 127.465.

(e) The applicable fees shall be made payable to "The Commonwealth of Pennsylvania Clean Air Fund" with the permit number clearly indicated and submitted to the respective regional office.

#012 [25 Pa. Code § 127.441]**Severability Clause.**

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

#013 [25 Pa. Code § 127.449]**De Minimis Emission Increases.**

(a) This permit authorizes de minimis emission increases in accordance with 25 Pa. Code § 127.449 so long as the permittee provides the Department with seven (7) days prior written notice before commencing any de minimis emissions increase. 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.

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

(c) Except as provided below in (d), the permittee is authorized 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_x from a single source during the term of the permit and 5 tons of NO_x 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 PM₁₀ from a single source during the term of the permit and 3.0 tons of PM₁₀ 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, the regulations thereunder 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, the regulations thereunder or 25 Pa. Code Article III.

(6) Other sources and classes of sources determined to be of minor significance by the Department.

(d) In accordance with § 127.14, the permittee is authorized to install the following minor sources without the need for a plan approval or permit modification:

**SECTION B. General State Only Requirements**

- (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 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.
 - (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.
- (e) 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 (c)(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 this permit, the Air Pollution Control Act, the Clean Air Act, or the regulations promulgated under either of the acts.
- (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, installation of minor sources made pursuant to this permit condition and Plan Approval Exemptions under 25 Pa. Code § 127.14 (relating to exemptions), the permittee is prohibited from making 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.

#014 [25 Pa. Code § 127.3]**Operational Flexibility.**

The permittee is authorized to make changes within the facility in accordance with the regulatory provisions outlined in 25 Pa. Code § 127.3 (relating to operational flexibility) to implement the operational flexibility requirements provisions authorized under Section 6.1(i) of the Air Pollution Control Act and the operational flexibility terms and conditions of this permit. The provisions in 25 Pa. Code Chapter 127 which implement the operational flexibility requirements include the following:

- (1) Section 127.14 (relating to exemptions)
- (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)

**SECTION B. General State Only Requirements**

(6) Section 127.462 (relating to minor operating permit modifications)

(7) Subchapter H (relating to general plan approvals and general operating permits)

#015 [25 Pa. Code § 127.11a]**Reactivation of Sources**

(a) The permittee may not reactivate a source that has been out of operation or production for at least one year unless the reactivation is conducted in accordance with a plan approval granted by the Department or in accordance with reactivation and maintenance plans developed and approved by the Department in accordance with 25 Pa. Code § 127.11a(a).

(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).

#016 [25 Pa. Code § 127.36]**Health Risk-based Emission Standards and Operating Practice Requirements.**

(a) When needed to protect public health, welfare and the environment from emissions of hazardous air pollutants from new and existing sources, the permittee shall comply with the health risk-based emission standards or operating practice requirements imposed by the Department, except as precluded by §§ 6.6(d)(2) and (3) of the Air Pollution Control Act [35 P.S. § 4006.6(d)(2) and (3)].

(b) A person challenging a performance or emission standard established by the Department has the burden to demonstrate that performance or emission standard does not meet the requirements of Section 112 of the Clean Air Act.

#017 [25 Pa. Code § 121.9]**Circumvention.**

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 25 Pa. Code Article III, except that with prior approval of the Department, the device or technique may be used for control of malodors.

#018 [25 Pa. Code §§ 127.402(d) & 127.442]**Reporting Requirements.**

(a) The permittee shall comply with the applicable reporting requirements of the Clean Air Act, the regulations thereunder, the Air Pollution Control Act and 25 Pa. Code Article III including Chapters 127, 135 and 139.

(b) The permittee shall submit reports to the Department containing information the Department may prescribe relative to the operation and maintenance of any air contamination source.

(c) 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 in the permit transmittal letter, or otherwise notified)

(d) Any records or information including applications, forms, or reports submitted pursuant to this permit condition shall contain a certification by a responsible official as to truth, accuracy and completeness. The certifications submitted under this permit shall require a responsible official of the facility to certify that based on information and belief formed after reasonable inquiry, the statements and information in the documents are true, accurate and complete.

(e) Any records, reports or information submitted to the Department shall be available to the public except for such

**SECTION B. General State Only Requirements**

records, reports or information which meet the confidentiality requirements of § 4013.2 of the Air Pollution Control Act and §§ 112(d) and 114(c) of the Clean Air Act. The permittee may not request a claim of confidentiality for any emissions data generated for the facility.

#019 [25 Pa. Code §§ 127.441(c) & 135.5]**Sampling, Testing and Monitoring Procedures.**

(a) The permittee shall comply with the monitoring, recordkeeping or reporting requirements of 25 Pa. Code Chapter 139 and the other applicable requirements of 25 Pa. Code Article III and additional requirements related to monitoring, reporting and recordkeeping required by the Clean Air Act and the regulations thereunder including the Compliance Assurance Monitoring requirements of 40 CFR Part 64, where applicable.

(b) Unless alternative methodology is required by the Clean Air Act and regulations adopted thereunder, sampling, testing and monitoring required by or used by the permittee to demonstrate compliance with any applicable regulation or permit condition shall be conducted in accordance with the requirements of 25 Pa. Code Chapter 139.

#020 [25 Pa. Code §§ 127.441(c) and 135.5]**Recordkeeping.**

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

- (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 any 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.

(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.

#021 [25 Pa. Code § 127.441(a)]**Property Rights.**

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

#022 [25 Pa. Code § 127.447]**Alternative Operating Scenarios.**

The permittee is authorized to make changes at the facility to implement alternative operating scenarios identified in this permit in accordance with 25 Pa. Code § 127.447.

**SECTION B. General State Only Requirements****#023 [25 Pa. Code §135.3]****Reporting**

(a) If the facility is a Synthetic Minor Facility, the permittee shall submit by March 1 of each year an annual emissions report for the preceding calendar year. The report shall include information for all active previously reported sources, new sources which were first operated during the preceding calendar year, and sources modified during the same period which were not previously reported. All air emissions from the facility should be estimated and reported.

(b) A source owner or operator of a Synthetic Minor Facility may request an extension of time from the Department for the filing of an annual emissions report, and the Department may grant the extension for reasonable cause.

#024 [25 Pa. Code §135.4]**Report Format**

If applicable, the emissions reports shall contain sufficient information to enable the Department to complete its emission inventory. Emissions reports shall be made by the source owner or operator in a format specified by the Department.

**SECTION C. Site Level Requirements****I. RESTRICTIONS.****Emission Restriction(s).****# 001 [25 Pa. Code §121.7]****Prohibition of air pollution.**

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

002 [25 Pa. Code §123.1]**Prohibition of certain fugitive emissions**

(a) No person may permit the emission into the outdoor atmosphere of fugitive air contaminant from a source other than the following:

(1) Construction or demolition of buildings or structures.

(2) Grading, paving and maintenance of roads and streets.

(3) 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.

(4) Clearing of land.

(5) Stockpiling of materials.

(6) Open burning operations.

(7) Blasting in open pit mines. Emissions from drilling are not considered as emissions from blasting.

(8) n/a

(9) Sources and classes of sources other than those identified in paragraphs (1)-(8), for which the operator has obtained a determination from the Department that fugitive emissions from the source, after appropriate control, meet the following requirements:

(i) the emissions are of minor significance with respect to causing air pollution; and

(ii) the emissions are not preventing or interfering with the attainment or maintenance of any ambient air quality standard.

(b) An application form for requesting a determination under either subsection (a)(9) or 129.15(c) is available from the Department. In reviewing these applications, the Department may require the applicant to supply information including, but not limited to, a description of proposed control measures, characteristics of emissions, quantity of emissions, and ambient air quality data and analysis showing the impact of the source on ambient air quality. The applicant shall be required to demonstrate that the requirements of subsections (a)(9) and (c) and 123.2 (relating to fugitive particulate matter) or of the requirements of 129.15(c) have been satisfied. Upon such demonstration, the Department will issue a determination, in writing, either as an operating permit condition, for those sources subject to permit requirements under the act, or as an order containing appropriate conditions and limitations.

(c) A person responsible for any source specified in subsections (a)(1) -- (7) or (9) shall take all reasonable actions to prevent particulate matter from becoming airborne. These actions shall include, but not be limited to, the following:

(1) 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.

(2) Application of asphalt, oil, water or suitable chemicals on dirt roads, material stockpiles and other surfaces which may give rise to airborne dusts.

(3) Paving and maintenance of roadways.

**SECTION C. Site Level Requirements**

(4) 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.

(d) The requirements contained in subsection (a) and 123.2 do not apply to fugitive emissions arising from the production of agricultural commodities in their unmanufactured state on the premises of the farm operation.

003 [25 Pa. Code §123.13]**Processes**

(a) Subsections (b) and (c) apply to all processes except combustion units, incinerators and pulp mill smelt dissolving tanks.

(b) Not applicable

(c) No person may permit the emission into the outdoor atmosphere of particulate matter from any process in a manner that the concentration of particulate matter in the effluent gas exceeds any of the following:

(i) .04 grain per dry standard cubic foot, when the effluent gas volume is less than 150,000 dry standard cubic feet per minute.

(ii) The rate determined by the formula:

$$A = 6000/E$$

where:

A = Allowable emissions in grains per dry standard cubic foot, and

E = Effluent gas volume in dry standard cubic feet per minute,

when E is equal to or greater than 150,000 but less than 300,000.

(iii) .02 grain per dry standard cubic foot, when the effluent gas volume is greater than 300,000 dry standard cubic feet per minute.

004 [25 Pa. Code §123.2]**Fugitive particulate matter**

The Owner/Operator may not permit fugitive particulate matter to be emitted into the outdoor atmosphere from a source specified in 123.1(a)(1) -- (9) (relating to prohibition of certain fugitive emissions) if such emissions are visible at the point the emissions pass outside the Owner/Operator's property.

005 [25 Pa. Code §123.21]**General**

(a) This section applies to sources except those subject to other provisions of this article, with respect to the control of sulfur compound emissions.

(b) No person may permit the emission into the outdoor atmosphere of sulfur oxides from a source in a manner that the concentration of the sulfur oxides, expressed as SO₂, in the effluent gas exceeds 500 parts per million, by volume, dry basis.

006 [25 Pa. Code §123.31]**Limitations**

The Owner/Operator may not permit the emission into the outdoor atmosphere of any malodorous air contaminants from any source in such a manner that the malodors are detectable outside of the property of the Facility.

**SECTION C. Site Level Requirements****# 007 [25 Pa. Code §123.41]****Limitations**

Permittee may not permit 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:

- (1) Equal to or greater than 20% for a period or periods aggregating more than three minutes in any 1 hour.
- (2) Equal to or greater than 60% at any time.

008 [25 Pa. Code §123.42]**Exceptions**

The visible emission limitations of 25 PA Code Section 123.41 do 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.
- (c) The emission results from sources specified in 25 PA Code Section 123.1(a)(1) -- (9) (relating to prohibition of certain fugitive emissions).

009 [25 Pa. Code §127.441]**Operating permit terms and conditions.**

The permittee shall limit the facility-wide emissions to the following levels based on any consecutive 12-month rolling period:

NOx - 86.1 tpy
CO - 89.2 tpy
PM - 16.0 tpy
PM10 - 16.0 tpy
PM2.5 - 16.0 tpy
SOx - 2.0 tpy
VOC - 7.8 tpy
Formaldehyde - 0.9 tpy
HAP - 0.9 tpy
CO2e - 152,482 tpy

010 [25 Pa. Code §129.14]**Open burning operations**

- (a) Not applicable.
- (b) No person may permit the open burning of material in an area outside of air basins in a manner that:
 - (1) The emissions are visible, at any time, at the point such emissions pass outside the property of the person on whose land the open burning is being conducted.
 - (2) Malodorous air contaminants from the open burning are detectable outside the property of the person on whose land the open burning is being conducted.
 - (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.
- (c) Exceptions: The requirements of subsections (a) and (b) do not apply where 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.

**SECTION C. Site Level Requirements**

- (4) Not applicable.
- (5) Not applicable.
- (6) A fire set solely for recreational or ceremonial purposes.
- (7) A fire set solely for cooking food.

(d) Clearing and grubbing wastes. The following is applicable to clearing and grubbing wastes:

- (1) As used in this subsection the following terms shall have the following meanings:

Air curtain destructor -- A mechanical device which forcefully projects a curtain of air across a pit in which open burning is being conducted so that combustion efficiency is increased and smoke and other particulate matter are contained.

Clearing and grubbing wastes -- Trees, shrubs, and other native vegetation which are cleared from land during or prior to the process of construction. The term does not include demolition wastes and dirt laden roots.

- (2) Not applicable.

(3) Subsection (b) notwithstanding clearing and grubbing wastes may be burned outside of an air basin, subject to the following limitations:

(i) Upon receipt of a complaint or determination by the Department that an air pollution problem exists, the Department may order that the open burning cease or comply with subsection (b) of this section.

(ii) Authorization for open burning under this paragraph does not apply to clearing and grubbing wastes transported from an air basin for disposal outside of an air basin.

(4) During an air pollution episode, open burning is limited by Chapter 137 (relating to air pollution episodes) and shall cease as specified in such chapter.

II. TESTING REQUIREMENTS.**# 011 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

If, at any time, the Department has cause to believe that air contaminant emissions from the sources listed in this operating permit may be in excess of the limitations specified in, or established pursuant to this operating permit, the permittee may be required to conduct test methods and procedures deemed necessary by the Department to determine the actual emissions rate. Such testing shall be conducted in accordance with 25 Pa. Code Chapter 139, where applicable, and in accordance with any restrictions or limitations established by the Department at such time as it notifies the company that testing is required.

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

Performance testing shall be conducted as follows:

(a) The Permittee shall submit one electronic copy of a pre-test protocol to the Department for review at least 90 days prior to the performance of any U.S. EPA reference method stack test. All proposed performance test methods shall be identified in the pre-test protocol and approved by the Department prior to testing.

(b) The Permittee shall notify the Regional Air Quality Manager and Division of Source Testing and Monitoring at least 15 days prior to any performance test so that an observer may be present at the time of the test. This notification may be sent by email. Notification shall not be made without prior receipt of a protocol acceptance letter from the Department.

(c) Pursuant to 40 CFR Part 60.8(a), a complete test report shall be submitted to the Department no later than 60 calendar days after completion of the on-site testing portion of an emission test program.

**SECTION C. Site Level Requirements**

(d) Pursuant to 25 Pa. Code Section 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 owner or operator 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.
- (3) Summary of results with respect to each applicable permit condition.
- (4) Statement of compliance or non-compliance with each applicable permit condition.

(e) 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.

(f) All testing shall be performed in accordance with the provisions of Chapter 139 of the Rules and Regulations of the Department of Environmental Protection.

(g) All submittals shall be sent as an electronic submittal to ra-epstacktesting@pa.gov, with a cc to ra-epswstacktesting@pa.gov.

(h) The permittee shall ensure all federal reporting requirements contained in the applicable subpart of 40 CFR are followed, including timelines more stringent than those contained herein. In the event of an inconsistency or any conflicting requirements between state and the federal, the most stringent provision, term, condition, method or rule shall be used by default.

III. MONITORING REQUIREMENTS.**# 013 [25 Pa. Code §123.43]****Measuring techniques**

Visible emissions may be measured using either of the following:

- (1) A device approved by the Department and maintained to provide accurate opacity measurements.
- (2) Observers, trained and qualified to measure plume opacity with the naked eye or with the aid of any devices approved by the Department.

014 [25 Pa. Code §127.441]**Operating permit terms and conditions.**

A facility-wide inspection shall be conducted at a minimum of once each day that the facility is visited by the Owner/Operator. The facility-wide inspection shall be conducted for the presence of the following:

- a. Visible stack emissions;
- b. Fugitive emissions; and
- c. Potentially objectionable odors at the property line.

These observations are to ensure continued compliance with source-specific visible emission limitations, fugitive emissions prohibited under 25 Pa. Code §§123.1 or 123.2, and malodors prohibited under 25 Pa. Code §123.31. Observations for visible stack emissions shall be conducted during daylight hours and all observations shall be conducted while sources are in operation. If any visible stack emissions, fugitive emissions, or potentially objectionable odors are apparent, the Owner/Operator shall take corrective action.

015 [25 Pa. Code §127.441]**Operating permit terms and conditions.**

Compliance with mass emission limits established in this operating permit may be demonstrated using engineering

**SECTION C. Site Level Requirements**

calculations based on fuel and raw material purchase records, manufacturers specifications, AP-42 emission factors, laboratory analyses, source test results, operating records, material balance methods, and/or other applicable methods with written Departmental approval.

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

Records of each facility-wide inspection for visible stack emissions, fugitive emissions, or potentially objectionable odors shall be maintained in a log and at the minimum include the date, time, name, and title of the observer, along with any corrective action taken as a result.

017 [25 Pa. Code §127.441]**Operating permit terms and conditions.**

The permittee shall maintain the following comprehensive and accurate records:

- a) Maintenance procedures and schedules for each air contamination source and air cleaning device authorized under this plan approval.
- b) Maintenance conducted on each air contamination source and air cleaning device authorized under this plan approval.
- c) Records of a natural gas analysis performed at least once every year on the inlet natural gas to the facility or tariff sheet demonstrating that total sulfur content does not exceed 0.060 lb/MMBtu of heat input consistent with 40 CFR §60.4365.
- d) Records of a fractional gas analysis performed at least once every six months on a representative sample of natural gas flowing through the facility, to include higher heating value.
- e) Inspections for visible stack emissions, fugitive emissions, and potentially objectionable odors including the date, time, name, and title of the observer, along with any corrective action taken as a result.
- f) Records of any leak detected and associated repair activity through the leak detection and repair program (LDAR program) or maintenance program.

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

All logs and required records shall be maintained on site, or at an alternative location acceptable to the Department, for a minimum of five years and shall be made available to the Department upon request.

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

Annual emissions reporting shall be conducted as follows:

- a) In accordance with 25 Pa. Code §135.3, the permittee shall submit to the Department via AES*Online or AES*XML at www.depgreenport.state.pa.us/ by March 1 of each year, a facility inventory report for the preceding calendar year for all sources authorized under this plan approval. The inventory report shall include all emissions information for all sources operated during the preceding calendar year. Emissions data including, but not limited to, the following shall be reported: carbon monoxide (CO); oxides of nitrogen (NOx); particulate matter less than 10 micrometers in diameter (PM10); particulate matter less than 2.5 micrometers in diameter (PM2.5); sulfur dioxide (SO2); volatile organic compounds (VOC); total hazardous air pollutants (HAP); speciated HAP including, but not limited to, benzene, ethyl benzene, formaldehyde, n-hexane, toluene, isomers and mixtures of xylenes, and 2,2,4-trimethylpentane; carbon dioxide (CO2); methane (CH4); and nitrous oxide (N2O).
- b) A source owner or operator may request an extension of time from the Department for the filing of a source report, and the Department may grant the extension for reasonable cause.

020 [25 Pa. Code §127.441]**Operating permit terms and conditions.**

- (a) The permittee shall report malfunctions, emergencies or incidents of excess emissions to the Department. A malfunction is any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process

**SECTION C. Site Level Requirements**

equipment, or a process to operate in a normal or usual manner. An emergency is any situation arising from sudden and reasonably unforeseeable events beyond the control of the owner or operator of a facility which requires immediate corrective action to restore normal operation and which causes the emission source to exceed emissions, due to unavoidable increases in emissions attributable to the situation. An emergency shall not include situations caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation, or operator error.

(b) When the malfunction, emergency or incident of excess emissions poses an imminent danger to the public health, safety, welfare, or environment, it shall be reported to the Department and the County Emergency Management Agency by telephone within one (1) hour after the discovery of the malfunction, emergency or incident of excess emissions. The owner or operator shall submit a written or emailed report of instances of such malfunctions, emergencies or incidents of excess emissions to the Department within three (3) business days of the telephone report.

(c) The report shall describe the following:

1. name, permit or authorization number, and location of the facility,
2. nature and cause of the malfunction, emergency or incident,
3. date and time when the malfunction, emergency or incident was first observed,
4. expected duration of excess emissions,
5. estimated rate of emissions,
6. corrective actions or preventative measures taken.

(d) Any malfunction, emergency or incident of excess emissions that is not subject to the notice requirements of paragraph (b) of this condition shall be reported to the Department by telephone within 24 hours (or by 4:00 PM of the next business day, whichever is later) of discovery and in writing or by e-mail within five (5) business days of discovery. The report shall contain the same information required by paragraph (c), and any permit specific malfunction reporting requirements.

(e) During an emergency an owner or operator may continue to operate the source at their discretion provided they submit justification for continued operation of a source during the emergency and follow all the notification and reporting requirements in accordance with paragraphs (b)-(d), as applicable, including any permit specific malfunction reporting requirements.

(f) Reports regarding malfunctions, emergencies or incidents of excess emissions shall be submitted to the appropriate DEP Regional Office Air Program Manager.

(g) Any emissions resulted from malfunction or emergency are to be reported in the annual emissions inventory report, if the annual emissions inventory report is required by permit or authorization.

021 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.4]**Subpart A - General Provisions****Address.**

The Facility is subject to New Source Performance Standards from 40 CFR Part 60 Subparts KKKK and OOOOa. In accordance with 40 CFR §§60.4, copies of all requests, reports, applications, submittals and other communications regarding affected sources shall be forwarded to both EPA and the Department at the addresses listed below unless otherwise noted.

United States Environmental Protection Agency
Region III, Air and Radiation Division
Permits Branch (3AD10)
Four Penn Center
1600 John F. Kennedy Boulevard
Philadelphia, Pennsylvania 19103-2852
R3_APD_Permits@epa.gov

PADEP
Air Quality Program
400 Waterfront Drive
Pittsburgh, PA 15222-4745

**SECTION C. Site Level Requirements****VI. WORK PRACTICE REQUIREMENTS.****# 022 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

All air contamination sources and air cleaning devices authorized under this Operating Permit shall be operated per the manufacturer's specifications and maintained according to the manufacturer's recommended maintenance schedule; or a developed maintenance plan which is at least as stringent as the manufacturer's or is certified by the manufacturer to satisfy performance warranties for control efficiency, outlet emission rate, and other air contamination aspects of the air contamination source or air cleaning device as appropriate.

023 [25 Pa. Code §127.441]**Operating permit terms and conditions.**

The permittee is allowed to make the following changes to its methods of operation without applying for a revision of this permit. This clause does not relieve the permittee, however, of any requirement to notify the Department when changes are made or to apply for a new or modified source of emissions under a preconstruction review program. The following changes are allowed at this facility under this permit:

(1) Elevate emission levels above the hourly permitted limitation immediately following engine startup and occurring prior to engine shutdown for a period of no more than one hour in either case. In any event, the allowable annual emission rate shall not be exceeded.

VII. ADDITIONAL REQUIREMENTS.**# 024 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

The entire facility is subject to the LDAR requirements of Section D, Source ID 104: Fugitive Emissions.

VIII. COMPLIANCE CERTIFICATION.

No additional compliance certifications exist except as provided in other sections of this permit including Section B (relating to State Only General Requirements).

IX. COMPLIANCE SCHEDULE.

No compliance milestones exist.

**SECTION D. Source Level Requirements**

Source ID: 104

Source Name: FUGITIVE EMISSIONS

Source Capacity/Throughput:

N/A

PROC
104STAC
Z01**I. RESTRICTIONS.**

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

II. TESTING REQUIREMENTS.

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

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

(i) No later than 30 days after an emission source commences operation, and at least monthly thereafter, the owner or operator of a facility shall conduct an AVO inspection.

(ii) No later than 60 days after initial startup, and quarterly thereafter, the owner or operator shall conduct an LDAR program using either an OGI camera, a gas leak detector that meets the requirements of 40 CFR Part 60, Appendix A-7, Method 21, or other leak detection methods approved by the Division of Source Testing and Monitoring.

(iii) The detection devices must be operated and maintained in accordance with manufacturer-recommended procedures, as required by the test method, or a Department-approved method.

(iv) A leak is defined as:

(A) Any positive indication, whether audible, visual, or odorous, determined during an AVO inspection;

(B) Any visible emissions detected by an OGI camera calibrated according to 40 CFR § 60.18 and a detection sensitivity level of 60 grams/hour; or

(C) A concentration of 500 ppm calibrated as methane or greater detected by an instrument reading.

(v) For quarterly inspections using a gas leak detector in accordance with 40 CFR Part 60, Appendix A-7, Method 21, the owner or operator may choose to adjust the detection instrument readings to account for the background organic concentration level as determined according to the procedures in Section 8.3.2.

(vi) Any leak detected from a fugitive emission component shall be repaired by the owner or operator of the facility as expeditiously as practicable. A first attempt at repair must be attempted within 5 calendar days of detection, and repair must be completed no later than 15 calendar days after the leak is detected unless:

(A) The owner or operator must purchase parts, in which case the repair must be completed no later than 10 calendar days after the receipt of the purchased parts; or

(B) The repair or replacement is technically infeasible, would require a vent blowdown, a compressor station, processing plant or transmission station shutdown, or would be unsafe to repair during operation of the unit, in which case the repair or replacement must be completed during the next scheduled compressor station, processing plant or transmission station shutdown, after a planned vent blowdown or within 2 years, whichever is earlier.

**SECTION D. Source Level Requirements**

(vi) Once a fugitive emission component has been repaired or replaced, the owner or operator must resurvey the component as soon as practicable, but no later than 30 calendar days after the leak is repaired.

(A) For repairs that cannot be made during the monitoring survey when the leak is initially found, either a digital photograph must be taken of the component or the component must be tagged for identification purposes.

(B) A leak is considered repaired if:

(1) There are no detectable emissions consistent with Section 8.3.2 of 40 CFR Part 60, Appendix A-7, Method 21;

(2) A leak concentration of less than 500 ppm as methane is detected when the gas leak detector probe inlet is placed at the surface of the component;

(3) There is no visible leak image when using an OGI camera calibrated at a detection sensitivity level of 60 grams/hour; or

(4) There is no bubbling at the leak interface using a soap solution bubble test specified in Section 8.3.3 of 40 CFR Part 60, Appendix A-7, Method 21.

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

For fugitive emissions components, the owner or operator shall maintain the following records:

(a) Records of each monitoring survey which must include:

(i) The facility name and location;

(ii) The Plan Approval authorization number;

(iii) The date, start time, and end time of the survey;

(iv) The name of the operator(s) performing the survey;

(v) The monitoring instrument used;

(vi) The ambient temperature, sky conditions, and maximum wind speed at the time of the survey;

(vii) Any deviations from the monitoring plan or a statement that there were none; and

(viii) Documentation of each fugitive emission including:

(A) The identification of each component from which fugitive emissions were detected;

(B) The instrument reading of each fugitive emissions component that meets the leak definition (See monitoring requirements for definition).

(C) The status of repair of each component including:

(1) The repair methods applied in each attempt to repair the component;

(2) The tagging or digital photographing of each component not repaired during the monitoring survey in which the fugitive emissions were discovered;

(3) The reasons a component was placed on delay of repair;

(4) The date of successful repair of the component; and

(5) The information on the instrumentation or method used to resurvey the component after repair, if it was not completed during the monitoring survey in which the fugitive emissions were discovered.

003 [25 Pa. Code §127.441]**Operating permit terms and conditions.**

The emissions from fugitive emissions components during the reporting period must be included in the annual emissions inventory report.

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

The Owner/Operator shall comply with the following applicable 40 CFR Part 60 Subpart OOOOa notification, recordkeeping, and reporting requirements [Additional authority for this condition is derived from 40 CFR §60.5420a]:

**SECTION D. Source Level Requirements**

a) You must submit the notifications according to paragraphs (a)(1) and (2) of this section if you own or operate one or more of the affected facilities specified in §60.5365a that was constructed, modified or reconstructed during the reporting period.

1) If you own or operate a well, centrifugal compressor, reciprocating compressor, pneumatic controller, pneumatic pump, storage vessel, or collection of fugitive emissions components at a well site or collection of fugitive emissions components at a compressor station, you are not required to submit the notifications required in §60.7(a)(1), (3), and (4).

2) N/A

b) Reporting requirements. You must submit annual reports containing the information specified in paragraphs (b)(1) through (8) and (12) of this section and performance test reports as specified in paragraph (b)(9) or (10) of this section, if applicable. You must submit annual reports following the procedure specified in paragraph (b)(11) of this section. The initial annual report is due no later than 90 days after the end of the initial compliance period as determined according to §60.5410a. Subsequent annual reports are due no later than same date each year as the initial annual report. If you own or operate more than one affected facility, you may submit one report for multiple affected facilities provided the report contains all of the information required as specified in paragraphs (b)(1) through (8) of this section. Annual reports may coincide with title V reports as long as all the required elements of the annual report are included. You may arrange with the Administrator a common schedule on which reports required by this part may be submitted as long as the schedule does not extend the reporting period.

1) The general information specified in paragraphs (b)(1)(i) through (iv) of this section for all reports.

i. The company name, facility site name associated with the affected facility, US Well ID or US Well ID associated with the affected facility, if applicable, and address of the affected facility. If an address is not available for the site, include a description of the site location and provide the latitude and longitude coordinates of the site in decimal degrees to an accuracy and precision of five (5) decimals of a degree using the North American Datum of 1983.

ii. An identification of each affected facility being included in the annual report.

iii. Beginning and ending dates of the reporting period.

iv. A certification by a certifying official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

(2) - (6) N/A

7) For the collection of fugitive emissions components at each well site and the collection of fugitive emissions components at each compressor station within the company-defined area, the records of each monitoring survey including the information specified in paragraphs (b)(7)(i) through (xi) of this section. For the collection of fugitive emissions components at a compressor station, if a monitoring survey is waived under §60.5397a(g)(5), you must include in your annual report the fact that a monitoring survey was waived and the calendar months that make up the quarterly monitoring period for which the monitoring survey was waived.

i. Date of the survey.

ii. Beginning and end time of the survey.

iii. Name of operator(s) performing survey. If the survey is performed by optical gas imaging, you must note the training and experience of the operator.

iv. Ambient temperature, sky conditions, and maximum wind speed at the time of the survey.

v. Monitoring instrument used.

vi. Any deviations from the monitoring plan or a statement that there were no deviations from the monitoring plan.

vii. Number and type of components for which fugitive emissions were detected.

viii. Number and type of fugitive emissions components that were not repaired as required in §60.5397a(h).

ix. Number and type of difficult-to-monitor and unsafe-to-monitor fugitive emission components monitored.

x. The date of successful repair of the fugitive emissions component.

xi. Number and type of fugitive emission components placed on delay of repair and explanation for each delay of repair.

xii. Type of instrument used to resurvey a repaired fugitive emissions component that could not be repaired during the initial fugitive emissions finding.

**SECTION D. Source Level Requirements**

(8) - (10) N/A

11) You must submit reports to the EPA via the CEDRI. (CEDRI can be accessed through the EPA's CDX (<https://cdx.epa.gov/>)). You must use the appropriate electronic report in CEDRI for this subpart or an alternate electronic file format consistent with the extensible markup language (XML) schema listed on the CEDRI Web site (<https://www3.epa.gov/ttn/chief/cedri/>). If the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, you must submit the report to the Administrator at the appropriate address listed in §60.4. Once the form has been available in CEDRI for at least 90 calendar days, you must begin submitting all subsequent reports via CEDRI. The reports must be submitted by the deadlines specified in this subpart, regardless of the method in which the reports are submitted.

12) N/A

c) Recordkeeping requirements. You must maintain the records identified as specified in §60.7(f) and in paragraphs (c)(1) through (16) of this section. All records required by this subpart must be maintained either onsite or at the nearest local field office for at least 5 years. Any records required to be maintained by this subpart that are submitted electronically via the EPA's CDX may be maintained in electronic format.

(1) - (14) N/A

15) For each collection of fugitive emissions components at a well site and each collection of fugitive emissions components at a compressor station, the records identified in paragraphs (c)(15)(i) through (iii) of this section.

i. The fugitive emissions monitoring plan as required in §60.5397a(b), (c), and (d).

ii. The records of each monitoring survey as specified in paragraphs (c)(15)(ii)(A) through (I) of this section.

A. Date of the survey.

B. Beginning and end time of the survey.

C. Name of operator(s) performing survey. You must note the training and experience of the operator.

D. Monitoring instrument used.

E. When optical gas imaging is used to perform the survey, one or more digital photographs or videos, captured from the optical gas imaging instrument used for conduct of monitoring, of each required monitoring survey being performed. The digital photograph must include the date the photograph was taken and the latitude and longitude of the collection of fugitive emissions components at a well site or collection of fugitive emissions components at a compressor station imbedded within or stored with the digital file. As an alternative to imbedded latitude and longitude within the digital file, the digital photograph or video may consist of an image of the monitoring survey being performed with a separately operating GPS device within the same digital picture or video, provided the latitude and longitude output of the GPS unit can be clearly read in the digital image.

F. Fugitive emissions component identification when Method 21 is used to perform the monitoring survey.

G. Ambient temperature, sky conditions, and maximum wind speed at the time of the survey.

H. Any deviations from the monitoring plan or a statement that there were no deviations from the monitoring plan.

I. Documentation of each fugitive emission, including the information specified in paragraphs (c)(15)(ii)(I)(1) through (12) of this section.

i. Location.

ii. Any deviations from the monitoring plan or a statement that there were no deviations from the monitoring plan.

iii. Number and type of components for which fugitive emissions were detected.

**SECTION D. Source Level Requirements**

- iv. Number and type of difficult-to-monitor and unsafe-to-monitor fugitive emission components monitored.
- v. Instrument reading of each fugitive emissions component that requires repair when Method 21 is used for monitoring.
- vi. Number and type of fugitive emissions components that were not repaired as required in §60.5397a(h).
- vii. Number and type of components that were tagged as a result of not being repaired during the monitoring survey when the fugitive emissions were initially found as required in §60.5397a(h)(3)(ii).
- viii. If a fugitive emissions component is not tagged, a digital photograph or video of each fugitive emissions component that could not be repaired during the monitoring survey when the fugitive emissions were initially found as required in §60.5397a(h)(3)(ii). The digital photograph or video must clearly identify the location of the component that must be repaired. Any digital photograph or video required under this paragraph can also be used to meet the requirements under paragraph (c)(15)(ii)(E) of this section, as long as the photograph or video is taken with the optical gas imaging instrument, includes the date and the latitude and longitude are either imbedded or visible in the picture.
- ix. Repair methods applied in each attempt to repair the fugitive emissions components.
- x. Number and type of fugitive emission components placed on delay of repair and explanation for each delay of repair.
- xi. The date of successful repair of the fugitive emissions component.
- xii. Instrumentation used to resurvey a repaired fugitive emissions component that could not be repaired during the initial fugitive emissions finding.

iii. N/A

16) N/A

17) N/A

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

The Owner/Operator shall comply with the following applicable 40 CFR Part 60 Subpart OOOOa timelines [Additional authority for this condition is derived from 40 CFR §60.5370a]:

- a) You must be in compliance with the standards of this subpart no later than August 2, 2016 or upon startup, whichever is later.
- b) At all times, including periods of startup, shutdown, and malfunction, owners and operators shall maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. The provisions for exemption from compliance during periods of startup, shutdown and malfunctions provided for in 40 CFR 60.8(c) do not apply to this subpart.

c) N/A

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

The Owner/Operator shall comply with the following applicable 40 CFR Part 60 Subpart OOOOa fugitive emissions GHG and VOC standards for each collection of fugitive emissions components at a compressor station [Additional authority for this condition is derived from 40 CFR §60.5397a]:

For each affected facility under §60.5365a(i) and (j), you must reduce GHG (in the form of a limitation on emissions of methane) and VOC emissions by complying with the requirements of paragraphs (a) through (j) of this section. These requirements are independent of the closed vent system and cover requirements in §60.5411a.

- a) You must monitor all fugitive emission components, as defined in §60.5430a, in accordance with paragraphs (b) through (g) of this section. You must repair all sources of fugitive emissions in accordance with paragraph (h) of this section. You must keep records in accordance with paragraph (i) of this section and report in accordance with paragraph (j) of this

**SECTION D. Source Level Requirements**

section. For purposes of this section, fugitive emissions are defined as: Any visible emission from a fugitive emissions component observed using optical gas imaging or an instrument reading of 500 ppm or greater using Method 21.

b) You must develop an emissions monitoring plan that covers the collection of fugitive emissions components at well sites and compressor stations within each company-defined area in accordance with paragraphs (c) and (d) of this section.

c) Fugitive emissions monitoring plans must include the elements specified in paragraphs (c)(1) through (8) of this section, at a minimum.

1) Frequency for conducting surveys. Surveys must be conducted at least as frequently as required by paragraphs (f) and (g) of this section.

2) Technique for determining fugitive emissions (i.e., Method 21 at 40 CFR part 60, appendix A-7, or optical gas imaging).

3) Manufacturer and model number of fugitive emissions detection equipment to be used.

4) Procedures and timeframes for identifying and repairing fugitive emissions components from which fugitive emissions are detected, including timeframes for fugitive emission components that are unsafe to repair. Your repair schedule must meet the requirements of paragraph (h) of this section at a minimum.

5) Procedures and timeframes for verifying fugitive emission component repairs.

6) Records that will be kept and the length of time records will be kept.

7) If you are using optical gas imaging, your plan must also include the elements specified in paragraphs (c)(7)(i) through (vii) of this section.

i. Verification that your optical gas imaging equipment meets the specifications of paragraphs (c)(7)(i)(A) and (B) of this section. This verification is an initial verification and may either be performed by the facility, by the manufacturer, or by a third party. For the purposes of complying with the fugitives emissions monitoring program with optical gas imaging, a fugitive emission is defined as any visible emissions observed using optical gas imaging.

A. Your optical gas imaging equipment must be capable of imaging gases in the spectral range for the compound of highest concentration in the potential fugitive emissions.

B. Your optical gas imaging equipment must be capable of imaging a gas that is half methane, half propane at a concentration of 10,000 ppm at a flow rate of =60g/hr from a quarter inch diameter orifice.

ii. Procedure for a daily verification check.

iii. Procedure for determining the operator's maximum viewing distance from the equipment and how the operator will ensure that this distance is maintained.

iv. Procedure for determining maximum wind speed during which monitoring can be performed and how the operator will ensure monitoring occurs only at wind speeds below this threshold.

v. Procedures for conducting surveys, including the items specified in paragraphs (c)(7)(v)(A) through (C) of this section.

A. How the operator will ensure an adequate thermal background is present in order to view potential fugitive emissions.

B. How the operator will deal with adverse monitoring conditions, such as wind.

C. How the operator will deal with interferences (e.g., steam).

vi. Training and experience needed prior to performing surveys.

vii. Procedures for calibration and maintenance. At a minimum, procedures must comply with those recommended by the manufacturer.

**SECTION D. Source Level Requirements**

8) If you are using Method 21 of appendix A-7 of this part, your plan must also include the elements specified in paragraphs (c)(8)(i) and (ii) of this section. For the purposes of complying with the fugitive emissions monitoring program using Method 21 a fugitive emission is defined as an instrument reading of 500 ppm or greater.

i. Verification that your monitoring equipment meets the requirements specified in Section 6.0 of Method 21 at 40 CFR part 60, appendix A-7. For purposes of instrument capability, the fugitive emissions definition shall be 500 ppm or greater methane using a FID-based instrument. If you wish to use an analyzer other than a FID-based instrument, you must develop a site-specific fugitive emission definition that would be equivalent to 500 ppm methane using a FID-based instrument (e.g., 10.6 eV PID with a specified isobutylene concentration as the fugitive emission definition would provide equivalent response to your compound of interest).

ii. Procedures for conducting surveys. At a minimum, the procedures shall ensure that the surveys comply with the relevant sections of Method 21 at 40 CFR part 60, appendix A-7, including Section 8.3.1.

d) Each fugitive emissions monitoring plan must include the elements specified in paragraphs (d)(1) through (4) of this section, at a minimum, as applicable.

1) Sitemap.

2) A defined observation path that ensures that all fugitive emissions components are within sight of the path. The observation path must account for interferences.

3) If you are using Method 21, your plan must also include a list of fugitive emissions components to be monitored and method for determining location of fugitive emissions components to be monitored in the field (e.g. tagging, identification on a process and instrumentation diagram, etc.).

4) Your plan must also include the written plan developed for all of the fugitive emission components designated as difficult-to-monitor in accordance with paragraph (g)(3)(i) of this section, and the written plan for fugitive emission components designated as unsafe-to-monitor in accordance with paragraph (g)(3)(ii) of this section.

e) Each monitoring survey shall observe each fugitive emissions component, as defined in §60.5430a, for fugitive emissions.

f)

1) N/A

2) You must conduct an initial monitoring survey within 60 days of the startup of a new compressor station for each new collection of fugitive emissions components at the new compressor station or by June 3, 2017, whichever is later. For a modified collection of fugitive components at a compressor station, the initial monitoring survey must be conducted within 60 days of the modification or by June 3, 2017, whichever is later.

g) A monitoring survey of each collection of fugitive emissions components at a well site or at a compressor station must be performed at the frequencies specified in paragraphs (g)(1) and (2) of this section, with the exceptions noted in paragraphs (g)(3) and (4) of this section.

1) N/A

2) A monitoring survey of the collection of fugitive emissions components at a compressor station within a company-defined area must be conducted at least quarterly after the initial survey. Consecutive quarterly monitoring surveys must be conducted at least 60 days apart.

3) Fugitive emissions components that cannot be monitored without elevating the monitoring personnel more than 2 meters above the surface may be designated as difficult-to-monitor. Fugitive emissions components that are designated difficult-to-monitor must meet the specifications of paragraphs (g)(3)(i) through (iv) of this section.

i. A written plan must be developed for all of the fugitive emissions components designated difficult-to-monitor. This written plan must be incorporated into the fugitive emissions monitoring plan required by paragraphs (b), (c), and (d) of this section.

ii. The plan must include the identification and location of each fugitive emissions component designated as difficult-to-monitor.

**SECTION D. Source Level Requirements**

- iii. The plan must include an explanation of why each fugitive emissions component designated as difficult-to-monitor is difficult-to-monitor.
 - iv. The plan must include a schedule for monitoring the difficult-to-monitor fugitive emissions components at least once per calendar year.
- 4) Fugitive emissions components that cannot be monitored because monitoring personnel would be exposed to immediate danger while conducting a monitoring survey may be designated as unsafe-to-monitor. Fugitive emissions components that are designated unsafe-to-monitor must meet the specifications of paragraphs (g)(4)(i) through (iv) of this section.
- i. A written plan must be developed for all of the fugitive emissions components designated unsafe-to-monitor. This written plan must be incorporated into the fugitive emissions monitoring plan required by paragraphs (b), (c), and (d) of this section.
 - ii. The plan must include the identification and location of each fugitive emissions component designated as unsafe-to-monitor.
 - iii. The plan must include an explanation of why each fugitive emissions component designated as unsafe-to-monitor is unsafe-to-monitor.
 - iv. The plan must include a schedule for monitoring the fugitive emissions components designated as unsafe-to-monitor.
- 5) N/A
- h) Each identified source of fugitive emissions shall be repaired or replaced in accordance with paragraphs (h)(1) and (2) of this section. For fugitive emissions components also subject to the repair provisions of §§60.5416a(b)(9) through (12) and (c)(4) through (7), those provisions apply instead to those closed vent system and covers, and the repair provisions of paragraphs (h)(1) and (2) of this section do not apply to those closed vent systems and covers.
- 1) Each identified source of fugitive emissions shall be repaired or replaced as soon as practicable, but no later than 30 calendar days after detection of the fugitive emissions.
- 2) If the repair or replacement is technically infeasible, would require a vent blowdown, a compressor station shutdown, a well shutdown or well shut-in, or would be unsafe to repair during operation of the unit, the repair or replacement must be completed during the next compressor station shutdown, well shutdown, well shut-in, after an unscheduled, planned or emergency vent blowdown or within 2 years, whichever is earlier.
- 3) Each repaired or replaced fugitive emissions component must be resurveyed as soon as practicable, but no later than 30 days after being repaired, to ensure that there are no fugitive emissions.
- i. For repairs that cannot be made during the monitoring survey when the fugitive emissions are initially found, the operator may resurvey the repaired fugitive emissions components using either Method 21 or optical gas imaging within 30 days of finding such fugitive emissions.
 - ii. For each repair that cannot be made during the monitoring survey when the fugitive emissions are initially found, a digital photograph must be taken of that component or the component must be tagged for identification purposes. The digital photograph must include the date that the photograph was taken, must clearly identify the component by location within the site (e.g., the latitude and longitude of the component or by other descriptive landmarks visible in the picture).
 - iii. Operators that use Method 21 to resurvey the repaired fugitive emissions components are subject to the resurvey provisions specified in paragraphs (h)(3)(iii)(A) and (B) of this section.
- A. A fugitive emissions component is repaired when the Method 21 instrument indicates a concentration of less than 500 ppm above background or when no soap bubbles are observed when the alternative screening procedures specified in section 8.3.3 of Method 21 are used.
- B. Operators must use the Method 21 monitoring requirements specified in paragraph (c)(8)(ii) of this section or the alternative screening procedures specified in section 8.3.3 of Method 21.
- iv. Operators that use optical gas imaging to resurvey the repaired fugitive emissions components, are subject to the resurvey provisions specified in paragraphs (h)(3)(iv)(A) and (B) of this section.

**SECTION D. Source Level Requirements**

A. A fugitive emissions component is repaired when the optical gas imaging instrument shows no indication of visible emissions.

B. Operators must use the optical gas imaging monitoring requirements specified in paragraph (c)(7) of this section.

i) Records for each monitoring survey shall be maintained as specified §60.5420a(c)(15).

j) Annual reports shall be submitted for each collection of fugitive emissions components at a well site and each collection of fugitive emissions components at a compressor station that include the information specified in §60.5420a(b)(7). Multiple collection of fugitive emissions components at a well site or at a compressor station may be included in a single annual report.

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

The Owner/Operator shall comply with the following applicable 40 CFR Part 60 Subpart OOOOa demonstration of initial compliance with the standards for the collection of fugitive emissions components at a compressor station [Additional authority for this condition is derived from 40 CFR §60.5410a]:

You must determine initial compliance with the standards for each affected facility using the requirements in paragraphs (a) through (j) of this section. The initial compliance period begins on August 2, 2016, or upon initial startup, whichever is later, and ends no later than 1 year after the initial startup date for your affected facility or no later than 1 year after August 2, 2016. The initial compliance period may be less than one full year.

(a) - (i) N/A

j) To achieve initial compliance with the fugitive emission standards for each collection of fugitive emissions components at a well site and each collection of fugitive emissions components at a compressor station, you must comply with paragraphs (j)(1) through (5) of this section.

- 1) You must develop a fugitive emissions monitoring plan as required in §60.5397a(b)(c), and (d).
- 2) You must conduct an initial monitoring survey as required in §60.5397a(f).
- 3) You must maintain the records specified in §60.5420a(c)(15).
- 4) You must repair each identified source of fugitive emissions for each affected facility as required in §60.5397a(h).
- 5) You must submit the initial annual report for each collection of fugitive emissions components at a well site and each collection of fugitive emissions components at a compressor station as required in §60.5420a(b)(1) and (7).

008 [25 Pa. Code §127.441]**Operating permit terms and conditions.**

The Owner/Operator shall comply with the following applicable 40 CFR Part 60 Subpart OOOOa demonstration of continuous compliance with the standards for the collection of fugitive emissions components at a compressor station [Additional authority for this condition is derived from 40 CFR §60.5415a]:

(a) - (g) N/A

h) For each collection of fugitive emissions components at a well site and each collection of fugitive emissions components at a compressor station, you must demonstrate continuous compliance with the fugitive emission standards specified in §60.5397a according to paragraphs (h)(1) through (4) of this section.

- 1) You must conduct periodic monitoring surveys as required in §60.5397a(g).
- 2) You must repair or replace each identified source of fugitive emissions as required in §60.5397a(h).
- 3) You must maintain records as specified in §60.5420a(c)(15).
- 4) You must submit annual reports for collection of fugitive emissions components at a well site and each collection of fugitive emissions components at a compressor station as required in §60.5420a(b)(1) and (7).

**SECTION D. Source Level Requirements****VII. ADDITIONAL REQUIREMENTS.****# 009 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

All terms used in 40 CFR Part 60 Subpart OOOOa shall have the meaning given in 40 CFR §60.5430a or else in the Clean Air Act and 40 CFR Part 60 Subpart A [Additional authority for this condition is derived from 40 CFR §60.5430a].

010 [25 Pa. Code §127.441]**Operating permit terms and conditions.**

Each fugitive emissions component, as defined in 40 CFR § 60.5430a, at the Facility is subject to the requirements under 40 CFR Part 60, Subpart OOOOa – Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification, or Reconstruction Commenced After September 18, 2015 [Additional authority for this condition is derived from 40 CFR §60.5365a].

011 [25 Pa. Code §127.441]**Operating permit terms and conditions.**

The Owner/Operator may comply with 40 CFR Part 60 Subpart OOOOa alternative applicable means of emission limitations for GHG And VOC from the collection of fugitive emissions components at a compressor station [Additional authority for this condition is derived from 40 CFR §60.5398a].

a) If, in the Administrator's judgment, an alternative means of emission limitation will achieve a reduction in GHG (in the form of a limitation on emission of methane) and VOC emissions at least equivalent to the reduction in GHG and VOC emissions achieved under §60.5375a, §60.5385a, and §60.5397a, the Administrator will publish, in the Federal Register, a notice permitting the use of that alternative means for the purpose of compliance with §60.5375a, §60.5385a, and §60.5397a. The notice may condition permission on requirements related to the operation and maintenance of the alternative means.

b) Any notice under paragraph (a) of this section must be published only after notice and an opportunity for a public hearing.

c) The Administrator will consider applications under this section from either owners or operators of affected facilities.

d) Determination of equivalence to the design, equipment, work practice or operational requirements of this section will be evaluated by the following guidelines:

1) The applicant must collect, verify and submit test data, covering a period of at least 12 months to demonstrate the equivalence of the alternative means of emission limitation. The application must include the following information:

- i. A description of the technology or process.
- ii. The monitoring instrument and measurement technology or process.
- iii. A description of performance based procedures (i.e., method) and data quality indicators for precision and bias; the method detection limit of the technology or process.
- iv. For affected facilities under §60.5397a, the action criteria and level at which a fugitive emission exists.
- v. Any initial and ongoing quality assurance/quality control measures.
- vi. Timeframes for conducting ongoing quality assurance/quality control.
- vii. Field data verifying viability and detection capabilities of the technology or process.
- viii. Frequency of measurements.
- ix. Minimum data availability.
- x. Any restrictions for using the technology or process.
- xi. Operation and maintenance procedures and other provisions necessary to ensure reduction in methane and VOC emissions at least equivalent to the reduction in methane and VOC emissions achieved under §60.5397a.
- xii. Initial and continuous compliance procedures, including recordkeeping and reporting.

2) For each determination of equivalency requested, the emission reduction achieved by the design, equipment, work practice or operational requirements shall be demonstrated.

3) For each affected facility for which a determination of equivalency is requested, the emission reduction achieved by the alternative means of emission limitation shall be demonstrated.

**SECTION D. Source Level Requirements**

4) Each owner or operator applying for a determination of equivalence to a work practice standard shall commit in writing to work practice(s) that provide for emission reductions equal to or greater than the emission reductions achieved by the required work practice.

e) After notice and opportunity for public hearing, the Administrator will determine the equivalence of a means of emission limitation and will publish the determination in the Federal Register.

f) An application submitted under this section will be evaluated as set forth in paragraphs (f)(1) and (2) of this section.

1) The Administrator will compare the demonstrated emission reduction for the alternative means of emission limitation to the demonstrated emission reduction for the design, equipment, work practice or operational requirements and, if applicable, will consider the commitment in paragraph (d) of this section.

2) The Administrator may condition the approval of the alternative means of emission limitation on requirements that may be necessary to ensure operation and maintenance to achieve the same emissions reduction as the design, equipment, work practice or operational requirements. (g) Any equivalent means of emission limitations approved under this section shall constitute a required work practice, equipment, design or operational standard within the meaning of section 111(h)(1) of the CAA.

012 [25 Pa. Code §127.441]

Operating permit terms and conditions.

The Owner/Operator shall comply with the applicable General Provisions in 40 CFR §§60.1 through 60.19 as identified in Table 3 to 40 CFR Part 60 Subpart OOOOa [Additional authority for this condition is derived from 40 CFR §60.5425a].

**SECTION D. Source Level Requirements**

Source ID: 105

Source Name: 7700 BHP, SOLAR TAURUS 60, COMBUSTION TURBINE 1

Source Capacity/Throughput:

68.470 MMBTU/HR

67.127 MCF/HR

Natural Gas

Conditions for this source occur in the following groups: G01

PROC
105STAC
S05**I. RESTRICTIONS.**

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

VII. ADDITIONAL REQUIREMENTS.

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

**SECTION D. Source Level Requirements**

Source ID: 106

Source Name: 7700 BHP, SOLAR TAURUS 60, COMBUSTION TURBINE 2

Source Capacity/Throughput:

68.470 MMBTU/HR

67.127 MCF/HR

Natural Gas

Conditions for this source occur in the following groups: G01

PROC
106STAC
S06**I. RESTRICTIONS.**

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

VII. ADDITIONAL REQUIREMENTS.

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

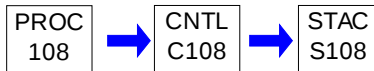
**SECTION D. Source Level Requirements**

Source ID: 108

Source Name: 7700 BHP, SOLAR TAURUS 60-7800S TURBINE #3 (7,700 HP @ ISO)

Source Capacity/Throughput: 63.410 MMBTU/HR

Conditions for this source occur in the following groups: NSPS SUBPART KKKK

**I. RESTRICTIONS.****Emission Restriction(s).****# 001 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

Visible emissions from the Solar Taurus 60 turbine #3 stack shall not exceed 10% opacity at any time.

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

Emission rates from the Solar Taurus 60 turbine #3 shall be limited as follows:

Air Contaminant	Operating Condition	Emission Rate
NOx	Normal	15 ppmvd @ 15% O2
	Normal	3.81 lb/hr
	All	16.68 tpy
CO	Normal	5 ppmvd @ 15% O2
	Normal	0.77 lb/hr
	All	8.23 tpy
VOC*	Normal	2 ppmvd @ 15% O2
	Normal	0.18 lb/hr
	All	0.83 tpy
Total PM (filterable + condensable)	Normal	1.27 lb/hr
	All	5.55 tpy

* Based on U.S. EPA Methods 18/25A or 25A/320 (or Agency approved equivalent, does not include formaldehyde)

For purposes of this condition, the "normal" operating scenario is when the turbine is operating in SoLoNOx mode (excludes startup, shutdown, and low temperature operating scenarios). Startup is defined as beginning when air contaminants begin to be emitted to the atmosphere, ending when SoLoNOx mode begins, and shall have duration no greater than 10 minutes. Shutdown is defined as beginning when the turbine exits SoLoNOx mode, ending when contaminants are no longer being emitted to the atmosphere, and shall have duration no greater than 10 minutes. Low temperature is defined as less than 0°F (inlet combustion air).

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

The Owner/Operator shall perform periodic monitoring for NOx and CO emissions from the Solar Taurus 60 turbine #3 at the Facility. Periodic monitoring shall be performed every 2,500 hours of operation and no sooner than 45 days from the previous test. A Department-approved test that has been performed within 45 days prior to the scheduled periodic monitoring may be used in lieu of the periodic monitoring for that time period. A portable gas analyzer may be used to satisfy the requirements of this condition utilizing three 20-minute test runs. The Department may alter the frequency of portable analyzer tests based on the test results. If NOx and CO emission results from the most recently conducted EPA Method stack tests are less than or equal to 75% of the NOx and CO emission limit, frequency of the periodic monitoring may be reduced to once annually. The portable gas analyzer shall be used and maintained according to the manufacturer's

**SECTION D. Source Level Requirements**

specifications and the procedures specified in ASTM D 6522 or equivalent as approved by the Department. EPA Method stack testing may be used to satisfy the requirements of this condition. The Department may also waive all or parts of this requirement if the Owner/Operator demonstrates compliance, in lieu of testing, through alternate means satisfactory to the Department. Periodic NO_x and CO monitoring results shall be submitted to the Department within 30 days of completion.

004 [25 Pa. Code §127.441]**Operating permit terms and conditions.**

The Owner/Operator shall perform NO_x, CO, VOC, Total Particulate Matter (filterable + condensable), and formaldehyde emission testing upon the Solar Taurus 60 turbine #3 according to the requirements of 25 Pa. Code Chapter 139. Initial performance testing is required within 180 days of startup of the turbine. Subsequent NO_x, CO and VOC performance testing shall be conducted no less often than once every two years thereafter. Each performance test shall be conducted using EPA Method stack testing.

III. MONITORING REQUIREMENTS.

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

V. REPORTING REQUIREMENTS.**# 005 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.7]****Subpart A - General Provisions****Notification and record keeping.**

The Owner/operator shall provide EPA with the notifications required by 40 CFR § 60.7. Required notifications may include but are not necessarily limited to: date of commencement of construction (within 30 days after starting construction), actual start-up date (within 15 days after equipment start-up), and physical or operational changes which may increase the emission rate of any air pollutant to which a standard applies (60 days or as soon as practicable before equipment start-up).

VI. WORK PRACTICE REQUIREMENTS.

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

VII. ADDITIONAL REQUIREMENTS.

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

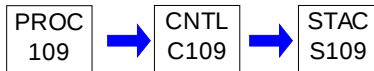
**SECTION D. Source Level Requirements**

Source ID: 109

Source Name: SOLAR TAURUS 60-7800S TURBINE #4 (7,684 HP @ ISO)

Source Capacity/Throughput: 73.300 MMBTU/HR

Conditions for this source occur in the following groups: NSPS SUBPART KKKK

**I. RESTRICTIONS.****Emission Restriction(s).****# 001 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

During normal operation, emissions from the Solar Taurus 60 turbine (Source ID 109) shall not exceed the following:

NO_x – 9.0 ppmvd @ 15% O₂NO_x – 2.4 lb/hr

Compliance Method:

U.S. EPA Reference Method 7E.*

CO – 5.0 ppmvd @ 15% O₂.

CO – 0.80 lb/hr

Compliance Method:

U.S. EPA Reference Method 10.*

VOC – 1.25 ppmvd (as methane) @ 15% O₂

VOC – 0.12 lb/hr

Compliance Method:

U.S. EPA Reference Method 18 and 25A, or Method 25A and 320.*

PM – 0.02 lb/MMBtu

PM – 1.45 lb/hr

Compliance Method:

U.S. EPA Reference Methods 201/201A or equivalent and Method 202.*

*Alternative compliance methods may be approved in writing by the Department

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

At all times, including during startup, shutdown, and low temperature events; emissions from the Solar Taurus 60 turbine (Source ID 109) shall not exceed the following on a 12-month rolling sum basis:

NO_x – 11.4 tons

CO – 8.5 tons

VOC – 0.6 tons

PM – 6.4 tons

**SECTION D. Source Level Requirements****# 003 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

Visible emissions from the Solar Taurus 60 turbine (Source ID 109) stack shall not equal or exceed 10% opacity at any time.

Fuel Restriction(s).**# 004 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

The permittee shall operate the sources using only pipeline quality natural gas fuel with a total sulfur content not to exceed 0.5 grains per 100 dscf.

Operation Hours Restriction(s).**# 005 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

Solar Taurus 60 turbine (Source ID 109) may be operated without oxidation catalyst for up to 100 hours immediately following initial startup (once in the life of each turbine) or a major overhaul in order to prevent catalyst fouling due to oil burnoff. The emissions from turbine operation without oxidation catalyst must be included in the annual emissions inventory report.

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

The permittee shall limit the hours of operation of each Solar Taurus 60 turbine during startup and shutdown to 34 hours in any consecutive 12-month period.

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

The Owner/Operator shall perform NO_x, CO, and VOC emission testing upon the Solar Taurus 60 turbine (Source ID 109) according to the requirements of 25 Pa. Code Chapter 139. Initial performance testing is required within 180 days of startup of each turbine. Subsequent NO_x, CO, and VOC performance testing shall be conducted no less often than once every two years thereafter. Each performance test shall be conducted using EPA Method stack testing.

008 [25 Pa. Code §127.441]**Operating permit terms and conditions.**

The Owner/Operator shall perform Total Particulate Matter (filterable + condensable) emission testing upon the Solar Taurus 60 turbine (Source ID 109) according to the requirements of 25 Pa. Code Chapter 139. Initial performance testing is required within 180 days of startup of the turbine. The performance test shall be conducted using EPA Method stack testing.

III. MONITORING REQUIREMENTS.**# 009 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

(a) Unless otherwise approved in writing by DEP, the permittee shall conduct the following periodic monitoring every 2,500 hours of operation:

(1) Conduct three test runs of at least 20 minutes duration within 25% of 100% of peak load or at the highest achievable load.

(2) Determine NO_x and CO emissions and O₂ concentrations in the exhaust with an electro-chemical cell portable gas analyzer used and maintained in accordance with the manufacturer's specifications and following the procedures specified in ASTM D6522.

(3) If the measured NO_x or CO emissions concentrations are within the margin of instrument error or in exceedance of the emissions limit, the permittee must perform a stack test within 180 days of the periodic monitoring.

**SECTION D. Source Level Requirements**

(b) The 2,500 hours of operation count resets after any performance test performed in accordance with above.

(c) The Department may alter the frequency of periodic monitoring based on the test results. The frequency of periodic monitoring may be altered upon request of the permittee with written Departmental approval.

(d) If the permittee decides to deviate from the monitoring procedures in (a) above, they must submit a request to use an alternate procedure, in writing, at least 60 days prior to performing the periodic monitoring. In the alternate procedure request, the permittee must demonstrate the alternate procedure's equivalence to the standard procedure to the satisfaction of the Division of Source Testing and Monitoring.

010 [25 Pa. Code §127.441]**Operating permit terms and conditions.**

The permittee shall install, operate and maintain instrumentation to continuously monitor the catalyst bed inlet gas temperature for the oxidation catalyst.

IV. RECORDKEEPING REQUIREMENTS.**# 011 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

The owner or operator shall maintain the following comprehensive and accurate records of the Solar Taurus 60 turbine (Source ID 109):

- 1) The make, model, serial number and manufacturer's engine certificate or vendor guarantees.
- 2) Hours of commissioning including hours of operation without the oxidation catalysts during commissioning.
- 3) Date, start time, and duration of periods of Non-SoLoNOx operation.
- 4) The number of hours of operation on a monthly and 12-month rolling sum basis.
- 5) The amount of fuel used (expressed in MMscf) on a monthly and 12-month rolling sum basis.
- 6) Emission calculations.
- 7) Emission test reports, all operating data collected during tests, and a copy of the calculations performed to determine compliance with emission limitations.
- 8) Operating data demonstrating that the Taurus 60 turbine was operating at maximum routine operating conditions and within plus or minus 25 percent of 100 percent peak load (or the highest achievable load) during performance testing.
- 9) Copies of the manufacturer's maintenance instructions and recommended maintenance schedule for the Taurus 60 turbine and catalyst.
- 10) Records of any maintenance conducted on the Taurus 60 turbine and catalyst.
- 11) Records of a natural gas analysis performed at least once every year on the inlet natural gas to the facility or tariff sheet demonstrating that total sulfur content does not exceed 0.5 grains per 100 dscf.
- 12) Records of catalyst inlet temperature readings performed once daily.
- 13) The results of each periodic monitoring.
- 14) Records of facility-wide inspections including the date, time, name, and title of the observer, along with any corrective action taken as a result.

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

The permittee will maintain adequate records to demonstrate that the duration of turbine operation without oxidation catalyst immediately following initial startup or a major overhaul does not exceed 100 hours per event.

V. REPORTING REQUIREMENTS.

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

**SECTION D. Source Level Requirements****VI. WORK PRACTICE REQUIREMENTS.****# 013 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

The Owner/Operator shall limit the engine's time spent at idle during startup or shutdown to a period appropriate for the operation of the engine and air pollution control equipment consistent with good air pollution control practices, not to exceed 30 minutes.

014 [25 Pa. Code §127.441]**Operating permit terms and conditions.**

The permittee shall at all times operate and maintain the Solar Taurus 60 turbine and oxidation catalyst, including all associated monitoring equipment, in accordance with the manufacturer's recommendations/specifications (including the manufacturer's preventive maintenance schedule) or an equivalent plan approved in writing by the Department, as well as in a manner consistent with good operating and air pollution control practices that minimize air emissions.

VII. ADDITIONAL REQUIREMENTS.**# 015 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

For purposes of this Operating Permit, operating modes of the Solar Taurus 60 turbine (Source ID 109) are defined as follows:

Startup – Commences with the fuel ignition in the combustion chamber and ends when the unit startup sequence is complete and stable Dry Low NO_x (DLN) mode has been reached. The start-up period for the turbine shall not exceed 30 minutes per event.

Shutdown – Commences when the turbine stop sequence is initiated and ends when the fuel injection into the combustion chamber is terminated. The shutdown period for the turbine shall not exceed 30 minutes per event.

Low Temperature – Anytime fuel is being combusted at an ambient temperature outside manufacturer DLN performance envelope (below 0 degrees F).

Normal – Anytime fuel is being combusted and the turbine is operating in DLN mode.

**SECTION D. Source Level Requirements**

Source ID: 402

Source Name: (4) MICROTURBINES (268 HP EACH)

Source Capacity/Throughput:

2.300 MCF/HR

Natural Gas

PROC
402STAC
S402**I. RESTRICTIONS.**

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

II. TESTING REQUIREMENTS.

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

III. MONITORING REQUIREMENTS.

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

IV. RECORDKEEPING REQUIREMENTS.

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

V. REPORTING REQUIREMENTS.

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

VI. WORK PRACTICE REQUIREMENTS.

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

VII. ADDITIONAL REQUIREMENTS.

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

**SECTION E. Source Group Restrictions.**

Group Name: G01

Group Description: Combustion Turbines

Sources included in this group

ID	Name
105	7700 BHP, SOLAR TAURUS 60, COMBUSTION TURBINE 1
106	7700 BHP, SOLAR TAURUS 60, COMBUSTION TURBINE 2

I. RESTRICTIONS.**Emission Restriction(s).****# 001 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

Emissions of the following contaminants from each turbine shall not exceed the following:

NOx 25 ppm, 6.34 lbs/hr, 27.79 tons/yr

CO 50 ppm, 7.73 lbs/hr, 33.84 tons/yr

VOC* 25 ppm, 0.44 lbs/hr, 1.94 tons/yr

* Based on US EPA Method 18/25A

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

The permittee shall monitor NOx, CO, and hydrocarbon concentrations in the exhaust gas of each turbine using a portable analyzer on an annual basis. The conversion from ppm to lbs/hr is subject to Department approval and must be done in accordance with the following:

- Readings are corrected to 15% oxygen.
- Readings are determined volumetrically.
- Heat content of fuel is corrected to 1,000 Btu/scf.

III. MONITORING REQUIREMENTS.**# 003 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.334]****Subpart GG - Standards of Performance for Stationary Gas Turbines****Monitoring of operations.**

The permittee shall monitor the following parameters:

- Hours of operation and amount of fuel combusted.
- Fuel sulfur content by use of tariff sheet, pipeline transportation contract or historical sampling for a 12-month period.

IV. RECORDKEEPING REQUIREMENTS.

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

V. REPORTING REQUIREMENTS.

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

**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 (State Only General Requirements).

VII. ADDITIONAL REQUIREMENTS.**# 004 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.330]****Subpart GG - Standards of Performance for Stationary Gas Turbines****Applicability and designation of affected facility.**

This facility is subject to the New Source Performance Standards for Stationary Gas Turbines (40 CFR Part 60, Subpart GG). In accordance with 40 CFR 60.4, copies of all requests, reports, applications, submittals and other communications shall be forwarded to both US EPA and the Department at the addresses listed below unless otherwise noted.

Director
Air Toxics and Radiation
US EPA, Region III
1650 Arch Street
Philadelphia, PA 19103-2029

PA DEP
Southwest Regional Office
Air Quality Program
400 Waterfront Drive
Pittsburgh, PA 15222-4745

**SECTION E. Source Group Restrictions.**

Group Name: NSPS SUBPART KKKK

Group Description: Stationary Combustion Turbines Subpart KKKK

Sources included in this group

ID	Name
108	7700 BHP, SOLAR TAURUS 60-7800S TURBINE #3 (7,700 HP @ ISO)
109	SOLAR TAURUS 60-7800S TURBINE #4 (7,684 HP @ ISO)

I. RESTRICTIONS.**Emission Restriction(s).****# 001 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.4320]****Subpart KKKK - Standards of Performance for Stationary Combustion Turbines****What emission limits must I meet for nitrogen oxides (NOX)?**

The Owner/Operator shall comply with the applicable 40 CFR Part 60 Subpart KKKK NO_x emission limits:

a) You must meet the emission limits for NO_x specified in Table 1 to this subpart.

Table 1 excerpt:

Combustion turbine type	Combustion turbine heat input at peak load (HHV)	NO _x emission standard
New turbine firing natural gas output (1.2 lb/MMWh)	> 50 MMBtu/h and = 850 MMBtu/h	25 ppm at 15 percent O ₂ or 150 ng/J of useful

b) N/A

002 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.4330]**Subpart KKKK - Standards of Performance for Stationary Combustion Turbines****What emission limits must I meet for sulfur dioxide (SO₂)?**

The Owner/Operator shall comply with the applicable 40 CFR Part 60 Subpart KKKK SO₂ limits:

a) If your turbine is located in a continental area, you must comply with either paragraph (a)(1), (a)(2), or (a)(3) of this section. If your turbine is located in Alaska, you do not have to comply with the requirements in paragraph (a) of this section until January 1, 2008.

1) N/A

2) You must not burn in the subject stationary combustion turbine any fuel which contains total potential sulfur emissions in excess of 26 ng SO₂/J (0.060 lb SO₂/MMBtu) heat input. If your turbine simultaneously fires multiple fuels, each fuel must meet this requirement; or

3) N/A

b) N/A

II. TESTING REQUIREMENTS.**# 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?**

The Owner/Operator shall comply with the applicable 40 CFR Part 60 Subpart KKKK NO_x continuous compliance demonstration requirements:

a) If you are not using water or steam injection to control NO_x emissions, you must perform annual performance tests in accordance with §60.4400 to demonstrate continuous compliance. If the NO_x emission result from the performance test is less than or equal to 75 percent of the NO_x emission limit for the turbine, you may reduce the frequency of subsequent performance tests to once every 2 years (no more than 26 calendar months following the previous performance test). If the

**SECTION E. Source Group Restrictions.**

results of any subsequent performance test exceed 75 percent of the NOX emission limit for the turbine, you must resume annual performance tests.

b) As an alternative, you may install, calibrate, maintain and operate one of the following continuous monitoring systems:

- 1) Continuous emission monitoring as described in §§60.4335(b) and 60.4345, or
- 2) Continuous parameter monitoring as follows:

i. N/A

ii. For any lean premix stationary combustion turbine, you must continuously monitor the appropriate parameters to determine whether the unit is operating in low-NOX mode.

iii. N/A

iv. N/A

004 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.4400]

Subpart KKKK - Standards of Performance for Stationary Combustion Turbines

How do I conduct the initial and subsequent performance tests, regarding NOX ?

The Owner/Operator shall comply with the applicable 40 CFR Part 60 Subpart KKKK NOx performance testing requirements:

a) You must conduct an initial performance test, as required in §60.8. Subsequent NOX performance tests shall be conducted on an annual basis (no more than 14 calendar months following the previous performance test).

1) There are two general methodologies that you may use to conduct the performance tests. For each test run:

i. Measure the NOX concentration (in parts per million (ppm)), using EPA Method 7E or EPA Method 20 in appendix A of this part. For units complying with the output based standard, concurrently measure the stack gas flow rate, using EPA Methods 1 and 2 in appendix A of this part, and measure and record the electrical and thermal output from the unit. Then, use the following equation to calculate the NOX emission rate:

$$E = 1.194 \times 10^{-7} \times (\text{NOX})_c \times Q_{\text{std}} / P \quad (\text{Eq. 5})$$

Where:

E = NOX emission rate, in lb/MWh

1.194×10^{-7} = conversion constant, in lb/dscf-ppm

(NOX)_c = average NOX concentration for the run, in ppm

Q_{std} = stack gas volumetric flow rate, in dscf/hr

P = gross electrical and mechanical energy output of the combustion turbine, in MW (for simple-cycle operation), for combined-cycle operation, the sum of all electrical and mechanical output from the combustion and steam turbines, or, for combined heat and power operation, the sum of all electrical and mechanical output from the combustion and steam turbines plus all useful recovered thermal output not used for additional electric or mechanical generation, in MW, calculated according to §60.4350(f)(2); or

ii. Measure the NOX and diluent gas concentrations, using either EPA Methods 7E and 3A, or EPA Method 20 in appendix A of this part. Concurrently measure the heat input to the unit, using a fuel flowmeter (or flowmeters), and measure the electrical and thermal output of the unit. Use EPA Method 19 in appendix A of this part to calculate the NOX emission rate in lb/MMBtu. Then, use Equations 1 and, if necessary, 2 and 3 in §60.4350(f) to calculate the NOX emission rate in lb/MWh.

2) Sampling traverse points for NOX and (if applicable) diluent gas are to be selected following EPA Method 20 or EPA Method 1 (non-particulate procedures), and sampled for equal time intervals. The sampling must be performed with a traversing single-hole probe, or, if feasible, with a stationary multi-hole probe that samples each of the points sequentially. Alternatively, a multi-hole probe designed and documented to sample equal volumes from each hole may be used to sample simultaneously at the required points.

3) Notwithstanding paragraph (a)(2) of this section, you may test at fewer points than are specified in EPA Method 1 or EPA Method 20 in appendix A of this part if the following conditions are met:

**SECTION E. Source Group Restrictions.**

i. You may perform a stratification test for NOX and diluent pursuant to

A. [Reserved], or

B. The procedures specified in section 6.5.6.1(a) through (e) of appendix A of part 75 of this chapter.

ii. Once the stratification sampling is completed, you may use the following alternative sample point selection criteria for the performance test:

A. If each of the individual traverse point NOX concentrations is within ± 10 percent of the mean concentration for all traverse points, or the individual traverse point diluent concentrations differs by no more than ± 5 ppm or ± 0.5 percent CO₂ (or O₂) from the mean for all traverse points, then you may use three points (located either 16.7, 50.0 and 83.3 percent of the way across the stack or duct, or, for circular stacks or ducts greater than 2.4 meters (7.8 feet) in diameter, at 0.4, 1.2, and 2.0 meters from the wall). The three points must be located along the measurement line that exhibited the highest average NOX concentration during the stratification test; or

B. For turbines with a NOX standard greater than 15 ppm @ 15% O₂, you may sample at a single point, located at least 1 meter from the stack wall or at the stack centroid if each of the individual traverse point NOX concentrations is within ± 5 percent of the mean concentration for all traverse points, or the individual traverse point diluent concentrations differs by no more than ± 3 ppm or ± 0.3 percent CO₂ (or O₂) from the mean for all traverse points; or

C. For turbines with a NOX standard less than or equal to 15 ppm @ 15% O₂, you may sample at a single point, located at least 1 meter from the stack wall or at the stack centroid if each of the individual traverse point NOX concentrations is within ± 2.5 percent of the mean concentration for all traverse points, or the individual traverse point diluent concentrations differs by no more than ± 1 ppm or ± 0.15 percent CO₂ (or O₂) from the mean for all traverse points.

b) The performance test must be done at any load condition within plus or minus 25 percent of 100 percent of peak load. You may perform testing at the highest achievable load point, if at least 75 percent of peak load cannot be achieved in practice. You must conduct three separate test runs for each performance test. The minimum time per run is 20 minutes.

1) If the stationary combustion turbine combusts both oil and gas as primary or backup fuels, separate performance testing is required for each fuel.

2) N/A

3) N/A

4) Compliance with the applicable emission limit in §60.4320 must be demonstrated at each tested load level. Compliance is achieved if the three-run arithmetic average NOX emission rate at each tested level meets the applicable emission limit in §60.4320.

5) If you elect to install a CEMS, the performance evaluation of the CEMS may either be conducted separately or (as described in §60.4405) as part of the initial performance test of the affected unit.

6) The ambient temperature must be greater than 0 °F during the performance test.

005 [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?**

The Owner/Operator shall comply with the applicable 40 CFR Part 60 Subpart KKKK initial NO_x performance test:

If you elect to install and certify a NOX-diluent CEMS under §60.4345, then the initial performance test required under §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 §60.4320 and to provide the required reference method data for the RATA of the CEMS described under §60.4335.

d) Compliance with the applicable emission limit in §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.

**SECTION E. Source Group Restrictions.****# 006 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.4415]****Subpart KKKK - Standards of Performance for Stationary Combustion Turbines****How do I conduct the initial and subsequent performance tests for sulfur?**

The Owner/Operator shall comply with the applicable 40 CFR Part 60 Subpart KKKK sulfur performance testing requirements:

a) You must conduct an initial performance test, as required in §60.8. Subsequent SO₂ performance tests shall be conducted on an annual basis (no more than 14 calendar months following the previous performance test). There are three methodologies that you may use to conduct the performance tests.

1) If you choose to periodically determine the sulfur content of the fuel combusted in the turbine, a representative fuel sample would be collected following ASTM D5287 (incorporated by reference, see §60.17) for natural gas or ASTM D4177 (incorporated by reference, see §60.17) for oil. Alternatively, for oil, you may follow the procedures for manual pipeline sampling in section 14 of ASTM D4057 (incorporated by reference, see §60.17). The fuel analyses of this section may be performed either by you, a service contractor retained by you, the fuel vendor, or any other qualified agency. Analyze the samples for the total sulfur content of the fuel using:

i. N/A

ii. For gaseous fuels, ASTM D1072, or alternatively D3246, D4084, D4468, D4810, D6228, D6667, or Gas Processors Association Standard 2377 (all of which are incorporated by reference, see §60.17).

2) Measure the SO₂ concentration (in parts per million (ppm)), using EPA Methods 6, 6C, 8, or 20 in appendix A of this part. In addition, the American Society of Mechanical Engineers (ASME) standard, ASME PTC 19-10-1981-Part 10, "Flue and Exhaust Gas Analyses," manual methods for sulfur dioxide (incorporated by reference, see §60.17) can be used instead of EPA Methods 6 or 20. For units complying with the output based standard, concurrently measure the stack gas flow rate, using EPA Methods 1 and 2 in appendix A of this part, and measure and record the electrical and thermal output from the unit. Then use the following equation to calculate the SO₂ emission rate:

$$E = 1.664 \times 10^{-7} \times (\text{SO}_2)_c \times Q_{\text{std}} / P \quad (\text{Eq. 6})$$

Where:

E = SO₂ emission rate, in lb/MWh

1.664×10^{-7} = conversion constant, in lb/dscf-ppm

(SO₂)_c = average SO₂ concentration for the run, in ppm

Q_{std} = stack gas volumetric flow rate, in dscf/hr

P = gross electrical and mechanical energy output of the combustion turbine, in MW (for simple-cycle operation), for combined-cycle operation, the sum of all electrical and mechanical output from the combustion and steam turbines, or, for combined heat and power operation, the sum of all electrical and mechanical output from the combustion and steam turbines plus all useful recovered thermal output not used for additional electric or mechanical generation, in MW, calculated according to §60.4350(f)(2); or

3) Measure the SO₂ and diluent gas concentrations, using either EPA Methods 6, 6C, or 8 and 3A, or 20 in appendix A of this part. In addition, you may use the manual methods for sulfur dioxide ASME PTC 19-10-1981-Part 10 (incorporated by reference, see §60.17). Concurrently measure the heat input to the unit, using a fuel flowmeter (or flowmeters), and measure the electrical and thermal output of the unit. Use EPA Method 19 in appendix A of this part to calculate the SO₂ emission rate in lb/MMBtu. Then, use Equations 1 and, if necessary, 2 and 3 in §60.4350(f) to calculate the SO₂ emission rate in lb/MWh.

b) [Reserved]

**SECTION E. Source Group Restrictions.****III. MONITORING REQUIREMENTS.****# 007 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.4360]****Subpart KKKK - Standards of Performance for Stationary Combustion Turbines****How do I determine the total sulfur content of the turbine's combustion fuel?**

The Owner/Operator shall comply with the applicable 40 CFR Part 60 Subpart KKKK fuel sulfur content determination requirements:

You must monitor the total sulfur content of the fuel being fired in the turbine, except as provided in §60.4365. The sulfur content of the fuel must be determined using total sulfur methods described in §60.4415. Alternatively, if the total sulfur content of the gaseous fuel during the most recent performance test was less than half the applicable limit, ASTM D4084, D4810, D5504, or D6228, or Gas Processors Association Standard 2377 (all of which are incorporated by reference, see §60.17), which measure the major sulfur compounds, may be used.

008 [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?**

The Owner/Operator shall comply with the applicable 40 CFR Part 60 Subpart KKKK fuel sulfur monitoring exemption requirements:

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 SO₂/J (0.060 lb SO₂/MMBtu) heat input for units located in continental areas and 180 ng SO₂/J (0.42 lb SO₂/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 one of the following sources 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 SO₂/J (0.060 lb SO₂/MMBtu) heat input for continental areas and has potential sulfur emissions of less than less than 180 ng SO₂/J (0.42 lb SO₂/MMBtu) heat input for noncontinental areas; or

b) Representative fuel sampling data which show that the sulfur content of the fuel does not exceed 26 ng SO₂/J (0.060 lb SO₂/MMBtu) heat input for continental areas or 180 ng SO₂/J (0.42 lb SO₂/MMBtu) heat input for noncontinental areas. At a minimum, the amount of fuel sampling data specified in section 2.3.1.4 or 2.3.2.4 of appendix D to part 75 of this chapter is required.

009 [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 NO_x ?**

The Owner/Operator shall comply with the applicable 40 CFR Part 60 Subpart KKKK NO_x excess emissions and monitor downtime requirements:

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

a) N/A

b) For turbines using continuous emission monitoring, as described in §§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 NO_x emission rate exceeds the applicable emission limit in §60.4320. For the purposes of this subpart, a "4-hour rolling average NO_x emission rate" is the arithmetic average of the average NO_x 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 NO_x emission rates

**SECTION E. Source Group Restrictions.**

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, 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.

c) For turbines required to monitor combustion parameters or parameters that document proper operation of the NOX emission controls:

1) An excess emission is a 4-hour rolling unit operating hour average in which any monitored parameter does not achieve the target value or is outside the acceptable range defined in the parameter monitoring plan for the unit.

2) A period of monitor downtime is a unit operating hour in which any of the required parametric data are either not recorded or are invalid.

IV. RECORDKEEPING REQUIREMENTS.

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

V. REPORTING REQUIREMENTS.**# 010 [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?**

The Owner/Operator shall comply with the applicable 40 CFR Part 60 Subpart KKKK reporting requirements:

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 §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 §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.

011 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.4395]**Subpart KKKK - Standards of Performance for Stationary Combustion Turbines****When must I submit my reports?**

The Owner/Operator shall comply with the applicable 40 CFR Part 60 Subpart KKKK reporting deadlines:

All reports required under §60.7(c) must be postmarked by the 30th day following the end of each 6-month period.

VI. WORK PRACTICE REQUIREMENTS.**# 012 [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?**

The Owner/Operator shall comply with the applicable 40 CFR Part 60 Subpart KKKK general requirements:

**SECTION E. Source Group Restrictions.**

a) 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.

b) N/A

VII. ADDITIONAL REQUIREMENTS.

013 [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?

The Solar Taurus 60 turbines (Source ID 108 & 109) authorized to operate under this Operating Permit are subject to the requirements under 40 CFR Part 60, Subpart KKKK – Standards of Performance for Stationary Combustion Turbines.

014 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.4420]

Subpart KKKK - Standards of Performance for Stationary Combustion Turbines

What definitions apply to this subpart?

All terms used in 40 CFR Part 60 Subpart KKKK shall have the meaning given in 40 CFR §60.4420 or else in the Clean Air Act and 40 CFR Part 60 Subpart A.

**SECTION F. Alternative Operation Requirements.**

No Alternative Operations exist for this State Only facility.

**SECTION G. Emission Restriction Summary.**

No emission restrictions listed in this section of the permit.

**SECTION H. Miscellaneous.**

The following shall be considered insignificant sources of air emissions:

Pipeline Fluids Tank P-2 - 1,000 gallons

Wastewater Tank K-1 - 3,000 gallons

Plant Hot Water Heater - 0.040 MMBtu/hr

Peerless Boiler - 0.416 MMBtu/hr

Ajax Backup Boiler - 2.5 MMBtu/hr

York Gas Furnace - 0.12 MMBtu/hr

Produced Fluids Tank TK-1 - 2,500 gallons

Lube Oil Tank TK-2 - 1,000 gallons

Facility Blowdowns (Emissions from facility blowdowns are required to be reported as part of the facility emission reporting requirements.)



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