

West Virginia Department of Environmental Protection
Earl Ray Tomblin
Governor

Division of Air Quality

Randy C. Huffman
Cabinet Secretary

Permit to Modify



R13- 2064G

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

Issued to:

**Columbia Gas Transmission, LLC
Smithfield Compressor Station
103-00010**

William F. Durham
Director

Issued: Draft • Effective: Draft

Facility Location: Smithfield, Wetzel County, West Virginia
Mailing Address: 1700 MacCorkle Avenue SE, Charleston, WV 25314
Facility Description: Natural gas compressor station
NAICS Codes: 486210
UTM Coordinates: 539.68 km Easting • 4,370.03 km Northing • Zone 17
Permit Type: Modification
Description of Change: Installation of one (1) Solar Centaur 40 turbine.

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

The source is subject to 45CSR30. The permittee has the duty to update the facility's Title V (45CSR30) permit application to reflect the changes permitted herein.

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1.0. Emission Units

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
BLR1	BL1	Heating System Boiler American Standard Model 1 BN-J-3	1963	3.4 MMBTU/hr	None
HTR1	H1	Line Heater BS&B Model J-92-02	1970	0.25 MMBTU/hr	None
HTR2	H2	Line Heater Total Energy Resources, Inc. Model 99-26	1999	0.50 MMBTU/hr	None
HTR3	H3	Heater #3	2014	0.30 MMBTU/hr	None
09801	E01	Ingersoll Rand 412 KVGB 4SLB Reciprocating Engine/Integral Compressor	1963	1,500 HP	None
09802	E02	Ingersoll Rand 412 KVGB 4SLB Reciprocating Engine/Integral Compressor	1963	1,500 HP	None
09805	E05	Taurus 60-T7302S Turbine Engine/Centrifugal Compressor	1999	6,736 HP	None
098G3	G3	Waukesha VGF24GL Emergency Generator	2014	530 HP	None
09806	E06	Solar Centaur 40 Turbine	2015	4,433 HP @ 0 °F 4,213 HP @ 32 °F	None

2.0. General Conditions

2.1. Definitions

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

2.2. Acronyms

CAAA	Clean Air Act Amendments	NO_x	Nitrogen Oxides
CBI	Confidential Business Information	NSPS	New Source Performance Standards
CEM	Continuous Emission Monitor	PM	Particulate Matter
CES	Certified Emission Statement	PM_{2.5}	Particulate Matter less than 2.5 µm in diameter
C.F.R. or CFR	Code of Federal Regulations	PM₁₀	Particulate Matter less than 10µm in diameter
CO	Carbon Monoxide	Ppb	Pounds per Batch
C.S.R. or CSR	Codes of State Rules	Pph	Pounds per Hour
DAQ	Division of Air Quality	Ppm	Parts per Million
DEP	Department of Environmental Protection	Ppm_v or ppmv	Parts per Million by Volume
dscm	Dry Standard Cubic Meter	PSD	Prevention of Significant Deterioration
FOIA	Freedom of Information Act	Psi	Pounds per Square Inch
HAP	Hazardous Air Pollutant	SIC	Standard Industrial Classification
HON	Hazardous Organic NESHAP	SIP	State Implementation Plan
HP	Horsepower	SO₂	Sulfur Dioxide
lbs/hr	Pounds per Hour	TAP	Toxic Air Pollutant
LDAR	Leak Detection and Repair	TPY	Tons per Year
M	Thousand	TRS	Total Reduced Sulfur
MACT	Maximum Achievable Control Technology	TSP	Total Suspended Particulate
MDHI	Maximum Design Heat Input	USEPA	United States Environmental Protection Agency
MM	Million	UTM	Universal Transverse Mercator
MMBtu/hr or mmbtu/hr	Million British Thermal Units per Hour	VEE	Visual Emissions Evaluation
MMCF/hr or mmcf/hr	Million Cubic Feet per Hour	VOC	Volatile Organic Compounds
NA	Not Applicable	VOL	Volatile Organic Liquids
NAAQS	National Ambient Air Quality Standards		
NESHAPS	National Emissions Standards for Hazardous Air Pollutants		

2.3. Authority

This permit is issued in accordance with West Virginia air pollution control law W.Va. Code §§ 22-5-1. et seq. and the following Legislative Rules promulgated thereunder:

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

2.4. Term and Renewal

- 2.4.1. This permit supersedes and replaces previously issued Permit R13-2064F. This Permit shall remain valid, continuous and in effect unless it is revised, suspended, revoked or otherwise changed under an applicable provision of 45CSR13 or any other applicable legislative rule;

2.5. Duty to Comply

- 2.5.1. The permitted facility shall be constructed and operated in accordance with the plans and specifications filed in Permit Applications R13-2064, R13-2064A, R13-2064B, R13-2064C, R13-2064D, R13-2064E, R13-2064F, R13-2064G and any modifications, administrative updates, or amendments thereto. The Secretary may suspend or revoke a permit if the plans and specifications upon which the approval was based are not adhered to;
[45CSR§§13-5.11 and -10.3.]
- 2.5.2. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the West Virginia Code and the Clean Air Act and is grounds for enforcement action by the Secretary or USEPA;
- 2.5.3. Violations of any of the conditions contained in this permit, or incorporated herein by reference, may subject the permittee to civil and/or criminal penalties for each violation and further action or remedies as provided by West Virginia Code 22-5-6 and 22-5-7;
- 2.5.4. Approval of this permit does not relieve the permittee herein of the responsibility to apply for and obtain all other permits, licenses, and/or approvals from other agencies; i.e., local, state, and federal, which may have jurisdiction over the construction and/or operation of the source(s) and/or facility herein permitted.

2.6. Duty to Provide Information

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

2.7. Duty to Supplement and Correct Information

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

2.8. Administrative Update

The permittee may request an administrative update to this permit as defined in and according to the procedures specified in 45CSR13.

[45CSR§13-4.]

2.9. Permit Modification

The permittee may request a minor modification to this permit as defined in and according to the procedures specified in 45CSR13.

[45CSR§13-5.4.]

2.10 Major Permit Modification

The permittee may request a major modification as defined in and according to the procedures specified in 45CSR14 or 45CSR19, as appropriate.

[45CSR§13-5.1]

2.11. Inspection and Entry

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

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

2.12. Emergency

- 2.12.1. An "emergency" means any situation arising from sudden and reasonable unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by

improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

- 2.12.2. Effect of any emergency. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions of Section 2.12.3 are met.
- 2.12.3. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - a. An emergency occurred and that the permittee can identify the cause(s) of the emergency;
 - b. The permitted facility was at the time being properly operated;
 - c. During the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and
 - d. The permittee submitted notice of the emergency to the Secretary within one (1) working day of the time when emission limitations were exceeded due to the emergency and made a request for variance, and as applicable rules provide. This notice must contain a detailed description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.
- 2.12.4. In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof.
- 2.12.5. The provisions of this section are in addition to any emergency or upset provision contained in any applicable requirement.

2.13. Need to Halt or Reduce Activity Not a Defense

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

2.14. Suspension of Activities

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

2.15. Property Rights

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

2.16. Severability

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

2.17. Transferability

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

2.18. Notification Requirements

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

2.19. Credible Evidence

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

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3.0. Facility-Wide Requirements

3.1. Limitations and Standards

- 3.1.1. **Open burning.** The open burning of refuse by any person, firm, corporation, association or public agency is prohibited except as noted in 45CSR§6-3.1.
[45CSR§6-3.1.]
- 3.1.2. **Open burning exemptions.** The exemptions listed in 45CSR§6-3.1 are subject to the following stipulation: Upon notification by the Secretary, no person shall cause, suffer, allow or permit any form of open burning during existing or predicted periods of atmospheric stagnation. Notification shall be made by such means as the Secretary may deem necessary and feasible.
[45CSR§6-3.2.]
- 3.1.3. **Asbestos.** The permittee is responsible for thoroughly inspecting the facility, or part of the facility, prior to commencement of demolition or renovation for the presence of asbestos and complying with 40 C.F.R. § 61.145, 40 C.F.R. § 61.148, and 40 C.F.R. § 61.150. The permittee, owner, or operator must notify the Secretary at least ten (10) working days prior to the commencement of any asbestos removal on the forms prescribed by the Secretary if the permittee is subject to the notification requirements of 40 C.F.R. § 61.145(b)(3)(i). The USEPA, the Division of Waste Management, and the Bureau for Public Health - Environmental Health require a copy of this notice to be sent to them.
[40CFR§61.145(b) and 45CSR§34]
- 3.1.4. **Odor.** No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor at any location occupied by the public.
[45CSR§4-3.1] *[State Enforceable Only]*
- 3.1.5. **Permanent shutdown.** A source which has not operated at least 500 hours in one 12-month period within the previous five (5) year time period may be considered permanently shutdown, unless such source can provide to the Secretary, with reasonable specificity, information to the contrary. All permits may be modified or revoked and/or reapplication or application for new permits may be required for any source determined to be permanently shutdown.
[45CSR§13-10.5.]
- 3.1.6. **Standby plan for reducing emissions.** When requested by the Secretary, the permittee shall prepare standby plans for reducing the emissions of air pollutants in accordance with the objectives set forth in Tables I, II, and III of 45CSR11.
[45CSR§11-5.2.]

3.2. Monitoring Requirements

[Reserved]

3.3. Testing Requirements

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

connections and sampling ports to be located in such manner as the Secretary may require, power for test equipment and the required safety equipment, such as scaffolding, railings and ladders, to comply with generally accepted good safety practices. Such tests shall be conducted in accordance with the methods and procedures set forth in this permit or as otherwise approved or specified by the Secretary in accordance with the following:

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

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

3.4. Recordkeeping Requirements

- 3.4.1. **Retention of records.** The permittee shall maintain records of all information (including monitoring data, support information, reports, and notifications) required by this permit recorded in a form suitable and readily available for expeditious inspection and review. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation. The files shall be maintained for at least five (5) years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent two (2) years of data shall be maintained on site. The remaining three (3) years of data may be maintained off site, but must remain accessible within a reasonable time. Where appropriate, the permittee may maintain records electronically (on a computer, on computer floppy disks, CDs, DVDs, or magnetic tape disks), on microfilm, or on microfiche.
- 3.4.2. **Odors.** For the purposes of 45CSR4, the permittee shall maintain a record of all odor complaints received, any investigation performed in response to such a complaint, and any responsive action(s) taken.
[45CSR§4. State Enforceable Only.]

3.5. Reporting Requirements

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

If to the DAQ:

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

If to the US EPA:

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

3.5.4. Operating Fee

- 3.5.4.1. In accordance with 45CSR30 – Operating Permit Program, the permittee shall submit a certified emissions statement and pay fees on an annual basis in accordance with the submittal requirements of the Division of Air Quality. A receipt for the appropriate fee shall be

maintained on the premises for which the receipt has been issued, and shall be made immediately available for inspection by the Secretary or his/her duly authorized representative.

- 3.5.5. **Emission inventory.** At such time(s) as the Secretary may designate, the permittee herein shall prepare and submit an emission inventory for the previous year, addressing the emissions from the facility and/or process(es) authorized herein, in accordance with the emission inventory submittal requirements of the Division of Air Quality. After the initial submittal, the Secretary may, based upon the type and quantity of the pollutants emitted, establish a frequency other than on an annual basis.

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4.0. Source-Specific Requirements

4.1. Limitations and Standards

- 4.1.1. **Record of Monitoring.** The permittee shall keep records of monitoring information that include the following:
- The date, place as defined in this permit, and time of sampling or measurements;
 - The date(s) analyses were performed;
 - The company or entity that performed the analyses;
 - The analytical techniques or methods used;
 - The results of the analyses; and
 - The operating conditions existing at the time of sampling or measurement.
- 4.1.2. **Minor Source of Hazardous Air Pollutants (HAP).** HAP emissions from the facility shall be less than 10 tons/year of any single HAP or 25 tons/year of any combination of HAPs. Compliance with this Section shall ensure that the facility is a minor HAP source.
- 4.1.3. **Operation and Maintenance of Air Pollution Control Equipment.** The permittee shall, to the extent practicable, install, maintain, and operate all pollution control equipment listed in Section 1.0 and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary.
[45CSR§13-5.11.]
- 4.1.4. **Record of Malfunctions of Air Pollution Control Equipment.** For all air pollution control equipment listed in Section 1.0, the permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the air pollution control equipment during which excess emissions occur. For each such case, the following information shall be recorded:
- The equipment involved.
 - Steps taken to minimize emissions during the event.
 - The duration of the event.
 - The estimated increase in emissions during the event.
- For each such case associated with an equipment malfunction, the additional information shall also be recorded:
- The cause of the malfunction.
 - Steps taken to correct the malfunction.
 - Any changes or modifications to equipment or procedures that would help prevent future recurrences of the malfunction.
- 4.1.5. The permittee shall install, maintain, and operate all above-ground piping, valves, pumps, etc. that service lines in the transport of potential sources of regulated air pollutants to minimize any fugitive escape of regulated air pollutants (leak). Any above-ground piping, valves, pumps, etc. that shows signs of excess wear and that have a reasonable potential for fugitive emissions of regulated air pollutants shall be replaced.
- 4.1.4. The permittee shall monitor and maintain quarterly records (calendar year) for each facility component that was inspected for fugitive escape of regulated air pollutants. Each component shall operate with no detectable emissions, as determined using audio-visual-olfactory (AVO) inspections, USEPA 40CFR60 Method 21, USEPA alternative work practice to detect leaks from

equipment using optical gas imaging (OGI) camera (ex. FLIR camera), or some combination thereof. AVO inspections shall include, but not limited to, defects as visible cracks, holes, or gaps in piping; loose connections; liquid leaks; or broken or missing caps or other closure devices. If permittee uses USEPA Method 21, then no detectable emissions is defined as less than 500 ppm in accordance with Method 21. If permittee uses an OGI camera, then no detectable emissions is defined as no visible leaks detected in accordance with USEPA alternative OGI work practices.

If any leak is detected, the permittee shall repair the leak as soon as possible. The first attempt at repair must be made within five (5) calendar days of discovering the leak, and the final repair must be made within fifteen (15) calendar days of discovering the leak. The permittee shall record each leak detected and the associated repair. The leak will not be considered repaired until the same monitoring method or a more detailed instrument determines the leak is repaired.

Delay of repair of a closed vent system for which leaks or defects have been detected is allowed if the repair is technically infeasible without a shutdown, or if you determine that emissions resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair. You must complete repair of such equipment by the end of the next shutdown.

[45CSR§13-5.11.]

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5.0. Source-Specific Requirements [Turbines (E05, E06)]

5.1. Limitations and Standards

- 5.1.1. Maximum hourly emission rates from Solar Taurus 60-T7302S turbine/natural gas compressor (E05) shall not exceed the following limits:

Emission Point ID#	Operating Mode	Emissions (lb/hr)	
		NO _x	CO
E05	Full Load @ 0°F	6.11	7.44
	Low-Load Operation (<50%)	11.47	219.34
	Low-Temp Operation (< 0°F)	30.36	23.10
	Startup/Shutdown	3.86	72.00

- 5.1.2. Maximum annual emission rates from Solar Taurus 60-T7302S turbine/natural gas compressor (E05) shall not exceed the following limits:

Emission Point ID#	Emissions (ton/year)	
	NO _x	CO
E05	39.00	99.00

- 5.1.3. The Solar Taurus 60-T7302S turbine/natural gas compressor (E05) shall consume no more than 66,426 standard cubic feet (scf) of natural gas per hour or 582 x 10⁶ scf of natural gas per year.

- 5.1.4. Maximum hourly emission rates from Solar Centaur 40 turbine (E06) shall not exceed the following limits:

Emission Point ID#	Operating Mode	Emissions (lb/hr)		
		NO _x	CO	VOC
E06	Normal Load @ 32 °F	4.14	5.05	0.29
	Low-Load Operation (<50%)	7.51	304.73	3.48
	Low-Temp Operation (< 0 to -20 °F)	7.67	11.11	0.63
	Very Low Temp (< -20 °F)	21.90	16.67	0.63
	Startup/Shutdown (lb/event)	1.00	94.60	1.08

- 5.1.5. Maximum annual emission rates from Centaur 40 turbine (E06) shall not exceed the following limits:

Emission Point ID#	Emissions (ton/year)		
	NO _x	CO	VOC
E06	18.30	32.09	1.38

- 5.1.6. The Solar Centaur 40 turbine (E06) shall consume no more than 47,708 standard cubic feet (scf) of natural gas per hour or 395.33×10^6 scf of natural gas per year.
- 5.1.7. The permitted facility shall comply with all applicable provisions of 40 CFR §§ 60.332, 60.333, 60.334, and 60.335., provided that compliance with any more stringent limitation set forth in this permit shall also be demonstrated. The permittee must notify the Director of the DAQ of excess emissions as required. **[45CSR§13]**
- 5.1.8. NO_x emissions shall not exceed 25 ppm at 15% O₂, or 1.2 lb/MWh gross output. When operating at less than 75% peak load or at temperatures less than 0 °F, the emission limit for NO_x is 150 ppm at 15% O₂ or 8.7 lb/MWh gross output.
[40CFR§60.4320(a)]
- 5.1.9. SO₂ emissions shall not exceed 0.90 lb/MWh gross output or 0.060 lb SO₂/MMBtu heat input.
[40CFR§60.4330(a)]
- 5.1.10. The permittee may elect not to monitor the total sulfur content of the fuel combusted in the turbine, if the fuel is demonstrated not to exceed potential sulfur emissions of 26 ng SO₂/J (0.060 lb SO₂/MMBtu) heat input for units located in continental areas and 180 ng SO₂/J (0.42 lb SO₂/MMBtu) heat input for units located in noncontinental areas or a continental area that the Administrator determines does not have access to natural gas and that the removal of sulfur compounds would cause more environmental harm than benefit. You must use one of the following sources of information to make the required demonstration:
- (a) The fuel quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the fuel, specifying that the maximum total sulfur content for oil use in continental areas is 0.05 weight percent (500 ppmw) or less and 0.4 weight percent (4,000 ppmw) or less for noncontinental areas, the total sulfur content for natural gas use in continental areas is 20 grains of sulfur or less per 100 standard cubic feet and 140 grains of sulfur or less per 100 standard cubic feet for noncontinental areas, has potential sulfur emissions of less than less than 26 ng SO₂/J (0.060 lb SO₂/MMBtu) heat input for continental areas and has potential sulfur emissions of less than 180 ng SO₂/J (0.42 lb SO₂/MMBtu) heat input for noncontinental areas; or
 - (b) Representative fuel sampling data which show that the sulfur content of the fuel does not exceed 26 ng SO₂/J (0.060 lb SO₂/MMBtu) heat input for continental areas or 180 ng SO₂/J (0.42 lb SO₂/MMBtu) heat input for noncontinental areas. At a minimum, the amount of fuel sampling data specified in section 2.3.1.4 or 2.3.2.4 of appendix D to part 75 of this chapter (CFR Title 40) is required.
[40CFR§60.4365]
- 5.1.11. **40CFR63 Subpart YYYY Notification Requirements**
- (a) You must submit all of the notifications in §§63.7(b) and (c), 63.8(e), 63.8(f)(4), and 63.9(b) and (h) that apply to you by the dates specified.
 - (b) *Not applicable.*
 - (c) As specified in §63.9(b), if you start up your new or reconstructed stationary combustion turbine on or after March 5, 2004, you must submit an Initial Notification not later than 120 calendar days after you become subject to 40CFR63 Subpart YYYY.
 - (d) If you are required to submit an Initial Notification but are otherwise not affected by the emission limitation requirements of 40CFR63 Subpart YYYY, in accordance with §63.6090(b), your notification must include the information in §63.9(b)(2)(i) through (v) and a statement that your new or reconstructed stationary combustion turbine has no additional emission limitation requirements and must explain the basis of the exclusion (for example, that it operates exclusively as an emergency stationary combustion turbine).
 - (e) *Not applicable.*
 - (f) *Not applicable.*

[40CFR§63.6145]

5.1.12. The permittee must operate and maintain the stationary combustion turbines (T01, T02) in a manner consistent with good air pollution control practices for minimizing emissions at all times including during startup, shutdown, and malfunction.

[40CFR§60.4333(a)]

5.1.13. The Solar Turbines (E05, E06) shall be operated and maintained in accordance with the manufacturer's recommendations and specifications and in a manner consistent with good operating practices and shall only burn natural gas.

5.2. Monitoring Requirements

5.2.1. At such reasonable times as the Secretary may designate, the permittee shall conduct Method 9 emission observations for the purpose of demonstrating compliance with Section 5.1.13. Method 9 shall be conducted in accordance with 40 CFR 60 Appendix A.

5.2.2. The permittee must perform annual performance tests in accordance with §60.4400 to demonstrate continuous compliance. If the NO_x emission result from the performance test is less than or equal to 75 percent of the NO_x emission limit for the turbines (T01, T02), the permittee may reduce the frequency of subsequent performance tests to once every 2 years (no more than 26 calendar months following the previous performance test). If the results of any subsequent performance test exceed 75 percent of the NO_x emission limit for the turbine, the permittee must resume annual performance tests.

[40CFR§60.4340(a)]

5.2.3. This initial compliance test shall be conducted within 60 days after achieving the maximum production rate at which the facility will be operated, and within 180 days of start-up, whichever is later.

[40CFR§60.8(a)]

5.3. Testing Requirements

5.3.1. In the event that the Secretary requests emission tests to be conducted to determine the carbon monoxide (CO), nitrogen oxides (NO_x), particulate matter (PM₁₀), sulfur dioxide (SO₂), and volatile organic compounds (VOC) from emission points, the methods listed below from Appendix A of 40CFR60 shall be utilized for purposes of conducting performance tests, unless the Secretary approves an alternate or equivalent method. Submission of test protocol and notification of testing is required as described in Section 3.3.1 of this permit.

Pollutant	Method
CO	10, 10A, or 10B
NO _x	40CFR60, Subpart GG
PM ₁₀	5
SO ₂	40CFR60, Subpart GG
VOC	25 or 25A

- 5.3.2. The permittee must perform annual performance tests in accordance with §60.4400 to demonstrate continuous compliance. If the NO_x emission result from the performance test is less than or equal to 75 percent of the NO_x emission limit for the turbines (T01, T02), the permittee may reduce the frequency of subsequent performance tests to once every 2 years (no more than 26 calendar months following the previous performance test). If the results of any subsequent performance test exceed 75 percent of the NO_x emission limit for the turbine, the permittee must resume annual performance tests.

[40CFR§60.4340(a)]

- 5.3.3. This initial compliance test shall be conducted within 60 days after achieving the maximum production rate at which the facility will be operated, and within 180 days of start-up, whichever is later.

[40CFR§60.8(a)]

5.4. Recordkeeping Requirements

- 5.4.1. To demonstrate compliance with section 5.1.2 and 5.1.5, the permittee shall maintain the following records:

- a. Monthly operating hours at normal dry low NO_x (DLN) conditions ($\geq 50\%$ of rated load and ambient temperatures $\geq 0^{\circ}\text{F}$).
- b. Monthly operating hours at non-Dry Low NO_x (non-DLN).
- c. Monthly operating hours at low ambient temperature ($< 0^{\circ}\text{F}$).
- d. Monthly number of startup and shutdown cycles.

These monthly records will be used to calculate monthly emissions (ME) for each regulated pollutant (Px) using the following equation:

$$\text{ME Px} = \text{DLN Px} * \text{DLN hrs} + \text{non-DLN Px} * \text{non-DLN hrs} + \text{LT Px} * \text{LT hrs} + \text{SS Px} * \text{SS cycles}$$

Where: DLN Px, non-DLN Px, LT Px, and SS Px are the unit emission rates (lb/hr or lb/cycle) for pollutant X during normal DLN, non-Dry Low NO_x, low-temperature, and startup/shutdown operation, respectively.

- 5.4.2. To demonstrate compliance with sections 5.1.1 and 5.1.4, the permittee shall utilize the monthly emission formula listed above in section 5.4.1, and keep records of the hours of operation of the Solar Taurus 60-T7302S turbine/natural gas compressor (E05) and Solar Centaur 40 turbine (E06)

- 5.4.3. To demonstrate compliance with sections 5.1.3 and 5.1.6, the permittee shall maintain records of the amount of natural gas consumed in the Solar Taurus 60-T7302S turbine/natural gas compressor (E05) and Solar Centaur turbine (E06). Said records shall be maintained on site for a period of five (5) years. Said records shall be made available to the Director of the Division of Air Quality of his/her duly authorized representative upon request and shall be certified by a responsible official upon submittal.

- 5.4.4. The permittee shall maintain the fuel quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the fuel, specifying that the maximum total sulfur content for 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 less than 26 ng SO₂/J (0.060 lb SO₂/MMBtu) heat input for continental areas.

[40CFR§60.4365(a)]

5.5. Reporting Requirements

- 5.5.1. All records required under 40CFR60 Subpart GG shall be maintained by the owner or operator of the affected facility for a period of two years following the date of such record. [40CFR§60.334c]

[Solar Taurus 60-T7302S turbine (E05)]

- 5.5.2. The permitted facility shall comply with all applicable provisions of 40CFR60 Subpart GG. The permittee must also notify the Director of excess emissions as required. [40CFR§60.330-335, 45CSR§13]

40CFR60 Subpart GG Applicable Requirements
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40 C.F.R. 60 Subpart GG, specifically 40 C.F.R. § 60.332 (a) (2); § 60.332 (c); § 60.333; § 60.334 (c); § 60.334 (h) (1); § 60.334 (h) (2); § 60.334 (h) (3) (i); § 60.334 (h) (3) (ii); § 60.334 (i) (2); § 60.334 (j); § 60.335.
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[Solar Taurus 60-T7302S turbine (E05)]

- 5.5.3. The permittee shall submit a written report of the results of testing required in sections 5.3.2 and 5.3.3 of this permit before the close of business on the 60th day following the completion of such testing to the Director. Such report(s) shall include all records and readings taken during such testing, as appropriate for the required report. [40CFR§60.4375(b)]

[Solar Centaur turbine (E06)]

6.0. Source-Specific Requirements (BL1, H1, H2, H3)

6.1. Limitations and Standards

- 6.1.1. Maximum Design Heat Input. The maximum design heat input of the boiler (BL1) and heaters (H1, H2, H3) shall not exceed the following:

Emission Point ID#	Emission Unit	Maximum Design Heat Input (MMBtu/hr)
BL1	Boiler	3.4
H1	Line Heater	0.25
H2	Line Heater	0.50
H3	Heater	0.30

- 6.1.2. No person shall cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air from any fuel burning unit which is greater than ten (10) percent opacity based on a six minute block average.
[45CSR§2-3.1.]

6.2. Monitoring Requirements

- 6.2.1. At such reasonable times as the Secretary may designate, the permittee shall conduct Method 9 emission observations for the purpose of demonstrating compliance with Section 6.1.2. Method 9 shall be conducted in accordance with 40 CFR 60 Appendix A.

6.3. Testing Requirements

- 6.3.1. Compliance with the visible emission requirements of section 6.1.2 shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 9 or by using measurements from continuous opacity monitoring systems approved by the Director. The Director may require the installation, calibration, maintenance and operation of continuous opacity monitoring systems and may establish policies for the evaluation of continuous opacity monitoring results and the determination of compliance with the visible emission requirements of section 6.1.2. Continuous opacity monitors shall not be required on fuel burning units which employ wet scrubbing systems for emission control.
[45CSR§2-3.2.]

6.4. Recordkeeping Requirements

- 6.4.1. The permittee shall maintain records of all monitoring data required by Section 6.2.1 documenting the date and time of each visible emission check, the emission point or equipment/source identification number, the name or means of identification of the observer, the results of the check(s), whether the visible emissions are normal for the process, and, if applicable, all corrective measures taken or planned. The permittee shall also record the general weather conditions (i.e. sunny, approximately 80°F, 6 - 10 mph NE wind) during the visual emission check(s). Should a visible emission observation be required to be performed per the requirements specified in Method 9, the data records of each observation shall be maintained per the requirements of Method 9.

6.5. Reporting Requirements

- 6.5.1. Any deviation(s) from the allowable visible emission requirement for any emission source discovered during observations using 40CFR Part 60, Appendix A, Method 9 or 22 shall be reported in writing to the Director of the Division of Air Quality as soon as practicable, but in any case within ten (10) calendar days of the occurrence and shall include at least the following information: the results of the visible determination of opacity of emissions, the cause or suspected cause of the violation(s), and any corrective measures taken or planned.

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7.0. Source-Specific Requirements (Engine, G3)

7.1. Limitations and Standards

- 7.1.1. The quantity of natural gas that shall be consumed in the 530 hp natural gas fired emergency generator, Waukesha VGF24GL (G3) shall not exceed 4,334 cubic feet per hour or 2.17×10^6 cubic feet per year.
- 7.1.2. Maximum emissions from the 530 hp natural gas fired emergency generator, Waukesha VGF24GL (G3) shall not exceed the following limits:

Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
Nitrogen Oxides	2.34	0.58
Carbon Monoxide	1.52	0.38
Volatile Organic Compounds	0.30	0.08
Formaldehyde	0.23	0.06

- 7.1.3. **Maximum Yearly Operation Limitation.** The maximum yearly hours of operation for the 530 hp natural gas fired emergency generator, Waukesha VGF24GL (G3) shall not exceed 500 hours per year. Compliance with the Maximum Yearly Operation Limitation shall be determined using a twelve month rolling total. A twelve month rolling total shall mean the sum of the hours of operation at any given time during the previous twelve consecutive calendar months.

7.2. Recordkeeping Requirements

- 7.2.1. To demonstrate compliance with sections 7.1.1 – 7.1.3, the permittee shall maintain records of the hours of operation of the 530 hp natural gas fired emergency generator, Waukesha VGF24GL (G3). Said records shall be maintained on site or in a readily accessible off-site location maintained by the permittee for a period of five (5) years. Said records shall be readily available to the Director of the Division of Air Quality or his/her duly authorized representative for expeditious inspection and review. Any records submitted to the agency pursuant to a requirement of this permit or upon request by the Director shall be certified by a responsible official.

8.0. Source-Specific Requirements (40CFR60 Subpart JJJJ Requirements, G3)

8.1. Limitations and Standards

- 8.1.1 The provisions of this subpart are applicable to owners, and operators of stationary spark ignition (SI) internal combustion engines (ICE) as specified below. For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator.
- a. Owners and operators of stationary SI ICE that commence construction after June 12, 2006, where the stationary SI ICE are manufactured:
 1. *Reserved;*
 2. *Reserved;*
 3. *Reserved;*
 4. *On or after January 1, 2009, for emergency engines with a maximum engine power greater than 19 KW (25 HP).*
 - b. Owners and operators of stationary SI ICE that commence modification or reconstruction after June 12, 2006.
[40CFR§60.4230(a)]
- 8.1.2. The provisions of this subpart are not applicable to stationary SI ICE being tested at an engine test cell/stand. [40CFR§60.4230(b)]
- 8.1.3. Stationary SI ICE may be eligible for exemption from the requirements of this subpart as described in 40 CFR part 1068, subpart C (or the exemptions described in 40 CFR parts 90 and 1048, for engines that would need to be certified to standards in those parts), except that owners and operators, as well as manufacturers, may be eligible to request an exemption for national security. [40CFR§60.4230(e)]

8.2. Emission Standards for Owners and Operators

- 8.2.1. Owners and operators of stationary SI ICE with a maximum engine power greater than or equal to 75 KW (100 HP) (except gasoline and rich burn engines that use LPG) must comply with the emission standards in Table 1 to this subpart for their stationary SI ICE. For owners and operators of stationary SI ICE with a maximum engine power greater than or equal to 100 HP (except gasoline and rich burn engines that use LPG) manufactured prior to January 1, 2011 that were certified to the certification emission standards in 40 CFR part 1048 applicable to engines that are not severe duty engines, if such stationary SI ICE was certified to a carbon monoxide (CO) standard above the standard in Table 1 to this subpart, then the owners and operators may meet the CO certification (not field testing) standard for which the engine was certified.
[40CFR§60.4233(e)]
- 8.2.2. Owners and operators of stationary SI ICE that are required to meet standards that reference 40 CFR 1048.101 must, if testing their engines in use, meet the standards in that section applicable to field testing, except as indicated in paragraph (e) of this section. [40CFR§60.4233(h)]
- 8.2.3. Owners and operators of stationary SI ICE must operate and maintain stationary SI ICE that achieve the emission standards as required in §60.4233 over the entire life of the engine.
[40CFR§60.4234]

8.3. Compliance Requirements for Owners and Operators

8.3.1. If you are an owner or operator of a stationary SI internal combustion engine and must comply with the emission standards specified in §60.4233(d) or (e), you must demonstrate compliance according to one of the methods specified in paragraphs (b)(1) and (2) of this section.

(b)(1). 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 paragraph (a) of this section.

(b)(2). 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. *Reserved.*

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.

[40CFR§60.4243(b)]

8.3.2. If you own or operate an emergency stationary ICE, you must operate the emergency stationary ICE according to the requirements in paragraphs (d)(1) through (3) of this section. In order for the engine to be considered an emergency stationary ICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (d)(1) through (3) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (d)(1) through (3) of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

(1) There is no time limit on the use of emergency stationary ICE in emergency situations.

(2) You may operate your emergency stationary ICE for any combination of the purposes specified in paragraphs (d)(2)(i) through (iii) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph (d)(3) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (d)(2).

(i) Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. 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 calendar year.

(ii) Emergency stationary ICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see § 60.17), or other authorized entity as determined by the

Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.

(iii) Emergency stationary ICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

(3) Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (d)(2) of this section. Except as provided in paragraph (d)(3)(i) of this section, the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(i) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:

(A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator;

(B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.

(C) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.

(D) The power is provided only to the facility itself or to support the local transmission and distribution system.

(E) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

(ii) [Reserved]
[40CFR§60.4243(d)]

8.3.3. Owners and operators of stationary SI natural gas fired engines may operate their engines using propane for a maximum of 100 hours per year as an alternative fuel solely during emergency operations, but must keep records of such use. If propane is used for more than 100 hours per year in an engine that is not certified to the emission standards when using propane, the owners and operators are required to conduct a performance test to demonstrate compliance with the emission standards of § 60.4233.
[40CFR§60.4243(e)]

8.4. Testing Requirements for Owners and Operators

8.4.1. 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. [40CFR§60.4244(a)]

- 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. [40CFR§60.4244(b)]
- 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. [40CFR§60.4244(c)]
- d. To determine compliance with the NO_x mass per unit output emission limitation, convert the concentration of NO_x in the engine exhaust using Equation 1 of this section:

$$ER = \frac{C_d \times 1.912 \times 10^{-3} \times Q \times T}{HP - hr} \quad (\text{Eq. 1})$$

Where:

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

C_d = Measured NO_x concentration in parts per million by volume (ppmv).

1.912×10⁻³ = Conversion constant for ppm NO_x to grams per standard cubic meter at 20 degrees Celsius.

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

T = Time of test run, in hours.

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

[40CFR§60.4244(d)]

- 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:

$$ER = \frac{C_d \times 1.164 \times 10^{-3} \times Q \times T}{HP - hr} \quad (\text{Eq. 2})$$

Where:

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

C_d = Measured CO concentration in ppmv.

1.164×10⁻³ = 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.

[40CFR§60.4244(e)]

- 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:

$$ER = \frac{C_d \times 1.833 \times 10^{-3} \times Q \times T}{HP - hr} \quad (\text{Eq. 3})$$

Where:

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

C_d = VOC concentration measured as propane in ppmv.

1.833×10^{-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.
[40CFR§60.4244(f)]

- 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.

$$RF_i = \frac{C_{Mi}}{C_{Ai}} \quad (\text{Eq. 4})$$

Where:

RF_i = Response factor of compound i when measured with EPA Method 25A.

C_{Mi} = Measured concentration of compound i in ppmv as carbon.

C_{Ai} = True concentration of compound i in ppmv as carbon.

$$C_{i,corr} = RF_i \times C_{i,meas} \quad (\text{Eq. 5})$$

Where:

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

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

$$C_{P,eq} = 0.6098 \times C_{i,corr} \quad (\text{Eq. 6})$$

Where:

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

[40CFR§60.4244(g)]

8.5. Notification, Reports, and Records for Owners and Operators

- 8.5.1. 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.
 1. All notifications submitted to comply with this subpart and all documentation supporting any notification.
 2. Maintenance conducted on the engine.
 3. 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 and 1048.
 4. 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.
[40CFR§60.4245(a)]
 - b. For all stationary SI emergency ICE greater than or equal to 500 HP manufactured on or after July 1, 2010, that do not meet the standards applicable to non-emergency engines, the owner or operator of must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. [40CFR§60.4245(b)]
 - 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.
 1. Name and address of the owner or operator;
 2. The address of the affected source;
 3. Engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement;
 4. Emission control equipment; and
 5. Fuel used.
[40CFR§60.4245(c)]
 - 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. [40CFR§60.4245(d)]

9.0. Source-Specific Requirements (40CFR63 Subpart ZZZZ Requirements, Reciprocating Compressor Engines (E01, E02, G3))

9.1. Limitations and Standards

9.1.1. The permittee must comply with the applicable operating limitations in this section no later than October 19, 2013.
[40 C.F.R. § 63.6595(a)(1)] (E01, E02)

9.1.2. *Stationary RICE subject to Regulations under 40 CFR Part 60.* An affected source that meets any of the criteria in paragraphs (c)(1) through (7) of 40 CFR 63.6590 must meet the requirements of 40 CFR part 63 Subpart ZZZZ by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines. No further requirements apply for such engines under this part.

The permittee meets the criteria of paragraph (c)(1), which is for a new or reconstructed stationary RICE located at an area source. The permittee must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart JJJJ. **(G3)**
 [40CFR§63.65690(c)]

9.1.3. Following, are the applicable RICE MACT requirements according to the “Summary of Requirements” table provided by EPA.

Emission Unit ID	Emission Limitations	Operating Limitations	Monitoring Requirements	Continuous Compliance	Notification Requirements	Record-keeping Requirements
E01, E02	§ 63.6603 Table 2d, Item 8	§ 63.6603	§§ 63.6625 (h), (j)	§ 63.6605 § 63.6640 (a), (e) Table 6, Item 9	§ 63.6645 (a) (5)	§§ 63.6655 (a), (d), (e)

E01, E02 are existing stationary non-emergency natural gas fired remote 4SLB engines located at an area source.

CERTIFICATION OF DATA ACCURACY

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

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

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

Telephone No. _____ Fax No. _____

¹ This form shall be signed by a "Responsible Official." "Responsible Official" means one of the following:

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