



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

**PLAN APPROVAL**

Issue Date: June 10, 2013

Effective Date: June 10, 2013

Expiration Date: December 10, 2014

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 construct, install, modify or reactivate the air emission source(s) more fully described in the site inventory list. This Facility is subject to all terms and conditions specified in this plan approval. Nothing in this plan approval 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 plan approval condition is set forth in brackets. All terms and conditions in this permit are federally enforceable unless otherwise designated as "State-Only" requirements.

**Plan Approval No. 26-00588A**

Federal Tax Id - Plant Code: 26-4578063-28

**Owner Information**

Name: LAUREL MTN MIDSTREAM OPR LLC

Mailing Address: PARK PLACE 2  
2000 COMMERCE DR  
PITTSBURGH, PA 15275

**Plant Information**

Plant: LAUREL MTN MIDSTREAM LLC/SHAMROCK COMP STA

Location: 26 Fayette County 26918 German Township

SIC Code: 1389 Mining - Oil And Gas Field Services, Nec

**Responsible Official**

Name: DANIEL HAEFELIN

Title: OPR MGR

Phone: (412) 865 - 1767

**Plan Approval Contact Person**

Name: DICK BAKER

Title: SR ENV SPECIALIST

Phone: (412) 787 - 4296

[Signature] \_\_\_\_\_

MARK A. WAYNER, SOUTHWEST REGION AIR PROGRAM MANAGER



### Plan Approval Description

This Plan Approval is to allow the construction and temporary operation of one new natural gas-fired compressor turbine, natural gas-fired emergency generator, dehydrator with reboiler, and produced water tank by Laurel Mountain Midstream, LLC at the Shamrock Compressor Station located in German Township, Fayette County. Additionally, this plan approval includes a combined hours of operation limitation on the currently authorized natural gas-fired compressor engines, a reduced rating on the currently authorized natural gas-fired turbine, and a process change on the currently authorized dehydrator.



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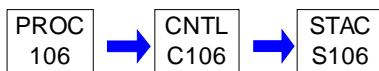
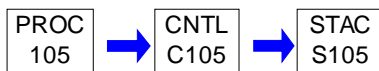
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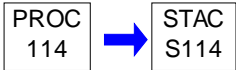
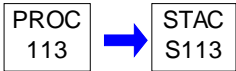
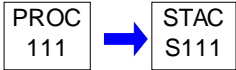
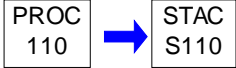
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Source ID	Source Name	Capacity/Throughput	Fuel/Material
104	CATERPILLAR G3516B COMPRESSOR ENGINE #1 (1380 BHP)		
105	CATERPILLAR G3516B COMPRESSOR ENGINE #2 (1380 BHP)		
106	CATERPILLAR G3516B COMPRESSOR ENGINE #3 (1380 BHP)		
107	CATERPILLAR G3516B COMPRESSOR ENGINE #4 (1380 BHP)		
108	CATERPILLAR G3516B COMPRESSOR ENGINE #5 (1380 BHP)		
109	CATERPILLAR G3516B COMPRESSOR ENGINE #6 (1380 BHP)		
110	SOLAR MARS 100-16000S TURBINE (15,252 HP)	113.600 MMBTU/HR	
111	TEG DEHYDRATOR 1 (200 MMSCF/DAY)		
113	SOLAR TITAN 130-20502S TURBINE (19,553 HP)	138.230 MMBTU/HR	
114	TEG DEHYDRATOR 2 (200 MMSCF/DAY)		
115	CATERPILLAR G3516B EMERGENCY GENERATOR (1,818 BHP)		
C104	ENGINE #1 OXIDATION CATALYST		
C105	ENGINE #2 OXIDATION CATALYST		
C106	ENGINE #3 OXIDATION CATALYST		
C107	ENGINE #4 OXIDATION CATALYST		
C108	ENGINE #5 OXIDATION CATALYST		
C109	ENGINE #6 OXIDATION CATALYST		
C115	EMERGENCY GENERATOR OXIDATION CATALYST		
S104	ENGINE #1 STACK		
S105	ENGINE #2 STACK		
S106	ENGINE #3 STACK		
S107	ENGINE #4 STACK		
S108	ENGINE #5 STACK		
S109	ENGINE #6 STACK		
S110	SOLAR MARS TURBINE STACK		
S111	DEHYDRATOR 1 STACK		
S113	SOLAR TITAN TURBINE STACK		
S114	DEHYDRATOR 2 STACK		
S115	EMERGENCY GENERATOR STACK		

**PERMIT MAPS**

**PERMIT MAPS**

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

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

**#002 [25 Pa. Code § 127.12b (a) (b)]****Future Adoption of Requirements**

The issuance of this plan approval does not prevent the future adoption by the Department of any rules, regulations or standards, or the issuance of orders necessary to comply with the requirements of the Federal Clean Air Act or the Pennsylvania Air Pollution Control Act, or to achieve or maintain ambient air quality standards. The issuance of this plan approval shall not be construed to limit the Department's enforcement authority.

**#003 [25 Pa. Code § 127.12b]****Plan Approval Temporary Operation**

This plan approval authorizes temporary operation of the source(s) covered by this plan approval provided the following conditions are met.

(a) When construction, installation, modification, or reactivation is being conducted, the permittee shall provide written notice to the Department of the completion of the activity approved by this plan approval and the permittee's intent to commence operation at least five (5) working days prior to the completion of said activity. The notice shall state when the activity will be completed and when the permittee expects to commence operation. When the activity involves multiple sources on different time schedules, notice is required for the commencement of operation of each source.

(b) Pursuant to 25 Pa. Code § 127.12b (d), temporary operation of the source(s) is authorized to facilitate the shakedown of sources and air cleaning devices, to permit operations pending the issuance of a permit under 25 Pa. Code Chapter 127, Subchapter F (relating to operating permits) or Subchapter G (relating to Title V operating permits) or to permit the evaluation of the air contaminant aspects of the source.

(c) This plan approval authorizes a temporary operation period not to exceed 180 days from the date of commencement of operation, provided the Department receives notice from the permittee pursuant to paragraph (a), above.

(d) The permittee may request an extension of the 180-day shakedown period if further evaluation of the air contamination aspects of the source(s) is necessary. The request for an extension shall be submitted, in writing, to the Department at least 15 days prior to the end of the initial 180-day shakedown period and shall provide a description of the compliance status of the source, a detailed schedule for establishing compliance, and the reasons compliance has not been established. This temporary operation period will be valid for a limited time and may be extended for additional limited periods, each not to exceed 180 days.

(e) The notice submitted by the permittee pursuant to subpart (a) above, prior to the expiration of the plan approval, shall modify the plan approval expiration date on Page 1 of this plan approval. The new plan approval expiration date shall be 180 days from the date of commencement of operation.

**#004 [25 Pa. Code § 127.12(a) (10)]****Content of Applications**

The permittee shall maintain and operate the sources and associated air cleaning devices in accordance with good engineering practice as described in the plan approval application submitted to the Department.

**#005 [25 Pa. Code §§ 127.12(c) and (d) & 35 P.S. § 4013.2]****Public Records and Confidential Information**

(a) The records, reports or information obtained by the Department or referred to at public hearings shall be available to the public, except as provided in paragraph (b) of this condition.

(b) Upon cause shown by the permittee that the records, reports or information, or a particular portion thereof, but not emission data, to which the Department has access under the act, if made public, would divulge production or sales figures or methods, processes or production unique to that person or would otherwise tend to affect adversely the

**SECTION B. General Plan Approval Requirements**

competitive position of that person by revealing trade secrets, including intellectual property rights, the Department will consider the record, report or information, or particular portion thereof confidential in the administration of the act. The Department will implement this section consistent with sections 112(d) and 114(c) of the Clean Air Act (42 U.S.C.A. § § 7412(d) and 7414(c)). Nothing in this section prevents disclosure of the report, record or information to Federal, State or local representatives as necessary for purposes of administration of Federal, State or local air pollution control laws, or when relevant in a proceeding under the act.

**#006 [25 Pa. Code § 127.12b]****Plan Approval terms and conditions.**

[Additional authority for this condition is derived from 25 Pa. Code Section 127.13]

(a) This plan approval will be valid for a limited time, as specified by the expiration date contained on Page 1 of this plan approval. Except as provided in § § 127.11a and 127.215 (relating to reactivation of sources; and reactivation), at the end of the time, if the construction, modification, reactivation or installation has not been completed, a new plan approval application or an extension of the previous approval will be required.

(b) If construction has commenced, but cannot be completed before the expiration of this plan approval, an extension of the plan approval must be obtained to continue construction. To allow adequate time for departmental action, a request for the extension shall be postmarked at least thirty (30) days prior to the expiration date. The request for an extension shall include the following:

- (i) A justification for the extension,
- (ii) A schedule for the completion of the construction

If construction has not commenced before the expiration of this plan approval, then a new plan approval application must be submitted and approval obtained before construction can commence.

(c) If the construction, modification or installation is not commenced within 18 months of the issuance of this plan approval or if there is more than an 18-month lapse in construction, modification or installation, a new plan approval application that meets the requirements of 25 Pa. Code Chapter 127, Subchapter B (related to plan approval requirements), Subchapter D (related to prevention of significant deterioration of air quality), and Subchapter E (related to new source review) shall be submitted. The Department may extend the 18-month period upon a satisfactory showing that an extension is justified.

**#007 [25 Pa. Code § 127.32]****Transfer of Plan Approvals**

(a) This plan approval may not be transferred from one person to another except when a change of ownership is demonstrated to the satisfaction of the Department and the Department approves the transfer of the plan approval in writing.

(b) Section 127.12a (relating to compliance review) applies to a request for transfer of a plan approval. A compliance review form shall accompany the request.

(c) This plan approval is valid only for the specific source and the specific location of the source as described in the application.

**#008 [25 Pa. Code § 127.12(4) & 35 P.S. § 4008 & § 114 of the CAA]****Inspection and Entry**

(a) 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.

(b) The permittee shall also allow the Department to have access at reasonable times to said sources and associated air cleaning devices with such measuring and recording equipment, including equipment recording visual observations, as the Department deems necessary and proper for performing its duties and for the effective enforcement of the Air Pollution Control Act and regulations adopted under the act.



**SECTION B. General Plan Approval Requirements**

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

**#009 [25 Pa. Code 127.13a]****Plan Approval Changes for Cause**

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

- (a) The permittee constructs or operates the source subject to the plan approval in violation of the act, the Clean Air Act, the regulations promulgated under the act or the Clean Air Act, a plan approval or permit or in a manner that causes air pollution.
- (b) 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.
- (c) The permittee fails to submit a report required by this plan approval.
- (d) The Environmental Protection Agency determines that this plan approval is not in compliance with the Clean Air Act or the regulations thereunder.

**#010 [25 Pa. Code §§ 121.9 & 127.216]****Circumvention**

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

**#011 [25 Pa. Code § 127.12c]****Submissions**

Reports, test data, monitoring data, notifications shall be submitted to the:

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

**#012 [25 Pa. Code § 127.12(9) & 40 CFR Part 68]****Risk Management**

- (a) If required by Section 112(r) of the Clean Air Act, the permittee shall develop and implement an accidental release program consistent with requirements of the Clean Air Act, 40 CFR Part 68 (relating to chemical accident prevention provisions) and the Federal Chemical Safety Information, Site Security and Fuels Regulatory Relief Act (P.L. 106-40).
- (b) The permittee shall prepare and implement a Risk Management Plan (RMP) which meets the requirements of Section 112(r) of the Clean Air Act, 40 CFR Part 68 and the Federal Chemical Safety Information, Site Security and Fuels Regulatory Relief Act when a regulated substance listed in 40 CFR § 68.130 is present in a process in more than the listed threshold quantity at the facility. The permittee shall submit the RMP to the Environmental Protection Agency according to the following schedule and requirements:
  - (1) The permittee shall submit the first RMP to a central point specified by the Environmental Protection Agency no later than the latest of the following:

**SECTION B. General Plan Approval Requirements**

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

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

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

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

**#013 [25 Pa. Code § 127.25]****Compliance Requirement**

A person may not cause or permit the operation of a source subject to § 127.11 (relating to plan approval requirements), unless the source and air cleaning devices identified in the application for the plan approval and the plan approval issued to the source, are operated and maintained in accordance with specifications in the application and conditions in the plan approval issued by the Department. A person may not cause or permit the operation of an air contamination source subject to this chapter in a manner inconsistent with good operating practices.



## SECTION C. Site Level Plan Approval Requirements

### I. RESTRICTIONS.

#### Emission Restriction(s).

##### # 001 [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) Coke oven batteries, provided the fugitive air contaminants emitted from any coke oven battery comply with the standards for visible fugitive emissions in §§ 123.44 and 129.15 (relating to limitations of visible fugitive air contaminants from operation of any coke oven battery; and coke pushing operations).

(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.

(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.

**SECTION C. Site Level Plan Approval Requirements**

(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.

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

A person 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 person's property.

**# 003 [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.

**# 004 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

Emissions of CO<sub>2</sub>e from the Facility shall not exceed 187,820 tons in any consecutive 12-month period.

**II. TESTING REQUIREMENTS.****# 005 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

Performance testing shall be conducted as follows:

- a. The Owner/Operator shall submit three copies of a pre-test protocol to the Department for review at least 45 days prior to the performance of any EPA reference method stack test. The Owner/Operator shall submit three copies of a one-time protocol to the Department for review for the use of a portable analyzer and may repeat portable analyzer testing without additional protocol approvals provided that the same method and equipment are used. All proposed performance test methods shall be identified in the pre-test protocol and approved by the Department prior to testing.
- b. The Owner/Operator shall notify the Regional Air Quality Manager at least 15 days prior to any performance test so that an observer may be present at the time of the test. Notification shall also be sent to the Division of Source Testing and Monitoring. 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.
- 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. Pursuant to 25 Pa. Code Section 139.53(a)(1) and 139.53(a)(3) all submittals, besides notifications, shall be

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accomplished through PSIMS\*Online available through <https://www.depgreenport.state.pa.us/ecomm/Login.jsp> when it becomes available. If internet submittal can not be accomplished, three copies of the submittal shall be sent to the Pennsylvania Department of Environmental Protection, Bureau of Air Quality, Division of Source Testing and Monitoring, 400 Market Street, 12th Floor Rachael Carson State Office Building, Harrisburg, PA 17105-8468 with deadlines verified through document postmarks.

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.****# 006 [25 Pa. Code §127.12b]****Plan approval 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, during daylight hours, and while the sources are operating. The facility-wide inspection shall be conducted for the presence of the following:

- a. Visible stack emissions;
- b. Fugitive emissions; and
- c. Odors at the property line.

If visible stack emissions, fugitive emissions, or odors are apparent, the Owner/Operator shall take corrective action. Records of each inspection 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.

**IV. RECORDKEEPING REQUIREMENTS.****# 007 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

The Owner/Operator shall maintain the following comprehensive and accurate records:

- a. The number of hours of operation per month that each engine and turbine operated.
- b. The number of hours per month that either turbine is not operational.
- c. The amount of fuel used per month by each engine and turbine.
- d. Records of actual throughput per day and the glycol circulation rate for the dehydrator.
- e. Records including a description of testing methods, results, all turbine and engine operating data collected during tests, and a copy of the calculations performed to determine compliance with emission standards for the each turbine and engine.
- f. Copies of the report that demonstrates that the turbine was operating at maximum routine operating conditions and within plus or minus 25 percent of 100 percent peak load during performance testing.
- g. Copies of the manufacturer's recommended maintenance schedule for each turbine, engine, and catalyst.
- h. Records of any maintenance conducted on each turbine, engine, and catalyst.
- i. The total sulfur content of the natural gas being fired in the turbines or the demonstration that the natural gas does not exceed potential sulfur emissions of 0.060 lb SO<sub>2</sub>/MMBtu of heat input consistent with 40 CFR §60.4365.
- j. Records of a fractional gas analysis performed at least once six months on the inlet natural gas to the facility.
- k. Records of facility-wide inspections including the date, time, name, and title of the observer, along with any corrective action taken as a result.
- l. Records of any leak detected and associated repair activity through the leak detection and repair or maintenance program.

**# 008 [25 Pa. Code §127.12b]****Plan approval 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.

**SECTION C. Site Level Plan Approval Requirements****V. REPORTING REQUIREMENTS.****# 009 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

Malfunction reporting shall be conducted as follows:

a. The Owner/Operator shall report each malfunction that occurs at this Facility that poses an imminent and substantial danger to the public health and safety or the environment or which it should reasonably believe may result in citizen complaints to the Department. For purposes of this condition, a malfunction is defined as any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment or source to operate in a normal or usual manner that may result in an increase in the emission of air contaminants. Examples of malfunctions that may result in citizen complaints include but are not limited to: large dust plumes, heavy smoke, a spill or release that results in a malodor that is detectable outside the property of the person on whose land the source is being operated.

b. When the malfunction poses an imminent and substantial danger to the public health and safety or the environment, the notification shall be submitted to the Department no later than one hour after the incident. All other malfunctions that must be reported under subsection (a) shall be reported to the Department no later than the next business day.

c. The notice shall describe the following:

- i. Name and location of the facility;
- ii. Nature and cause of the malfunction;
- iii. Time when the malfunction or breakdown was first observed;
- iv. Expected duration of excess emissions; and
- v. Estimated rate of emissions.

d. The owner or operator shall notify the Department immediately when corrective measures have been accomplished.

e. Subsequent to the malfunction, the owner/operator shall submit a full written report to the Department including the items identified in (c) and corrective measures taken on the malfunction within 15 days, if requested.

f. The owner/operator shall submit reports on the operation and maintenance of the source to the Regional Air Program Manager at such intervals and in such form and detail as may be required by the Department. Information required in the reports may include, but is not limited to, process weight rates, firing rates, hours of operation, and maintenance schedules.

g. Malfunctions shall be reported to the Department at the following address:

PA DEP  
Office of Air Quality  
400 Waterfront Drive  
Pittsburgh, PA 15222-4745  
(412) 442-4000

**# 010 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

The Owner/Operator of each stationary source emitting criteria pollutants (including but not limited to NO<sub>x</sub>, CO, VOC [including formaldehyde], SO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>), HAP, greenhouse gases (GHG) in the form of CO<sub>2</sub> equivalent (CO<sub>2e</sub>), and GHG on a mass-basis shall provide the Department with a statement, in a form as the Department may prescribe, for classes or categories of sources, showing the actual emissions of criteria pollutants, HAP (per the Department's Emissions Inventory Reporting Instructions), GHG in the form of CO<sub>2e</sub>, and GHG on a mass-basis from that source for each reporting period. A description of the method used to calculate the emissions and the time period over which the calculation is based shall be included. The statement shall also contain a certification by a company officer or the plant manager that the information contained in the statement is accurate.

**# 011 [25 Pa. Code §135.3]****Reporting**

Annual emission reporting shall be conducted as follows:

**SECTION C. Site Level Plan Approval Requirements**

- a. The Owner/Operator shall submit by March 1 of each year, a source report for the preceding calendar year. The report shall include information for all previously reported sources, new sources which were first operated during the proceeding calendar year, and sources modified during the same period which were not previously reported.
- b. A person who received initial notification by the Department that a source report is necessary shall submit an initial source report within 60 days after receiving the notification or by March 1 of the year following the year for which the report is required, whichever is later.
- c. A source Owner/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.

**# 012 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.4]****Subpart A - General Provisions****Address.**

The Facility is subject New Source Performance Standards from 40 CFR Part 60 Subparts JJJJ and KKKK and National Emission Standards for Hazardous Air Pollutants from 40 CFR Part 63 Subparts HH and ZZZZ. In accordance with 40 CFR §60.4 and 40 CFR §63.9, copies of all requests, reports, applications, submittals and other communications regarding the emergency generator and turbine shall be forwarded to both EPA and the Department at the addresses listed below unless otherwise noted.

Director	PADEP
Air Protection Section	Air Quality Program
Mail Code 3AP00	400 Waterfront Drive
US EPA, Region III	Pittsburgh, PA 15222-4745
1650 Arch Street	
Philadelphia, PA 19101-2029	

**# 013 [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), 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), and opacity observations (within 30 days).

**VI. WORK PRACTICE REQUIREMENTS.****# 014 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

The Owner/Operator shall incorporate a leak detection and repair or maintenance program at the Facility. Components subject to this program shall include but not be limited to valves, connectors, open ended lines, pressure relief valves, and meters. Frequency of leak detection shall be on a quarterly basis. Acceptable leak detection methods include any of the following:

- a. Optical gas imaging instrument. Use an optical gas imaging instrument for equipment leak detection in accordance with 40 CFR part 60, subpart A, § 60.18 of the Alternative work practice for monitoring equipment leaks, § 60.18(i)(1)(i); § 60.18(i)(2)(i) except that the monitoring frequency shall be annual using the detection sensitivity level of 60 grams per hour as stated in 40 CFR Part 60, subpart A, Table 1: Detection Sensitivity Levels; § 60.18(i)(2)(ii) and (iii) except the gas chosen shall be methane, and § 60.18(i)(2)(iv) and (v); § 60.18(i)(3); § 60.18(i)(4)(i) and (v); including the requirements for daily instrument checks and distances, and excluding requirements for video records. Any emissions detected by the optical gas imaging instrument is a leak unless screened with Method 21 (40 CFR part 60, appendix A-7) monitoring, in which case 10,000 ppm or greater is designated a leak. In addition, you must operate the optical gas imaging instrument to image the source types required by this subpart in accordance with the instrument manufacturer's operating parameters. Unless using methods in paragraph (b) of this condition, an optical gas imaging instrument must be used for all source types that are inaccessible and cannot be monitored without elevating the monitoring personnel more than 2 meters above a support surface.
- b. Method 21. Use the equipment leak detection methods in 40 CFR part 60, appendix A-7, Method 21. If using Method 21

**SECTION C. Site Level Plan Approval Requirements**

monitoring, if an instrument reading of 10,000 ppm or greater is measured, a leak is detected. Inaccessible emissions sources, as defined in 40 CFR part 60, are not exempt from this subpart. Owners or operators must use alternative leak detection devices as described in paragraph (a) or (b) of this condition to monitor inaccessible equipment leaks or vented emissions.

c. Infrared laser beam illuminated instrument. Use an infrared laser beam illuminated instrument for equipment leak detection. Any emissions detected by the infrared laser beam illuminated instrument is a leak unless screened with Method 21 monitoring, in which case 10,000 ppm or greater is designated a leak. In addition, you must operate the infrared laser beam illuminated instrument to detect the source types required by 40 CFR Part 60 Subpart W in accordance with the instrument manufacturer's operating parameters.

d. Acoustic leak detection device. Use the acoustic leak detection device to detect through-valve leakage. When using the acoustic leak detection device to quantify the through-valve leakage, you must use the instrument manufacturer's calculation methods to quantify the through-valve leak. When using the acoustic leak detection device, if a leak of 3.1 scf per hour or greater is calculated, a leak is detected. In addition, you must operate the acoustic leak detection device to monitor the source valves required by this subpart in accordance with the instrument manufacturer's operating parameters. Acoustic stethoscope type devices designed to detect through valve leakage when put in contact with the valve body and that provide an audible leak signal but do not calculate a leak rate can be used to identify non-leakers with subsequent measurement required to calculate the rate if through-valve leakage is identified. Leaks are reported if a leak rate of 3.1 scf per hour or greater is measured.

**# 015 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

All air contamination sources and air cleaning devices authorized under this Plan Approval shall be operated per the manufacturer's specifications and maintained according to the manufacturer's recommended maintenance schedule.

**VII. ADDITIONAL REQUIREMENTS.****# 016 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

The Owner/Operator shall submit requests to extend the temporary operation period at least 15 days prior to the expiration date of any authorized period of temporary operation until the source(s), and modifications to existing source(s), covered by this authorization are incorporated into an issued TVOP for this facility.

**# 017 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

The Owner/Operator shall comply with all applicable requirements of 40 CFR Part 60 Subpart OOOO, effective October 15, 2012.

**# 018 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

Upon determination by the Owner/Operator that the source(s) covered by this Plan Approval are in compliance with all conditions of the Plan Approval the Owner/Operator shall contact the Department's reviewing engineer and schedule the Initial Operating Permit Inspection.

**# 019 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

Upon completion of the Initial Operating Permit Inspection and determination by the Department that the source(s) covered by this Plan Approval are in compliance with all conditions of the Plan Approval the Owner/Operator shall submit a revision to a pending Title V Operating Permit ("TVOP") application for this Facility.

**# 020 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

If, at any time, the Department has cause to believe that air contaminant emissions from the sources listed in this Plan Approval may be in excess of the limitations specified in, or established pursuant to this plan approval or the permittee's 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



**SECTION C. Site Level Plan Approval Requirements**

such time as it notifies the company that testing is required.

**# 021 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

This Plan Approval is to allow the construction and temporary operation of one new natural gas-fired compressor turbine, natural gas-fired emergency generator, dehydrator with reboiler, and produced water tank by Laurel Mountain Midstream, LLC at the Shamrock Compressor Station located in German Township, Fayette County. Additionally, this plan approval includes a combined hours of operation limitation on the currently authorized natural gas-fired compressor engines, a reduced rating on the currently authorized natural gas-fired turbine, and a process change on the currently authorized dehydrator.

**# 022 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

New air contamination sources and air cleaning devices authorized to be installed at the Facility under this Plan Approval are as follows:

- One (1) Solar, Model No. Titan 130-20502S, natural gas-fired turbine, 19,553 HP.
- One (1) Caterpillar, Model G3516B, lean burn natural gas-fired emergency generator, 1,818 bhp @ 1,800 rpm; controlled by an EMIT Technologies (or equivalent), Model No. ELX-4200Z-1616F-43CEE-24, oxidation catalyst; regulated by an ADEM III (or equivalent) automatic air/fuel ratio controller.
- One (1) Tryer Process Equipment (or equivalent), tri-ethylene glycol (TEG) dehydrator, 200 MMscf/day; still vent and flash tank emission capture and combustion as reboiler fuel.
- One (1) natural gas-fired and/or dehydrator vent gas-fired reboiler, 1.71 MMBtu/hr.
- One (1) produced water tank, 476 bbl capacity; uncontrolled.

**# 023 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

Each air contamination source and air cleaning device authorized for installation and temporary operation under PA-26-00588 at this Facility remains subject to all the conditions and requirements of PA-26-00588 unless superseded by a more stringent requirement of this Plan Approval.

**VIII. COMPLIANCE CERTIFICATION.**

No additional compliance certifications exist except as provided in other sections of this plan approval including Section B (relating to Plan Approval General Requirements).

**IX. COMPLIANCE SCHEDULE.**

No compliance milestones exist.

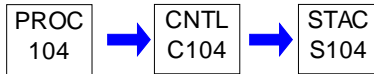
**SECTION D. Source Level Plan Approval Requirements**

Source ID: 104

Source Name: CATERPILLAR G3516B COMPRESSOR ENGINE #1 (1380 BHP)

Source Capacity/Throughput:

Conditions for this source occur in the following groups: G101

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval 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 plan approval including Section B (Plan Approval 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 plan approval including Section B (Plan Approval 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 plan approval including Section B (Plan Approval 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 plan approval including Section B (Plan Approval 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 plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

**VII. ADDITIONAL REQUIREMENTS.**

No additional requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

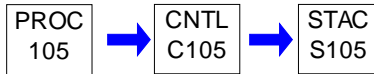
**SECTION D. Source Level Plan Approval Requirements**

Source ID: 105

Source Name: CATERPILLAR G3516B COMPRESSOR ENGINE #2 (1380 BHP)

Source Capacity/Throughput:

Conditions for this source occur in the following groups: G101

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval 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 plan approval including Section B (Plan Approval 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 plan approval including Section B (Plan Approval 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 plan approval including Section B (Plan Approval 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 plan approval including Section B (Plan Approval 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 plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

**VII. ADDITIONAL REQUIREMENTS.**

No additional requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

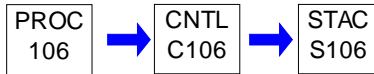
**SECTION D. Source Level Plan Approval Requirements**

Source ID: 106

Source Name: CATERPILLAR G3516B COMPRESSOR ENGINE #3 (1380 BHP)

Source Capacity/Throughput:

Conditions for this source occur in the following groups: G101

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval 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 plan approval including Section B (Plan Approval 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 plan approval including Section B (Plan Approval 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 plan approval including Section B (Plan Approval 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 plan approval including Section B (Plan Approval 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 plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

**VII. ADDITIONAL REQUIREMENTS.**

No additional requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

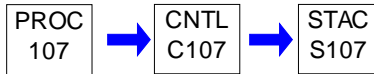
**SECTION D. Source Level Plan Approval Requirements**

Source ID: 107

Source Name: CATERPILLAR G3516B COMPRESSOR ENGINE #4 (1380 BHP)

Source Capacity/Throughput:

Conditions for this source occur in the following groups: G101

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval 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 plan approval including Section B (Plan Approval 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 plan approval including Section B (Plan Approval 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 plan approval including Section B (Plan Approval 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 plan approval including Section B (Plan Approval 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 plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

**VII. ADDITIONAL REQUIREMENTS.**

No additional requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

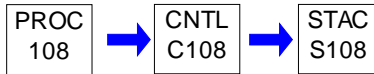
**SECTION D. Source Level Plan Approval Requirements**

Source ID: 108

Source Name: CATERPILLAR G3516B COMPRESSOR ENGINE #5 (1380 BHP)

Source Capacity/Throughput:

Conditions for this source occur in the following groups: G101

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval 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 plan approval including Section B (Plan Approval 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 plan approval including Section B (Plan Approval 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 plan approval including Section B (Plan Approval 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 plan approval including Section B (Plan Approval 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 plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

**VII. ADDITIONAL REQUIREMENTS.**

No additional requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

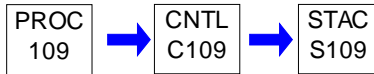
**SECTION D. Source Level Plan Approval Requirements**

Source ID: 109

Source Name: CATERPILLAR G3516B COMPRESSOR ENGINE #6 (1380 BHP)

Source Capacity/Throughput:

Conditions for this source occur in the following groups: G101

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval 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 plan approval including Section B (Plan Approval 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 plan approval including Section B (Plan Approval 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 plan approval including Section B (Plan Approval 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 plan approval including Section B (Plan Approval 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 plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

**VII. ADDITIONAL REQUIREMENTS.**

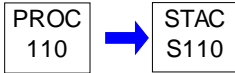
No additional requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

**SECTION D. Source Level Plan Approval Requirements**

Source ID: 110

Source Name: SOLAR MARS 100-16000S TURBINE (15,252 HP)

Source Capacity/Throughput: 113.600 MMBTU/HR

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

**IV. RECORDKEEPING REQUIREMENTS.**

No additional record keeping requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

**V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

**VI. WORK PRACTICE REQUIREMENTS.**

No additional work practice requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

**VII. ADDITIONAL REQUIREMENTS.****# 001 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

Output power rating of the previously installed Solar Mars 100 turbine has been reduced from 16,847 bhp to 15,252 bhp in order to reflect operation of the source at an average ambient temperature of 50°F. This air contamination source shall not be modified or undergo a physical change as a result of this plan approval.

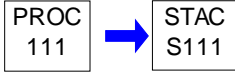


**SECTION D. Source Level Plan Approval Requirements**

Source ID: 111

Source Name: TEG DEHYDRATOR 1 (200 MMSCF/DAY)

Source Capacity/Throughput:

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

**IV. RECORDKEEPING REQUIREMENTS.**

No additional record keeping requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

**V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

**VI. WORK PRACTICE REQUIREMENTS.****# 001 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

Emissions from each tri-ethylene glycol dehydrator's still vent and flash tank shall be routed to each dehydrator's reboiler for combustion as fuel.

**VII. ADDITIONAL REQUIREMENTS.**

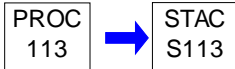
No additional requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

**SECTION D. Source Level Plan Approval Requirements**

Source ID: 113

Source Name: SOLAR TITAN 130-20502S TURBINE (19,553 HP)

Source Capacity/Throughput: 138.230 MMBTU/HR

**I. RESTRICTIONS.****Emission Restriction(s).****# 001 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

Visible emissions from the Solar Titan 130 turbine stack shall not exceed 10% opacity at any time.

**# 002 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

Emission rates from the Solar Titan 130 turbine shall be limited as follows:

Pollutant	Operating Condition	Emission Rate
Nitrogen Oxides	Normal	15 ppmvd @ 15% O2
Nitrogen Oxides	Normal	9.00 lb/hr
Nitrogen Oxides	All	36.22 tpy
Carbon Monoxide*	Normal	10 ppmvd @ 15% O2
Carbon Monoxide*	Normal	3.65 lb/hr
Carbon Monoxide*	All	24.66 tpy
VOC	Normal	5 ppmvd (as propane) @ 15% O2
VOC	Normal	0.98 lb/hr
VOC	All	4.04 tpy
PM10	Normal	3.38 lb/hr
PM10	All	14.80 tpy
PM2.5	Normal	2.23 lb/hr
PM2.5	All	9.80 tpy

\* If the Owner/Operator cannot demonstrate to the Department, during the shakedown period, that this turbine is capable of meeting the CO emission limit of 10 ppmvd @ 15% O2, the Owner/Operator shall install an oxidation catalyst to reduce CO emissions to meet the standard. The Owner/Operator shall demonstrate compliance with the CO emission limit according to test methods or procedures deemed appropriate by the Department.

For purposes of this condition, the "normal" operating scenario excludes startup, shutdown, and low temperature operating scenarios. Startup is defined as beginning when air contaminants begin to be emitted to the atmosphere, and shall have duration no greater than 10 minutes. Shutdown is defined as 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.

**Fuel Restriction(s).****# 003 [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 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/MMBtu) heat input.

**SECTION D. Source Level Plan Approval Requirements****II. TESTING REQUIREMENTS.****# 004 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

The Owner/Operator shall perform NO<sub>x</sub>, CO, VOC, PM<sub>10</sub>, and PM<sub>2.5</sub> emission tests upon the Solar Titan 130 turbine according to the requirements of 25 Pa. Code Chapter 139. Initial emission testing is required within 180 days of startup of the turbine. Subsequent NO<sub>x</sub>, CO, and VOC testing shall be performed no less often than once every two years thereafter. Each emission test shall be performed using EPA Method stack testing.

**# 005 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

Turbine initial and subsequent NO<sub>x</sub> testing shall be performed as follows (Additional authority for this condition is derived from 40 CFR §60.4400):

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

1) Measure the NO<sub>x</sub> 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 NO<sub>x</sub> emission rate:

$$E = (1.194 \times 10^{-7} \times (\text{NO}_x)_c \times Q_{\text{std}}) / P$$

Where:

E = NO<sub>x</sub> emission rate, in lb/MWh

1.194 × 10<sup>-7</sup> = conversion constant, in lb/dscf-ppm

(NO<sub>x</sub>)<sub>c</sub> = average NO<sub>x</sub> concentration for the run, in ppm

Q<sub>std</sub> = 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

2) Measure the NO<sub>x</sub> 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 NO<sub>x</sub> emission rate in lb/MMBtu. Then, use Equations 1 and, if necessary, 2 and 3 in §60.4350(f) to calculate the NO<sub>x</sub> emission rate in lb/MWh.

b. Sampling traverse points for NO<sub>x</sub> 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.

c. 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:

1) You may perform a stratification test for NO<sub>x</sub> and diluent pursuant to

i. [Reserved], or

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

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

i. If each of the individual traverse point NO<sub>x</sub> 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 ±5ppm or ±0.5 percent CO<sub>2</sub>(or O<sub>2</sub>)

**SECTION D. Source Level Plan Approval Requirements**

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

ii. N/A

iii. For turbines with a NOX standard less than or equal to 15 ppm @ 15% O<sub>2</sub>, 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 ±1ppm or ±0.15 percent CO<sub>2</sub>(or O<sub>2</sub>) from the mean for all traverse points.

d. 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) N/A

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) N/A

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

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

The Owner/Operator may elect not to monitor the total sulfur content of the natural gas combusted in the turbines [for fuel sulfur content monitoring required through NSPS Subpart KKKK], if the fuel is demonstrated not to exceed potential sulfur emissions of 26 ng SO<sub>2</sub>/J (0.060 lb SO<sub>2</sub>/MMBtu) heat input. One of the following sources of information must be used 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 total sulfur content for natural gas use in continental areas is 20 grains of sulfur or less per 100 standard cubic feet, has potential sulfur emissions of less than 26 ng SO<sub>2</sub>/J (0.060 lb SO<sub>2</sub>/MMBtu) heat input; or

b. Representative fuel sampling data which shows that the sulfur content of the fuel does not exceed 26 ng SO<sub>2</sub>/J (0.060 lb SO<sub>2</sub>/MMBtu) heat input. At a minimum, the amount of fuel sampling data specified in section 2.3.1.4 or 2.3.2.4 of 40 CFR Part 75 Appendix D is required.

**IV. RECORDKEEPING REQUIREMENTS.**

No additional record keeping requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

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

**SECTION D. Source Level Plan Approval Requirements**

The Owner/Operator shall submit the following turbine reports in accordance with 40 CFR §63.4375:

a. N/A.

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.

**VI. WORK PRACTICE REQUIREMENTS.**

**# 008 [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 operate and maintain stationary combustion turbine[s], air pollution 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.

**VII. ADDITIONAL REQUIREMENTS.**

**# 009 [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 Titan 130 turbine, approved to be installed under this plan approval, is subject to the requirements under 40 CFR Part 60, Subpart KKKK – Standards of Performance for Stationary Combustion Turbines.

**# 010 [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?**

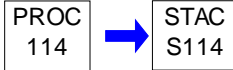
All terms used in 40 CFR Part 60 Subpart KKKK shall have the meaning given in 40 CFR §60.4420 or else in the Clean Air Act and 40 CFR Part 60 Subpart A.

**SECTION D. Source Level Plan Approval Requirements**

Source ID: 114

Source Name: TEG DEHYDRATOR 2 (200 MMSCF/DAY)

Source Capacity/Throughput:

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

**II. TESTING REQUIREMENTS.****# 001 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.772]****Subpart HH - National Emission Standards for Hazardous Air Pollutants From Oil and Natural Gas Production Facilities  
Test methods, compliance procedures, and compliance demonstrations.**

Test methods, compliance procedures, and compliance demonstrations.

a. N/A

b. Determination of glycol dehydration unit flowrate or benzene emissions. The procedures of this paragraph shall be used by an owner or operator to determine glycol dehydration unit natural gas flowrate or benzene emissions to meet the criteria for an exemption from control requirements under §63.764(e)(1).

1) The determination of actual flowrate of natural gas to a glycol dehydration unit shall be made using the procedures of either paragraph (b)(1)(i) or (b)(1)(ii) of this section.

i. The owner or operator shall install and operate a monitoring instrument that directly measures natural gas flowrate to the glycol dehydration unit with an accuracy of plus or minus 2 percent or better. The owner or operator shall convert annual natural gas flowrate to a daily average by dividing the annual flowrate by the number of days per year the glycol dehydration unit processed natural gas.

ii. The owner or operator shall document, to the Administrator's satisfaction, that the actual annual average natural gas flowrate to the glycol dehydration unit is less than 85 thousand standard cubic meters per day.

2) The determination of actual average benzene emissions from a glycol dehydration unit shall be made using the procedures of either paragraph (b)(2)(i) or (b)(2)(ii) of this section. Emissions shall be determined either uncontrolled, or with federally enforceable controls in place.

i. The owner or operator shall determine actual average benzene emissions using the model GRI-GLYCalc™, Version 3.0 or higher, and the procedures presented in the associated GRI-GLYCalc™ Technical Reference Manual. Inputs to the model shall be representative of actual operating conditions of the glycol dehydration unit and may be determined using the procedures documented in the Gas Research Institute (GRI) report entitled "Atmospheric Rich/Lean Method for Determining Glycol Dehydrator Emissions" (GRI-95/0368.1); or

ii. The owner or operator shall determine an average mass rate of benzene emissions in kilograms per hour through direct measurement using the methods in §63.772(a)(1)(i) or (ii), or an alternative method according to §63.7(f). Annual emissions in kilograms per year shall be determined by multiplying the mass rate by the number of hours the unit is operated per year. This result shall be converted to megagrams per year.

c. N/A

d. N/A

e. N/A

f. N/A

g. N/A

**SECTION D. Source Level Plan Approval Requirements****III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

**IV. RECORDKEEPING REQUIREMENTS.****# 002 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.774]****Subpart HH - National Emission Standards for Hazardous Air Pollutants From Oil and Natural Gas Production Facilities Recordkeeping requirements.**

Recordkeeping requirements.

- a. N/A
- b. N/A
- c. N/A

d.

1) An owner or operator of a glycol dehydration unit that meets the exemption criteria in §63.764(e)(1)(i) or §63.764(e)(1)(ii) shall maintain the records specified in paragraph (d)(1)(i) or paragraph (d)(1)(ii) of this section, as appropriate, for that glycol dehydration unit.

i. The actual annual average natural gas throughput (in terms of natural gas flowrate to the glycol dehydration unit per day) as determined in accordance with §63.772(b)(1), or

ii. The actual average benzene emissions (in terms of benzene emissions per year) as determined in accordance with §63.772(b)(2).

2) N/A

e. N/A

f. N/A

**V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

**VI. WORK PRACTICE REQUIREMENTS.****# 003 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

Emissions from each tri-ethylene glycol dehydrator's still vent and flash tank shall be routed to each dehydrator's reboiler for combustion as fuel.

**VII. ADDITIONAL REQUIREMENTS.****# 004 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

The Owner/Operator shall comply with all additional applicable requirements of 40 CFR Part 63 Subpart HH due to amendments effective October 15, 2012.

**# 005 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.760]****Subpart HH - National Emission Standards for Hazardous Air Pollutants From Oil and Natural Gas Production Facilities Applicability and designation of affected source.**

The tri-ethylene glycol dehydrator, approved to be installed under this plan approval, is subject to 40 CFR Part 63, subpart HH – National Emission Standards for Hazardous Air Pollutants From Oil and Natural Gas Production Facilities.

**SECTION D. Source Level Plan Approval Requirements****# 006 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.761]****Subpart HH - National Emission Standards for Hazardous Air Pollutants From Oil and Natural Gas Production Facilities Definitions.**

All terms used in 40 CFR Part 63 Subpart HH shall have the meaning given in 40 CFR §63.761 or else in the Clean Air Act and 40 CFR Part 63 Subpart A.

**# 007 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.764]****Subpart HH - National Emission Standards for Hazardous Air Pollutants From Oil and Natural Gas Production Facilities General standards.**

General standards.

- a. N/A
- b. N/A
- c. N/A
- d. N/A

e. Exemptions.

1) The owner or operator is exempt from the requirements of paragraph (c)(1) and (d) of this section if the criteria listed in paragraph (e)(1)(i) or (ii) of this section are met, except that the records of the determination of these criteria must be maintained as required in §63.774(d)(1).

- i. The actual annual average flowrate of natural gas to the glycol dehydration unit is less than 85 thousand standard cubic meters per day, as determined by the procedures specified in §63.772(b)(1) of this subpart; or
- ii. The actual average emissions of benzene from the glycol dehydration unit process vent to the atmosphere are less than 0.90 megagram [1.0 ton] per year, as determined by the procedures specified in §63.772(b)(2) of this subpart.

2) N/A

- f. N/A
- g. N/A
- h. N/A
- i. N/A

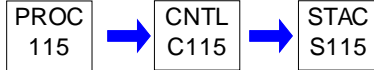


**SECTION D. Source Level Plan Approval Requirements**

Source ID: 115

Source Name: CATERPILLAR G3516B EMERGENCY GENERATOR (1,818 BHP)

Source Capacity/Throughput:

**I. RESTRICTIONS.****Emission Restriction(s).****# 001 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

Visible emissions from the Caterpillar G3516B emergency generator stack shall not exceed the following limitations:

- Equal to or greater than 10% for a period or periods aggregating more than three minutes in any one hour.
- Equal to or greater than 30% at any time.

**# 002 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

Emissions from the Caterpillar G3516B emergency generator shall be limited to the following:

At rated bhp and speed:

- NO<sub>x</sub> – 0.59 g/bhp-hr
- CO – 0.18 g/bhp-hr
- VOC – 0.24 g/bhp-hr\*

At all operating conditions excluding startup, shutdown, and malfunction:

- NO<sub>x</sub> – 2.36 lb/hr
- CO – 0.70 lb/hr
- VOC – 0.96 lb/hr\*

\* Based on US EPA Method 18/25A (or Department approved equivalent, does not include formaldehyde)

**Operation Hours Restriction(s).****# 003 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

Operation of the Caterpillar G3516B emergency generator shall not exceed 500 hours per rolling 12-month period.

**# 004 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.4243]****Subpart JJJJ - Standards of Performance for Stationary Spark Ignition Internal Combustion Engines****What are my compliance requirements if I am an owner or operator of a stationary SI internal combustion engine?**

Emergency stationary ICE may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. There is no time limit on the use of emergency stationary ICE in emergency situations. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency ICE beyond 100 hours per year. Emergency stationary ICE may operate up to 50 hours per year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year provided for maintenance and testing. The 50 hours per year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity. For owners and operators of emergency engines, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as permitted in this section, is prohibited.

**SECTION D. Source Level Plan Approval Requirements****II. TESTING REQUIREMENTS.****# 005 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

The Owner/Operator shall perform NO<sub>x</sub>, CO, and VOC emission tests upon the Caterpillar G3516B emergency generator at the Facility according to the requirements of 40 CFR §§60.4243 and 60.4244. Initial emission testing is required within one year (365 days) of startup of the emergency generator. Subsequent testing shall be performed every 8,760 hours or 3 years, whichever comes first. Portable analyzer testing according to ASTM Methods D6522-00 and D6348-03, or other methods included in Table 2 to Subpart JJJJ of Part 60 are acceptable for testing every 8,760 hours or 3 years.

**# 006 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.4243]****Subpart JJJJ - Standards of Performance for Stationary Spark Ignition Internal Combustion Engines****What are my compliance requirements if I am an owner or operator of a stationary SI internal combustion engine?**

As an Owner/Operator of stationary SI ICE subject to the emission standards specified in §60.4233(e), you must demonstrate compliance according to one of the methods specified in paragraphs a. and b. of this condition.

- a. Purchasing an engine certified according to procedures specified in this subpart, for the same model year and demonstrating compliance according to one of the methods specified in 40 CFR §60.4243(a).
- b. Purchasing a non-certified engine and demonstrating compliance with the emission standards specified in §60.4233(d) or (e) and according to the requirements specified in §60.4244, as applicable, and according to paragraphs (b)(2)(i) and (ii) of this section.

i. N/A

ii. If you are an owner or operator of a stationary SI internal combustion engine greater than 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test and conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance.

**# 007 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.4244]****Subpart JJJJ - Standards of Performance for Stationary Spark Ignition Internal Combustion Engines****What test methods and other procedures must I use if I am an owner or operator of a stationary SI internal combustion engine?**

Owners and operators of stationary SI ICE who conduct performance tests must follow the procedures in paragraphs (a) through (g) of this section.

- a. Each performance test must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and according to the requirements in §60.8 and under the specific conditions that are specified by Table 2 to this subpart.
- b. You may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in §60.8(c). If your stationary SI internal combustion engine is non-operational, you do not need to startup the engine solely to conduct a performance test; however, you must conduct the performance test immediately upon startup of the engine.
- c. You must conduct three separate test runs for each performance test required in this section, as specified in §60.8(f). Each test run must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and last at least 1 hour.
- d. To determine compliance with the NO<sub>x</sub> mass per unit output emission limitation, convert the concentration of NO<sub>x</sub> in the engine exhaust using Equation 1 of this section:

$$ER = (Cd * 1.912 * 10^{-3} * Q * T) / (HP * hr) \text{ (Eq. 1)}$$

Where:

ER = Emission rate of NO<sub>x</sub> in g/HP-hr

Cd = Measured NO<sub>x</sub> concentration in parts per million by volume (ppmv).

1.912×10<sup>-3</sup> = Conversion constant for ppm NO<sub>x</sub> to grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meter per hour, dry basis.

**SECTION D. Source Level Plan Approval Requirements**

T = Time of test run, in hours.

HP-hr = Brake work of the engine, horsepower-hour (HP-hr).

e. To determine compliance with the CO mass per unit output emission limitation, convert the concentration of CO in the engine exhaust using Equation 2 of this section:

$$ER = (Cd * 1.164 * 10^{-3}) * Q * T / (HP-hr) \text{ (Eq. 2)}$$

Where:

ER = Emission rate of CO in g/HP-hr.

Cd = Measured CO concentration in ppmv.

$1.164 \times 10^{-3}$  = Conversion constant for ppm CO to grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meters per hour, dry basis.

T = Time of test run, in hours.

HP-hr = Brake work of the engine, in HP-hr.

f. For purposes of this subpart, when calculating emissions of VOC, emissions of formaldehyde should not be included. To determine compliance with the VOC mass per unit output emission limitation, convert the concentration of VOC in the engine exhaust using Equation 3 of this section:

$$ER = (Cd * 1.833 * 10^{-3}) * Q * T / (HP-hr) \text{ (Eq. 3)}$$

Where:

ER = Emission rate of VOC in g/HP-hr.

Cd = VOC concentration measured as propane in ppmv.

$1.833 \times 10^{-3}$  = Conversion constant for ppm VOC measured as propane, to grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meters per hour, dry basis.

T = Time of test run, in hours.

HP-hr = Brake work of the engine, in HP-hr.

g. If the owner/operator chooses to measure VOC emissions using either Method 18 of 40 CFR part 60, appendix A, or Method 320 of 40 CFR part 63, appendix A, then it has the option of correcting the measured VOC emissions to account for the potential differences in measured values between these methods and Method 25A. The results from Method 18 and Method 320 can be corrected for response factor differences using Equations 4 and 5 of this section. The corrected VOC concentration can then be placed on a propane basis using Equation 6 of this section.

$$RF_i = CM_i / CA_i \text{ (Eq. 4)}$$

Where:

RF<sub>i</sub> = Response factor of compound i when measured with EPA Method 25A.

**SECTION D. Source Level Plan Approval Requirements**

$CM_i$  = Measured concentration of compound  $i$  in ppmv as carbon.

$CA_i$  = True concentration of compound  $i$  in ppmv as carbon.

$C_{icorr} = R_{Fi} * C_{imeas}$  (Eq. 5)

Where:

$C_{icorr}$  = Concentration of compound  $i$  corrected to the value that would have been measured by EPA Method 25A, ppmv as carbon.

$C_{imeas}$  = Concentration of compound  $i$  measured by EPA Method 320, ppmv as carbon.

$C_{peq} = 0.6098 * C_{icorr}$  (Eq. 6)

Where:

$C_{peq}$  = Concentration of compound  $i$  in mg of propane equivalent per DSCM.

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

**IV. RECORDKEEPING REQUIREMENTS.**

No additional record keeping requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

**V. REPORTING REQUIREMENTS.**

**# 008 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.4245]**

**Subpart JJJJ - Standards of Performance for Stationary Spark Ignition Internal Combustion Engines**

**What are my notification, reporting, and recordkeeping requirements if I am an owner or operator of a stationary SI internal combustion engine?**

Owners or operators of stationary SI ICE must meet the following notification, reporting, and recordkeeping requirements:

a. Owners and operators of all stationary SI ICE must keep records of the information in paragraphs (a)(1) through (4) of this section.

i. All notifications submitted to comply with this subpart and all documentation supporting any notification.

ii. Maintenance conducted on the engine.

iii. If the stationary SI internal combustion engine is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards and information as required in 40 CFR parts 90, 1048, 1054, and 1060, as applicable.

iv. If the stationary SI internal combustion engine is not a certified engine or is a certified engine operating in a non-certified manner and subject to §60.4243(a)(2), documentation that the engine meets the emission standards.

b. N/A

c. Owners and operators of stationary SI ICE greater than or equal to 500 HP that have not been certified by an engine manufacturer to meet the emission standards in §60.4231 must submit an initial notification as required in §60.7(a)(1). The notification must include the information in paragraphs (c)(1) through (5) of this section.

i. Name and address of the owner or operator;

ii. The address of the affected source;

iii. Engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement;

iv. Emission control equipment; and

**SECTION D. Source Level Plan Approval Requirements**

v. Fuel used.

d. Owners and operators of stationary SI ICE that are subject to performance testing must submit a copy of each performance test as conducted in §60.4244 within 60 days after the test has been completed.

**VI. WORK PRACTICE REQUIREMENTS.**

No additional work practice requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

**VII. ADDITIONAL REQUIREMENTS.**

**# 009 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.4230]  
Subpart JJJJ - Standards of Performance for Stationary Spark Ignition Internal Combustion Engines  
Am I subject to this subpart?**

The Caterpillar G3516B emergency generator, approved to be installed under this plan approval, is subject to the requirements under 40 CFR Part 60, Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines.

**# 010 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.4248]  
Subpart JJJJ - Standards of Performance for Stationary Spark Ignition Internal Combustion Engines  
What definitions apply to this subpart?**

All terms used in 40 CFR Part 60 Subpart JJJJ shall have the meaning given in 40 CFR §60.4248 or else in the Clean Air Act and 40 CFR Part 60 Subpart A.

**# 011 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.6585]  
Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines  
Am I subject to this subpart?**

The Caterpillar G3516B emergency generator, approved to be installed under this plan approval, is subject to 40 CFR Part 60, Subpart ZZZZ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines.

**# 012 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.6590]  
Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines  
What parts of my plant does this subpart cover?**

The Caterpillar G3516B emergency generator, approved to be installed under this plan approval, is a new stationary RICE located at an area source. This emergency generator must meet the requirements of 40 CFR Part 63 Subpart ZZZZ by meeting the requirements of 40 CFR Part 60 Subpart JJJJ. No further requirements apply for this emergency generator under 40 CFR Part 63 Subpart ZZZZ.

**SECTION E. Source Group Plan Approval Restrictions.**

Group Name: G101

Group Description: Caterpillar G3516B Natural Gas Compressor Engines (1,380 BHP Each)

Sources included in this group

ID	Name
104	CATERPILLAR G3516B COMPRESSOR ENGINE #1 (1380 BHP)
105	CATERPILLAR G3516B COMPRESSOR ENGINE #2 (1380 BHP)
106	CATERPILLAR G3516B COMPRESSOR ENGINE #3 (1380 BHP)
107	CATERPILLAR G3516B COMPRESSOR ENGINE #4 (1380 BHP)
108	CATERPILLAR G3516B COMPRESSOR ENGINE #5 (1380 BHP)
109	CATERPILLAR G3516B COMPRESSOR ENGINE #6 (1380 BHP)

**I. RESTRICTIONS.****Operation Hours Restriction(s).**

# 001 [25 Pa. Code §127.12b]

**Plan approval terms and conditions.**

Operation of the six previously installed Caterpillar G3516B compressor engines shall not exceed 39,600 hours combined per 12-month rolling period. Hours of operation when either turbine is not operational shall not be counted against this limit.

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

**IV. RECORDKEEPING REQUIREMENTS.**

No additional record keeping requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

**V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

**VI. WORK PRACTICE REQUIREMENTS.**

No additional work practice requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

**VII. ADDITIONAL REQUIREMENTS.**

No additional requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).



**SECTION F. Alternative Operation Requirements.**

No Alternative Operations exist for this Plan Approval facility.



**SECTION G. Emission Restriction Summary.**

No emission restrictions listed in this section of the permit.



**SECTION H. Miscellaneous.**

This is a major Title V facility for greenhouse gas emissions and as such, actual emissions may equal or exceed the following in any consecutive 12-month period:

100,000 tons of CO<sub>2</sub>e (CARBON DIOXIDE EQUIVALENT)

100.0 tons of CO<sub>2</sub> (CARBON DIOXIDE)

100.0 tons of CH<sub>4</sub> (METHANE)

This is a natural minor facility with respect to all remaining pollutants and as such, actual emissions can not equal or exceed the following in any consecutive 12-month period:

100.0 tons of NO<sub>x</sub> (NITROGEN OXIDES)

100.0 tons of CO (CARBON MONOXIDE)

100.0 tons of SO<sub>x</sub> (SULFUR OXIDES)

100.0 tons of PM-10 (PARTICULATE MATTER < 10 MICRONS)

50.0 tons of VOC (VOLATILE ORGANIC COMPOUNDS)

10.0 tons of a SINGLE HAP (HAZARDOUS AIR POLLUTANT)

25.0 tons of ALL HAP COMBINED

Miscellaneous sources located at this facility include the following:

Two (2) natural gas- and dehydrator vent gas-fired reboilers, 1.71 MMBtu/hr each

Two (2) produced water tanks, 476 bbl capacity each



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

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