

West Virginia Department of Environmental Protection

Harold D. Ward  
Cabinet Secretary

# Title V Operating Permit Revision

## For Minor Modification Permitting Action Under 45CSR30 and Title V of the Clean Air Act

**Permit Action Number:** MM02 and MM03 **SIC:** 4922  
**Name of Permittee:** Columbia Gas Transmission, LLC  
**Facility Name/Location:** Sherwood Compressor Station  
**County:** Doddridge County  
**Permittee Mailing Address:** 1700 MacCorkle Avenue SE, Charleston, WV 25314

**Description of Permit Revision:** This minor modification incorporates the revisions made with Class II Administrative Update Permit R13-3313C (R30-01700162-2020 MM02) and Class I Administrative Update Permit R13-3313D (R30-01700162-2020 MM03). Permit R13-3313C updated the emission factors for CO and VOCs for the emergency generator RICE G1 based on the updated manufacturer's emissions guarantee, which resulted in an increase in emissions, and made some other minor administrative changes. Permit R13-3313D updated the CO testing requirement schedule for the turbines and made some other minor administrative changes.

### Title V Permit Information:

**Permit Number:** R30-01700162-2020  
**Issued Date:** May 11, 2020  
**Effective Date:** May 25, 2020  
**Expiration Date:** May 11, 2025

**Directions to Facility:** From the town of Smithburg, head southwest on Smithbury Street towards Smithton Road and make a left. In approximately 0.5 miles, keep left to continue to County Route 50/22. In approximately 0.2 miles, turn left onto US-50 W, then left onto Snowbird Road. At the end of Snowbird Road, turn right onto Route 18. The station will be on the right in approximately 0.5 miles.

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THIS PERMIT REVISION IS ISSUED IN ACCORDANCE WITH THE WEST VIRGINIA AIR POLLUTION CONTROL ACT (W.VA. CODE §§ 22-5-1 ET SEQ.) AND 45CSR30 - "REQUIREMENTS FOR OPERATING PERMITS." THE PERMITTEE IDENTIFIED AT THE FACILITY ABOVE IS AUTHORIZED TO OPERATE THE STATIONARY SOURCES OF AIR POLLUTANTS IDENTIFIED HEREIN IN ACCORDANCE WITH ALL TERMS AND CONDITIONS OF THIS PERMIT.



Laura M. Crowder

Digitally signed by: Laura M. Crowder  
DN: CN = Laura M. Crowder email = Laura.M.  
Crowder@wv.gov C = US O = West Virginia Department  
of Environmental Protection OU = Division of Air Quality  
Date: 2024.09.03 08:58:18 -0400

September 3, 2024

Laura M. Crowder  
Director, Division of Air Quality

Date Issued

Permit Number: **R30-01700162-2020**  
Permittee: **Columbia Gas Transmission, LLC**  
Facility Name: **Sherwood Compressor Station**  
Permittee Mailing Address: 1700 MacCorkle Avenue SE, Charleston, WV

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*This permit is issued in accordance with the West Virginia Air Pollution Control Act (West Virginia Code §§ 22-5-1 et seq.) and 45CSR30 — Requirements for Operating Permits. The permittee identified at the above-referenced facility is authorized to operate the stationary sources of air pollutants identified herein in accordance with all terms and conditions of this permit.*

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Facility Location: Sherwood, Doddridge County, West Virginia  
Facility Mailing Address: 2678 Route 18 South; West Union, WV 26456  
Telephone Number: (304) 873-3800  
Type of Business Entity: LLC  
Facility Description: Natural Gas Compressor Station  
SIC Codes: 4922  
UTM Coordinates: 523.0 km Easting • 4,346.7 km Northing • Zone 17

Permit Writer: Dan Roberts

*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.*

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*Issuance of this Title V Operating Permit does not supersede or invalidate any existing permits under 45CSR13, 14 or 19, although all applicable requirements from such permits governing the facility's operation and compliance have been incorporated into the Title V Operating Permit.*

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## 1.0 Emission Units and Active R13, R14, and R19 Permits

### 1.1 Emission Units

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
T1	T01	Solar Taurus 60 Turbine #1	<del>2017</del> <a href="#">2019</a>	7,417 HP @ 32 °F	None
T2	T02	Solar Taurus 60 Turbine #2	<del>2017</del> <a href="#">2019</a>	7,417 HP @ 32 °F	None
T3	T03	Solar Mars 100 Turbine #3	<del>2017</del> <a href="#">2019</a>	15,427 HP @ 32 °F	None
T4	T04	Solar Mars 100 Turbine #4	<del>2017</del> <a href="#">2019</a>	15,427 HP @ 32 °F	None
G1	G1	Waukesha <a href="#">VGF-P48GL</a> Emergency Generator <a href="#">RICE</a>	<del>2017</del> <a href="#">2019</a>	1,175 hp	None
HTR1	H1	Process Heater	<del>2017</del> <a href="#">2019</a>	1.50 MMBTU/hr	None
HTR2	H2	Process Heater	<del>2017</del> <a href="#">2019</a>	0.80 MMBTU/hr	None
HTR3	SH1	<del>40</del> Catalytic Heaters	<del>2017</del> <a href="#">Varies</a>	<del>40 x 0.072 MMBTU/hr</del> <a href="#">2.88 MMBTU/hr (total)</a>	None
A1	A01	<del>Condensate</del> Pipeline Liquids Storage Tank	<del>2017</del> <a href="#">2019</a>	2,000 gal	None

### 1.2 Active R13, R14, and R19 Permits

The underlying authority for any conditions from R13, R14, and/or R19 permits contained in this operating permit is cited using the original permit number (e.g. R13-1234). The current applicable version of such permit(s) is listed below.

Permit Number	Date of Issuance
R13-3313 <del>B</del> <a href="#">D</a>	<del>September 07, 2022</del> <a href="#">July 2, 2024</a>

## 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 39.). The Director of the Division of Air Quality is the Secretary's designated representative for the purposes of this permit.
- 2.1.4. Unless otherwise specified in a permit condition or underlying rule or regulation, all references to a "rolling yearly total" shall mean the sum of the monthly data, values or parameters being measured, monitored, or recorded, at any given time for the previous twelve (12) consecutive calendar months.

### 2.2. Acronyms

<b>CAAA</b>	Clean Air Act Amendments	<b>NSPS</b>	New Source Performance Standards
<b>CBI</b>	Confidential Business Information	<b>PM</b>	Particulate Matter
<b>CEM</b>	Continuous Emission Monitor	<b>PM<sub>10</sub></b>	Particulate Matter less than 10µm in diameter
<b>CES</b>	Certified Emission Statement	<b>pph</b>	Pounds per Hour
<b>C.F.R. or CFR</b>	Code of Federal Regulations	<b>ppm</b>	Parts per Million
<b>CO</b>	Carbon Monoxide	<b>PSD</b>	Prevention of Significant Deterioration
<b>C.S.R. or CSR</b>	Codes of State Rules	<b>psi</b>	Pounds per Square Inch
<b>DAQ</b>	Division of Air Quality	<b>SIC</b>	Standard Industrial Classification
<b>DEP</b>	Department of Environmental Protection	<b>SIP</b>	State Implementation Plan
<b>FOIA</b>	Freedom of Information Act	<b>SO<sub>2</sub></b>	Sulfur Dioxide
<b>HAP</b>	Hazardous Air Pollutant	<b>TAP</b>	Toxic Air Pollutant
<b>HON</b>	Hazardous Organic NESHAP	<b>TPY</b>	Tons per Year
<b>HP</b>	Horsepower	<b>TRS</b>	Total Reduced Sulfur
<b>lbs/hr or lb/hr</b>	Pounds per Hour	<b>TSP</b>	Total Suspended Particulate
<b>LDAR</b>	Leak Detection and Repair	<b>USEPA</b>	United States Environmental Protection Agency
<b>m</b>	Thousand	<b>UTM</b>	Universal Transverse Mercator
<b>MACT</b>	Maximum Achievable Control Technology	<b>VEE</b>	Visual Emissions Evaluation
<b>mm</b>	Million	<b>VOC</b>	Volatile Organic Compounds
<b>mmBtu/hr</b>	Million British Thermal Units per Hour		
<b>mmft<sup>3</sup>/hr or mmcf/hr</b>	Million Cubic Feet Burned per Hour		
<b>NA or N/A</b>	Not Applicable		
<b>NAAQS</b>	National Ambient Air Quality Standards		
<b>NESHAPS</b>	National Emissions Standards for Hazardous Air Pollutants		
<b>NO<sub>x</sub></b>	Nitrogen Oxides		

### **2.3. Permit Expiration and Renewal**

- 2.3.1. Permit duration. This permit is issued for a fixed term of five (5) years and shall expire on the date specified on the cover of this permit, except as provided in 45CSR§30-6.3.b. and 45CSR§30-6.3.c.  
**[45CSR§30-5.1.b.]**
- 2.3.2. A permit renewal application is timely if it is submitted at least six (6) months prior to the date of permit expiration.  
**[45CSR§30-4.1.a.3.]**
- 2.3.3. Permit expiration terminates the source's right to operate unless a timely and complete renewal application has been submitted consistent with 45CSR§30-6.2. and 45CSR§30-4.1.a.3.  
**[45CSR§30-6.3.b.]**
- 2.3.4. If the Secretary fails to take final action to deny or approve a timely and complete permit application before the end of the term of the previous permit, the permit shall not expire until the renewal permit has been issued or denied, and any permit shield granted for the permit shall continue in effect during that time.  
**[45CSR§30-6.3.c.]**

### **2.4. Permit Actions**

- 2.4.1. This permit may be modified, revoked, reopened and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.  
**[45CSR§30-5.1.f.3.]**

### **2.5. Reopening for Cause**

- 2.5.1. This permit shall be reopened and revised under any of the following circumstances:
- a. Additional applicable requirements under the Clean Air Act or the Secretary's legislative rules become applicable to a major source with a remaining permit term of three (3) or more years. Such a reopening shall be completed not later than eighteen (18) months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to 45CSR§§30-6.6.a.1.A. or B.
  - b. Additional requirements (including excess emissions requirements) become applicable to an affected source under Title IV of the Clean Air Act (Acid Deposition Control) or other legislative rules of the Secretary. Upon approval by U.S. EPA, excess emissions offset plans shall be incorporated into the permit.
  - c. The Secretary or U.S. EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.
  - d. The Secretary or U.S. EPA determines that the permit must be revised or revoked and reissued to assure compliance with the applicable requirements.

**[45CSR§30-6.6.a.]**

## **2.6. Administrative Permit Amendments**

- 2.6.1. The permittee may request an administrative permit amendment as defined in and according to the procedures specified in 45CSR§30-6.4.  
**[45CSR§30-6.4.]**

## **2.7. Minor Permit Modifications**

- 2.7.1. The permittee may request a minor permit modification as defined in and according to the procedures specified in 45CSR§30-6.5.a.  
**[45CSR§30-6.5.a.]**

## **2.8. Significant Permit Modification**

- 2.8.1. The permittee may request a significant permit modification, in accordance with 45CSR§30-6.5.b., for permit modifications that do not qualify for minor permit modifications or as administrative amendments.  
**[45CSR§30-6.5.b.]**

## **2.9. Emissions Trading**

- 2.9.1. No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading, and other similar programs or processes for changes that are provided for in the permit and that are in accordance with all applicable requirements.  
**[45CSR§30-5.1.h.]**

## **2.10. Off-Permit Changes**

- 2.10.1. Except as provided below, a facility may make any change in its operations or emissions that is not addressed nor prohibited in its permit and which is not considered to be construction nor modification under any rule promulgated by the Secretary without obtaining an amendment or modification of its permit. Such changes shall be subject to the following requirements and restrictions:
- a. The change must meet all applicable requirements and may not violate any existing permit term or condition.
  - b. The permittee must provide a written notice of the change to the Secretary and to U.S. EPA within two (2) business days following the date of the change. Such written notice shall describe each such change, including the date, any change in emissions, pollutants emitted, and any applicable requirement that would apply as a result of the change.
  - c. The change shall not qualify for the permit shield.
  - d. The permittee shall keep records describing all changes made at the source that result in emissions of regulated air pollutants, but not otherwise regulated under the permit, and the emissions resulting from those changes.
  - e. No permittee may make any change subject to any requirement under Title IV of the Clean Air Act (Acid Deposition Control) pursuant to the provisions of 45CSR§30-5.9.

- f. No permittee may make any changes which would require preconstruction review under any provision of Title I of the Clean Air Act (including 45CSR14 and 45CSR19) pursuant to the provisions of 45CSR§30-5.9.

**[45CSR§30-5.9.]**

## **2.11. Operational Flexibility**

- 2.11.1. The permittee may make changes within the facility as provided by § 502(b)(10) of the Clean Air Act. Such operational flexibility shall be provided in the permit in conformance with the permit application and applicable requirements. No such changes shall be a modification under any rule or any provision of Title I of the Clean Air Act (including 45CSR14 and 45CSR19) promulgated by the Secretary in accordance with Title I of the Clean Air Act and the change shall not result in a level of emissions exceeding the emissions allowable under the permit.

**[45CSR§30-5.8]**

- 2.11.2. Before making a change under 45CSR§30-5.8., the permittee shall provide advance written notice to the Secretary and to U.S. EPA, describing the change to be made, the date on which the change will occur, any changes in emissions, and any permit terms and conditions that are affected. The permittee shall thereafter maintain a copy of the notice with the permit, and the Secretary shall place a copy with the permit in the public file. The written notice shall be provided to the Secretary and U.S. EPA at least seven (7) days prior to the date that the change is to be made, except that this period may be shortened or eliminated as necessary for a change that must be implemented more quickly to address unanticipated conditions posing a significant health, safety, or environmental hazard. If less than seven (7) days notice is provided because of a need to respond more quickly to such unanticipated conditions, the permittee shall provide notice to the Secretary and U.S. EPA as soon as possible after learning of the need to make the change.

**[45CSR§30-5.8.a.]**

- 2.11.3. The permit shield shall not apply to changes made under 45CSR§30-5.8., except those provided for in 45CSR§30-5.8.d. However, the protection of the permit shield will continue to apply to operations and emissions that are not affected by the change, provided that the permittee complies with the terms and conditions of the permit applicable to such operations and emissions. The permit shield may be reinstated for emissions and operations affected by the change:

- a. If subsequent changes cause the facility's operations and emissions to revert to those authorized in the permit and the permittee resumes compliance with the terms and conditions of the permit, or
- b. If the permittee obtains final approval of a significant modification to the permit to incorporate the change in the permit.

**[45CSR§30-5.8.c.]**

- 2.11.4. "Section 502(b)(10) changes" are changes that contravene an express permit term. Such changes do not include changes that would violate applicable requirements or contravene enforceable permit terms and conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements.

**[45CSR§30-2.40]**



## **2.12. Reasonably Anticipated Operating Scenarios**

2.12.1. The following are terms and conditions for reasonably anticipated operating scenarios identified in this permit.

- a. Contemporaneously with making a change from one operating scenario to another, the permittee shall record in a log at the permitted facility a record of the scenario under which it is operating and to document the change in reports submitted pursuant to the terms of this permit and 45CSR30.
- b. The permit shield shall extend to all terms and conditions under each such operating scenario; and
- c. The terms and conditions of each such alternative scenario shall meet all applicable requirements and the requirements of 45CSR30.

**[45CSR§30-5.1.i.]**

## **2.13. Duty to Comply**

2.13.1. 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; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

**[45CSR§30-5.1.f.1.]**

## **2.14. Inspection and Entry**

2.14.1. 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.

**[45CSR§30-5.3.b.]**

## 2.15. Schedule of Compliance

- 2.15.1. For sources subject to a compliance schedule, certified progress reports shall be submitted consistent with the applicable schedule of compliance set forth in this permit and 45CSR§30-4.3.h., but at least every six (6) months, and no greater than once a month, and shall include the following:
- a. Dates for achieving the activities, milestones, or compliance required in the schedule of compliance, and dates when such activities, milestones or compliance were achieved; and
  - b. An explanation of why any dates in the schedule of compliance were not or will not be met, and any preventative or corrective measure adopted.

[45CSR§30-5.3.d.]

## 2.16. Need to Halt or Reduce Activity not a Defense

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

[45CSR§30-5.1.f.2.]

## 2.17. ~~Emergency~~ [Reserved](#)

~~2.17.1. An "emergency" means any situation arising from sudden and reasonably 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.~~

~~[45CSR§30-5.7.a.]~~

~~2.17.2. 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 45CSR§30-5.7.c. are met.~~

~~[45CSR§30-5.7.b.]~~

~~2.17.3. 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. Subject to the requirements of 45CSR§30-5.1.c.3.C.1, 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, report, and variance request fulfills the requirement of 45CSR§30-5.1.c.3.B. This notice must contain a detailed description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.~~

~~[45CSR§30-5.7.e.]~~

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

[45CSR§30-5.7.d.]

2.17.5. This provision is in addition to any emergency or upset provision contained in any applicable requirement.

[45CSR§30-5.7.e.]

## **2.18. Federally-Enforceable Requirements**

2.18.1. All terms and conditions in this permit, including any provisions designed to limit a source's potential to emit and excepting those provisions that are specifically designated in the permit as "State-enforceable only", are enforceable by the Secretary, USEPA, and citizens under the Clean Air Act.

[45CSR§30-5.2.a.]

2.18.2. Those provisions specifically designated in the permit as "State-enforceable only" shall become "Federally-enforceable" requirements upon SIP approval by the USEPA.

## **2.19. Duty to Provide Information**

2.19.1. 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 modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Secretary copies of records required 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.

[45CSR§30-5.1.f.5.]

## **2.20. Duty to Supplement and Correct Information**

2.20.1. 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.

[45CSR§30-4.2.]

## **2.21. Permit Shield**

2.21.1. Compliance with the conditions of this permit shall be deemed compliance with any applicable requirements as of the date of permit issuance provided that such applicable requirements are included and are specifically identified in this permit or the Secretary has determined that other requirements specifically identified are not applicable to the source and this permit includes such a determination or a concise summary thereof.  
**[45CSR§30-5.6.a.]**

2.21.2. Nothing in this permit shall alter or affect the following:

- a. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance; or
- b. The applicable requirements of the Code of West Virginia and Title IV of the Clean Air Act (Acid Deposition Control), consistent with § 408 (a) of the Clean Air Act.
- c. The authority of the Administrator of U.S. EPA to require information under § 114 of the Clean Air Act or to issue emergency orders under § 303 of the Clean Air Act.

**[45CSR§30-5.6.c.]**

## **2.22. Credible Evidence**

2.22.1. 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 defenses otherwise available to the permittee including but not limited to any challenge to the credible evidence rule in the context of any future proceeding.  
**[45CSR§30-5.3.e.3.B.]**

## **2.23. Severability**

2.23.1. The provisions of this permit are severable. If any provision of this permit, or the application of any provision of this permit to any circumstance is held invalid by a court of competent jurisdiction, the remaining permit terms and conditions or their application to other circumstances shall remain in full force and effect.  
**[45CSR§30-5.1.e.]**

## **2.24. Property Rights**

2.24.1. This permit does not convey any property rights of any sort or any exclusive privilege.  
**[45CSR§30-5.1.f.4]**

## **2.25. Acid Deposition Control**

2.25.1. Emissions shall not exceed any allowances that the source lawfully holds under Title IV of the Clean Air Act (Acid Deposition Control) or rules of the Secretary promulgated thereunder.

- a. No permit revision shall be required for increases in emissions that are authorized by allowances acquired pursuant to the acid deposition control program, provided that such increases do not require a permit revision under any other applicable requirement.

- b. No limit shall be placed on the number of allowances held by the source. The source may not, however, use allowances as a defense to noncompliance with any other applicable requirement.
- c. Any such allowance shall be accounted for according to the procedures established in rules promulgated under Title IV of the Clean Air Act.

**[45CSR§30-5.1.d.]**

- 2.25.2. Where applicable requirements of the Clean Air Act are more stringent than any applicable requirement of regulations promulgated under Title IV of the Clean Air Act (Acid Deposition Control), both provisions shall be incorporated into the permit and shall be enforceable by the Secretary and U. S. EPA.

**[45CSR§30-5.1.a.2.]**

### 3.0 Facility-Wide Requirements

#### 3.1. Limitations and Standards

- 3.1.1. **Open burning.** The open burning of refuse by any person 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 or allow 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. [40 C.F.R. §61.145(b) and 45CSR34]
- 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. **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]
- 3.1.6. **Emission inventory.** The permittee is responsible for submitting, on an annual basis, an emission inventory in accordance with the submittal requirements of the Division of Air Quality. [W.Va. Code § 22-5-4(a)(14)]
- 3.1.7. **Ozone-depleting substances.** For those facilities performing maintenance, service, repair or disposal of appliances, the permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 C.F.R. Part 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B:
- a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the prohibitions and required practices pursuant to 40 C.F.R. §§ 82.154 and 82.156.
  - b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 C.F.R. § 82.158.

- c. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 C.F.R. § 82.161.

**[40 C.F.R. 82, Subpart F]**

- 3.1.8. **Risk Management Plan.** Should this stationary source, as defined in 40 C.F.R. § 68.3, become subject to Part 68, then the owner or operator shall submit a risk management plan (RMP) by the date specified in 40 C.F.R. § 68.10 and shall certify compliance with the requirements of Part 68 as part of the annual compliance certification as required by 40 C.F.R. Part 70 or 71.

**[40 C.F.R. 68]**

- ~~3.1.9. [Reserved.](#) The permittee shall install the following noise abatement equipment prior to operation:~~

~~a. The two (2) Solar Taurus 60 turbines (T1, T2) and two (2) Solar Mars 100 turbines (T3, T4) shall be housed in an enclosed insulated building with a minimum of 6 inch thick high density insulation. All operations shall occur with the doors closed as practical. Personnel entry doors should be a STC 36 sound rating, should be self closing and should seal when closed. Each air supply fan for the air ventilation system shall employ an exterior dissipative type silencer.~~

~~b. The turbine exhaust systems shall include a 2 stage exhaust silencer system.~~

~~c. Acoustical pipe insulation on all outdoor above ground gas piping.~~

~~d. The turbine air intake system for each compressor unit shall be designed with at least one (1) in duct silencer, and at least one (1) of the silencers should be installed in the intake ductwork located inside the building.~~

~~e. The gas aftercooler shall be designed with "low noise" fans that operate at relatively low tip speeds.~~

~~f. Each compressor unit shall be equipped with a blowdown silencer.~~

~~g. The above noise abatement equipment shall be employed during any and all operation of the noise emitting sources at the facility. Further, the noise abatement equipment shall be operated and maintained in accordance with the manufacturer's specifications.~~

~~**[45CSR13, R13-3313, Condition 4.1.5.]**~~

- 3.1.10. No person shall cause, suffer, allow or permit fugitive particulate matter to be discharged beyond the boundary lines of the property on which the discharge originates or at any public or residential location, which causes or contributes to statutory air pollution.

**[45CSR§17-3.1 (State-enforceable only)]**

## **3.2. Monitoring Requirements**

- 3.2.1. None

### 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, if applicable, in accordance with the Secretary's delegated authority and any established equivalency determination methods which are 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.
  - 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 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.
    3. A statement of compliance or non-compliance with each permit or rule condition.

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



### 3.4. Recordkeeping Requirements

- 3.4.1. **Monitoring information.** The permittee shall keep records of monitoring information that include the following:
- a. The date, place as defined in this permit and time of sampling or measurements;
  - b. The date(s) analyses were performed;
  - c. The company or entity that performed the analyses;
  - d. The analytical techniques or methods used;
  - e. The results of the analyses; and
  - f. The operating conditions existing at the time of sampling or measurement.

**[45CSR§30-5.1.c.2.A.; 45CSR13, R13-3313, Condition 4.1.1.]**

- 3.4.2. **Retention of records.** The permittee shall retain records of all required monitoring data and support information for a period of at least five (5) years from the date of monitoring sample, measurement, report, application, or record creation date. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. Where appropriate, records may be maintained in computerized form in lieu of the above records.

**[45CSR§30-5.1.c.2.B.]**

- 3.4.3. **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§30-5.1.c. 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.

**[45CSR§§30-4.4. and 5.1.c.3.D.]**

- 3.5.2. A permittee may request confidential treatment for the submission of reporting required under 45CSR§30-5.1.c.3. pursuant to the limitations and procedures of W.Va. Code § 22-5-10 and 45CSR31.

**[45CSR§30-5.1.c.3.E.]**

- 3.5.3. Except for the electronic submittal of the annual compliance certification and semi-annual monitoring reports to the DAQ and USEPA as required in 3.5.5 and 3.5.6 below, 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 or by private carrier with postage prepaid to the address(es), or submitted in electronic format by e-mail as

set forth below or to such other person or address as the Secretary of the Department of Environmental Protection may designate:

**DAQ:**

Director  
WVDEP  
Division of Air Quality  
601 57<sup>th</sup> Street SE  
Charleston, WV 25304

**US EPA:**

Section Chief  
U. S. Environmental Protection Agency, Region III  
Enforcement and Compliance Assurance Division  
Air, RCRA, and Toxics Branch (3ED21)  
Four Penn Center  
1600 John F. Kennedy Boulevard  
Philadelphia, PA 19103-2852

**DAQ Compliance and Enforcement<sup>1</sup>:**

DEPAirQualityReports@wv.gov

<sup>1</sup>For all self-monitoring reports (MACT, GACT, NSPS, etc.), stack tests and protocols, Notice of Compliance Status reports, Initial Notifications, etc.

- 3.5.4. ~~Certified emissions statement~~ Fees. 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~~ 45CSR§30-8.  
[45CSR§30-8.]

- 3.5.5. **Compliance certification.** The permittee shall certify compliance with the conditions of this permit on the forms provided by the DAQ. In addition to the annual compliance certification, the permittee may be required to submit certifications more frequently under an applicable requirement of this permit. The annual certification shall be submitted to the DAQ and USEPA on or before March 15 of each year, and shall certify compliance for the period ending December 31. The permittee shall maintain a copy of the certification on site for five (5) years from submittal of the certification. The annual certification shall be submitted in electronic format by e-mail to the following addresses:

**DAQ:**

DEPAirQualityReports@wv.gov

**US EPA:**

R3\_APD\_Permits@epa.gov

[45CSR§30-5.3.e.]

- 3.5.6. **Semi-annual monitoring reports.** The permittee shall submit reports of any required monitoring on or before September 15 for the reporting period January 1 to June 30 and on or before March 15 for the reporting period July 1 to December 31. All instances of deviation from permit requirements must be clearly identified in such reports. All required reports must be certified by a responsible official consistent with 45CSR§30-4.4. The semi-annual monitoring reports shall be submitted in electronic format by e-mail to the following address:

**DAQ:**

DEPAirQualityReports@wv.gov

[45CSR§30-5.1.c.3.A.]

3.5.7. ~~**Emergencies.** For reporting emergency situations, refer to Section 2.17 of this permit.~~ [Reserved.](#)

3.5.8. **Deviations.**

a. In addition to monitoring reports required by this permit, the permittee shall promptly submit supplemental reports and notices in accordance with the following:

1. ~~Any deviation resulting from an emergency or upset condition, as defined in 45CSR§30-5.7., shall be reported by telephone or telefax within one (1) working day of the date on which the permittee becomes aware of the deviation, if the permittee desires to assert the affirmative defense in accordance with 45CSR§30-5.7. A written report of such deviation, which shall include the probable cause of such deviations, and any corrective actions or preventative measures taken, shall be submitted and certified by a responsible official within ten (10) days of the deviation.~~ [Reserved.](#)
2. Any deviation that poses an imminent and substantial danger to public health, safety, or the environment shall be reported to the Secretary immediately by telephone or ~~telefax~~ [email](#). A written report of such deviation, which shall include the probable cause of such deviation, and any corrective actions or preventative measures taken, shall be submitted by the responsible official within ten (10) days of the deviation.
3. Deviations for which more frequent reporting is required under this permit shall be reported on the more frequent basis.
4. All reports of deviations shall identify the probable cause of the deviation and any corrective actions or preventative measures taken.

**[45CSR§30-5.1.c.3.C.]**

b. The permittee shall, in the reporting of deviations from permit requirements, including those attributable to upset conditions as defined in this permit, report the probable cause of such deviations and any corrective actions or preventive measures taken in accordance with any rules of the Secretary.

**[45CSR§30-5.1.c.3.B.]**

3.5.9. **New applicable requirements.** If any applicable requirement is promulgated during the term of this permit, the permittee will meet such requirements on a timely basis, or in accordance with a more detailed schedule if required by the applicable requirement.

**[45CSR§30-4.3.h.1.B.]**

### **3.6. Compliance Plan**

3.6.1. None

### **3.7. Permit Shield**

3.7.1. The permittee is hereby granted a permit shield in accordance with 45CSR§30-5.6. The permit shield applies provided the permittee operates in accordance with the information contained within this permit.

3.7.2. The following requirements specifically identified are not applicable to the source based on the determinations set forth below. The permit shield shall apply to the following requirements provided the conditions of the determinations are met.

- a. 40CFR60, Subpart Dc: Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units. The heaters are less than 10 MMBtu/hr, therefore, according to 40CFR§60.40c(a), this rule does not apply.
- b. 40CFR60, Subpart OOOO: Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution for which Construction, Modification or Reconstruction Commenced After August 23, 2011, and on or before September 18, 2015. The equipment at this facility was installed in ~~2017~~ [2019](#), which is after the applicability date specified in 40CFR§60.5365, therefore this rule does not apply.

**4.0 Turbines [emission point ID(s): T01, T02, T03, T04]**

**4.1. Limitations and Standards**

4.1.1. The Solar turbines (T01, T02, T03, T04) 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. Each turbine shall only be fired with pipeline-quality natural gas.  
**[45CSR13, R13-3313, Condition 5.1.1.]**

4.1.2. Maximum annual emissions from the Solar turbines (T01, T02, T03, T04) shall not exceed the following:

Emission Point ID#	NO <sub>x</sub>	CO	VOC	SO <sub>2</sub>	PM <sub>10</sub>	CH <sub>2</sub> O
	tons/year					
T01	16.78	38.95	2.13	0.21	1.97	0.21
T02	16.78	38.95	2.13	0.21	1.97	0.21
T03	32.51	78.89	4.16	0.41	3.82	0.41
T04	32.51	78.89	4.16	0.41	3.82	0.41

Compliance with the annual emission limits shall be determined using a twelve-month rolling total. A twelve-month rolling total shall mean the sum of the emissions at any given time during the previous twelve consecutive calendar months.

**[45CSR13, R13-3313, Condition 5.1.2.]**

4.1.3. Maximum hourly emissions from the Solar Taurus 60 turbines (T01, T02) shall not exceed the following:

Operating Parameter	T01	T02
<b>NO<sub>x</sub></b>		
Full Load @ 32 °F	15 ppm <sub>v</sub> @ 15% O <sub>2</sub> (3.68 lb/hr)	15 ppm <sub>v</sub> @ 15% O <sub>2</sub> (3.68 lb/hr)
Low Temp (<0 °F)	10.75 lb/hr	10.75 lb/hr
Low Load (<50%)	8.50 lb/hr	8.50 lb/hr
Startup/Shutdown	1.10 lb/event	1.10 lb/event
<b>CO</b>		
Full Load @ 32 °F	25 ppm <sub>v</sub> @ 15% O <sub>2</sub> (3.74 lb/hr)	25 ppm <sub>v</sub> @ 15% O <sub>2</sub> (3.74 lb/hr)
Low Temp (<0 °F)	15.58 lb/hr	15.58 lb/hr
Low Load (<50%)	344.95 lb/hr	344.95 lb/hr
Startup/Shutdown	97.30 lb/event	97.30 lb/event
<b>VOC</b>		
Full Load @ 32 °F	5 ppm <sub>v</sub> @ 15% O <sub>2</sub> (0.43 lb/hr)	5 ppm <sub>v</sub> @ 15% O <sub>2</sub> (0.43 lb/hr)
Low Temp (<0 °F)	0.89 lb/hr	0.89 lb/hr
Low Load (<50%)	3.94 lb/hr	3.94 lb/hr
Startup/Shutdown	1.12 lb/event	1.12 lb/event

Operating Parameter	T01	T02
<b>SO<sub>2</sub> (short term emission rate based on 20 gr S/100 scf)</b>		
Full Load @ 32 °F	3.90 lb/hr	3.90 lb/hr
<b>PM<sub>10</sub></b>		
Full Load @ 32 °F	0.45 lb/hr	0.45 lb/hr

**[45CSR13, R13-3313, Condition 5.1.3.]**

4.1.4. Maximum hourly emissions from the Solar Mars 100 turbines (T03, T04) shall not exceed the following:

Operating Parameter	T03	T04
<b>NO<sub>x</sub></b>		
Full Load @ 32 °F	15 ppm <sub>v</sub> @ 15% O <sub>2</sub> (7.12 lb/hr)	15 ppm <sub>v</sub> @ 15% O <sub>2</sub> (7.12 lb/hr)
Low Temp (<0 °F)	21.12 lb/hr	21.12 lb/hr
Low Load (<50%)	16.10 lb/hr	16.10 lb/hr
Startup/Shutdown	3.10 lb/event	3.10 lb/event
<b>CO</b>		
Full Load @ 32 °F	25 ppm <sub>v</sub> @ 15% O <sub>2</sub> (7.23 lb/hr)	25 ppm <sub>v</sub> @ 15% O <sub>2</sub> (7.23 lb/hr)
Low Temp (<0 °F)	30.60 lb/hr	30.60 lb/hr
Low Load (<50%)	653.41 lb/hr	653.41 lb/hr
Startup/Shutdown	272.70 lb/event	272.70 lb/event
<b>VOC</b>		
Full Load @ 32 °F	5 ppm <sub>v</sub> @ 15% O <sub>2</sub> (0.83 lb/hr)	5 ppm <sub>v</sub> @ 15% O <sub>2</sub> (0.83 lb/hr)
Low Temp (<0 °F)	1.75 lb/hr	1.75 lb/hr
Low Load (<50%)	7.47 lb/hr	7.47 lb/hr
Startup/Shutdown	3.12 lb/event	3.12 lb/event
<b>SO<sub>2</sub> (short term emission rate based on 20 gr S/100 scf)</b>		
Full Load @ 32 °F	7.54 lb/hr	7.54 lb/hr
<b>PM<sub>10</sub></b>		
Full Load @ 32 °F	0.87 lb/hr	0.87 lb/hr

**[45CSR13, R13-3313, Condition 5.1.4.]**

~~4.1.5. Reserved. The Solar turbines (T01, T02, T03, T04) shall consume no more than the following amounts of natural gas:~~

<del>Emission Point ID</del>	<del>Natural gas consumption MMscf/yr</del>
<del>T01</del>	<del>586.09</del>
<del>T02</del>	<del>586.09</del>
<del>T03</del>	<del>1,133.85</del>
<del>T04</del>	<del>1,133.85</del>

~~[45CSR13, R13-3313, Condition 5.1.5.]~~

4.1.6. NO<sub>x</sub> emissions from the Solar turbines (T01, T02, T03, T04) shall not exceed 25 ppm at 15% O<sub>2</sub> (or an alternative limit of 150 ng/J of useful output or 1.2 lb/MWh). When operating at less than 75% peak load or at temperatures less than 0 °F, the emission limit for NO<sub>x</sub> is 150 ppm at 15% O<sub>2</sub> (or an alternative limit of 1,100 ng/J of useful output or 8.7 lb/MWh).  
[45CSR16; 40CFR§60.4320(a) and Table 1 to 40CFR60 Subpart KKKK; 45CSR13, R13-3313, Condition ~~5.1.6~~, [5.1.5](#).]

4.1.7. Emissions of SO<sub>2</sub> shall not exceed 0.060 lb of SO<sub>2</sub>/MMBTU heat input. For purpose of demonstrating compliance with this limit, the permittee shall maintain the Federal Energy Regulatory Commission (FERC) tariff limit on total sulfur content of 20 grains of sulfur per 100 standard cubic feet of natural gas combusted in the turbines.  
[45CSR16; 40CFR§60.4330(a)(2) and §60.4365(a); 45CSR13, R13-3313, Condition ~~5.1.7~~, [5.1.6](#).]

4.1.8. The permittee must operate and maintain the stationary combustion turbines (T01, T02, T03, T04) in a manner consistent with good air pollution control practices for minimizing emissions at all times including during startup, shutdown, and malfunction.  
[45CSR16; 40CFR§60.4333(a); 45CSR13, R13-3313, Condition ~~5.1.8~~, [5.1.7](#).]

## 4.2. Monitoring Requirements

4.2.1. None

## 4.3. Testing Requirements

4.3.1. For the purposes of demonstrating compliance with the NO<sub>x</sub> emission standards in permit conditions 4.1.3, 4.1.4, and 40CFR§60.4320(a), the permittee shall conduct an initial performance test within 60 days after achieving maximum output of each turbine, but no later than 180 days after initial startup. After the initial test, subsequent performance testing shall be conducted annually (no more than 14 months following the previous test) unless the previous results demonstrate that the affected units achieved compliance of less than or equal to 75 percent of the NO<sub>x</sub> emission limit, then the permittee may reduce the frequency of subsequent tests to once every two years (no more than 26 calendar months following the previous test) as allowed under 40 CFR §60.4340(a). If the results of any subsequent performance test exceed 75 percent of the NO<sub>x</sub> emission limit, then the permittee must resume annual performance tests. Such testing shall be conducted in accordance with Condition 3.3.1. and 40 CFR §60.4400. Records of such testing shall be maintained in accordance with Condition 3.4.2.  
[45CSR16; 40CFR§60.8(a), §60.4340(a), and §60.4400; 45CSR13, R13-3313, Condition 5.2.1.]

- 4.3.2. In order to show compliance with the CO emission limits contained in 4.1.2 - 4.1.4 of this permit the permittee shall perform ~~initial and periodic~~ performance tests ~~on each turbine~~ using EPA approved methods (or other alternative methods approved by the Director) ~~as requested by the Secretary and outlined in Section 3.3~~. Said testing shall be performed while the turbines are operating at normal conditions, within 25% of full load or at the highest achievable load (and while ambient temperatures are above 0°F). ~~The initial performance test shall be conducted within 180 days of startup. Subsequent testing shall be conducted at least every 5 years.~~  
**[45CSR13, R13-3313, Condition 5.2.2.]**

#### 4.4. Recordkeeping Requirements

- 4.4.1. To demonstrate compliance with section 4.1.2 - ~~4.1.5~~ 4.1.4, the permittee shall maintain records of the amount of natural gas consumed and the hours of operation of each of the Solar turbines (T01, T02, T03, T04).  
**[45CSR13, R13-3313, Condition 5.3.1.]**
- 4.4.2. 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 26 ng SO<sub>2</sub>/J (0.060 lb SO<sub>2</sub>/MMBtu) heat input for continental areas.  
**[45CSR16; 40CFR§60.4365(a); 45CSR13, R13-3313, Condition 5.3.2.]**
- 4.4.3. In order to demonstrate compliance with the emission limitations of condition 4.1.2 – 4.1.4 of this permit the permittee will monitor and record the monthly operating hours for each operating parameter listed in permit conditions 4.1.3 and 4.1.4. Monthly emissions for each pollutant will be calculated using the following equation:

$$\text{MEP}_x = \text{DLNP}_x * \text{DLN hrs} + \text{LLP}_x * \text{LL hrs} + \text{LTP}_x * \text{LT hrs} + \text{SSP}_x * \text{SS cycles}$$

Where:

- MEP<sub>x</sub> is the monthly emissions for each pollutant
- DLNP<sub>x</sub> is the unit emission rates (lb/hr) for pollutant X during normal (DLN) operation
- LLP<sub>x</sub> is the unit emission rates (lb/hr) for pollutant X during low-load (LL) operation
- LTP<sub>x</sub> is the unit emission rates (lb/hr) for pollutant X during low-temperature (LT) operation
- SSP<sub>x</sub> is the unit emission rates (lb/cycle) for pollutant X during startup/shutdown (SS) operation

At the end of each month, the monthly emissions will be summed for the preceding 12 months to determine compliance with the annual emissions limits.

**[45CSR13, R13-3313, Condition 5.3.3.]**

#### 4.5. Reporting Requirements

- 4.5.1. The permittee shall submit a notification to the Director of the initial start-up of turbines. Such notice must be submitted within 15 days after the actual date of start-up for the affected source. This notification supersedes the notification requirements of Condition 2.18 of R13-3313.  
**[45CSR16; 40CFR§60.7(a)(3); 45CSR13, R13-3313, Condition 5.4.1.]**
- 4.5.2. The permittee shall submit a written report of the results of testing required in 4.3 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.  
**[45CSR16; 40CFR§60.4375(b); 45CSR13; R13-3313, Condition 5.4.2.]**



## 4.6. Compliance Plan

4.6.1. None

## 5.0 Emergency Generator RICE [emission point ID(s): G1]

### 5.1. Limitations and Standards

5.1.1. **Maximum Yearly Operation Limitation.** The maximum yearly operating hours of the 1,175 hp natural gas fired reciprocating engine, Waukesha VGF-P48GL (G1) shall not exceed 500 hours per year (during periods of non-emergencies). 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.

**[45CSR13, R13-3313, Condition 6.1.1.]**

5.1.2. Maximum emissions from the 1,175 hp natural gas fired reciprocating engine, Waukesha VGF-P48GL (G1) shall not exceed the following limits:

Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
Nitrogen Oxides	5.18	1.30
Carbon Monoxide	<del>4.15</del> <u>10.36</u>	<del>1.04</del> <u>2.59</u>
Volatile Organic Compounds	<del>0.83</del> <u>3.20</u>	<del>0.21</del> <u>0.80</u>

The emergency generator shall only be fired with pipeline-quality natural gas.

*Compliance with these limits ensure compliance with condition 5.1.3.*

**[45CSR13, R13-3313, Condition 6.1.2.]**

5.1.3. Emissions from emergency generator (G1) shall not exceed the following:

- a. NO<sub>x</sub> emissions from the engine shall not exceed 2.0 grams of NO<sub>x</sub> per horsepower-hour (g/hp-hr) or 160 ppmvd at 15 percent O<sub>2</sub>;
- b. CO emissions from engine shall not exceed 4.0 g/hp-hr or 540 ppmvd at 15 percent O<sub>2</sub>;
- c. VOC emissions from the engine shall not exceed 1.0 g/hp-hr or 86 ppmvd at 15 percent O<sub>2</sub>. Emission of formaldehyde shall be excluded when determining compliance with this VOC limit.

**[45CSR16; 40CFR§60.4233(e); Table 1 to 40CFR60, Subpart JJJJ; 45CSR13, R13-3313, Condition 6.2.1.]**

5.1.4. Owners and operators of stationary SI ICE must operate and maintain stationary SI ICE that achieve the emission standards as required in 40CFR§60.4233 over the entire life of the engine.

**[45CSR16; 40CFR§60.4234; 45CSR13, R13-3313, Condition 6.2.2.]**

5.1.5. Starting on July 1, 2010, if the emergency stationary SI internal combustion engine that is greater than or equal to 500 HP that was built on or after July 1, 2010, does not meet the standards applicable to non-emergency engines, the owner or operator must install a non-resettable hour meter.

**[45CSR16; 40CFR§60.4237(a); 45CSR13, R13-3313, Condition 6.3.1.]**

- 5.1.6. If you are an owner or operator of a stationary SI internal combustion engine and must comply with the emission standards specified in 40CFR§§60.4233(d) or (e), you must demonstrate compliance according to one of the methods specified in paragraphs (b)(1) and (2) of 40 CFR 60.4243.
- a. 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 40 CFR 60.4243.
    1. 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.

**[45CSR16; 40CFR§§60.4243(b)(2) and (b)(2)(ii); 45CSR13, R13-3313, Condition 6.4.1.]**

- 5.1.7. 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 40CFR§60.4243. In order for the engine to be considered an emergency stationary ICE under 40 CFR 60 Subpart JJJJ, 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 40 CFR §60.4243, is prohibited. If you do not operate the engine according to the requirements in paragraphs (d)(1) through (3) of 40CFR§60.4243, the engine will not be considered an emergency engine under 40 CFR 60 Subpart JJJJ 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 40CFR§60.4243 for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph (d)(3) of 40 CFR §60.4243 counts as part of the 100 hours per calendar year allowed by paragraph (d)(2) of 40CFR§60.4243.
    - 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.
  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 40 CFR §60.4243. Except as provided in paragraph (d)(3)(i) of 40 CFR §60.4243, 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.

**[45CSR16; 40CFR§60.4243(d); 45CSR13, R13-3313, Condition 6.4.2.]**

- 5.1.8. 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.

**[45CSR16; 40CFR§60.4243(e); 45CSR13, R13-3313, Condition 6.4.3.]**

- 5.1.9. **40 CFR 63, Subpart ZZZZ**

The emergency generator (G1) is subject to all applicable regulations given under 40 CFR 63, Subpart ZZZZ including the following:

- a. *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 40CFR§63.6590 must meet the requirements of this part 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.

**[45CSR34; 40CFR§63.6590(c)]**

## **5.2. Monitoring Requirements**

- 5.2.1. None

## **5.3. Testing Requirements**

- 5.3.1. Owners and operators of stationary SI ICE who conduct performance tests must follow the procedures in paragraphs (a) through (f) of 40CFR§60.4244.

- 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 40 CFR 60 Subpart JJJJ.

**[45CSR16; 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. **[45CSR16; 40CFR§60.4244(b)]**
- c. You must conduct three separate test runs for each performance test required in 40 CFR 60 Subpart JJJJ, 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. **[45CSR16; 40CFR§60.4244(c)]**
- 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 40CFR §60.4244:

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

Where:

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

C<sub>d</sub> = 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°C.

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).

**[45CSR16; 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 40CFR §60.4244:

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

Where:

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

C<sub>d</sub> = Measured CO concentration in ppmv.

1.164×10<sup>-3</sup> = Conversion constant for ppm CO to grams per standard cubic meter at 20°C.

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.

**[45CSR16; 40CFR§60.4244(e)]**

- f. For purposes of 40 CFR 60 Subpart JJJJ, 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 40CFR§60.4244:

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

Where:

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

C<sub>d</sub> = VOC concentration measured as propane in ppmv.

1.833×10<sup>-3</sup> = 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.

**[45CSR16; 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 40CFR§60.4244. The corrected VOC concentration can then be placed on a propane basis using Equation 6 of 40CFR§60.4244.

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

Where:

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

C<sub>Mi</sub> = Measured concentration of compound i in ppmv as carbon.

C<sub>Ai</sub> = True concentration of compound i in ppmv as carbon.

$$C_{icorr} = RF_i \times C_{imeas} \quad (\text{Eq. 5})$$

Where:

C<sub>icorr</sub> = Concentration of compound i corrected to the value that would have been measured by EPA Method 25A, ppmv as carbon.

C<sub>imeas</sub> = Concentration of compound i measured by EPA Method 320, ppmv as carbon.

$$C_{Peq} = 0.6098 \times C_{icorr} \quad (Eq. 6)$$

Where:

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

**[45CSR16; 40CFR§60.4244]**

**[45CSR13, R13-3313, Condition 6.5.1.]**

## 5.4. Recordkeeping Requirements

5.4.1. Owners or operators of stationary SI ICE must meet the following recordkeeping requirements:

- a. Owners and operators of all stationary SI ICE must keep records of the information in paragraphs (a)(1) through (4) of 40CFR§60.4245.
  1. All notifications submitted to comply with 40 CFR 60 Subpart JJJJ 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, 1048, 1054, and 1060, as applicable.
  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.

**[45CSR16; 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. **[45CSR16; 40CFR§60.4245(b)]**

**[45CSR13, R13-3313, Conditions 6.6.1.a. and 6.6.1.b.]**

## 5.5. Reporting Requirements

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

- a. 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 40CFR§60.4245.

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.

**[45CSR16; 40CFR§60.4245(c)]**

- b. 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.  
**[45CSR16; 40CFR§60.4245(d)]**

**[45CSR13, R13-3313, Conditions 6.6.1.c. and 6.6.1.d.]**

## **5.6. Compliance Plan**

- 5.6.1. None



## 6.0 Heaters [emission point ID(s): HTR1, HTR2, HTR3]

### 6.1. Limitations and Standards

6.1.1. Maximum Design Heat Input (MDHI). The MDHI for the heaters shall not exceed the following:

Emission Unit ID#	Emission Unit Description	MDHI
HTR1	Process Heater	1.50 MMBTU/hr
HTR2	Process Heater	0.80 MMBTU/hr
HTR3	<del>40</del> Catalytic Heaters	2.88 MMBTU/hr TOTAL

Each heater shall only be fired with pipeline-quality natural gas.

[45CSR13, R13-3313, Condition 7.1.1.]

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.; 45CSR13, R13-3313, Condition 7.1.2.] [\(HTR1 & HTR2 Only\)](#)

### 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 permit condition 6.1.2. Method 9 shall be conducted in accordance with 40 CFR 60 Appendix A. [45CSR13, R13-3313, Condition 7.2.1.]

### 6.3. Testing Requirements

6.3.1. Upon request by the Secretary, compliance with the visible emission requirements of permit condition 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 Secretary. The Secretary 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 permit condition 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.; 45CSR13, R13-3313, Condition 7.3.1.]

### 6.4. Recordkeeping Requirements

6.4.1. The permittee shall maintain records of all monitoring data required by permit condition 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. [45CSR13, R13-3313, Condition 7.4.1.]

## **6.5. Reporting Requirements**

6.5.1. None

## **6.6. Compliance Plan**

6.6.1. None

## 7.0 40CFR60, Subpart OOOOa Requirements

### 7.1. Limitations and Standards

- 7.1.1. For each affected facility under §60.5365a(j), you must reduce GHG (in the form of a limitation on emissions of methane) and VOC emissions by complying with the requirements of paragraphs (a) through (j) of §60.5397a. These requirements are independent of the closed vent system and cover requirements in §60.5411a.
- a. You must monitor all fugitive emission components, as defined in §60.5430a, in accordance with 40 C.F.R. §§60.5397a(b) through (g). You must repair all sources of fugitive emissions in accordance with 40 C.F.R. §60.5397a(h). You must keep records in accordance with 40 C.F.R. §60.5397a(i) and report in accordance with 40 C.F.R. §60.5397a(j). For purposes of this section, fugitive emissions are defined as: Any visible emission from a fugitive emissions component observed using optical gas imaging or an instrument reading of 500 ppm or greater using Method 21.
  - b. You must develop an emissions monitoring plan that covers the collection of fugitive emissions components at well sites and compressor stations within each company-defined area in accordance with 40 C.F.R. §§60.5397a(c) and (d).
  - c. Fugitive emissions monitoring plans must include the elements specified in 40 C.F.R. §60.5397a(c)(1) through (8), at a minimum.
    1. Frequency for conducting surveys. Surveys must be conducted at least as frequently as required by 40 C.F.R. §§60.5397a(f) and (g).
    2. Technique for determining fugitive emissions (i.e., Method 21 at 40 CFR part 60, appendix A-7, or optical gas imaging).
    3. Manufacturer and model number of fugitive emissions detection equipment to be used.
    4. Procedures and timeframes for identifying and repairing fugitive emissions components from which fugitive emissions are detected, including timeframes for fugitive emission components that are unsafe to repair. Your repair schedule must meet the requirements of 40 C.F.R. §60.5397a(h) at a minimum.
    5. Procedures and timeframes for verifying fugitive emission component repairs.
    6. Records that will be kept and the length of time records will be kept.
    7. If you are using optical gas imaging, your plan must also include the elements specified in 40 C.F.R. §60.5397a(c)(7)(i) through (vii).
      - i. Verification that your optical gas imaging equipment meets the specifications of 40 C.F.R. §§60.5397a(c)(7)(i)(A) and (B). This verification is an initial verification and may either be performed by the facility, by the manufacturer, or by a third party. For the purposes of complying with the fugitives emissions monitoring program with optical gas imaging, a fugitive emission is defined as any visible emissions observed using optical gas imaging.

- A. Your optical gas imaging equipment must be capable of imaging gases in the spectral range for the compound of highest concentration in the potential fugitive emissions.
  - B. Your optical gas imaging equipment must be capable of imaging a gas that is half methane, half propane at a concentration of 10,000 ppm at a flow rate of  $\leq 60$  g/hr from a quarter inch diameter orifice.
  - ii. Procedure for a daily verification check.
  - iii. Procedure for determining the operator's maximum viewing distance from the equipment and how the operator will ensure that this distance is maintained.
  - iv. Procedure for determining maximum wind speed during which monitoring can be performed and how the operator will ensure monitoring occurs only at wind speeds below this threshold.
  - v. Procedures for conducting surveys, including the items specified in 40 C.F.R. §§60.5397a(c)(7)(v)(A) through (C).
    - A. How the operator will ensure an adequate thermal background is present in order to view potential fugitive emissions.
    - B. How the operator will deal with adverse monitoring conditions, such as wind.
    - C. How the operator will deal with interferences (e.g., steam).
  - vi. Training and experience needed prior to performing surveys.
  - vii. Procedures for calibration and maintenance. At a minimum, procedures must comply with those recommended by the manufacturer.
8. If you are using Method 21 of appendix A-7 of this part, your plan must also include the elements specified in 40 C.F.R. §§60.5397a(c)(8)(i) and (ii). For the purposes of complying with the fugitive emissions monitoring program using Method 21 a fugitive emission is defined as an instrument reading of 500 ppm or greater.
- i. Verification that your monitoring equipment meets the requirements specified in Section 6.0 of Method 21 at 40 CFR part 60, appendix A-7. For purposes of instrument capability, the fugitive emissions definition shall be 500 ppm or greater methane using a FID-based instrument. If you wish to use an analyzer other than a FID-based instrument, you must develop a site-specific fugitive emission definition that would be equivalent to 500 ppm methane using a FID-based instrument (e.g., 10.6 eV PID with a specified isobutylene concentration as the fugitive emission definition would provide equivalent response to your compound of interest).
  - ii. Procedures for conducting surveys. At a minimum, the procedures shall ensure that the surveys comply with the relevant sections of Method 21 at 40 CFR part 60, appendix A-7, including Section 8.3.1.
- d. Each fugitive emissions monitoring plan must include the elements specified in 40 C.F.R. §§60.5397a(d)(1) through (4), at a minimum, as applicable.

1. Sitemap.
  2. A defined observation path that ensures that all fugitive emissions components are within sight of the path. The observation path must account for interferences.
  3. If you are using Method 21, your plan must also include a list of fugitive emissions components to be monitored and method for determining location of fugitive emissions components to be monitored in the field (e.g. tagging, identification on a process and instrumentation diagram, etc.).
  4. Your plan must also include the written plan developed for all of the fugitive emission components designated as difficult-to-monitor in accordance with 40 C.F.R. §60.5397a(g)(3)(i) of this section, and the written plan for fugitive emission components designated as unsafe-to-monitor in accordance with 40 C.F.R. §60.5397a(g)(3)(ii).
- e. Each monitoring survey shall observe each fugitive emissions component, as defined in §60.5430a, for fugitive emissions.
- f.
  1. You must conduct an initial monitoring survey within 60 days of the startup of production, as defined in §60.5430a, for each collection of fugitive emissions components at a new well site or by June 3, 2017, whichever is later. For a modified collection of fugitive emissions components at a well site, the initial monitoring survey must be conducted within 60 days of the first day of production for each collection of fugitive emission components after the modification or by June 3, 2017, whichever is later.
  2. You must conduct an initial monitoring survey within 60 days of the startup of a new compressor station for each new collection of fugitive emissions components at the new compressor station or by June 3, 2017, whichever is later. For a modified collection of fugitive components at a compressor station, the initial monitoring survey must be conducted within 60 days of the modification or by June 3, 2017, whichever is later.
- g. A monitoring survey of each collection of fugitive emissions components at a well site or at a compressor station must be performed at the frequencies specified in 40 C.F.R. §§60.5397a(g)(1) and (2), with the exceptions noted in 40 C.F.R. §§60.5397a(g)(3) and (4).
1. A monitoring survey of each collection of fugitive emissions components at a well site within a company-defined area must be conducted at least semiannually after the initial survey. Consecutive semiannual monitoring surveys must be conducted at least 4 months apart.
  2. A monitoring survey of the collection of fugitive emissions components at a compressor station within a company-defined area must be conducted at least quarterly after the initial survey. Consecutive quarterly monitoring surveys must be conducted at least 60 days apart.
  3. Fugitive emissions components that cannot be monitored without elevating the monitoring personnel more than 2 meters above the surface may be designated as difficult-to-monitor. Fugitive emissions components that are designated difficult-to-monitor must meet the specifications of 40 C.F.R. §§60.5397a(g)(3)(i) through (iv).
- i. A written plan must be developed for all of the fugitive emissions components designated difficult-to-monitor. This written plan must be incorporated into the fugitive emissions monitoring plan required by 40 C.F.R. §§60.5397a(b), (c), and (d).

- ii. The plan must include the identification and location of each fugitive emissions component designated as difficult-to-monitor.
      - iii. The plan must include an explanation of why each fugitive emissions component designated as difficult-to-monitor is difficult-to-monitor.
      - iv. The plan must include a schedule for monitoring the difficult-to-monitor fugitive emissions components at least once per calendar year.
    4. Fugitive emissions components that cannot be monitored because monitoring personnel would be exposed to immediate danger while conducting a monitoring survey may be designated as unsafe-to-monitor. Fugitive emissions components that are designated unsafe-to-monitor must meet the specifications of 40 C.F.R. §§60.5397a(g)(4)(i) through (iv).
      - i. A written plan must be developed for all of the fugitive emissions components designated unsafe-to-monitor. This written plan must be incorporated into the fugitive emissions monitoring plan required by 40 C.F.R. §§60.5397a(b), (c), and (d).
      - ii. The plan must include the identification and location of each fugitive emissions component designated as unsafe-to-monitor.
      - iii. The plan must include an explanation of why each fugitive emissions component designated as unsafe-to-monitor is unsafe-to-monitor.
      - iv. The plan must include a schedule for monitoring the fugitive emissions components designated as unsafe-to-monitor.
    5. The requirements of 40 C.F.R. §60.5397a(g)(2) are waived for any collection of fugitive emissions components at a compressor station located within an area that has an average calendar month temperature below 0°Fahrenheit for two of three consecutive calendar months of a quarterly monitoring period. The calendar month temperature average for each month within the quarterly monitoring period must be determined using historical monthly average temperatures over the previous three years as reported by a National Oceanic and Atmospheric Administration source or other source approved by the Administrator. The requirements of 40 C.F.R. §60.5397a(g)(2) shall not be waived for two consecutive quarterly monitoring periods.
  - h. Each identified source of fugitive emissions shall be repaired or replaced in accordance with 40 C.F.R. §§60.5397a(h)(1) and (2). For fugitive emissions components also subject to the repair provisions of 40 C.F.R. §§60.5416a(b)(9) through (12) and (c)(4) through (7), those provisions apply instead to those closed vent system and covers, and the repair provisions of 40 C.F.R. §§60.5397a(h)(1) and (2) do not apply to those closed vent systems and covers.
    1. Each identified source of fugitive emissions shall be repaired or replaced as soon as practicable, but no later than 30 calendar days after detection of the fugitive emissions.
    2. If the repair or replacement is technically infeasible, would require a vent blowdown, a compressor station shutdown, a well shutdown or well shut-in, or would be unsafe to repair during operation of the unit, the repair or replacement must be completed during the next scheduled compressor station

shutdown, well shutdown, well shut-in, after a planned vent blowdown or within 2 years, whichever is earlier.

3. Each repaired or replaced fugitive emissions component must be resurveyed as soon as practicable, but no later than 30 days after being repaired, to ensure that there are no fugitive emissions.
  - i. For repairs that cannot be made during the monitoring survey when the fugitive emissions are initially found, the operator may resurvey the repaired fugitive emissions components using either Method 21 or optical gas imaging within 30 days of finding such fugitive emissions.
  - ii. For each repair that cannot be made during the monitoring survey when the fugitive emissions are initially found, a digital photograph must be taken of that component or the component must be tagged for identification purposes. The digital photograph must include the date that the photograph was taken, must clearly identify the component by location within the site (e.g., the latitude and longitude of the component or by other descriptive landmarks visible in the picture).
  - iii. Operators that use Method 21 to resurvey the repaired fugitive emissions components are subject to the resurvey provisions specified in 40 C.F.R. §§60.5397a(h)(3)(iii)(A) and (B).
    - A. A fugitive emissions component is repaired when the Method 21 instrument indicates a concentration of less than 500 ppm above background or when no soap bubbles are observed when the alternative screening procedures specified in section 8.3.3 of Method 21 are used.
    - B. Operators must use the Method 21 monitoring requirements specified in 40 C.F.R. §60.5397a(c)(8)(ii) or the alternative screening procedures specified in section 8.3.3 of Method 21.
  - iv. Operators that use optical gas imaging to resurvey the repaired fugitive emissions components, are subject to the resurvey provisions specified in 40 C.F.R. §§60.5397a(h)(3)(iv)(A) and (B).
    - A. A fugitive emissions component is repaired when the optical gas imaging instrument shows no indication of visible emissions.
    - B. Operators must use the optical gas imaging monitoring requirements specified in 40 C.F.R. §60.5397a(c)(7).
- i. Records for each monitoring survey shall be maintained as specified §60.5420a(c)(15).
- j. Annual reports shall be submitted for each collection of fugitive emissions components at a well site and each collection of fugitive emissions components at a compressor station that include the information specified in §60.5420a(b)(7). Multiple collection of fugitive emissions components at a well site or at a compressor station may be included in a single annual report.

**[45CSR16; 40 C.F.R. §60.5397a; 45CSR13, R13-3313, Condition 4.1.4.]**

- 7.1.2. You must determine initial compliance with the standards for each affected facility. The initial compliance period begins on August 2, 2016, or upon initial startup, whichever is later, and ends no later than 1 year after the initial startup date for your affected facility or no later than 1 year after August 2, 2016. The initial compliance period may be less than one full year.

- a. To achieve initial compliance with the fugitive emission standards for each collection of fugitive emissions components at a well site and each collection of fugitive emissions components at a compressor station, you must comply with paragraphs (j)(1) through (5) of 40CFR§60.5410a.
  1. You must develop a fugitive emissions monitoring plan as required in §60.5397a(b), (c), and (d).
  2. You must conduct an initial monitoring survey as required in §60.5397a(f).
  3. You must maintain the records specified in §60.5420a(c)(15).
  4. You must repair each identified source of fugitive emissions for each affected facility as required in §60.5397a(h).
  5. You must submit the initial annual report for each collection of fugitive emissions components at a well site and each collection of fugitive emissions components at a compressor station as required in §60.5420a(b)(1) and (7).

**[45CSR16; 40 C.F.R. §60.5410a(j)]**

- 7.1.3. For each collection of fugitive emissions components at a well site and each collection of fugitive emissions components at a compressor station, you must demonstrate continuous compliance with the fugitive emission standards specified in §60.5397a according to the following paragraphs:
  - a. You must conduct periodic monitoring surveys as required in §60.5397a(g).
  - b. You must repair or replace each identified source of fugitive emissions as required in §60.5397a(h).
  - c. You must maintain records as specified in §60.5420a(c)(15).
  - d. You must submit annual reports for collection of fugitive emissions components at a well site and each collection of fugitive emissions components at a compressor station as required in §60.5420a(b)(1) and (7).

**[45CSR16; 40 C.F.R. §60.5415a(h)]**

## **7.2. Monitoring Requirements**

- 7.2.1. None

## **7.3. Testing Requirements**

- 7.3.1. None

## **7.4. Recordkeeping Requirements**

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



For each collection of fugitive emissions components at a well site and each collection of fugitive emissions components at a compressor station, the records identified in paragraphs (c)(15)(i) through (iii) of 40 C.F.R. §60.5420a.

- (i) The fugitive emissions monitoring plan as required in §60.5397a(b), (c), and (d).
- (ii) The records of each monitoring survey as specified in paragraphs (c)(15)(ii)(A) through (I) of 40 C.F.R. §60.5420a.
  - (A) Date of the survey.
  - (B) Beginning and end time of the survey.
  - (C) Name of operator(s) performing survey. You must note the training and experience of the operator.
  - (D) Monitoring instrument used.
  - (E) When optical gas imaging is used to perform the survey, one or more digital photographs or videos, captured from the optical gas imaging instrument used for conduct of monitoring, of each required monitoring survey being performed. The digital photograph must include the date the photograph was taken and the latitude and longitude of the collection of fugitive emissions components at a well site or collection of fugitive emissions components at a compressor station imbedded within or stored with the digital file. As an alternative to imbedded latitude and longitude within the digital file, the digital photograph or video may consist of an image of the monitoring survey being performed with a separately operating GPS device within the same digital picture or video, provided the latitude and longitude output of the GPS unit can be clearly read in the digital image.
  - (F) Fugitive emissions component identification when Method 21 is used to perform the monitoring survey.
  - (G) Ambient temperature, sky conditions, and maximum wind speed at the time of the survey.
  - (H) Any deviations from the monitoring plan or a statement that there were no deviations from the monitoring plan.
  - (I) Documentation of each fugitive emission, including the information specified in paragraphs (c)(15)(ii)(I)(1) through (12) of 40 C.F.R. §60.5420a.
    - (1) Location.
    - (2) Any deviations from the monitoring plan or a statement that there were no deviations from the monitoring plan.
    - (3) Number and type of components for which fugitive emissions were detected.
    - (4) Number and type of difficult-to-monitor and unsafe-to-monitor fugitive emission components monitored.
    - (5) Instrument reading of each fugitive emissions component that requires repair when Method 21 is used for monitoring.
    - (6) Number and type of fugitive emissions components that were not repaired as required in §60.5397a(h).
    - (7) Number and type of components that were tagged as a result of not being repaired during the monitoring survey when the fugitive emissions were initially found as required in §60.5397a(h)(3)(ii).
    - (8) If a fugitive emissions component is not tagged, a digital photograph or video of each fugitive emissions component that could not be repaired during the monitoring survey when the fugitive emissions were initially found as required in §60.5397a(h)(3)(ii). The digital photograph or video

must clearly identify the location of the component that must be repaired. Any digital photograph or video required under this paragraph can also be used to meet the requirements under paragraph (c)(15)(ii)(E) of 40 C.F.R. §60.5420a, as long as the photograph or video is taken with the optical gas imaging instrument, includes the date and the latitude and longitude are either imbedded or visible in the picture.

- (9) Repair methods applied in each attempt to repair the fugitive emissions components.
  - (10) Number and type of fugitive emission components placed on delay of repair and explanation for each delay of repair.
  - (11) The date of successful repair of the fugitive emissions component.
  - (12) Instrumentation used to resurvey a repaired fugitive emissions component that could not be repaired during the initial fugitive emissions finding.
- (iii) For the collection of fugitive emissions components at a compressor station, if a monitoring survey is waived under §60.5397a(g)(5), you must maintain records of the average calendar month temperature, including the source of the information, for each calendar month of the quarterly monitoring period for which the monitoring survey was waived.

**[40 C.F.R. §§60.5420a(c)&(c)(15), 45CSR16]**

## **7.5. Reporting Requirements**

7.5.1. Reporting requirements. You must submit annual reports containing the information specified in paragraphs (b)(1) through (8) and (12) of 40 C.F.R. §60.5420a and performance test reports as specified in paragraph (b)(9) or (10) of 40 C.F.R. §60.5420a, if applicable, except as provided in paragraph (b)(13) of 40 C.F.R. §60.5420a. You must submit annual reports following the procedure specified in paragraph (b)(11) of 40 C.F.R. §60.5420a. The initial annual report is due no later than 90 days after the end of the initial compliance period as determined according to §60.5410a. Subsequent annual reports are due no later than same date each year as the initial annual report. If you own or operate more than one affected facility, you may submit one report for multiple affected facilities provided the report contains all of the information required as specified in paragraphs (b)(1) through (8) of 40 C.F.R. §60.5420a, except as provided in paragraph (b)(13) of 40 C.F.R. §60.5420a. Annual reports may coincide with title V reports as long as all the required elements of the annual report are included. You may arrange with the Administrator a common schedule on which reports required by this part may be submitted as long as the schedule does not extend the reporting period.

- a. The general information specified in paragraphs (b)(1)(i) through (iv) of 40 C.F.R. §60.5420a for all reports.
  - 1. The company name, facility site name associated with the affected facility, US Well ID or US Well ID associated with the affected facility, if applicable, and address of the affected facility. If an address is not available for the site, include a description of the site location and provide the latitude and longitude coordinates of the site in decimal degrees to an accuracy and precision of five (5) decimals of a degree using the North American Datum of 1983.
    - i. An identification of each affected facility being included in the annual report.
    - ii. Beginning and ending dates of the reporting period.
    - iii. A certification by a certifying official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

- b. For the collection of fugitive emissions components at each well site and the collection of fugitive emissions components at each compressor station within the company-defined area, the records of each monitoring survey including the information specified in paragraphs (b)(7)(i) through (xii) of 40 C.F.R. §60.5420a. For the collection of fugitive emissions components at a compressor station, if a monitoring survey is waived under §60.5397a(g)(5), you must include in your annual report the fact that a monitoring survey was waived and the calendar months that make up the quarterly monitoring period for which the monitoring survey was waived.
1. Date of the survey.
  2. Beginning and end time of the survey.
  3. Name of operator(s) performing survey. If the survey is performed by optical gas imaging, you must note the training and experience of the operator.
  4. Ambient temperature, sky conditions, and maximum wind speed at the time of the survey.
  5. Monitoring instrument used.
  6. Any deviations from the monitoring plan or a statement that there were no deviations from the monitoring plan.
  7. Number and type of components for which fugitive emissions were detected.
  8. Number and type of fugitive emissions components that were not repaired as required in §60.5397a(h).
  9. Number and type of difficult-to-monitor and unsafe-to-monitor fugitive emission components monitored.
  10. The date of successful repair of the fugitive emissions component.
  11. Number and type of fugitive emission components placed on delay of repair and explanation for each delay of repair.
  12. Type of instrument used to resurvey a repaired fugitive emissions component that could not be repaired during the initial fugitive emissions finding.

[45CSR16; 40 C.F.R. §§60.5420a(b)(1) and (7)]

## 7.6. Compliance Plan

- 7.6.1. None