Chertkovsky, Natalya V <natalya.v.chertkovsky@wv.gov>

White Oak Compressor Station TV permit renewal

11 messages

Chertkovsky, Natalya V <natalya.v.chertkovsky@wv.gov> Wed, May 14, 2025 at 2:08 PM
To: David Keatley <david_keatley@tcenergy.com>

Hello David,
Please, find attached draft TV permit renewal and a renewal fact sheet for your review.
Please, let me know by May 28, 2025 (or sooner) if you have any questions or comments.
Thank you,

Sincerely,

Natalya Chertkovsky
WV DEP DAQ
Permit Engineer
304-926-0499 x 41250

2 attachments

DPTitleVPermitRenewal2025 - clean.docx
312K

DPFactSheetRenewal2025.docx
87K

David Keatley <david_keatley@tcenergy.com> Wed, May 14, 2025 at 3:26 PM
To: "Chertkovsky, Natalya V" <natalya.v.chertkovsky@wv.gov>

Natalya,

Tank A02 has been removed and 1,200 gallon wastewater tank A03 has been installed. Please update section 1.1.

David J. Keatley PE, PhD

Environmental Analyst

USNG Environmental Compliance

Email: david_keatley@tcenergy.com

Desk: (304) 357-2443

1700 Maccorkle Ave, SE

5th Floor

Charleston, WV

25314

TC Energy

TCEnergy.com

From: Chertkovsky, Natalya V <natalya.v.chertkovsky@wv.gov>
Sent: Wednesday, May 14, 2025 2:08 PM
To: David Keatley <david_keatley@tcenergy.com>
Subject: [EXTERNAL] White Oak Compressor Station TV permit renewal

[Quoted text hidden]

Chertkovsky, Natalya V <natalya.v.chertkovsky@wv.gov> Wed, May 14, 2025 at 5:01 PM
To: David Keatley <david_keatley@tcenergy.com>

Ok, thank you David.
Was it replaced in 2025?
Any applicable requirements?
[Quoted text hidden]

David Keatley <david_keatley@tcenergy.com> Thu, May 15, 2025 at 11:29 AM
To: "Chertkovsky, Natalya V" <natalya.v.chertkovsky@wv.gov>

Natalya,

Responses in red below.

David Keatley

From: Chertkovsky, Natalya V <natalya.v.chertkovsky@wv.gov>
Sent: Wednesday, May 14, 2025 5:02 PM
To: David Keatley <david_keatley@tcenergy.com>
Subject: Re: [EXTERNAL] White Oak Compressor Station TV permit renewal

Ok, thank you David.

Was it replaced in 2025?

2023

Any applicable requirements?

No applicable requirements, since this is a wastewater tank.

[Quoted text hidden]

Chertkovsky, Natalya V <natalya.v.chertkovsky@wv.gov> Thu, May 15, 2025 at 11:40 AM
To: David Keatley <david_keatley@tcenergy.com>

David,
Thank you for the clarification.
Was it overlooked during the R13-3315C revision in 2024?
[Quoted text hidden]

David Keatley <david_keatley@tcenergy.com> Thu, May 15, 2025 at 11:59 AM
To: "Chertkovsky, Natalya V" <natalya.v.chertkovsky@wv.gov>

Natalya,

Response in red below.

David Keatley

From: Chertkovsky, Natalya V <natalya.v.chertkovsky@wv.gov>
Sent: Thursday, May 15, 2025 11:41 AM
To: David Keatley <david_keatley@tcenergy.com>
Subject: Re: [EXTERNAL] White Oak Compressor Station TV permit renewal

David,

Thank you for the clarification.

Was it overlooked during the R13-3315C revision in 2024?

The application in 2024 was primarily to update testing requirements for the turbines, so tanks were not reviewed in this application. It wasn't overlooked, but it could have been included.

[Quoted text hidden]

Chertkovsky, Natalya V <natalya.v.chertkovsky@wv.gov> Thu, May 15, 2025 at 12:01 PM
To: David Keatley <david_keatley@tcenergy.com>

Thank you for the information.
[Quoted text hidden]

Chertkovsky, Natalya V <natalya.v.chertkovsky@wv.gov> Thu, May 15, 2025 at 1:44 PM
To: David Keatley <david_keatley@tcenergy.com>

David,
Will you have more comments later, or we are ok to go out to notice?
[Quoted text hidden]

David Keatley <david_keatley@tcenergy.com> Thu, May 15, 2025 at 2:29 PM
To: "Chertkovsky, Natalya V" <natalya.v.chertkovsky@wv.gov>

Natalya,

I have no additional comments. Feel free to go to notice.

[Quoted text hidden]

Chertkovsky, Natalya V <natalya.v.chertkovsky@wv.gov> Thu, May 15, 2025 at 2:33 PM
To: David Keatley <david_keatley@tcenergy.com>

Thank you, David!
[Quoted text hidden]

Chertkovsky, Natalya V <natalya.v.chertkovsky@wv.gov> Fri, May 16, 2025 at 7:34 AM
To: David Keatley <david_keatley@tcenergy.com>

David,
FYI please, see attached draft permit and a fact sheet revised per your comment.
Thank you,
Sincerely,
Natalya Chertkovsky

[Quoted text hidden]

2 attachments

DPTitleVPermitRenewal2025.docx
313K

DPFactSheetRenewal2025.docx
88K

West Virginia Department of Environmental Protection

Harold D. Ward
Cabinet Secretary

Permit to Operate

Pursuant to

Title V

of the Clean Air Act

Issued to:

Columbia Gas Transmission, LLC
White Oak Compressor Station
R30-01300017-2025

Laura M. Crowder
Director, Division of Air Quality

Issued: [Date of issuance] • *Effective: [Equals issue date plus two weeks]*
Expiration: [5 years after issuance date] • *Renewal Application Due: [6 months prior to expiration]*

Permit Number: **R30-01300017-2025**
Permittee: **Columbia Gas Transmission, LLC**
Facility Name: **White Oak Compressor Station**
Permittee Mailing Address: **1700 MacCorkle Avenue, SE, Charleston, WV 25314**

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.

Facility Location:	Brohard, Calhoun County, West Virginia
Facility Mailing Address:	1700 MacCorkle Avenue, SE, Charleston, WV 25314
Telephone Number:	304-357-2000
Type of Business Entity:	LLC
Facility Description:	Transmission Natural Gas Compressor Station
SIC Codes:	4922
UTM Coordinates:	487.7 km Easting • 4,321.4 km Northing • Zone 17

Permit Writer: Natalya V. Chertkovsky-Veselova

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.

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.

Table of Contents

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 Titan 130 Turbine #1	2019	20,912 HP @ 32 °F	None
T2	T02	Solar Titan 130 Turbine #2	2019	20,912 HP @ 32 °F	None
G1	G1	Waukesha VGF-P48GL Emergency Generator RICE 4 Cycle, Lean Burn	2019	1,175 hp	None
HTR1	H1	Process Heater	2019	1.50 MMBTU/hr	None
HTR2	SH1	Catalytic Heaters	2019	2.88 MMBTU/hr (total)	None
Al	A01	Pipeline Liquids Storage Tank	2019	2,056 gal	None
A2	A02	Wastewater Storage Tank	2019	1,500 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
R13-3315C	July 9, 2024

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 other person to whom the Secretary has delegated authority or duties pursuant to W.Va. Code §§ 22-1-6 or 22-1-8 (45CSR§30-2.39.). 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

CAAA	Clean Air Act Amendments	**NSPS**	New Source Performance Standards
CBI	Confidential Business Information	**PM**	Particulate Matter
CEM	Continuous Emission Monitor	**PM_{10}**	Particulate Matter less than 10μm in diameter
CES	Certified Emission Statement	**pph**	Pounds per Hour
C.F.R. *or* CFR	Code of Federal Regulations	**ppm**	Parts per Million
CO	Carbon Monoxide	**PSD**	Prevention of Significant Deterioration
C.S.R. *or* CSR	Codes of State Rules	**psi**	Pounds per Square Inch
DAQ	Division of Air Quality	**SIC**	Standard Industrial Classification
DEP	Department of Environmental Protection	**SIP**	State Implementation Plan
FOIA	Freedom of Information Act	**SO_2**	Sulfur Dioxide
HAP	Hazardous Air Pollutant	**TAP**	Toxic Air Pollutant
HON	Hazardous Organic NESHAP	**TPY**	Tons per Year
HP	Horsepower	**TRS**	Total Reduced Sulfur
lbs/hr *or* lb/hr	Pounds per Hour	**TSP**	Total Suspended Particulate
LDAR	Leak Detection and Repair	**USEPA**	United States Environmental Protection Agency
m	Thousand	**UTM**	Universal Transverse Mercator
MACT	Maximum Achievable Control Technology	**VEE**	Visual Emissions Evaluation
mm	Million	**VOC**	Volatile Organic Compounds
mmBtu/hr	Million British Thermal Units per Hour		
$mmft^3$/hr *or* mmcf/hr	Million Cubic Feet Burned per Hour		
NA *or* N/A	Not Applicable		
NAAQS	National Ambient Air Quality Standards		
NESHAPS	National Emissions Standards for Hazardous Air Pollutants		
NO_x	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. Reserved

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)(15)]**

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. 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. Reserved

3.3. Testing Requirements

3.3.1. **Stack testing.** As per provisions set forth in this permit or as otherwise required by the Secretary, in accordance with the West Virginia Code, underlying regulations, permits and orders, the permittee shall conduct test(s) to determine compliance with the emission limitations set forth in this permit and/or established or set forth in underlying documents. The Secretary, or his duly authorized representative, may at his option witness or conduct such test(s). Should the Secretary exercise his option to conduct such test(s), the operator shall provide all necessary sampling connections and sampling ports to be located in such manner as the Secretary may require, power for test equipment and the required safety equipment, such as scaffolding, railings and ladders, to comply with generally accepted good safety practices. Such tests shall be conducted in accordance with the methods and procedures set forth in this permit or as otherwise approved or specified by the Secretary in accordance with the following:

a. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with 40 C.F.R. Parts 60, 61, and 63, 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. If a testing method is specified or approved which effectively replaces a test method specified in the permit, the permit shall be revised in accordance with 45CSR§30-6.4 or 45CSR§30-6.5 as applicable.

c. All periodic tests to determine mass emission limits from or air pollutant concentrations in discharge stacks and such other tests as specified in this permit shall be conducted in accordance with an approved test protocol. Unless previously approved, such protocols shall be submitted to the Secretary in writing

at least thirty (30) days prior to any testing and shall contain the information set forth by the Secretary. In addition, the permittee shall notify the Secretary at least fifteen (15) days prior to any testing so the Secretary may have the opportunity to observe such tests. This notification shall include the actual date and time during which the test will be conducted and, if appropriate, verification that the tests will fully conform to a referenced protocol previously approved by the Secretary.

d. The permittee shall submit a report of the results of the stack test within 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)(15-16) 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, R13-3315, 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 57th 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[1]:
DEPAirQualityReports@wv.gov

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

3.5.4. **Fees.** The permittee shall pay fees on an annual basis in accordance with 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:	**US EPA:**
DEPAirQualityReports@wv.gov	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. **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. 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 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 45 CSR§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.

40 C.F.R. 60, Subpart Dc	**Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units.** The heaters at the facility are less than 10 MMBtu/hr, therefore, according to 40 C.F.R. §60.40c(a), this rule does not apply.
40 C.F.R. 63 Subpart JJJJJJ	**NESHAP for Industrial, Commercial, and Institutional Boilers Area Sources.** According to 40 C.F.R. §63.11195(e) natural gas fired boilers are not subject to this subpart.
40 C.F.R. 60, 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 and later, which is after the applicability date specified in 40 C.F.R. §60.5365, therefore this rule does not apply.

4.0 Source-Specific Requirements [Turbines (T01, T02)]

4.1. Limitations and Standards

4.1.1. The Solar Titan 130 turbines (T01, T02) 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, R13-3315, Condition 5.1.1]

4.1.2. Maximum annual emissions from the Solar Titan 130 turbines (T01, T02) shall not exceed the following:

Emission Point ID#	NO_x	CO	VOC	SO_2	PM_{10}	CH_2O
	tons/year					
T01	43.10	104.84	5.52	0.55	5.08	0.55
T02	43.10	104.84	5.52	0.55	5.08	0.55

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, R13-3315, Condition 5.1.2]

4.1.3. Maximum hourly emissions from the Solar Titan 130 turbines (T01, T02) shall not exceed the following:

Operating Parameter	T01	T02
NO_x		
Normal Load @ 32 °F	15 ppm_v, @ 15% O_2 (9.48 lb/hr)	15 ppm_v, @ 15% O_2 (9.48 lb/hr)
Low Temp (<0 °F)	28.40 lb/hr	28.40 lb/hr
Low Load (<50%)	20.97 lb/hr	20.97 lb/hr
Startup/Shutdown	4.30 lb/event	4.30 lb/event
CO		
Normal Load @ 32 °F	25 ppm_v, @ 15% O_2 (9.62 lb/hr)	25 ppm_v, @ 15% O_2 (9.62 lb/hr)
Low Temp (<0 °F)	41.16 lb/hr	41.16 lb/hr
Low Load (<50%)	850.77 lb/hr	850.77 lb/hr
Startup/Shutdown	384.50 lb/event	384.50 lb/event
VOC		
Normal Load @ 32 °F	5 ppm_v, @ 15% O_2 (1.10 lb/hr)	5 ppm_v, @ 15% O_2 (1.10 lb/hr)
Low Temp (<0 °F)	2.35 lb/hr	2.35 lb/hr
Low Load (<50%)	9.72 lb/hr	9.72 lb/hr
Startup/Shutdown	4.40 lb/event	4.40 lb/event

Operating Parameter	T01	T02
SO_2 (short term emission rate based on 20 gr S/100 scf)		
Full Load @ 32 °F	10.02 lb/hr	10.02 lb/hr
PM_{10}		
Full Load @ 32 °F	1.16 lb/hr	1.16 lb/hr

[45CSR13, R13-3315, Condition 5.1.3]

4.1.4. NO_x emissions from the Solar Titan 130 turbines (T01, T02) shall not exceed 25 ppm at 15% O_2 (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_x is 150 ppm at 15% O_2 (or an alternative limit of 1,100 ng/J or useful output or 8.7 lb/MWh).

[45CSR16, 40 C.F.R. §60.4320(a) and Table 1 to 40 C.F.R. 60 Subpart KKKK, 45CSR13, R13-3315, Condition 5.1.4]

4.1.5. Emissions of SO_2 shall not exceed 0.060 lb of SO_2/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, 40 C.F.R. §60.4330(a)(2) and §60.4365(a), 45CSR13, R13-3315, Condition 5.1.5]

4.1.6. The permittee must operate and maintain the stationary combustion turbines (T01, T02) in a manner consistent with good air pollution control practices for minimizing emissions at all times including during startup, shutdown, and malfunction.
[45CSR16, 40 C.F.R. §60.4333(a), 45CSR13, R13-3315, Condition 5.1.6]

4.2. Monitoring Requirements

4.2.1. Reserved

4.3. Testing Requirements

4.3.1. For the purposes of demonstrating compliance with the NO_x emission standards in permit conditions 4.1.2, 4.1.3, and 40 C.F.R. §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_x 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 C.F.R. §60.4340(a). If the results of any subsequent performance test exceed 75 percent of the NO_x emission limit, then the permittee must resume annual performance tests. Such testing shall be conducted in accordance with Condition 3.3.1. and 40 C.F.R. §60.4400. Records of such testing shall be maintained in accordance with Condition 3.4.2.
[45CSR16, 40 C.F.R. §60.8(a), §60.4340(a), and §60.4400, 45CSR13, R13-3315, Condition 5.2.1]

4.3.2. In order to show compliance with the CO emission limits contained in 4.1.2 and 4.1.3 of this permit the permittee shall perform performance tests 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).
[45CSR13, R13-3315, Condition 5.2.2]

4.4. Recordkeeping Requirements

4.4.1. To demonstrate compliance with section 4.1.2 - 4.1.3, the permittee shall maintain records of the amount of natural gas consumed and the hours of operation of each of the Solar Titan 130 turbines (T01, T02).
[45CSR13, R13-3315, 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_2/J (0.060 lb SO_2/MMBtu) heat input for continental areas.
[45CSR16, 40 C.F.R. §60.4365(a), 45CSR13, R13-3315, Condition 5.3.2]

4.4.3. In order to demonstrate compliance with the emission limitations of conditions 4.1.2 and 4.1.3 of this permit the permittee will monitor and record the monthly operating hours for each operating parameter listed in permit condition 4.1.3. Monthly emissions for each pollutant will be calculated using the following equation:

MEPx = DLNPx * DLN hrs + LLPx * LL hrs + LTPx * LT hrs + SSPx * SS cycles

Where:

- MEPx is the monthly emissions for each pollutant
- DLNPx is the unit emission rates (lb/hr) for pollutant X during normal (DLN) operation
- LLPx is the unit emission rates (lb/hr) for pollutant X during low-load (LL) operation
- LTPx is the unit emission rates (lb/hr) for pollutant X during low-temperature (LT) operation
- SSPx is the unit emission rates (1b/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, R13-3315, 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.
[45CSR16, 40 C.F.R. §60.7(a)(3), 45CSR13, R13-3315, Condition 5.4.1]

4.5.2. The permittee shall submit a written report of the results of testing required in section 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, 40 C.F.R. §60.4375(b), 45CSR13, R13-3315, Condition 5.4.2]

4.6. Compliance Plan

4.6.1. Reserved

5.0 Source-Specific Requirements [Emergency Generator RICE (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 RICE, 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, R13-3315, Condition 6.1.1]**

5.1.2. Maximum emissions from the 1,175 hp natural gas fired RICE, 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	4.15	1.04
Volatile Organic Compounds	0.83	0.21

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

Compliance with these limits ensure compliance with condition 5.1.3.

[45CSR13, R13-3315, Condition 6.1.2]

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

i. NO_x emissions from the engine shall not exceed 2.0 grams of NO_x per horsepower-hour (g/hp-hr) or 160 ppmvd at 15 percent O_2;

ii. CO emissions from engine shall not exceed 4.0 g/hp-hr or 540 ppmvd at 15 percent O_2;

iii. VOC emissions from the engine shall not exceed 1.0 g/hp-hr or 86 ppmvd at 15 percent O_2. Emission of formaldehyde shall be excluded when determining compliance with this VOC limit.

[45CSR16, 40 C.F.R. §60.4233(e), Table 1 to Subpart JJJJ of Part 60 - NO_x, CO, and VOC Emission Standards for Stationary Non-Emergency SI Engines > 100 HP, Stationary SI Landfill/Digester Gas Engines, and Stationary Emergency Engines > 25 HP, 45CSR13, R13-3315, 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 §60.4233 over the entire life of the engine. **[45CSR16, 40 C.F.R. §60.4234, 45CSR13, R13-3315, 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, 40 C.F.R. §60.4237(a), 45CSR13, R13-3315, 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 §60.4233(d) or (e), you must demonstrate compliance according to one of the methods specified in paragraphs (b)(1) and (2) of 40 C.F.R. §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 §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, 40 C.F.R. §§60.4243(b)(2) and (b)(2)(ii), 45CSR13, R13-3315, 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 40 C.F.R. §60.4243. In order for the engine to be considered an emergency stationary ICE under 40 C.F.R. 60 Subpart JJJJ, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (d)(1) through (3) of 40 C.F.R. §60.4243, is prohibited. If you do not operate the engine according to the requirements in paragraphs (d)(1) through (3) of 40 C.F.R. §60.4243, the engine will not be considered an emergency engine under 40 C.F.R. 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 the purpose specified in paragraph (d)(2)(i) of 40 C.F.R. §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 C.F.R. §60.4243 counts as part of the 100 hours per calendar year allowed by this paragraph (d)(2).

(i) Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year.

(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 provided in paragraph (d)(2) of 40 C.F.R. §60.4243. Except as provided in paragraph (d)(3)(i) of 40 C.F.R. §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, 40 C.F.R. §60.4243(d), 45CSR13, R13-3315, 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, 40 C.F.R. §60.4243(e), 45CSR13, R13-3315, Condition 6.4.3]**

5.1.9. **40 C.F.R. 63, Subpart ZZZZ**
The emergency generator (G1) is subject to all applicable regulations given under 40 C.F.R. 63, Subpart ZZZZ including the following:

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

[45CSR34; 40 C.F.R. §63.6590(c)]

5.2. Monitoring Requirements

5.2.1. Reserved

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 40 C.F.R. §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 C.F.R. 60 Subpart JJJJ. **[45CSR16, 40 C.F.R. §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 start up the engine solely to conduct a performance test; however, you must conduct the performance test immediately upon startup of the engine.
[45CSR16, 40 C.F.R. §60.4244(b)]

c. You must conduct three separate test runs for each performance test required in 40 C.F.R. 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, 40 C.F.R. §60.4244(c)]**

d. To determine compliance with the NOx mass per unit output emission limitation, convert the concentration of NO_x in the engine exhaust using Equation 1 of 40 C.F.R. §60.4244:

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

Where:

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

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

$1.912x10^{-3}$ = Conversion constant for ppm NO_x to grams per standard cubic meter at 20 degrees Celsius.

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

T = Time of test run, in hours.

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

[45CSR16, 40 C.F.R. §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 40 C.F.R. §60.4244:

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

Where:

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

C_d= Measured CO concentration in ppmv.

$1.164x10^{-3}$ = Conversion constant for ppm CO to grams per standard cubic meter at 20 degrees Celsius.

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

T = Time of test run, in hours.

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

[45CSR16, 40 C.F.R. §60.4244(e)]

f. For purposes of 40 C.F.R. 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 40 C.F.R. §60.4244:

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

Where:

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

C_d = VOC concentration measured as propane in ppmv.

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

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

T = Time of test run, in hours.

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

[45CSR16, 40 C.F.R. §60.4244(f)]

g. If the owner/operator chooses to measure VOC emissions using either Method 18 of 40 C.F.R. part 60, appendix A, or Method 320 of 40 C.F.R. 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 40 C.F.R. §60.4244. The corrected VOC concentration can then be placed on a propane basis using Equation 6 of 40 C.F.R. §60.4244.

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

Where:

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

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

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

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

Where:

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

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

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

Where:

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

[45CSR16, 40 C.F.R. §60.4244(g)]

[45CSR13, R13-3315, 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 40 C.F.R. §60.4245.
   1. All notifications submitted to comply with 40 C.F.R. 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 C.F.R. parts, 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, 40 C.F.R. §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, 40 C.F.R. §60.4245(b)]**

[45CSR13, R13-3315, 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 40 C.F.R. §60.4245. Beginning on February 26, 2025 submit the notification electronically according to paragraph (g) of 40 C.F.R. §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, 40 C.F.R. §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. Beginning on February 26, 2025, performance tests must be reported electronically according to paragraph (f) of 40 C.F.R. §60.4245.

[45CSR16, 40 C.F.R. §60.4245(d)]

c. Beginning on February 26, 2025, within 60 days after the date of completing each performance test, you must submit the results following the procedures specified in paragraph (g) of 40 C.F.R. §60.4245. Data collected using test methods that are supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT website (*https://www.epa.gov/electronic-reporting-air-emissions/electronic-reporting-tool-ert*) at the time of the test must be submitted in a file format generated using the EPA's ERT. Alternatively, you may submit an electronic file consistent with the extensible markup language (XML) schema listed on the EPA's ERT website. Data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT website at the time of the test must be included as an attachment in the ERT or an alternate electronic file.

[45CSR16, 40 C.F.R. §60.4245(f)]

d. If you are required to submit notifications or reports following the procedure specified in 40 C.F.R. §60.4245(g), you must submit notifications or reports to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI), which can be accessed through the EPA's Central Data Exchange (CDX) (*https://cdx.epa.gov/*). The EPA will make all the information submitted through CEDRI available to the public without further notice to you. Do not use CEDRI to submit information you claim as CBI. Although we do not expect persons to assert a claim of CBI, if you wish to assert a CBI claim for some of the information in the report or notification, you must submit a complete file in the format specified in this subpart, including information claimed to be CBI, to the EPA following the procedures in paragraphs (g)(1) and (2) of 40 C.F.R. §60.4245. Clearly mark the part or all of the information that you claim to be CBI. Information not marked as CBI may be authorized for public release without prior notice. Information marked as CBI will not be disclosed except in accordance with procedures set forth in 40 C.F.R. part 2. All CBI claims must be asserted at the time of submission. Anything submitted using CEDRI cannot later be claimed CBI. Furthermore, under CAA section 114(c), emissions data is not entitled to confidential treatment, and the EPA is required to make emissions data available to the public. Thus, emissions data will not be protected as CBI and will be made publicly available. You must submit the same file submitted to the CBI office with the CBI omitted to the EPA via the EPA's CDX as described earlier in this paragraph (g).

(1) The preferred method to receive CBI is for it to be transmitted electronically using email attachments, File Transfer Protocol, or other online file sharing services. Electronic submissions must be transmitted directly to the OAQPS CBI Office at the email address *oaqpscbi@epa.gov*, and as described in paragraph (g) of 40 C.F.R. §60.4245, should include clear CBI markings. ERT files should be flagged to the attention of the Group Leader, Measurement Policy Group; all other files should be flagged to the attention of the Stationary Spark Ignition Internal Combustion Engine Sector Lead. If assistance is needed with submitting large electronic files that exceed the file size limit for email attachments, and if you do not have your own file sharing service, please email *oaqpscbi@epa.gov* to request a file transfer link.

(2) If you cannot transmit the file electronically, you may send CBI information through the postal service to the following address: OAQPS Document Control Officer (C404-02), OAQPS, U.S. Environmental Protection Agency, 109 T.W. Alexander Drive, P.O. Box 12055, Research Triangle Park, North Carolina 27711. ERT files should be sent to the attention of the Group Leader, Measurement Policy Group, and all other files should be sent to the attention of the Stationary

Spark Ignition Internal Combustion Engine Sector Lead. The mailed CBI material should be double wrapped and clearly marked. Any CBI markings should not show through the outer envelope.

[45CSR16, 40 C.F.R. §60.4245(g)]

[45CSR13, R13-3315, Condition 6.6.1.c and 6.6.1.d]

5.5.2. If you own or operate an emergency stationary SI ICE with a maximum engine power more than 100 HP that operates the purpose specified in §60.4243(d)(3)(i), you must submit an annual report according to the requirements in paragraphs (1) through (3) of this section.

1. The report must contain the following information:

i. Company name and address where the engine is located

ii. Date of the report and beginning and ending dates of the reporting period.

iii. Engine site rating and model year.

iv. Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place.

v-vi. [Reserved]

vii. Hours spent for operation for the purposes specified in §60.4243(d)(3)(i), including the date, start time, and end time for engine operation for the purposes specified in §60.4243(d)(3)(i). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.

2. The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year.

3. The annual report must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (*https://cdx.epa.gov/*). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written report must be submitted to the Administrator at the appropriate address listed in §60.4. Beginning on February 26, 2025, submit annual report electronically according to paragraph (g) of 40 C.F.R. §60.4245.

[45CSR16, 40 C.F.R. §60.4245(e)]

5.6. Compliance Plan

5.6.1. Reserved

6.0 Source-Specific Requirements (Heaters (HTR1, HTR2))

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	Catalytic Heaters	2.88 MMBTU/hr TOTAL

Each heater shall only be fired with pipeline-quality natural gas.
[45CSR13, R13-3315, 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, R13-3315, Condition 7.1.2] (HTR1)

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 C.F.R. 60 Appendix A.
[45CSR13, R13-3315, 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 C.F.R. 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, R13-3315, 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, R13-3315, Condition 7.4.1]**

6.5. Reporting Requirements

6.5.1. Reserved

6.6. Compliance Plan

6.6.1. Reserved

7.0 40 C.F.R. 60, 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. The requirements in 40 C.F.R. §60.5397a are independent of the closed vent system and cover requirements in §60.5411a. Alternatively, you may comply with the requirements of §60.5398b, including the notification, recordkeeping, and reporting requirements outlined in §60.5424b. For the purpose of this subpart, compliance with the requirements in §60.5398b will be deemed compliance with this section. When complying with §60.5398b, the definitions in §60.5430b shall apply for those activities conducted under §60.5398b.

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 parts per million (ppm) or greater using Method 21 of appendix A-7 to this part.

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 of appendix A-7 to this part or optical gas imaging meeting the requirements in paragraphs (c)(7)(i) through (vii) of 40 C.F.R. §60.5397a).

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 fugitive~~s~~ emissions monitoring program with optical gas imaging, a fugitive emission is defined as any visible emissions observed using optical gas imaging.

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

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

ii. Procedure for a daily verification check.

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

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

v. Procedures for conducting surveys, including the items specified in 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) through (iii). For the purposes of complying with the fugitive emissions monitoring program using Method 21 of appendix A-7 of this part 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 C.F.R. 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 C.F.R. part 60, appendix A-7, including Section 8.3.1.

iii. ***Procedures for calibration.*** The instrument must be calibrated before use each day of its use by the procedures specified in Method 21 of appendix A-7 of this part. At a minimum, you must also conduct precision tests at the interval specified in Method 21 of appendix A-7 of this part, Section 8.1.2, and a calibration drift assessment at the end of each monitoring day. The calibration drift assessment must be conducted as specified in paragraph (c)(8)(iii)(A) of this section. Corrective action for drift assessments is specified in paragraphs (c)(8)(iii)(B) and (C) of this section.

A. Check the instrument using the same calibration gas that was used to calibrate the instrument before use. Follow the procedures specified in Method 21 of appendix A-7 of this part, Section 10.1, except do not adjust the meter readout to correspond to the calibration gas value. If multiple scales are used, record the instrument reading for each scale used. Divide the arithmetic difference of the initial and post-test calibration response by the corresponding calibration gas value for each scale and multiply by 100 to express the calibration drift as a percentage.

B. If a calibration drift assessment shows a negative drift of more than 10 percent, then all equipment with instrument readings between the fugitive emission definition multiplied by (100 minus the percent of negative drift/divided by 100) and the fugitive emission definition that was monitored since the last calibration must be re-monitored.

C. If any calibration drift assessment shows a positive drift of more than 10 percent from the initial calibration value, then, at the owner/operator's discretion, all equipment with instrument readings above the fugitive emission definition and below the fugitive emission definition multiplied by (100 plus the percent of positive drift/divided by 100) monitored since the last calibration may be re-monitored.

d. Each fugitive emissions monitoring plan must include the elements specified in 40 C.F.R. §§60.5397a(d)(1) through (3), at a minimum, as applicable.

1. If you are using optical gas imaging, your plan must include procedures to ensure that all fugitive emissions components monitored during each survey. Example procedures include, but are not limited to, a sitemap with an observation path, a written narrative of where the fugitive emissions components are located and how they will be monitored, or an inventory of fugitive emissions components.

2. If you are using Method 21 of appendix A-7 of this part, your plan must include a list of fugitive emissions components to be monitored and method for determining the location of fugitive emissions components to be monitored in the field (e.g., tagging, identification on a process and instrumentation diagram, etc.).

3. Your fugitive emissions monitoring plan must include the written plan developed for all of the fugitive emissions components designated as difficult-to-monitor in accordance with 40 C.F.R. §60.5397a(g)(3), and the written plan for fugitive emissions components designated as unsafe-to-monitor in accordance with 40 C.F.R. §60.5397a(g)(4).

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 90 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 90 days of the startup of production for each collection of fugitive emissions components after the modification or by June 3, 2017, whichever is latest.

2. You must conduct an initial monitoring survey within 90 days of the startup of a new compressor station for each 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 90 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) through (6).

1. Except as provided herein in this paragraph (g)(1), a monitoring survey of each collection of fugitive emissions components at a well site must be conducted at least semiannually after the initial survey. Consecutive semiannual monitoring surveys must be conducted at least 4 months apart and no more than 7 months apart.

2. Except as provided in this paragraph (g)(2), a monitoring survey of the collection of fugitive emissions components at a compressor station 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. You are no longer required to comply with the requirements of paragraph (g)(1) of 40 C.F.R. §60.5397a when the owner or operator removes all major production and processing equipment, as defined in §60.5430a, such that the well site becomes a wellhead only well site. If any major production and processing equipment is subsequently added to the well site, then the owner or operator must comply with the requirements in paragraphs (f)(1) and (g)(1) of 40 C.F.R. §60.5397a.

6. 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°F 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, as defined in §60.5430a, in accordance with 40 C.F.R. §§60.5397a(h)(1) and (2).

1. A first attempt at repair shall be made no later than 30 calendar days after detection of the fugitive emissions.

2. Repair shall be completed as soon as practicable, but no later than 30 calendar days after the first attempt at repair as required in paragraph (h)(1) of 40 C.F.R. §60.5397a.

3. Delay of repair will be allowed if the conditions in paragraphs (h)(3)(i) or (ii) of 40 C.F.R. §60.5397a are met.

i. If the repair 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 must be completed during the next scheduled compressor station shutdown for maintenance, scheduled well shutdown, scheduled well shut-in, after a scheduled vent blowdown or within 2 years of detecting the fugitive emissions, whichever is earliest. For purposes of this paragraph (h)(3), a vent blowdown is the opening of one or more blowdown valves to depressurize major production and processing equipment, other than a storage vessel.

ii. If the repair requires replacement of a fugitive emissions component or a part thereof, but the replacement cannot be acquired and installed within the repair timelines specified in paragraphs (h)(1) and (2) of 40 C.F.R. §60.5397a due to either of the conditions specified in paragraphs (h)(3)(ii)(A) or (B) of 40 C.F.R. §60.5397a, the repair must be completed in accordance with paragraph (h)(3)(ii)(C) of 40 C.F.R. §60.5397a and documented in accordance with §60.5420a(c)(15)(vii)(I).

A. Valve assembly supplies had been sufficiently stocked but are depleted at the time of the required repair.

B. A replacement fugitive emissions component or a part thereof requires custom fabrication.

C. The required replacement must be ordered no later than 10 calendar days after the first attempt at repair. The repair must be completed as soon as practicable, but no later than 30 calendar days after receipt of the replacement component, unless the repair requires a compressor station or well shutdown. If the repair requires a compressor station or well shutdown, the repair must be completed in accordance with the timeframe specified in paragraph (h)(3)(i) of this section.

4. Each identified source of fugitive emissions must be resurveyed to complete repair according to the requirements in paragraphs (h)(4)(i) through (iv) of 40 C.F.R. §60.5397a, to ensure that there are no fugitive emissions.

i. The operator may resurvey the fugitive emissions components to verify repair using either Method 21 of appendix A-7 of this part or optical gas imaging.

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 during the monitoring survey when the fugitives were initially found for identification purposes and subsequent repair. The digital photograph must include the date that the photograph was taken and 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 of appendix A-7 of this part to resurvey the repaired fugitive emissions components are subject to the resurvey provisions specified in 40 C.F.R. §§60.5397a(h)(4)(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 of appendix A-7 of this part 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 of appendix A-7 of this part.

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)(4)(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, R13-3315, Condition 4.1.4]

7.1.2 You must determine initial compliance with the standards for each affected facility. Except as otherwise provided in 40 C.F.R. §60.5410a, 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 1 full year.

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 40 C.F.R. §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(a)(1) according to the following paragraphs:

a. You must conduct periodic monitoring surveys as required in §60.5397a(g).

b. You must repair 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 (18) 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.
[40 C.F.R. §60.5420a(c), 45CSR16]

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

i. The date of the startup of production or the date of the first day of production after modification for each collection of fugitive emissions components at a well site and the date of startup or the date of modification for each collection of fugitive emissions components at a compressor station.

ii-iv. [Reserved]

v. For each collection of fugitive emissions components at a well site where you complete the removal of all major production and processing equipment such that the well site contains only one or more wellheads, record the date the well site completes the removal of all major production and processing equipment from the well site, and, if the well site is still producing, record the well ID or separate tank battery ID receiving the production from the well site. If major production and processing equipment is subsequently added back to the well site, record the date that the first piece of major production and processing equipment is added back to the well site.

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

vii. The records of each monitoring survey as specified in paragraphs (c)(15)(vii)(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), training and experience of operator(s) performing the survey.

D. Monitoring instrument used.

E. Fugitive emissions component identification when Method 21 of appendix A-7 of this part is used to perform the monitoring survey.

F. Ambient temperature, sky conditions, and maximum wind speed at the time of the survey. For compressor stations, operating mode of each compressor (*i.e.*, operating, standby pressurized, and not operating-depressurized modes) at the station at the time of the survey.

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

H. Records of calibrations for the instrument used during the monitoring survey.

I. Documentation of each fugitive emission detected during the monitoring survey, including the information specified in paragraphs (c)(15)(vii)(I)(*1*) through (*9*) of 40 C.F.R. §60.5420a.

(1) Location of each fugitive emission identified.
(2) Type of fugitive emissions component, including designation as difficult-to-monitor or unsafe-to-monitor, if applicable.
(3) If Method 21 of appendix A-7 of this part is used for detection, record the component ID and instrument reading.
(4) For each repair that cannot be made during the monitoring survey when the fugitive emissions are initially found, a digital photograph or video 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 and 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). The digital photograph or identification (e.g., tag) may be removed after the repair is completed, including verification of repair with the resurvey.
(5) The date of first attempt at repair of the fugitive emissions component(s).
(6) The date of successful repair of the fugitive emissions component, including the resurvey to verify repair and instrument used for the resurvey.
(7) Identification of each fugitive emission component placed on delay of repair and explanation for each delay of repair.
(8) For each fugitive emission component placed on delay of repair for reason of replacement component unavailability, the operator must document: the date the component was added to the delay of repair list, the date the replacement fugitive component or part thereof was ordered, the anticipated component delivery date (including any estimated shipment or delivery date provided by the vendor), and the actual arrival date of the component.
(9) Date of planned shutdowns that occur while there are any components that have been placed on delay of repair.

viii. For each collection of fugitive emissions components at a well site or collection of fugitive emissions components at a compressor station complying with an alternative means of emissions limitation under §60.5399a, you must maintain the records specified by the specific alternative fugitive emissions standard for a period of at least 5 years.

ix. If you comply with the alternative GHG and VOC standard under §60.5398b, in lieu of the information specified in paragraphs (c)(15)(vi) through (vii) of 40 C.F.R. §60.5420a, you must maintain the records specified in §60.5424b.

[40 C.F.R. §60.5420(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. 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) and (12) 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 is required for all reports.

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

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

iii. Beginning and ending dates of the reporting period.

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

[45CSR16; 40 C.F.R. §60.5420a(b)(1)]

b. For the collection of fugitive emissions components at each well site and the collection of fugitive emissions components at each compressor station, report the information specified in paragraphs (b)(7)(i) through (iii) of 40 C.F.R. §60.5420a, as applicable.

i.

A. Designation of the type of site (*i.e.*, well site or compressor station) at which the collection of fugitive emissions components is located.

B. For each collection of fugitive emissions components at a well site that became an affected facility during the reporting period, you must include the date of the startup of production or the date of the first day of production after modification. For each collection of fugitive emissions components at a compressor station that became an affected facility during the reporting period, you must include the date of startup or the date of modification.

C. [Reserved]

D. For each collection of fugitive emissions components at a well site where during the reporting period you complete the removal of all major production and processing equipment such that the well site contains only one or more wellheads, you must include the date of the change to status as a wellhead only well site.

E. For each collection of fugitive emissions components at a well site where you previously reported under paragraph (b)(7)(i)(C) of 40 C.F.R. §60.5420a the removal of all major production and processing equipment and during the reporting period major production and processing equipment is added back to the well site, the date that the first piece of major production and processing equipment is added back to the well site.

ii. For each fugitive emissions monitoring survey performed during the annual reporting period, the information specified in paragraphs (b)(7)(ii)(A) through (G) of 40 C.F.R. §60.5420a.

A. Date of the survey.

B. Monitoring instrument used.

C. Any deviations from the monitoring plan elements under §60.5397a(c)(1),(2), and (7) and (c)(8)(i) or a statement that there were no deviations from these elements of the monitoring plan.

D. Number and type of components for which fugitive emissions were detected.
E. Number and type of fugitive emissions components that were not repaired as required in §60.5397a(h).
F. Number and type of fugitive emission components (including designation as difficult-to-monitor or unsafe-to-monitor, if applicable) on delay of repair and explanation for each delay of repair.
G. Date of planned shutdown(s) that occurred during the reporting period if there are any components that have been-placed on delay of repair.

iii. For each collection of fugitive emissions components at a well site or collection of fugitive emissions components at a compressor station complying with an alternative fugitive emissions standard under §60.5399a, in lieu of the information specified in paragraphs (b)(7)(i) and (ii) of 40 C.F.R. §60.5420a, you must provide the information specified in paragraphs (b)(7)(iii)(A) through (C) of 40 C.F.R. §60.5420a.
A. The alternative standard with which you are complying.
B. The site-specific reports specified by the specific alternative fugitive emissions standard, submitted in the format in which they were submitted to the state, local, or tribal authority. If the report is in hard copy, you must scan the document and submit it as an electronic attachment to the annual report required in paragraph (b) of 40 C.F.R. §60.5420a.
C. If the report specified by the specific alternative fugitive emissions standard is not site-specific, you must submit the information specified in paragraphs (b)(7)(i) and (ii) of 40 C.F.R. §60.5420a for each individual site complying with the alternative standard.

iv. If you comply with the alternative GHG and VOC standard under §60.5398b, in lieu of the information specified in paragraph (b)(7)(ii) of 40 C.F.R. §60.5420a, you must provide the information specified in §60.5424b.

[45CSR16; 40 C.F.R. §60.5420a(b)(7)]

7.6. Compliance Plan

7.6.1 None

West Virginia Department of Environmental Protection
Division of Air Quality

Fact Sheet

For Draft/Proposed Renewal Permitting Action Under 45CSR30 and Title V of the Clean Air Act

Permit Number: **R30-01300017-2025**
Applications Received: **February 28, 2025**
Plant Identification Number: **03-54-013-00017**
Permittee: **Columbia Gas Transmission, LLC**
Facility Name: **White Oak Compressor Station**
Mailing Address: **1700 MacCorkle Avenue SE, Charleston, WV 25314**

Physical Location:	Brohard, Calhoun County, West Virginia
UTM Coordinates:	487.7 km Easting • 4,321.4 km Northing • Zone 17
Directions:	From the town of Brohard, head southeast on Brohard Road towards Dutchman Run and turn right to stay on Brohard Road. Continue on County Route 5/3. In approximately one mile, turn left onto County Route 21/3. The station is on the right in approximately 1.6 miles.

Facility Description

The White Oak Compressor Station is a natural gas transmission and compressor station. Pipeline transmission of natural gas requires that the gas be compressed. The facility receives natural gas via pipeline from an upstream compressor station, compresses it using natural gas-fired turbines, and transmits the natural gas via pipeline to a downstream station.

SIC Code: 4922

Emissions Summary

Plantwide Emissions Summary [Tons per Year]

Regulated Pollutants	Potential Emissions	2024 Actual Emissions
Carbon Monoxide (CO)	212.35	48.43
Nitrogen Oxides (NO_X)	89.38	43.81
Particulate Matter ($PM_{2.5}$)	10.32	6.45
Particulate Matter (PM_{10})	10.32	6.45
Total Particulate Matter (TSP)	10.32	6.45
Sulfur Dioxide (SO_2)	1.11	0.7
Volatile Organic Compounds (VOC)	18.05	9.23

PM_{10} is a component of TSP.

Hazardous Air Pollutants	Potential Emissions	2024 Actual Emissions
Formaldehyde	1.26	0.85
Total HAPs	1.88	1.22

Some of the above HAPs may be counted as PM or VOCs.

Title V Program Applicability Basis

This facility has the potential to emit 212.35 tons per year of CO. Due to this facility's potential to emit over 100 tons per year of criteria pollutant, Columbia Gas Transmission, LLC is required to have an operating permit pursuant to Title V of the Federal Clean Air Act as amended and 45CSR30.

Legal and Factual Basis for Permit Conditions

The State and Federally-enforceable conditions of the Title V Operating Permits are based upon the requirements of the State of West Virginia Operating Permit Rule 45CSR30 for the purposes of Title V of the Federal Clean Air Act and the underlying applicable requirements in other state and federal rules.

This facility has been found to be subject to the following applicable rules:

Federal and State:	45CSR2	Particulate Air Pollution from Combustion of Fuel in Indirect Heat Exchangers
	45CSR6	Open burning prohibited.
	45CSR11	Standby plans for emergency episodes.
	45CSR13	NSR permits
	WV Code § 22-5-4 (a) (15)	The Secretary can request any pertinent information such as annual emission inventory reporting
	45CSR16	Standards of Performance for New Stationary Sources Pursuant to 40CFR60
	45CSR30	Operating permit requirement
	45CSR34	Emission Standard for Hazardous Air Pollutants
	40 C.F.R. Part 61, Subpart M	Asbestos inspection and removal
	40 C.F.R. 60 Subpart JJJJ	Standards of Performance for Stationary Spark Ignition Internal Combustion Engines (SI ICE)

	40 C.F.R. 60 Subpart KKKK	Standards of Performance for Stationary Combustion Turbines
	40 C.F.R. 60 Subpart OOOOa	Standards of Performance for Crude Oil and Natural Gas Facilities for Which Construction, Modification or Reconstruction Commenced After September 18, 2015 and On or Before December 6, 2022
	40 C.F.R. Part 63 Subpart ZZZZ	National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE)
	40 C.F.R. Part 82, Subpart F	Ozone depleting substances
State Only:	45CSR4	No objectionable odors
	45CSR17	Prevention and Control of Fugitive PM

Each State and Federally-enforceable condition of the Title V Operating Permit references the specific relevant requirements of 45CSR30 or the applicable requirement upon which it is based. Any condition of the Title V permit that is enforceable by the State but is not Federally-enforceable is identified in the Title V permit as such.

The Secretary's authority to require standards under 40 C.F.R. Part 60 (NSPS), 40 C.F.R. Part 61 (NESHAPs), and 40 C.F.R. Part 63 (NESHAPs MACT) is provided in West Virginia Code §§ 22-5-1 *et seq.*, 45CSR16, 45CSR34 and 45CSR30.

Active Permits/Consent Orders

Permit or Consent Order Number	Date of Issuance	Permit Determinations or Amendments That Affect the Permit *(if any)*
R13-3315C	July 9, 2024	

Conditions from this facility's Rule 13 permit(s) governing construction-related specifications and timing requirements will not be included in the Title V Operating Permit but will remain independently enforceable under the applicable Rule 13 permit(s). All other conditions from this facility's Rule 13 permit(s) governing the source's operation and compliance have been incorporated into this Title V permit in accordance with the "General Requirement Comparison Table," which may be downloaded from DAQ's website.

Determinations and Justifications

The following changes have been made to the permit since the previous permit modification (MM02/MM03) was issued on March 31, 2025.

1. Section 5.0 – conditions 5.1.7, 5.4.1(a), 5.5.1 and 5.5.2 were revised to reflect changes in the most recent version of 40 C.F.R. 60 Subpart JJJJ.

2. Section 7.0 – conditions 7.1.1, 7.1.2, 7.1.3, 7.4.1 and 7.5.1 were revised to reflect changes in the most recent version of 40 C.F.R. 60 Subpart OOOOa.

Non-Applicability Determinations

1. The following requirements have been determined not to be applicable to the subject facility and were included in the Permit Shield (condition 3.7.2) due to the following:

40 C.F.R. 60, Subpart Dc	**Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units.** The heaters at the facility are less than 10 MMBtu/hr, therefore, according to 40 C.F.R. §60.40c(a), this rule does not apply.
40 C.F.R. 63 Subpart JJJJJJ	**NESHAP for Industrial, Commercial, and Institutional Boilers Area Sources.** According to 40 C.F.R. §63.11195(e) natural gas fired boilers are not subject to this subpart.
40 C.F.R. 60, 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 and later, which is after the applicability date specified in 40 C.F.R. §60.5365, therefore this rule does not apply.

2. **40 C.F.R. 64: Compliance Assurance Monitoring**
   CAM is not applicable to the facility since there are no Pollutant Specific Emission Units (PSEUs) satisfying the criteria under 40 C.F.R. §64.2(a).

Request for Variances or Alternatives
None.

Insignificant Activities
Insignificant emission unit(s) and activities are identified in the Title V application.

Comment Period
Beginning Date: (Date of Notice Publication)
Ending Date: (Publication Date PLUS 30 Days)

Point of Contact
All written comments should be addressed to the following individual and office:

Natalya V. Chertkovsky-Veselova
West Virginia Department of Environmental Protection
Division of Air Quality
601 57th Street SE
Charleston, WV 25304
304/926-0499 ext. 41250
natalya.v.chertkovsky@wv.gov

Procedure for Requesting Public Hearing
During the public comment period, any interested person may submit written comments on the draft permit and may request a public hearing, if no public hearing has already been scheduled. A request for public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. The Secretary shall grant such a request for a hearing if he/she concludes that a public hearing is appropriate. Any public hearing shall be held in the general area in which the facility is located.

Response to Comments (Statement of Basis)
(**Choose**) Not applicable.
OR
Describe response to comments that are received and/or document any changes to the final permit from the draft/proposed permit.

West Virginia Department of Environmental Protection

Harold D. Ward
Cabinet Secretary

Permit to Operate

Pursuant to

Title V

of the Clean Air Act

Issued to:

Columbia Gas Transmission, LLC
White Oak Compressor Station
R30-01300017-2025

Laura M. Crowder
Director, Division of Air Quality

Issued: [Date of issuance] • *Effective: [Equals issue date plus two weeks]*
Expiration: [5 years after issuance date] • *Renewal Application Due: [6 months prior to expiration]*

Permit Number: **R30-01300017-2025**
Permittee: **Columbia Gas Transmission, LLC**
Facility Name: **White Oak Compressor Station**
Permittee Mailing Address: **1700 MacCorkle Avenue, SE, Charleston, WV 25314**

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.

Facility Location:	Brohard, Calhoun County, West Virginia
Facility Mailing Address:	1700 MacCorkle Avenue, SE, Charleston, WV 25314
Telephone Number:	304-357-2000
Type of Business Entity:	LLC
Facility Description:	Transmission Natural Gas Compressor Station
SIC Codes:	4922
UTM Coordinates:	487.7 km Easting • 4,321.4 km Northing • Zone 17

Permit Writer: Natalya V. Chertkovsky-Veselova

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.

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.

Table of Contents

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 Titan 130 Turbine #1	2019	20,912 HP @ 32 °F	None
T2	T02	Solar Titan 130 Turbine #2	2019	20,912 HP @ 32 °F	None
G1	G1	Waukesha VGF-P48GL Emergency Generator RICE 4 Cycle, Lean Burn	2019	1,175 hp	None
HTR1	H1	Process Heater	2019	1.50 MMBTU/hr	None
HTR2	SH1	Catalytic Heaters	2019	2.88 MMBTU/hr (total)	None
Al	A01	Pipeline Liquids Storage Tank	2019	2,056 gal	None
A3	A03	Wastewater Storage Tank	2023	1,200 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
R13-3315C	July 9, 2024

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 other person to whom the Secretary has delegated authority or duties pursuant to W.Va. Code §§ 22-1-6 or 22-1-8 (45CSR§30-2.39.). 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

CAAA	Clean Air Act Amendments	**NSPS**	New Source Performance Standards
CBI	Confidential Business Information	**PM**	Particulate Matter
CEM	Continuous Emission Monitor	**PM_{10}**	Particulate Matter less than 10μm in diameter
CES	Certified Emission Statement	**pph**	Pounds per Hour
C.F.R. *or* CFR	Code of Federal Regulations	**ppm**	Parts per Million
CO	Carbon Monoxide	**PSD**	Prevention of Significant Deterioration
C.S.R. *or* CSR	Codes of State Rules	**psi**	Pounds per Square Inch
DAQ	Division of Air Quality	**SIC**	Standard Industrial Classification
DEP	Department of Environmental Protection	**SIP**	State Implementation Plan
FOIA	Freedom of Information Act	**SO_2**	Sulfur Dioxide
HAP	Hazardous Air Pollutant	**TAP**	Toxic Air Pollutant
HON	Hazardous Organic NESHAP	**TPY**	Tons per Year
HP	Horsepower	**TRS**	Total Reduced Sulfur
lbs/hr *or* lb/hr	Pounds per Hour	**TSP**	Total Suspended Particulate
LDAR	Leak Detection and Repair	**USEPA**	United States Environmental Protection Agency
m	Thousand	**UTM**	Universal Transverse Mercator
MACT	Maximum Achievable Control Technology	**VEE**	Visual Emissions Evaluation
mm	Million	**VOC**	Volatile Organic Compounds
mmBtu/hr	Million British Thermal Units per Hour		
$mmft^3$/hr *or* mmcf/hr	Million Cubic Feet Burned per Hour		
NA *or* N/A	Not Applicable		
NAAQS	National Ambient Air Quality Standards		
NESHAPS	National Emissions Standards for Hazardous Air Pollutants		
NO_x	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. Reserved

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)(15)]**

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. 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. Reserved

3.3. Testing Requirements

3.3.1. **Stack testing.** As per provisions set forth in this permit or as otherwise required by the Secretary, in accordance with the West Virginia Code, underlying regulations, permits and orders, the permittee shall conduct test(s) to determine compliance with the emission limitations set forth in this permit and/or established or set forth in underlying documents. The Secretary, or his duly authorized representative, may at his option witness or conduct such test(s). Should the Secretary exercise his option to conduct such test(s), the operator shall provide all necessary sampling connections and sampling ports to be located in such manner as the Secretary may require, power for test equipment and the required safety equipment, such as scaffolding, railings and ladders, to comply with generally accepted good safety practices. Such tests shall be conducted in accordance with the methods and procedures set forth in this permit or as otherwise approved or specified by the Secretary in accordance with the following:

a. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with 40 C.F.R. Parts 60, 61, and 63, 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. If a testing method is specified or approved which effectively replaces a test method specified in the permit, the permit shall be revised in accordance with 45CSR§30-6.4 or 45CSR§30-6.5 as applicable.

c. All periodic tests to determine mass emission limits from or air pollutant concentrations in discharge stacks and such other tests as specified in this permit shall be conducted in accordance with an approved test protocol. Unless previously approved, such protocols shall be submitted to the Secretary in writing

at least thirty (30) days prior to any testing and shall contain the information set forth by the Secretary. In addition, the permittee shall notify the Secretary at least fifteen (15) days prior to any testing so the Secretary may have the opportunity to observe such tests. This notification shall include the actual date and time during which the test will be conducted and, if appropriate, verification that the tests will fully conform to a referenced protocol previously approved by the Secretary.

d. The permittee shall submit a report of the results of the stack test within 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)(15-16) 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, R13-3315, 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 57th 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[1]:
DEPAirQualityReports@wv.gov

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

3.5.4. **Fees.** The permittee shall pay fees on an annual basis in accordance with 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:	**US EPA:**
DEPAirQualityReports@wv.gov	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. **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. 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 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 45 CSR§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.

40 C.F.R. 60, Subpart Dc	**Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units.** The heaters at the facility are less than 10 MMBtu/hr, therefore, according to 40 C.F.R. §60.40c(a), this rule does not apply.
40 C.F.R. 63 Subpart JJJJJJ	**NESHAP for Industrial, Commercial, and Institutional Boilers Area Sources.** According to 40 C.F.R. §63.11195(e) natural gas fired boilers are not subject to this subpart.
40 C.F.R. 60, 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 and later, which is after the applicability date specified in 40 C.F.R. §60.5365, therefore this rule does not apply.

4.0 Source-Specific Requirements [Turbines (T01, T02)]

4.1. Limitations and Standards

4.1.1. The Solar Titan 130 turbines (T01, T02) 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, R13-3315, Condition 5.1.1]

4.1.2. Maximum annual emissions from the Solar Titan 130 turbines (T01, T02) shall not exceed the following:

Emission Point ID#	NO_x	CO	VOC	SO_2	PM_{10}	CH_2O
	tons/year					
T01	43.10	104.84	5.52	0.55	5.08	0.55
T02	43.10	104.84	5.52	0.55	5.08	0.55

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, R13-3315, Condition 5.1.2]

4.1.3. Maximum hourly emissions from the Solar Titan 130 turbines (T01, T02) shall not exceed the following:

Operating Parameter	T01	T02
NO_x		
Normal Load @ 32 °F	15 ppm_v, @ 15% O_2 (9.48 lb/hr)	15 ppm_v, @ 15% O_2 (9.48 lb/hr)
Low Temp (<0 °F)	28.40 lb/hr	28.40 lb/hr
Low Load (<50%)	20.97 lb/hr	20.97 lb/hr
Startup/Shutdown	4.30 lb/event	4.30 lb/event
CO		
Normal Load @ 32 °F	25 ppm_v, @ 15% O_2 (9.62 lb/hr)	25 ppm_v, @ 15% O_2 (9.62 lb/hr)
Low Temp (<0 °F)	41.16 lb/hr	41.16 lb/hr
Low Load (<50%)	850.77 lb/hr	850.77 lb/hr
Startup/Shutdown	384.50 lb/event	384.50 lb/event
VOC		
Normal Load @ 32 °F	5 ppm_v, @ 15% O_2 (1.10 lb/hr)	5 ppm_v, @ 15% O_2 (1.10 lb/hr)
Low Temp (<0 °F)	2.35 lb/hr	2.35 lb/hr
Low Load (<50%)	9.72 lb/hr	9.72 lb/hr
Startup/Shutdown	4.40 lb/event	4.40 lb/event

Operating Parameter	T01	T02
SO_2 (short term emission rate based on 20 gr S/100 scf)		
Full Load @ 32 °F	10.02 lb/hr	10.02 lb/hr
PM_{10}		
Full Load @ 32 °F	1.16 lb/hr	1.16 lb/hr

[45CSR13, R13-3315, Condition 5.1.3]

4.1.4. NO_x emissions from the Solar Titan 130 turbines (T01, T02) shall not exceed 25 ppm at 15% O_2 (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_x is 150 ppm at 15% O_2 (or an alternative limit of 1,100 ng/J or useful output or 8.7 lb/MWh).

[45CSR16, 40 C.F.R. §60.4320(a) and Table 1 to 40 C.F.R. 60 Subpart KKKK, 45CSR13, R13-3315, Condition 5.1.4]

4.1.5. Emissions of SO_2 shall not exceed 0.060 lb of SO_2/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, 40 C.F.R. §60.4330(a)(2) and §60.4365(a), 45CSR13, R13-3315, Condition 5.1.5]

4.1.6. The permittee must operate and maintain the stationary combustion turbines (T01, T02) in a manner consistent with good air pollution control practices for minimizing emissions at all times including during startup, shutdown, and malfunction.
[45CSR16, 40 C.F.R. §60.4333(a), 45CSR13, R13-3315, Condition 5.1.6]

4.2. Monitoring Requirements

4.2.1. Reserved

4.3. Testing Requirements

4.3.1. For the purposes of demonstrating compliance with the NO_x emission standards in permit conditions 4.1.2, 4.1.3, and 40 C.F.R. §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_x 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 C.F.R. §60.4340(a). If the results of any subsequent performance test exceed 75 percent of the NO_x emission limit, then the permittee must resume annual performance tests. Such testing shall be conducted in accordance with Condition 3.3.1. and 40 C.F.R. §60.4400. Records of such testing shall be maintained in accordance with Condition 3.4.2.
[45CSR16, 40 C.F.R. §60.8(a), §60.4340(a), and §60.4400, 45CSR13, R13-3315, Condition 5.2.1]

4.3.2. In order to show compliance with the CO emission limits contained in 4.1.2 and 4.1.3 of this permit the permittee shall perform performance tests 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).
[45CSR13, R13-3315, Condition 5.2.2]

4.4. Recordkeeping Requirements

4.4.1. To demonstrate compliance with section 4.1.2 - 4.1.3, the permittee shall maintain records of the amount of natural gas consumed and the hours of operation of each of the Solar Titan 130 turbines (T01, T02).
[45CSR13, R13-3315, 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_2/J (0.060 lb SO_2/MMBtu) heat input for continental areas.
[45CSR16, 40 C.F.R. §60.4365(a), 45CSR13, R13-3315, Condition 5.3.2]

4.4.3. In order to demonstrate compliance with the emission limitations of conditions 4.1.2 and 4.1.3 of this permit the permittee will monitor and record the monthly operating hours for each operating parameter listed in permit condition 4.1.3. Monthly emissions for each pollutant will be calculated using the following equation:

MEPx = DLNPx * DLN hrs + LLPx * LL hrs + LTPx * LT hrs + SSPx * SS cycles

Where:

- MEPx is the monthly emissions for each pollutant
- DLNPx is the unit emission rates (lb/hr) for pollutant X during normal (DLN) operation
- LLPx is the unit emission rates (lb/hr) for pollutant X during low-load (LL) operation
- LTPx is the unit emission rates (lb/hr) for pollutant X during low-temperature (LT) operation
- SSPx is the unit emission rates (1b/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, R13-3315, 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.
[45CSR16, 40 C.F.R. §60.7(a)(3), 45CSR13, R13-3315, Condition 5.4.1]

4.5.2. The permittee shall submit a written report of the results of testing required in section 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, 40 C.F.R. §60.4375(b), 45CSR13, R13-3315, Condition 5.4.2]

4.6. Compliance Plan

4.6.1. Reserved

5.0 Source-Specific Requirements [Emergency Generator RICE (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 RICE, 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, R13-3315, Condition 6.1.1]**

5.1.2. Maximum emissions from the 1,175 hp natural gas fired RICE, 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	4.15	1.04
Volatile Organic Compounds	0.83	0.21

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

Compliance with these limits ensure compliance with condition 5.1.3.

[45CSR13, R13-3315, Condition 6.1.2]

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

i. NO_x emissions from the engine shall not exceed 2.0 grams of NO_x per horsepower-hour (g/hp-hr) or 160 ppmvd at 15 percent O_2;

ii. CO emissions from engine shall not exceed 4.0 g/hp-hr or 540 ppmvd at 15 percent O_2;

iii. VOC emissions from the engine shall not exceed 1.0 g/hp-hr or 86 ppmvd at 15 percent O_2. Emission of formaldehyde shall be excluded when determining compliance with this VOC limit.

[45CSR16, 40 C.F.R. §60.4233(e), Table 1 to Subpart JJJJ of Part 60 - NO_x, CO, and VOC Emission Standards for Stationary Non-Emergency SI Engines > 100 HP, Stationary SI Landfill/Digester Gas Engines, and Stationary Emergency Engines > 25 HP, 45CSR13, R13-3315, 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 §60.4233 over the entire life of the engine. **[45CSR16, 40 C.F.R. §60.4234, 45CSR13, R13-3315, 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, 40 C.F.R. §60.4237(a), 45CSR13, R13-3315, 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 §60.4233(d) or (e), you must demonstrate compliance according to one of the methods specified in paragraphs (b)(1) and (2) of 40 C.F.R. §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 §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, 40 C.F.R. §§60.4243(b)(2) and (b)(2)(ii), 45CSR13, R13-3315, 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 40 C.F.R. §60.4243. In order for the engine to be considered an emergency stationary ICE under 40 C.F.R. 60 Subpart JJJJ, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (d)(1) through (3) of 40 C.F.R. §60.4243, is prohibited. If you do not operate the engine according to the requirements in paragraphs (d)(1) through (3) of 40 C.F.R. §60.4243, the engine will not be considered an emergency engine under 40 C.F.R. 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 the purpose specified in paragraph (d)(2)(i) of 40 C.F.R. §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 C.F.R. §60.4243 counts as part of the 100 hours per calendar year allowed by this paragraph (d)(2).

(i) Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year.

(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 provided in paragraph (d)(2) of 40 C.F.R. §60.4243. Except as provided in paragraph (d)(3)(i) of 40 C.F.R. §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, 40 C.F.R. §60.4243(d), 45CSR13, R13-3315, 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, 40 C.F.R. §60.4243(e), 45CSR13, R13-3315, Condition 6.4.3]**

5.1.9. **40 C.F.R. 63, Subpart ZZZZ**
The emergency generator (G1) is subject to all applicable regulations given under 40 C.F.R. 63, Subpart ZZZZ including the following:

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

[45CSR34; 40 C.F.R. §63.6590(c)]

5.2. Monitoring Requirements

5.2.1. Reserved

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 40 C.F.R. §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 C.F.R. 60 Subpart JJJJ. **[45CSR16, 40 C.F.R. §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 start up the engine solely to conduct a performance test; however, you must conduct the performance test immediately upon startup of the engine.
[45CSR16, 40 C.F.R. §60.4244(b)]

c. You must conduct three separate test runs for each performance test required in 40 C.F.R. 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, 40 C.F.R. §60.4244(c)]**

d. To determine compliance with the NOx mass per unit output emission limitation, convert the concentration of NO_x in the engine exhaust using Equation 1 of 40 C.F.R. §60.4244:

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

Where:

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

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

$1.912x10^{-3}$ = Conversion constant for ppm NO_x to grams per standard cubic meter at 20 degrees Celsius.

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

T = Time of test run, in hours.

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

[45CSR16, 40 C.F.R. §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 40 C.F.R. §60.4244:

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

Where:

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

C_d= Measured CO concentration in ppmv.

$1.164x10^{-3}$ = Conversion constant for ppm CO to grams per standard cubic meter at 20 degrees Celsius.

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

T = Time of test run, in hours.

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

[45CSR16, 40 C.F.R. §60.4244(e)]

f. For purposes of 40 C.F.R. 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 40 C.F.R. §60.4244:

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

Where:

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

C_d = VOC concentration measured as propane in ppmv.

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

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

T = Time of test run, in hours.

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

[45CSR16, 40 C.F.R. §60.4244(f)]

g. If the owner/operator chooses to measure VOC emissions using either Method 18 of 40 C.F.R. part 60, appendix A, or Method 320 of 40 C.F.R. 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 40 C.F.R. §60.4244. The corrected VOC concentration can then be placed on a propane basis using Equation 6 of 40 C.F.R. §60.4244.

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

Where:

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

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

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

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

Where:

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

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

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

Where:

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

[45CSR16, 40 C.F.R. §60.4244(g)]

[45CSR13, R13-3315, 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 40 C.F.R. §60.4245.
   1. All notifications submitted to comply with 40 C.F.R. 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 C.F.R. parts, 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, 40 C.F.R. §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, 40 C.F.R. §60.4245(b)]**

[45CSR13, R13-3315, 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 40 C.F.R. §60.4245. Beginning on February 26, 2025 submit the notification electronically according to paragraph (g) of 40 C.F.R. §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, 40 C.F.R. §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. Beginning on February 26, 2025, performance tests must be reported electronically according to paragraph (f) of 40 C.F.R. §60.4245.

[45CSR16, 40 C.F.R. §60.4245(d)]

c. Beginning on February 26, 2025, within 60 days after the date of completing each performance test, you must submit the results following the procedures specified in paragraph (g) of 40 C.F.R. §60.4245. Data collected using test methods that are supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT website (*https://www.epa.gov/electronic-reporting-air-emissions/electronic-reporting-tool-ert*) at the time of the test must be submitted in a file format generated using the EPA's ERT. Alternatively, you may submit an electronic file consistent with the extensible markup language (XML) schema listed on the EPA's ERT website. Data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT website at the time of the test must be included as an attachment in the ERT or an alternate electronic file.

[45CSR16, 40 C.F.R. §60.4245(f)]

d. If you are required to submit notifications or reports following the procedure specified in 40 C.F.R. §60.4245(g), you must submit notifications or reports to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI), which can be accessed through the EPA's Central Data Exchange (CDX) (*https://cdx.epa.gov/*). The EPA will make all the information submitted through CEDRI available to the public without further notice to you. Do not use CEDRI to submit information you claim as CBI. Although we do not expect persons to assert a claim of CBI, if you wish to assert a CBI claim for some of the information in the report or notification, you must submit a complete file in the format specified in this subpart, including information claimed to be CBI, to the EPA following the procedures in paragraphs (g)(1) and (2) of 40 C.F.R. §60.4245. Clearly mark the part or all of the information that you claim to be CBI. Information not marked as CBI may be authorized for public release without prior notice. Information marked as CBI will not be disclosed except in accordance with procedures set forth in 40 C.F.R. part 2. All CBI claims must be asserted at the time of submission. Anything submitted using CEDRI cannot later be claimed CBI. Furthermore, under CAA section 114(c), emissions data is not entitled to confidential treatment, and the EPA is required to make emissions data available to the public. Thus, emissions data will not be protected as CBI and will be made publicly available. You must submit the same file submitted to the CBI office with the CBI omitted to the EPA via the EPA's CDX as described earlier in this paragraph (g).

(1) The preferred method to receive CBI is for it to be transmitted electronically using email attachments, File Transfer Protocol, or other online file sharing services. Electronic submissions must be transmitted directly to the OAQPS CBI Office at the email address *oaqpscbi@epa.gov*, and as described in paragraph (g) of 40 C.F.R. §60.4245, should include clear CBI markings. ERT files should be flagged to the attention of the Group Leader, Measurement Policy Group; all other files should be flagged to the attention of the Stationary Spark Ignition Internal Combustion Engine Sector Lead. If assistance is needed with submitting large electronic files that exceed the file size limit for email attachments, and if you do not have your own file sharing service, please email *oaqpscbi@epa.gov* to request a file transfer link.

(2) If you cannot transmit the file electronically, you may send CBI information through the postal service to the following address: OAQPS Document Control Officer (C404-02), OAQPS, U.S. Environmental Protection Agency, 109 T.W. Alexander Drive, P.O. Box 12055, Research Triangle Park, North Carolina 27711. ERT files should be sent to the attention of the Group Leader, Measurement Policy Group, and all other files should be sent to the attention of the Stationary

Spark Ignition Internal Combustion Engine Sector Lead. The mailed CBI material should be double wrapped and clearly marked. Any CBI markings should not show through the outer envelope.

[45CSR16, 40 C.F.R. §60.4245(g)]

[45CSR13, R13-3315, Condition 6.6.1.c and 6.6.1.d]

5.5.2. If you own or operate an emergency stationary SI ICE with a maximum engine power more than 100 HP that operates the purpose specified in §60.4243(d)(3)(i), you must submit an annual report according to the requirements in paragraphs (1) through (3) of this section.

1. The report must contain the following information:

i. Company name and address where the engine is located

ii. Date of the report and beginning and ending dates of the reporting period.

iii. Engine site rating and model year.

iv. Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place.

v-vi. [Reserved]

vii. Hours spent for operation for the purposes specified in §60.4243(d)(3)(i), including the date, start time, and end time for engine operation for the purposes specified in §60.4243(d)(3)(i). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.

2. The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year.

3. The annual report must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (*https://cdx.epa.gov/*). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written report must be submitted to the Administrator at the appropriate address listed in §60.4. Beginning on February 26, 2025, submit annual report electronically according to paragraph (g) of 40 C.F.R. §60.4245.

[45CSR16, 40 C.F.R. §60.4245(e)]

5.6. Compliance Plan

5.6.1. Reserved

6.0 Source-Specific Requirements (Heaters (HTR1, HTR2))

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	Catalytic Heaters	2.88 MMBTU/hr TOTAL

Each heater shall only be fired with pipeline-quality natural gas.
[45CSR13, R13-3315, 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, R13-3315, Condition 7.1.2] (HTR1)

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 C.F.R. 60 Appendix A.
[45CSR13, R13-3315, 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 C.F.R. 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, R13-3315, 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, R13-3315, Condition 7.4.1]**

6.5. Reporting Requirements

6.5.1. Reserved

6.6. Compliance Plan

6.6.1. Reserved

7.0 40 C.F.R. 60, 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. The requirements in 40 C.F.R. §60.5397a are independent of the closed vent system and cover requirements in §60.5411a. Alternatively, you may comply with the requirements of §60.5398b, including the notification, recordkeeping, and reporting requirements outlined in §60.5424b. For the purpose of this subpart, compliance with the requirements in §60.5398b will be deemed compliance with this section. When complying with §60.5398b, the definitions in §60.5430b shall apply for those activities conducted under §60.5398b.

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 parts per million (ppm) or greater using Method 21 of appendix A-7 to this part.

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 of appendix A-7 to this part or optical gas imaging meeting the requirements in paragraphs (c)(7)(i) through (vii) of 40 C.F.R. §60.5397a).

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 fugitive~~s~~ emissions monitoring program with optical gas imaging, a fugitive emission is defined as any visible emissions observed using optical gas imaging.

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

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

ii. Procedure for a daily verification check.

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

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

v. Procedures for conducting surveys, including the items specified in 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) through (iii). For the purposes of complying with the fugitive emissions monitoring program using Method 21 of appendix A-7 of this part 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 C.F.R. 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 C.F.R. part 60, appendix A-7, including Section 8.3.1.

iii. ***Procedures for calibration.*** The instrument must be calibrated before use each day of its use by the procedures specified in Method 21 of appendix A-7 of this part. At a minimum, you must also conduct precision tests at the interval specified in Method 21 of appendix A-7 of this part, Section 8.1.2, and a calibration drift assessment at the end of each monitoring day. The calibration drift assessment must be conducted as specified in paragraph (c)(8)(iii)(A) of this section. Corrective action for drift assessments is specified in paragraphs (c)(8)(iii)(B) and (C) of this section.

A. Check the instrument using the same calibration gas that was used to calibrate the instrument before use. Follow the procedures specified in Method 21 of appendix A-7 of this part, Section 10.1, except do not adjust the meter readout to correspond to the calibration gas value. If multiple scales are used, record the instrument reading for each scale used. Divide the arithmetic difference of the initial and post-test calibration response by the corresponding calibration gas value for each scale and multiply by 100 to express the calibration drift as a percentage.

B. If a calibration drift assessment shows a negative drift of more than 10 percent, then all equipment with instrument readings between the fugitive emission definition multiplied by (100 minus the percent of negative drift/divided by 100) and the fugitive emission definition that was monitored since the last calibration must be re-monitored.

C. If any calibration drift assessment shows a positive drift of more than 10 percent from the initial calibration value, then, at the owner/operator's discretion, all equipment with instrument readings above the fugitive emission definition and below the fugitive emission definition multiplied by (100 plus the percent of positive drift/divided by 100) monitored since the last calibration may be re-monitored.

d. Each fugitive emissions monitoring plan must include the elements specified in 40 C.F.R. §§60.5397a(d)(1) through (3), at a minimum, as applicable.

1. If you are using optical gas imaging, your plan must include procedures to ensure that all fugitive emissions components monitored during each survey. Example procedures include, but are not limited to, a sitemap with an observation path, a written narrative of where the fugitive emissions components are located and how they will be monitored, or an inventory of fugitive emissions components.

2. If you are using Method 21 of appendix A-7 of this part, your plan must include a list of fugitive emissions components to be monitored and method for determining the location of fugitive emissions components to be monitored in the field (e.g., tagging, identification on a process and instrumentation diagram, etc.).

3. Your fugitive emissions monitoring plan must include the written plan developed for all of the fugitive emissions components designated as difficult-to-monitor in accordance with 40 C.F.R. §60.5397a(g)(3), and the written plan for fugitive emissions components designated as unsafe-to-monitor in accordance with 40 C.F.R. §60.5397a(g)(4).

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 90 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 90 days of the startup of production for each collection of fugitive emissions components after the modification or by June 3, 2017, whichever is latest.

2. You must conduct an initial monitoring survey within 90 days of the startup of a new compressor station for each 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 90 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) through (6).

1. Except as provided herein in this paragraph (g)(1), a monitoring survey of each collection of fugitive emissions components at a well site must be conducted at least semiannually after the initial survey. Consecutive semiannual monitoring surveys must be conducted at least 4 months apart and no more than 7 months apart.

2. Except as provided in this paragraph (g)(2), a monitoring survey of the collection of fugitive emissions components at a compressor station 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. You are no longer required to comply with the requirements of paragraph (g)(1) of 40 C.F.R. §60.5397a when the owner or operator removes all major production and processing equipment, as defined in §60.5430a, such that the well site becomes a wellhead only well site. If any major production and processing equipment is subsequently added to the well site, then the owner or operator must comply with the requirements in paragraphs (f)(1) and (g)(1) of 40 C.F.R. §60.5397a.

6. 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°F 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, as defined in §60.5430a, in accordance with 40 C.F.R. §§60.5397a(h)(1) and (2).

1. A first attempt at repair shall be made no later than 30 calendar days after detection of the fugitive emissions.

2. Repair shall be completed as soon as practicable, but no later than 30 calendar days after the first attempt at repair as required in paragraph (h)(1) of 40 C.F.R. §60.5397a.

3. Delay of repair will be allowed if the conditions in paragraphs (h)(3)(i) or (ii) of 40 C.F.R. §60.5397a are met.

i. If the repair 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 must be completed during the next scheduled compressor station shutdown for maintenance, scheduled well shutdown, scheduled well shut-in, after a scheduled vent blowdown or within 2 years of detecting the fugitive emissions, whichever is earliest. For purposes of this paragraph (h)(3), a vent blowdown is the opening of one or more blowdown valves to depressurize major production and processing equipment, other than a storage vessel.

ii. If the repair requires replacement of a fugitive emissions component or a part thereof, but the replacement cannot be acquired and installed within the repair timelines specified in paragraphs (h)(1) and (2) of 40 C.F.R. §60.5397a due to either of the conditions specified in paragraphs (h)(3)(ii)(A) or (B) of 40 C.F.R. §60.5397a, the repair must be completed in accordance with paragraph (h)(3)(ii)(C) of 40 C.F.R. §60.5397a and documented in accordance with §60.5420a(c)(15)(vii)(I).

A. Valve assembly supplies had been sufficiently stocked but are depleted at the time of the required repair.

B. A replacement fugitive emissions component or a part thereof requires custom fabrication.

C. The required replacement must be ordered no later than 10 calendar days after the first attempt at repair. The repair must be completed as soon as practicable, but no later than 30 calendar days after receipt of the replacement component, unless the repair requires a compressor station or well shutdown. If the repair requires a compressor station or well shutdown, the repair must be completed in accordance with the timeframe specified in paragraph (h)(3)(i) of this section.

4. Each identified source of fugitive emissions must be resurveyed to complete repair according to the requirements in paragraphs (h)(4)(i) through (iv) of 40 C.F.R. §60.5397a, to ensure that there are no fugitive emissions.

i. The operator may resurvey the fugitive emissions components to verify repair using either Method 21 of appendix A-7 of this part or optical gas imaging.

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 during the monitoring survey when the fugitives were initially found for identification purposes and subsequent repair. The digital photograph must include the date that the photograph was taken and 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 of appendix A-7 of this part to resurvey the repaired fugitive emissions components are subject to the resurvey provisions specified in 40 C.F.R. §§60.5397a(h)(4)(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 of appendix A-7 of this part 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 of appendix A-7 of this part.

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)(4)(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, R13-3315, Condition 4.1.4]

7.1.2 You must determine initial compliance with the standards for each affected facility. Except as otherwise provided in 40 C.F.R. §60.5410a, 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 1 full year.

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 40 C.F.R. §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(a)(1) according to the following paragraphs:

a. You must conduct periodic monitoring surveys as required in §60.5397a(g).

b. You must repair 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 (18) 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.
[40 C.F.R. §60.5420a(c), 45CSR16]

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

i. The date of the startup of production or the date of the first day of production after modification for each collection of fugitive emissions components at a well site and the date of startup or the date of modification for each collection of fugitive emissions components at a compressor station.

ii-iv. [Reserved]

v. For each collection of fugitive emissions components at a well site where you complete the removal of all major production and processing equipment such that the well site contains only one or more wellheads, record the date the well site completes the removal of all major production and processing equipment from the well site, and, if the well site is still producing, record the well ID or separate tank battery ID receiving the production from the well site. If major production and processing equipment is subsequently added back to the well site, record the date that the first piece of major production and processing equipment is added back to the well site.

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

vii. The records of each monitoring survey as specified in paragraphs (c)(15)(vii)(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), training and experience of operator(s) performing the survey.

D. Monitoring instrument used.

E. Fugitive emissions component identification when Method 21 of appendix A-7 of this part is used to perform the monitoring survey.

F. Ambient temperature, sky conditions, and maximum wind speed at the time of the survey. For compressor stations, operating mode of each compressor (*i.e.*, operating, standby pressurized, and not operating-depressurized modes) at the station at the time of the survey.

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

H. Records of calibrations for the instrument used during the monitoring survey.

I. Documentation of each fugitive emission detected during the monitoring survey, including the information specified in paragraphs (c)(15)(vii)(I)(*1*) through (*9*) of 40 C.F.R. §60.5420a.

(1) Location of each fugitive emission identified.
(2) Type of fugitive emissions component, including designation as difficult-to-monitor or unsafe-to-monitor, if applicable.
(3) If Method 21 of appendix A-7 of this part is used for detection, record the component ID and instrument reading.
(4) For each repair that cannot be made during the monitoring survey when the fugitive emissions are initially found, a digital photograph or video 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 and 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). The digital photograph or identification (e.g., tag) may be removed after the repair is completed, including verification of repair with the resurvey.
(5) The date of first attempt at repair of the fugitive emissions component(s).
(6) The date of successful repair of the fugitive emissions component, including the resurvey to verify repair and instrument used for the resurvey.
(7) Identification of each fugitive emission component placed on delay of repair and explanation for each delay of repair.
(8) For each fugitive emission component placed on delay of repair for reason of replacement component unavailability, the operator must document: the date the component was added to the delay of repair list, the date the replacement fugitive component or part thereof was ordered, the anticipated component delivery date (including any estimated shipment or delivery date provided by the vendor), and the actual arrival date of the component.
(9) Date of planned shutdowns that occur while there are any components that have been placed on delay of repair.

viii. For each collection of fugitive emissions components at a well site or collection of fugitive emissions components at a compressor station complying with an alternative means of emissions limitation under §60.5399a, you must maintain the records specified by the specific alternative fugitive emissions standard for a period of at least 5 years.

ix. If you comply with the alternative GHG and VOC standard under §60.5398b, in lieu of the information specified in paragraphs (c)(15)(vi) through (vii) of 40 C.F.R. §60.5420a, you must maintain the records specified in §60.5424b.

[40 C.F.R. §60.5420(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. 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) and (12) 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 is required for all reports.

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

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

iii. Beginning and ending dates of the reporting period.

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

[45CSR16; 40 C.F.R. §60.5420a(b)(1)]

b. For the collection of fugitive emissions components at each well site and the collection of fugitive emissions components at each compressor station, report the information specified in paragraphs (b)(7)(i) through (iii) of 40 C.F.R. §60.5420a, as applicable.

i.

A. Designation of the type of site (*i.e.*, well site or compressor station) at which the collection of fugitive emissions components is located.

B. For each collection of fugitive emissions components at a well site that became an affected facility during the reporting period, you must include the date of the startup of production or the date of the first day of production after modification. For each collection of fugitive emissions components at a compressor station that became an affected facility during the reporting period, you must include the date of startup or the date of modification.

C. [Reserved]

D. For each collection of fugitive emissions components at a well site where during the reporting period you complete the removal of all major production and processing equipment such that the well site contains only one or more wellheads, you must include the date of the change to status as a wellhead only well site.

E. For each collection of fugitive emissions components at a well site where you previously reported under paragraph (b)(7)(i)(C) of 40 C.F.R. §60.5420a the removal of all major production and processing equipment and during the reporting period major production and processing equipment is added back to the well site, the date that the first piece of major production and processing equipment is added back to the well site.

ii. For each fugitive emissions monitoring survey performed during the annual reporting period, the information specified in paragraphs (b)(7)(ii)(A) through (G) of 40 C.F.R. §60.5420a.

A. Date of the survey.

B. Monitoring instrument used.

C. Any deviations from the monitoring plan elements under §60.5397a(c)(1),(2), and (7) and (c)(8)(i) or a statement that there were no deviations from these elements of the monitoring plan.

D. Number and type of components for which fugitive emissions were detected.
E. Number and type of fugitive emissions components that were not repaired as required in §60.5397a(h).
F. Number and type of fugitive emission components (including designation as difficult-to-monitor or unsafe-to-monitor, if applicable) on delay of repair and explanation for each delay of repair.
G. Date of planned shutdown(s) that occurred during the reporting period if there are any components that have been-placed on delay of repair.

iii. For each collection of fugitive emissions components at a well site or collection of fugitive emissions components at a compressor station complying with an alternative fugitive emissions standard under §60.5399a, in lieu of the information specified in paragraphs (b)(7)(i) and (ii) of 40 C.F.R. §60.5420a, you must provide the information specified in paragraphs (b)(7)(iii)(A) through (C) of 40 C.F.R. §60.5420a.
A. The alternative standard with which you are complying.
B. The site-specific reports specified by the specific alternative fugitive emissions standard, submitted in the format in which they were submitted to the state, local, or tribal authority. If the report is in hard copy, you must scan the document and submit it as an electronic attachment to the annual report required in paragraph (b) of 40 C.F.R. §60.5420a.
C. If the report specified by the specific alternative fugitive emissions standard is not site-specific, you must submit the information specified in paragraphs (b)(7)(i) and (ii) of 40 C.F.R. §60.5420a for each individual site complying with the alternative standard.

iv. If you comply with the alternative GHG and VOC standard under §60.5398b, in lieu of the information specified in paragraph (b)(7)(ii) of 40 C.F.R. §60.5420a, you must provide the information specified in §60.5424b.

[45CSR16; 40 C.F.R. §60.5420a(b)(7)]

7.6. Compliance Plan

7.6.1 None

West Virginia Department of Environmental Protection
Division of Air Quality

Fact Sheet

For Draft/Proposed Renewal Permitting Action Under 45CSR30 and Title V of the Clean Air Act

Permit Number: **R30-01300017-2025**
Applications Received: **February 28, 2025**
Plant Identification Number: **03-54-013-00017**
Permittee: **Columbia Gas Transmission, LLC**
Facility Name: **White Oak Compressor Station**
Mailing Address: **1700 MacCorkle Avenue SE, Charleston, WV 25314**

Physical Location:	Brohard, Calhoun County, West Virginia
UTM Coordinates:	487.7 km Easting • 4,321.4 km Northing • Zone 17
Directions:	From the town of Brohard, head southeast on Brohard Road towards Dutchman Run and turn right to stay on Brohard Road. Continue on County Route 5/3. In approximately one mile, turn left onto County Route 21/3. The station is on the right in approximately 1.6 miles.

Facility Description

The White Oak Compressor Station is a natural gas transmission and compressor station. Pipeline transmission of natural gas requires that the gas be compressed. The facility receives natural gas via pipeline from an upstream compressor station, compresses it using natural gas-fired turbines, and transmits the natural gas via pipeline to a downstream station.

SIC Code: 4922

Emissions Summary

Plantwide Emissions Summary [Tons per Year]

Regulated Pollutants	Potential Emissions	2024 Actual Emissions
Carbon Monoxide (CO)	212.35	48.43
Nitrogen Oxides (NO_X)	89.38	43.81
Particulate Matter ($PM_{2.5}$)	10.32	6.45
Particulate Matter (PM_{10})	10.32	6.45
Total Particulate Matter (TSP)	10.32	6.45
Sulfur Dioxide (SO_2)	1.11	0.7
Volatile Organic Compounds (VOC)	18.05	9.23

PM_{10} is a component of TSP.

Hazardous Air Pollutants	Potential Emissions	2024 Actual Emissions
Formaldehyde	1.26	0.85
Total HAPs	1.88	1.22

Some of the above HAPs may be counted as PM or VOCs.

Title V Program Applicability Basis

This facility has the potential to emit 212.35 tons per year of CO. Due to this facility's potential to emit over 100 tons per year of criteria pollutant, Columbia Gas Transmission, LLC is required to have an operating permit pursuant to Title V of the Federal Clean Air Act as amended and 45CSR30.

Legal and Factual Basis for Permit Conditions

The State and Federally-enforceable conditions of the Title V Operating Permits are based upon the requirements of the State of West Virginia Operating Permit Rule 45CSR30 for the purposes of Title V of the Federal Clean Air Act and the underlying applicable requirements in other state and federal rules.

This facility has been found to be subject to the following applicable rules:

Federal and State:	45CSR2	Particulate Air Pollution from Combustion of Fuel in Indirect Heat Exchangers
	45CSR6	Open burning prohibited.
	45CSR11	Standby plans for emergency episodes.
	45CSR13	NSR permits
	45CSR16	Standards of Performance for New Stationary Sources Pursuant to 40 C.F.R. 60
	WV Code § 22-5-4 (a) (15)	The Secretary can request any pertinent information such as annual emission inventory reporting
	45CSR30	Operating permit requirement
	45CSR34	Emission Standard for Hazardous Air Pollutants
	40 C.F.R. Part 61, Subpart M	Asbestos inspection and removal
	40 C.F.R. 60 Subpart JJJJ	Standards of Performance for Stationary Spark Ignition Internal Combustion Engines (SI ICE)

	40 C.F.R. 60 Subpart KKKK	Standards of Performance for Stationary Combustion Turbines
	40 C.F.R. 60 Subpart OOOOa	Standards of Performance for Crude Oil and Natural Gas Facilities for Which Construction, Modification or Reconstruction Commenced After September 18, 2015 and On or Before December 6, 2022
	40 C.F.R. Part 63 Subpart ZZZZ	National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE)
	40 C.F.R. Part 82, Subpart F	Ozone depleting substances
State Only:	45CSR4	No objectionable odors
	45CSR17	Prevention and Control of Fugitive PM

Each State and Federally-enforceable condition of the Title V Operating Permit references the specific relevant requirements of 45CSR30 or the applicable requirement upon which it is based. Any condition of the Title V permit that is enforceable by the State but is not Federally-enforceable is identified in the Title V permit as such.

The Secretary's authority to require standards under 40 C.F.R. Part 60 (NSPS), 40 C.F.R. Part 61 (NESHAPs), and 40 C.F.R. Part 63 (NESHAPs MACT) is provided in West Virginia Code §§ 22-5-1 *et seq.*, 45CSR16, 45CSR34 and 45CSR30.

Active Permits/Consent Orders

Permit or Consent Order Number	Date of Issuance	Permit Determinations or Amendments That Affect the Permit *(if any)*
R13-3315C	July 9, 2024	

Conditions from this facility's Rule 13 permit(s) governing construction-related specifications and timing requirements will not be included in the Title V Operating Permit but will remain independently enforceable under the applicable Rule 13 permit(s). All other conditions from this facility's Rule 13 permit(s) governing the source's operation and compliance have been incorporated into this Title V permit in accordance with the "General Requirement Comparison Table," which may be downloaded from DAQ's website.

Determinations and Justifications

The following changes have been made to the permit since the previous permit modification (MM02/MM03) was issued on March 31, 2025.

1. Emission Units Table 1.1 – in 2023 an old 1,500-gal Wastewater Storage Tank A2 (Emission Point ID A02) was replaced with the new 1,200-gal Wastewater Storage Tank A3 (Emission Point ID A03).

2. Section 5.0 – conditions 5.1.7, 5.4.1(a), 5.5.1 and 5.5.2 were revised to reflect changes in the most recent version of 40 C.F.R. 60 Subpart JJJJ.

3. Section 7.0 – conditions 7.1.1, 7.1.2, 7.1.3, 7.4.1 and 7.5.1 were revised to reflect changes in the most recent version of 40 C.F.R. 60 Subpart OOOOa.

Non-Applicability Determinations

1. The following requirements have been determined not to be applicable to the subject facility and were included in the Permit Shield (condition 3.7.2) due to the following:

40 C.F.R. 60, Subpart Dc	**Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units.** The heaters at the facility are less than 10 MMBtu/hr, therefore, according to 40 C.F.R. §60.40c(a), this rule does not apply.
40 C.F.R. 63 Subpart JJJJJJ	**NESHAP for Industrial, Commercial, and Institutional Boilers Area Sources.** According to 40 C.F.R. §63.11195(e) natural gas fired boilers are not subject to this subpart.
40 C.F.R. 60, 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 and later, which is after the applicability date specified in 40 C.F.R. §60.5365, therefore this rule does not apply.

2. **40 C.F.R. 64: Compliance Assurance Monitoring**
   CAM is not applicable to the facility since there are no Pollutant Specific Emission Units (PSEUs) satisfying the criteria under 40 C.F.R. §64.2(a).

Request for Variances or Alternatives

None.

Insignificant Activities

Insignificant emission unit(s) and activities are identified in the Title V application.

Comment Period

Beginning Date: (Date of Notice Publication)
Ending Date: (Publication Date PLUS 30 Days)

Point of Contact

All written comments should be addressed to the following individual and office:

Natalya V. Chertkovsky-Veselova
West Virginia Department of Environmental Protection
Division of Air Quality
601 57th Street SE
Charleston, WV 25304
304/926-0499 ext. 41250
natalya.v.chertkovsky@wv.gov

Procedure for Requesting Public Hearing

During the public comment period, any interested person may submit written comments on the draft permit and may request a public hearing, if no public hearing has already been scheduled. A request for public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. The Secretary shall grant such a request for a hearing if he/she concludes that a public hearing is appropriate. Any public hearing shall be held in the general area in which the facility is located.

Response to Comments (Statement of Basis)

(**Choose**) Not applicable.

OR

Describe response to comments that are received and/or document any changes to the final permit from the draft/proposed permit.

Chertkovsky, Natalya V <natalya.v.chertkovsky@wv.gov>

Completeness Determination, Columbia Gas Transmission, LLC, White Oak Compressor Station, Application No. R30-01300017-2025

3 messages

Chertkovsky, Natalya V <natalya.v.chertkovsky@wv.gov> Wed, Apr 9, 2025 at 10:53 AM
To: david_carte@tcenergy.com, David Keatley <david_keatley@tcenergy.com>
Cc: Carrie McCumbers <carrie.mccumbers@wv.gov>

Your Title V renewal application for a permit to operate the above referenced facility was received by this Division on February 28, 2025. After review of said application, it has been determined that the application is administratively complete as submitted. Therefore, the above referenced facility qualifies for an Application Shield.

The applicant has the duty to supplement or correct the application. Any applicant who fails to submit any relevant facts or who has submitted incorrect information in a permit application shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrected information. In addition, an applicant shall provide additional information as necessary to address any requirements that become applicable to the source after the date it filed a complete application but prior to release of a draft permit.

The submittal of a complete application shall not affect the requirement that any source have all **preconstruction permits** required under the rules of the Division.

If during the processing of this application it is determined that additional information is necessary to evaluate or take final action on this application, a request for such information will be made in writing with a reasonable deadline for a response. Until which time as your renewal permit is issued or denied, please continue to operate this facility in accordance with 45CSR30, section 6.3.c. which states: *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.* This protection shall cease to apply if, subsequent to the completeness determination made pursuant to paragraph 6.1.d. of 45CSR30 and as required by paragraph 4.1.b., the applicant fails to submit by the deadline specified in writing any additional information identified as being needed to process the application.

Please remember, **failure of the applicant to timely submit information required or requested to process the application may cause the Application Shield to be revoked.** Should you have any questions regarding this determination, please contact me.

Sincerely,

Natalya V. Chertkovsky-Veselova,

Title V Permit Engineer,

WV DEP DAQ

David Keatley <david_keatley@tcenergy.com> Wed, Apr 9, 2025 at 10:56 AM
To: "natalya.v.chertkovsky@wv.gov" <natalya.v.chertkovsky@wv.gov>

Your message

To: David Keatley
Subject: [EXTERNAL] Completeness Determination, Columbia Gas Transmission, LLC, White Oak Compressor Station, Application No. R30-01300017-2025
Sent: Wednesday, April 9, 2025 10:53:42 AM (UTC-05:00) Eastern Time (US & Canada)

was read on Wednesday, April 9, 2025 10:56:29 AM (UTC-05:00) Eastern Time (US & Canada).

McCumbers, Carrie <carrie.mccumbers@wv.gov> Wed, Apr 9, 2025 at 11:00 AM
To: natalya.v.chertkovsky@wv.gov

Your message

To: McCumbers, Carrie
Subject: Completeness Determination, Columbia Gas Transmission, LLC, White Oak Compressor Station, Application No. R30-01300017-2025
Sent: 4/9/25, 10:53:42 AM EDT

was read on 4/9/25, 11:00:55 AM EDT

Received
February 28, 2025
WV DEP/Div of Air Quality

Division of Air Quality Permit Application Submittal

Please find attached a permit application for : Columbia Gas Transmission, LLC; White Oak Compressor Station
[Company Name; Facility Location]

- DAQ Facility ID (for existing facilities only): 013-00017
- Current 45CSR13 and 45CSR30 (Title V) permits associated with this process (for existing facilities only): R13-3315C; R30-01300017-2020 (MM01)

- Type of NSR Application (check all that apply):
  - ☐ Construction
  - ☐ Modification
  - ☐ Class I Administrative Update
  - ☐ Class II Administrative Update
  - ☐ Relocation
  - ☐ Temporary
  - ☐ Permit Determination

- Type of 45CSR30 (TITLE V) Application:
  - ☐ Title V Initial
  - ☑ Title V Renewal
  - ☐ Administrative Amendment**
  - ☐ Minor Modification**
  - ☐ Significant Modification**
  - ☐ Off Permit Change

****If the box above is checked, include the Title V revision information as ATTACHMENT S to the combined NSR/Title V application.**

- Payment Type:
  - ☐ Credit Card (Instructions to pay by credit card will be sent in the Application Status email.)
  - ☐ Check (Make checks payable to: WVDEP – Division of Air Quality)
    Mail checks to:
    WVDEP – DAQ – Permitting
    Attn: NSR Permitting Secretary
    601 57th Street, SE
    Charleston, WV 25304

Please wait until DAQ emails you the Facility ID Number and Permit Application Number. Please add these identifiers to your check or cover letter with your check.

- If the permit writer has any questions, please contact (all that apply):
  - ☐ Responsible Official/Authorized Representative
    - Name:
    - Email:
    - Phone Number:
  - ☑ Company Contact
    - Name: David Keatley
    - Email: david_keatley@tcenergy.com
    - Phone Number: (304) 357-2443
  - ☐ Consultant
    - Name:
    - Email:
    - Phone Number:

Columbia Gas Transmission, LLC
1700 MacCorkle Avenue SE
Charleston, WV 25314

TC Energy

February 21st, 2025

Laura M. Crowder, Director
WV Department of Environmental Protection (WVDEP)
Division of Air Quality (DAQ)
601 57th Street SE
Charleston, WV 25304

Re: Columbia Gas Transmission, LLC (Columbia)
White Oak Compressor Station (WVDAQ Facility ID: 013-00017)
Title V Operating Permit Renewal Application

Ms. Crowder,

Columbia Gas Transmission, LLC (Columbia) operates a Natural Gas Compressor Station in Brohard, West Virginia. The facility currently maintains an NSR Permit No. R13-3315C under 45CSR13 and a Title V Permit No. R30-01300017-2020 (MM01) under 45CSR30. The current Title V Permit to Operate expires on September 15, 2025.

This package contains the general application forms along with the required attachments for a Title V renewal permit application. White Oak Compressor Station's Potential to Emit (PTE) exceeds 100 tons per year for Carbon Monoxide (CO). For this reason, White Oak is considered a Title V source for permitting purposes.

Should you have any questions or require additional information, please contact me by phone at (304) 357-2443 or via email at david_keatley@tcenergy.com.

Sincerely,

David Keatley
Environmental Analyst
USNG Environmental Compliance
TC Energy

WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF AIR QUALITY
601 57th Street SE
Charleston, WV 25304
Phone: (304) 926-0475
www.dep.wv.gov/daq

INITIAL/RENEWAL TITLE V PERMIT APPLICATION - GENERAL FORMS

Section 1: General Information

1. Name of Applicant (As registered with the WV Secretary of State's Office):
Columbia Gas Transmission, LLC

2. Facility Name or Location:
White Oak Compressor Station

3. DAQ Plant ID No.:
013-00017

4. Federal Employer ID No. (FEIN):
31-0802435-30

5. **Permit Application Type:**

☐ Initial Permit — When did operations commence?
☒ Permit Renewal — What is the expiration date of the existing permit?
☐ Update to Initial/Renewal Permit Application

6. Type of Business Entity:

☐ Corporation ☐ Governmental Agency ☒ LLC
☐ Partnership ☐ Limited Partnership

7. Is the Applicant the:

☐ Owner ☐ Operator ☒ Both

If the Applicant is not both the owner and operator, please provide the name and address of the other party.

8. Number of onsite employees:

<10

9. Governmental Code:

☒ Privately owned and operated; 0
☐ Federally owned and operated; 1
☐ State government owned and operated; 2
☐ County government owned and operated; 3
☐ Municipality government owned and operated; 4
☐ District government owned and operated; 5

10. Business Confidentiality Claims

Does this application include confidential information (per 45CSR31)? ☐ Yes ☒ No

If yes, identify each segment of information on each page that is submitted as confidential, and provide justification for each segment claimed confidential, including the criteria under 45CSR§31-4.1, and in accordance with the DAQ's *"PRECAUTIONARY NOTICE-CLAIMS OF CONFIDENTIALITY"* guidance.

11. Mailing Address		
Street or P.O. Box: 1700 MacCorkle Ave, SE		
City: Charleston	**State:** WV	**Zip:** 25314
Telephone Number: (304) 257-2443	**Fax Number:**	

12. Facility Location (Physical Address)		
Street: 1752 Frederick Ridge Rd	**City:** Brohard	**County:** Calhoun
UTM Easting: 487.7 km	**UTM Northing:** 4,321.4 km	**Zone:** ☒ 17 or ☐ 18
Directions: From the town of Brohard, head southeast on Brohard Rd toward Dutchman Run and turn right to stay on Brohard Rd. Continue on Co. Route 5/3. In approximately 1 mile, turn left onto Co. Route 21/3. The station will be on the right in approximately 1.6 miles.		
Portable Source? ☐ Yes ☒ No		
Is facility located within a nonattainment area? ☐ Yes ☒ No		**If yes, for what air pollutants?**
Is facility located within 50 miles of another state? ☒ Yes ☐ No		**If yes, name the affected state(s).** Ohio
Is facility located within 100 km of a Class I Area[1]? ☐ Yes ☒ No **If no, do emissions impact a Class I Area[1]?** ☐ Yes ☒ No		**If yes, name the area(s).**

[1] *Class I areas include Dolly Sods and Otter Creek Wilderness Areas in West Virginia, and Shenandoah National Park and James River Face Wilderness Area in Virginia.*

13. Contact Information		
Responsible Official: David Carte		**Title:** Manager of Operations
Street or P.O. Box: 1742 Fredrick Ridge Rd		
City: Brohard	**State:** WV	**Zip:** 26148
Telephone Number: (304) 542-7231	**Cell Number:** N/A	
E-mail address: david_carte@tcenergy.com		
Environmental Contact: David J. Keatley PE, PhD		**Title:** Environmental Analyst USNG Environmental Compliance
Street or P.O. Box: 1700 MacCorkle Ave, SE, 5th Floor		
City: Charleston	**State:** WV	**Zip:** 25314
Telephone Number: (304) 357-2443	**Cell Number:** N/A	
E-mail address: david_keatley@tcenergy.com		
Application Preparer: Michael Dearing		**Title:** Project Manager
Company: Environmental Resources Management, Inc.		
Street or P.O. Box:		
City:	**State:**	**Zip:**
Telephone Number:	**Cell Number:**	
E-mail address: michael_dearing@erm.com		

14. Facility Description

List all processes, products, NAICS and SIC codes for normal operation, in order of priority. Also list any process, products, NAICS and SIC codes associated with any alternative operating scenarios if different from those listed for normal operation.

Process	Products	NAICS	SIC
Natural Gas Transmission		486210	4922

Provide a general description of operations.

White Oak Compressor Station is a natural gas transmission and compression facility covered by Standard Industrial Classification (SIC) Code 4922. The station has the potential to operate twenty-four (24) hours per day, seven (7) days per week, fifty-two (52) weeks per year.

The station consists of two (2) 20,912-hp Solar Titan 130 turbine compressor engines, one (1) 1,175-hp Waukesha VGF-P48GL emergency generator RICE, one (1) 1.50-MMBtu/hr fuel gas heater, catalytic heaters with a total output of 2.88-MMBtu/hr, one (1) 2,056-gal pipeline liquids storage tank, and one (1) 1,500-gal wastewater storage tank.

15. Provide an **Area Map** showing plant location as **ATTACHMENT A**.

16. Provide a **Plot Plan(s)**, e.g. scaled map(s) and/or sketch(es) showing the location of the property on which the stationary source(s) is located as **ATTACHMENT B**. For instructions, refer to "Plot Plan - Guidelines."

17. Provide a detailed **Process Flow Diagram(s)** showing each process or emissions unit as **ATTACHMENT C**. Process Flow Diagrams should show all emission units, control equipment, emission points, and their relationships.

Section 2: Applicable Requirements

18. Applicable Requirements Summary	
Instructions: Mark all applicable requirements.	
☐ SIP	☐ FIP
☒ Minor source NSR (45CSR13)	☐ PSD (45CSR14)
☐ NESHAP (45CSR34)	☐ Nonattainment NSR (45CSR19)
☒ Section 111 NSPS	☒ Section 112(d) MACT standards
☐ Section 112(g) Case-by-case MACT	☐ 112(r) RMP
☐ Section 112(i) Early reduction of HAP	☐ Consumer/commercial prod. reqts., section 183(e)
☐ Section 129 Standards/Reqts.	☐ Stratospheric ozone (Title VI)
☐ Tank vessel reqt., section 183(f)	☐ Emissions cap 45CSR§30-2.6.1
☐ NAAQS, increments or visibility (temp. sources)	☐ 45CSR27 State enforceable only rule
☐ 45CSR4 State enforceable only rule	☐ Acid Rain (Title IV, 45CSR33)
☐ Emissions Trading and Banking (45CSR28)	☐ **C**ompliance **A**ssurance **M**onitoring (40CFR64)
☐ Cross-State Air Pollution Rule (45CSR43)	

19. Non Applicability Determinations
List all requirements which the source has determined not applicable and for which a permit shield is requested. The listing shall also include the rule citation and the reason why the shield applies. 40 CFR 60 Subpart Dc – The proposed heaters are less than the 10 MMBtu/hr applicability threshold in §40 CFR 60.40c(a). 40 CFR 60 Subpart OOOO – The proposed units are not affected facilities listed under 40 CFR §60.5365.
☒ Permit Shield

20. Facility-Wide Applicable Requirements

List all facility-wide applicable requirements. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*).

- R13-3315C Condition 3.1.4: Do not discharge air pollutants which cause or contribute to an objectionable odor. [45CSR§4-3.1]
- R13-3415C Condition 3.3.1: Conduct stack tests as required and submit a report of the results within 60 days after test completion. [45CSR13]
- R13-3315C Condition 3.5.4.1: Submit a Certified Emissions Statement and pay fees on an annual basis. [45CSR30]

☐ Permit Shield

For all facility-wide applicable requirements listed above, provide monitoring/testing / recordkeeping / reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number and/or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

- R13-3315C Condition 3.4.1: Maintain records of all information required by the permit for at least five years.
- R13-3315C Condition 3.4.2: Maintain records of all odor complaints received, an investigation performed in response to such a complaint, and any responsive actions taken. [45CSR4]
- R13-3315C Condition 3.5.4.2: Submit the Certified Emissions Statement invoice and fee no later than 30 days prior to initial date of startup. Maintain a receipt for the appropriate fee on the premises. [45CSR30]

Are you in compliance with all facility-wide applicable requirements? ☒ Yes ☐ No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

21. Active Permits/Consent Orders		
Permit or Consent Order Number	Date of Issuance MM/DD/YYYY	List any Permit Determinations that Affect the Permit *(if any)*
R13-3315C	07/09/2024	
R30-01300017-2020 (MM01)	09/15/2024	

Section 3: Facility-Wide Emissions

23. Facility-Wide Emissions Summary [Tons per Year]	
Criteria Pollutants	Potential Emissions
Carbon Monoxide (CO)	212.35
Nitrogen Oxides (NO_X)	89.38
Lead (Pb)	-
Particulate Matter ($PM_{2.5}$)[1]	10.32
Particulate Matter (PM_{10})[1]	10.32
Total Particulate Matter (TSP)	10.32
Sulfur Dioxide (SO_2)	1.11
Volatile Organic Compounds (VOC)	18.05
Hazardous Air Pollutants[2]	Potential Emissions
Formaldehyde	1.26
Total HAPs	1.88
Regulated Pollutants other than Criteria and HAP	Potential Emissions
CO_2e	191,073.65

[1]$PM_{2.5}$ and PM_{10} are components of TSP.
[2]For HAPs that are also considered PM or VOCs, emissions should be included in both the HAPs section and the Criteria Pollutants section.

Section 4: Insignificant Activities

24. Insignificant Activities (Check all that apply)		
☒	1.	Air compressors and pneumatically operated equipment, including hand tools.
☒	2.	Air contaminant detectors or recorders, combustion controllers or shutoffs.
☒	3.	Any consumer product used in the same manner as in normal consumer use, provided the use results in a duration and frequency of exposure which are not greater than those experienced by consumer, and which may include, but not be limited to, personal use items; janitorial cleaning supplies, office supplies and supplies to maintain copying equipment.
☒	4.	Bathroom/toilet vent emissions.
☒	5.	Batteries and battery charging stations, except at battery manufacturing plants.
☐	6.	Bench-scale laboratory equipment used for physical or chemical analysis, but not lab fume hoods or vents. Many lab fume hoods or vents might qualify for treatment as insignificant (depending on the applicable SIP) or be grouped together for purposes of description.
☐	7.	Blacksmith forges.
☐	8.	Boiler water treatment operations, not including cooling towers.
☐	9.	Brazing, soldering or welding equipment used as an auxiliary to the principal equipment at the source.
☐	10.	CO_2 lasers, used only on metals and other materials which do not emit HAP in the process.
☒	11.	Combustion emissions from propulsion of mobile sources, except for vessel emissions from Outer Continental Shelf sources.
☒	12.	Combustion units designed and used exclusively for comfort heating that use liquid petroleum gas or natural gas as fuel.
☒	13.	Comfort air conditioning or ventilation systems not used to remove air contaminants generated by or released from specific units of equipment.
☐	14.	Demineralized water tanks and demineralizer vents.
☐	15.	Drop hammers or hydraulic presses for forging or metalworking.
☐	16.	Electric or steam-heated drying ovens and autoclaves, but not the emissions from the articles or substances being processed in the ovens or autoclaves or the boilers delivering the steam.
☐	17.	Emergency (backup) electrical generators at residential locations.
☐	18.	Emergency road flares.
☐	19.	Emission units which do not have any applicable requirements and which emit criteria pollutants (CO, NO_x, SO_2, VOC and PM) into the atmosphere at a rate of less than 1 pound per hour and less than 10,000 pounds per year aggregate total for each criteria pollutant from all emission units. Please specify all emission units for which this exemption applies along with the quantity of criteria pollutants emitted on an hourly and annual basis:

24. Insignificant Activities (Check all that apply)

☒ 20. Emission units which do not have any applicable requirements and which emit hazardous air pollutants into the atmosphere at a rate of less than 0.1 pounds per hour and less than 1,000 pounds per year aggregate total for all HAPs from all emission sources. This limitation cannot be used for any source which emits dioxin/furans nor for toxic air pollutants as per 45CSR27.

Please specify all emission units for which this exemption applies along with the quantity of hazardous air pollutants emitted on an hourly and annual basis:

Sources	VOCs		HAPs	
	lb/hr	ton/year	lb/hr	ton/year
A01 – Pipeline Liquids Storage Tank	<0.01	<0.01	<0.01	<0.01
A03 – Wastewater Storage Tank	<0.01	<0.01	<0.01	<0.01
Totals	**<0.01**	**<0.01**	**<0.01**	**<0.01**

☐ 21. Environmental chambers not using hazardous air pollutant (HAP) gases.

☒ 22. Equipment on the premises of industrial and manufacturing operations used solely for the purpose of preparing food for human consumption.

☐ 23. Equipment used exclusively to slaughter animals, but not including other equipment at slaughterhouses, such as rendering cookers, boilers, heating plants, incinerators, and electrical power generating equipment.

☐ 24. Equipment used for quality control/assurance or inspection purposes, including sampling equipment used to withdraw materials for analysis.

☐ 25. Equipment used for surface coating, painting, dipping or spray operations, except those that will emit VOC or HAP.

☐ 26. Fire suppression systems.

☒ 27. Firefighting equipment and the equipment used to train firefighters.

☐ 28. Flares used solely to indicate danger to the public.

☒ 29. Fugitive emission related to movement of passenger vehicle provided the emissions are not counted for applicability purposes and any required fugitive dust control plan or its equivalent is submitted.

☐ 30. Hand-held applicator equipment for hot melt adhesives with no VOC in the adhesive formulation.

☒ 31. Hand-held equipment for buffing, polishing, cutting, drilling, sawing, grinding, turning or machining wood, metal or plastic.

☐ 32. Humidity chambers.

☒ 33. Hydraulic and hydrostatic testing equipment.

☐ 34. Indoor or outdoor kerosene heaters.

☒ 35. Internal combustion engines used for landscaping purposes.

☐ 36. Laser trimmers using dust collection to prevent fugitive emissions.

☐ 37. Laundry activities, except for dry-cleaning and steam boilers.

☒ 38. Natural gas pressure regulator vents, excluding venting at oil and gas production facilities.

☐ 39. Oxygen scavenging (de-aeration) of water.

☐ 40. Ozone generators.

24. Insignificant Activities (Check all that apply)		
☒	41.	Plant maintenance and upkeep activities (e.g., grounds-keeping, general repairs, cleaning, painting, welding, plumbing, re-tarring roofs, installing insulation, and paving parking lots) provided these activities are not conducted as part of a manufacturing process, are not related to the source's primary business activity, and not otherwise triggering a permit modification. (Cleaning and painting activities qualify if they are not subject to VOC or HAP control requirements. Asphalt batch plant owners/operators must still get a permit if otherwise requested.)
☒	42.	Portable electrical generators that can be moved by hand from one location to another. "Moved by Hand" means that it can be moved without the assistance of any motorized or non-motorized vehicle, conveyance, or device.
☒	43.	Process water filtration systems and demineralizers.
☒	44.	Repair or maintenance shop activities not related to the source's primary business activity, not including emissions from surface coating or de-greasing (solvent metal cleaning) activities, and not otherwise triggering a permit modification.
☐	45.	Repairs or maintenance where no structural repairs are made and where no new air pollutant emitting facilities are installed or modified.
☐	46.	Routing calibration and maintenance of laboratory equipment or other analytical instruments.
☐	47.	Salt baths using nonvolatile salts that do not result in emissions of any regulated air pollutants. Shock chambers.
☐	48.	Shock chambers.
☐	49.	Solar simulators.
☒	50.	Space heaters operating by direct heat transfer.
☐	51.	Steam cleaning operations.
☐	52.	Steam leaks.
☐	53.	Steam sterilizers.
☐	54.	Steam vents and safety relief valves.
☐	55.	Storage tanks, reservoirs, and pumping and handling equipment of any size containing soaps, vegetable oil, grease, animal fat, and nonvolatile aqueous salt solutions, provided appropriate lids and covers are utilized.
☒	56.	Storage tanks, vessels, and containers holding or storing liquid substances that will not emit any VOC or HAP. Exemptions for storage tanks containing petroleum liquids or other volatile organic liquids should be based on size limits such as storage tank capacity and vapor pressure of liquids stored and are not appropriate for this list.
☒	57.	Such other sources or activities as the Director may determine.
☒	58.	Tobacco smoking rooms and areas.
☐	59.	Vents from continuous emissions monitors and other analyzers.

Section 5: Emission Units, Control Devices, and Emission Points

25. Equipment Table
Fill out the **Title V Equipment Table** and provide it as **ATTACHMENT D**.
26. Emission Units
For each emission unit listed in the **Title V Equipment Table**, fill out and provide an **Emission Unit Form** as **ATTACHMENT E**.
For each emission unit not in compliance with an applicable requirement, fill out a **Schedule of Compliance Form** as **ATTACHMENT F**.
27. Control Devices
For each control device listed in the **Title V Equipment Table**, fill out and provide an **Air Pollution Control Device Form** as **ATTACHMENT G**.
For any control device that is required on an emission unit in order to meet a standard or limitation for which the potential pre-control device emissions of an applicable regulated air pollutant is greater than or equal to the Title V Major Source Threshold Level, refer to the **Compliance Assurance Monitoring (CAM) Form(s)** for CAM applicability. Fill out and provide these forms, if applicable, for each Pollutant Specific Emission Unit (PSEU) as **ATTACHMENT H**.

Section 6: Certification of Information

28. Certification of Truth, Accuracy and Completeness and Certification of Compliance

Note: This Certification must be signed by a responsible official as defined in 45CSR§30-2.38.

a. Certification of Truth, Accuracy and Completeness

I certify that I am a responsible official (as defined at 45CSR§30-2.38) and am accordingly authorized to make this submission on behalf of the owners or operators of the source described in this document and its attachments. I certify under penalty of law that I have personally examined and am familiar with the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine and/or imprisonment.

b. Compliance Certification

Except for requirements identified in the Title V Application for which compliance is not achieved, I, the undersigned hereby certify that, based on information and belief formed after reasonable inquiry, all air contaminant sources identified in this application are in compliance with all applicable requirements.

Responsible official (type or print)

Name: David Carte	Title: Manager of Operations

Responsible official's signature:

Signature: David Carte Signature Date: 2/28/2025

(Must be signed and dated in blue ink or have a valid electronic signature)

Note: Please check all applicable attachments included with this permit application:

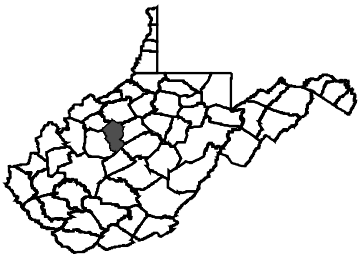
☒	ATTACHMENT A: Area Map
☒	ATTACHMENT B: Plot Plan(s)
☒	ATTACHMENT C: Process Flow Diagram(s)
☒	ATTACHMENT D: Equipment Table
☒	ATTACHMENT E: Emission Unit Form(s)
☐	ATTACHMENT F: Schedule of Compliance Form(s)
☐	ATTACHMENT G: Air Pollution Control Device Form(s)
☐	ATTACHMENT H: Compliance Assurance Monitoring (CAM) Form(s)

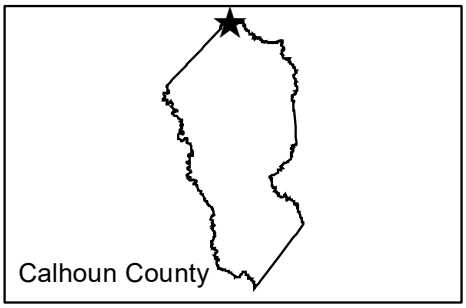
All of the required forms and additional information can be found and downloaded from, the DEP website at www.dep.wv.gov/daq, requested by phone (304) 926-0475, and/or obtained through the mail.

Table of Contents

Attachment A

Area Map





0 1,000 2,000 4,000 Feet

N

LAT. 39.041197 LON. -81.142297
CALHOUN COUNTY
WEST VIRGINIA

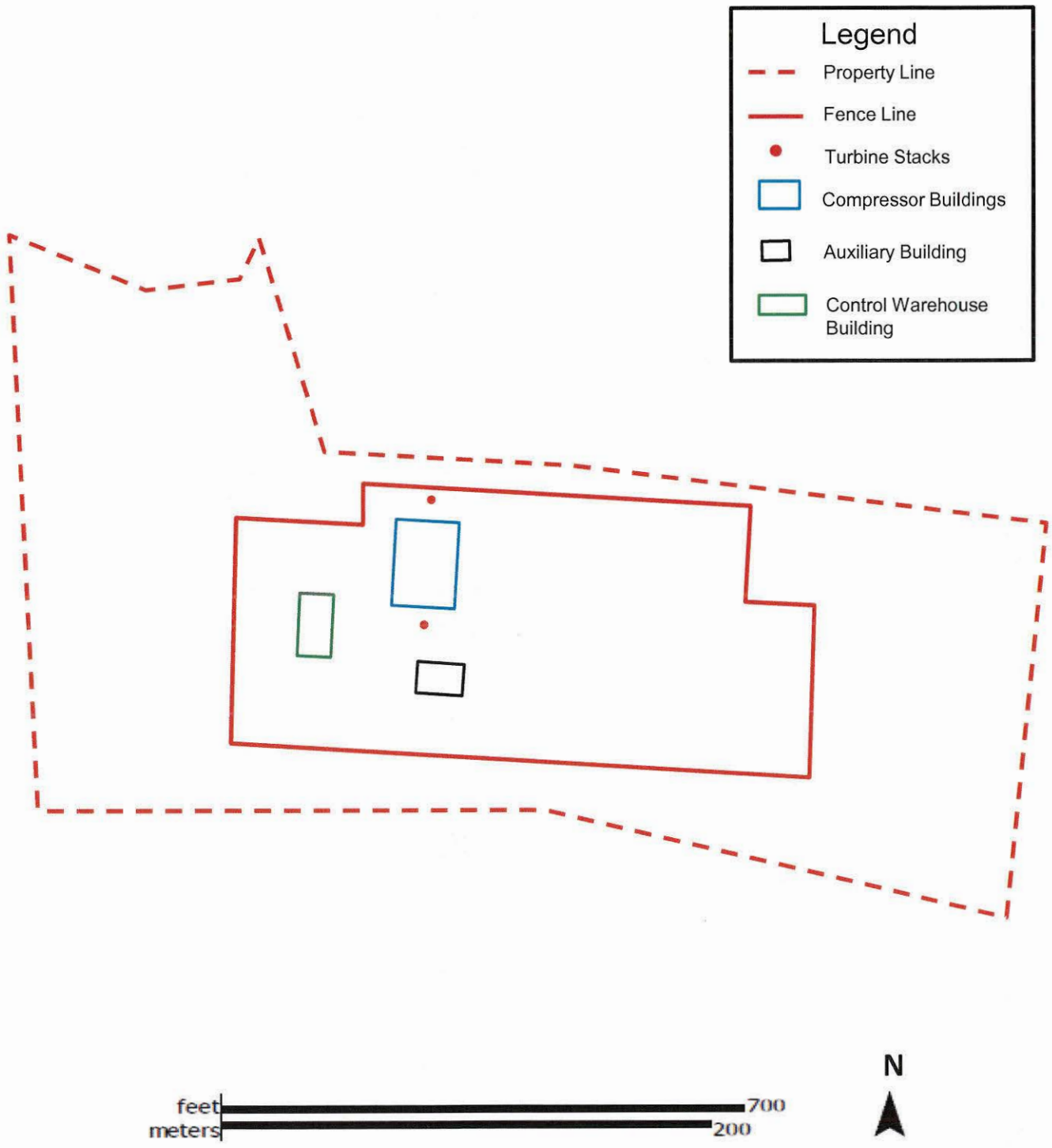
USGS 1:24K 7.5' Quadrangle:
MacFarlan, WV

SITE LOCATION MAP

ERM	**TC Energy** White Oak Compressor Station 1752 Frederick Ridge Road Brohard, West Virginia 26148	GIS Review: GM CHK'D: GM 0765928
Drawn By: SRV-05/05/2022	**Environmental Resources Management**	ATTACHMENT A

Attachment B

Plot Plan



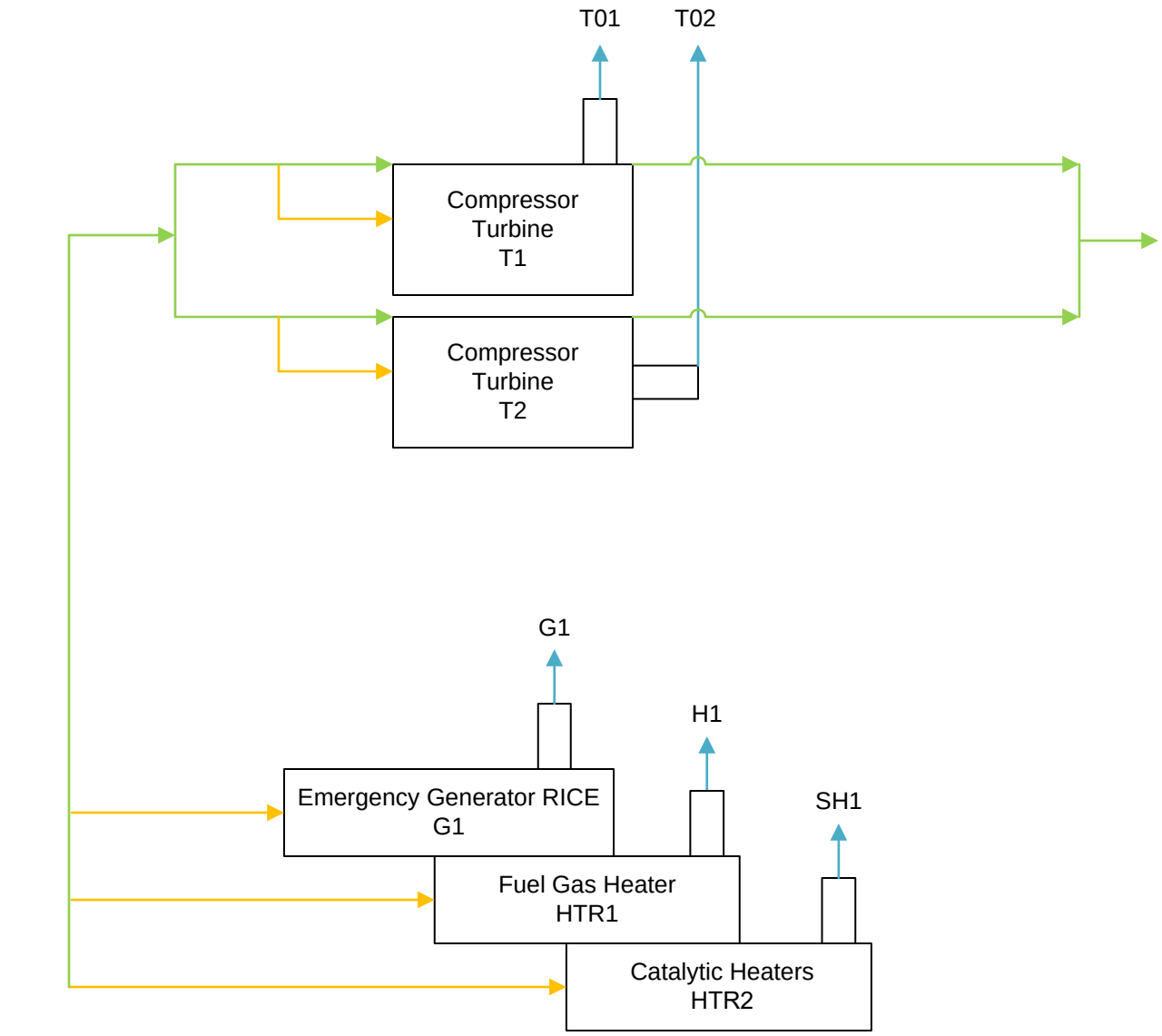
	Attachment E
Date: April 2016	Plot Plan White Oak Compressor Station

Attachment C

Process Flow Diagram

Attachment C – Process Flow Diagram

WHITE OAK COMPRESSOR STATION



Transmission Gas Stream

Fuel Gas

Emission Stream

TC Energy

Attachment D

Equipment Table

ATTACHMENT D - Title V Equipment Table

(includes all emission units at the facility except those designated as insignificant activities in Section 4, Item 24 of the General Forms)

Emission Unit ID[1]	Emission Point ID[1]	Emission Unit Description	Year Installed/ Modified	Design Capacity	Control Device[1]
T1	T01	Solar Titan 130 Turbine	2017	20,912 hp @ 32°F	None
T2	T02	Solar Titan 130 Turbine	2017	20,912 hp @ 32°F	None
G1	G1	Emergency Generator RICE; Waukesha VGF-P48GL; 4 Cycle, Lean Burn	2017	1,175 hp	None
HTR1	H1	GT Fuel Gas Heater	2017	1.50 MMBtu/hr	None
HTR2	SH1	Catalytic Heaters	2017	2.88 MMBtu/hr (Total)	None

[1]For 45CSR13 permitted sources, the numbering system used for the emission points, control devices, and emission units should be consistent with the numbering system used in the 45CSR13 permit. For grandfathered sources, the numbering system should be consistent with registrations or emissions inventory previously submitted to DAQ. For emission points, control devices, and emissions units which have not been previously labeled, use the following 45CSR13 numbering system: 1S, 2S, 3S,... or other appropriate description for emission units; 1C, 2C, 3C,... or other appropriate designation for control devices; 1E, 2E, 3E, ... or other appropriate designation for emission points.

Attachment E

Emission Unit Forms

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
T1	Solar Titan 130 Turbine	None

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Natural gas-fired Solar Titan 130 Turbine

Manufacturer:	**Model number:**	**Serial number:**
Solar	Titan 130	N/A
Construction date: 03/03/2019 (In Service)	**Installation date:** 03/03/2019 (In Service)	**Modification date(s):** N/A

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):

20,912 HP @ 32°F

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
172,115 scf/hr (Based on 32°F)	1,507.7 MMscf/yr (Based on 32°F	8,760 hr/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ☒ Yes ☐ No	**If yes, is it?** ☐ Indirect Fired ☒ Direct Fired
Maximum design heat input and/or maximum horsepower rating: Max Heat Input: 175.56 MMBtu/hr (HHV, 32°F) 20,912 HP @ 32°F	**Type and Btu/hr rating of burners:** N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Natural Gas: 172,115 scf/hr; 1,507.7 MMscf/yr (Based on 32°F)

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas	0.25 grains S/100 scf	0	1,020 Btu/scf

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	9.62	104.84
Nitrogen Oxides (NO_X)	9.48	43.10
Lead (Pb)	-	-
Particulate Matter ($PMFil_{2.5}$ / $PMFil_{10}$)	0.33	1.46
Particulate Matter (PM Condensable)	0.83	3.61
Total Particulate Matter (TSP)	1.16	5.08
Sulfur Dioxide (SO_2)	10.02	0.55
Volatile Organic Compounds (VOC)	1.10	5.51
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Formaldehyde	0.12	0.55
Total HAPs	0.18	0.79
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
CO_2e	20,557.32	90,041.06

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

NO_X, VOC, and CO: Vendor Data (20% of UHC for VOC)

$PM_{2.5}$ / PM_{10} / PM: AP-42 Table 3.1-2a (4/00)

SO_2: 0.20 grains S/100 scf (hourly); 0.25 grains S/100 scf (annually)

HAPs: AP-42 Table 3.1-3 (4/00)

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

(1) R13-3315C Condition 5.1.1: Operate and maintain turbines in accordance with the manufacturer's recommendations and specifications. Each turbine shall only be fired with pipeline-quality natural gas.

(2) R13-3315C Condition 5.1.2: Annual emission limits (tpy): NOx – 43.10, CO – 104.84, VOC – 5.52, SO_2 – 0.55, PM_{10} – 5.08, CH_2O – 0.55

(3) R13-3315C Condition 5.1.3: Comply with maximum hourly emission limits for each operating parameter.

(4) R13-3315C Condition 5.1.4: NO_X limited to 25 ppm at 15% O_2 or 150 ng/J of useful output (1.2 lb/MWh). When operating at less than 75% peak load or at temperatures less than 0°F, the limit for NO_X is 150 ppm at 15% O_2 (or 1,100 ng/J of useful output or 8.7 lb/MWh). [40 CFR §60.4320]

(5) R13-3315C Condition 5.1.5: SO_2 limited to 0.060 lb of SO_2/MMBtu heat input. [40 CFR §60.4330(a)(2)]

(6) R13-3315C Condition 5.1.6: Operate and maintain the stationary combustion turbines in a manner consistent with good air pollution control practices for minimizing emissions at all times including during startup, shutdown, and malfunction.

(7) 40 CFR 60 Subpart KKKK, §60.4305(a) – Subject to this subpart since the turbine has a heat input >= 10 MMBtu/hr.

☐ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

(1) R13-3315C Condition 5.2.1: Conduct an initial performance test for NO_X within 60 days after achieving maximum output of the turbine, but no later than 180 days after initial startup. Conduct subsequent performance tests annually. This frequency can be reduced to every two years if the results demonstrate the turbine achieved compliance of <= 75% of the NO_X emission limit. Maintain records of performance tests. Submit a copy of performance test within 60 days of test completion. [40 CFR §60.8, §60.4340(a), §60.4375(b), §60.4400]

(2) R13-3315C Condition 5.2.2: Perform performance tests for CO using EPA approved methods while 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).

(3) R13-3315C Condition 5.3.1: Maintain records of the amount of natural gas consumed and the hours of operation of each of the turbines.

(4) R13-3315C Condition 5.3.2: Maintain the fuel quality characteristics in a current, valid purchase contract, tariff sheet, or transportation contract specifying that the maximum total sulfur content for natural gas is 20 grains of sulfur or less per 100 scf. [40 CFR §60.4365(a)]

(5) R13-3315C Condition 5.3.3: Monitor and record the monthly operating hours for each operating parameter. Calculate monthly emissions and sum for the preceding 12 months to determined compliance with annual emissions limits.

(6) R13-3315C Condition 5.4.1: Submit an initial notification within 15 days after initial start-up. [40 CFR §60.7(a)(3)]

(7) R13-3315C Condition 5.4.2: Submit a written report of the results of testing before the close of business on the 60th day following the completion of such testing to the Director.

Are you in compliance with all applicable requirements for this emission unit? ☒ Yes ☐ No If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
T2	Solar Titan 130 Turbine	None

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Natural gas-fired Solar Titan 130 Turbine

Manufacturer:	**Model number:**	**Serial number:**
Solar	Titan 130	N/A
Construction date: 03/25/2019 (In Service)	**Installation date:** 03/25/2019 (In Service)	**Modification date(s):** N/A

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):

20,912 HP @ 32°F

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
172,115 scf/hr (Based on 32°F)	1,507.7 MMscf/yr (Based on 32°F	8,760 hr/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ☒ Yes ☐ No	**If yes, is it?** ☐ Indirect Fired ☒ Direct Fired
Maximum design heat input and/or maximum horsepower rating: Max Heat Input: 175.56 MMBtu/hr (HHV, 32°F) 20,912 HP @ 32°F	**Type and Btu/hr rating of burners:** N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Natural Gas: 172,115 scf/hr; 1,507.7 MMscf/yr (Based on 32°F)

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas	0.25 grains S/100 scf	0	1,020 Btu/scf

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	9.62	104.84
Nitrogen Oxides (NO_X)	9.48	43.10
Lead (Pb)	-	-
Particulate Matter ($PMFil_{2.5}$ / $PMFil_{10}$)	0.33	1.46
Particulate Matter (PM Condensable)	0.83	3.61
Total Particulate Matter (TSP)	1.16	5.08
Sulfur Dioxide (SO_2)	10.02	0.55
Volatile Organic Compounds (VOC)	1.10	5.51
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Formaldehyde	0.12	0.55
Total HAPs	0.18	0.79
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
CO_2e	20,557.32	90,041.06

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

NO_X, VOC, and CO: Vendor Data (20% of UHC for VOC)

$PM_{2.5}$ / PM_{10} / PM: AP-42 Table 3.1-2a (4/00)

SO_2: 0.20 grains S/100 scf (hourly); 0.25 grains S/100 scf (annually)

HAPs: AP-42 Table 3.1-3 (4/00)

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

(1) R13-3315C Condition 5.1.1: Operate and maintain turbines in accordance with the manufacturer's recommendations and specifications. Each turbine shall only be fired with pipeline-quality natural gas.

(2) R13-3315C Condition 5.1.2: Annual emission limits (tpy): NOx – 43.10, CO – 104.84, VOC – 5.52, SO_2 – 0.55, PM_{10} – 5.08, CH_2O – 0.55

(3) R13-3315C Condition 5.1.3: Comply with maximum hourly emission limits for each operating parameter.

(4) R13-3315C Condition 5.1.4: NO_X limited to 25 ppm at 15% O_2 or 150 ng/J of useful output (1.2 lb/MWh). When operating at less than 75% peak load or at temperatures less than 0°F, the limit for NO_X is 150 ppm at 15% O_2 (or 1,100 ng/J of useful output or 8.7 lb/MWh). [40 CFR §60.4320]

(5) R13-3315C Condition 5.1.5: SO_2 limited to 0.060 lb of SO_2/MMBtu heat input. [40 CFR §60.4330(a)(2)]

(6) R13-3315C Condition 5.1.6: Operate and maintain the stationary combustion turbines in a manner consistent with good air pollution control practices for minimizing emissions at all times including during startup, shutdown, and malfunction.

(7) 40 CFR 60 Subpart KKKK, §60.4305(a) – Subject to this subpart since the turbine has a heat input >= 10 MMBtu/hr.

☐ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

(1) R13-3315C Condition 5.2.1: Conduct an initial performance test for NO_X within 60 days after achieving maximum output of the turbine, but no later than 180 days after initial startup. Conduct subsequent performance tests annually. This frequency can be reduced to every two years if the results demonstrate the turbine achieved compliance of <= 75% of the NO_X emission limit. Maintain records of performance tests. Submit a copy of performance test within 60 days of test completion. [40 CFR §60.8, §60.4340(a), §60.4375(b), §60.4400]

(2) R13-3315C Condition 5.2.2: Perform performance tests for CO using EPA approved methods while 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).

(3) R13-3315C Condition 5.3.1: Maintain records of the amount of natural gas consumed and the hours of operation of each of the turbines.

(4) R13-3315C Condition 5.3.2: Maintain the fuel quality characteristics in a current, valid purchase contract, tariff sheet, or transportation contract specifying that the maximum total sulfur content for natural gas is 20 grains of sulfur or less per 100 scf. [40 CFR §60.4365(a)]

(5) R13-3315C Condition 5.3.3: Monitor and record the monthly operating hours for each operating parameter. Calculate monthly emissions and sum for the preceding 12 months to determined compliance with annual emissions limits.

(6) R13-3315C Condition 5.4.1: Submit an initial notification within 15 days after initial start-up. [40 CFR §60.7(a)(3)]

(7) R13-3315C Condition 5.4.2: Submit a written report of the results of testing before the close of business on the 60th day following the completion of such testing to the Director.

Are you in compliance with all applicable requirements for this emission unit? ☒ Yes ☐ No If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
G1	Emergency Generator RICE	None

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Natural gas-fired Waukesha VGF-P48GL Emergency Generator RICE

Manufacturer:	**Model number:**	**Serial number:**
Waukesha	VGF-P48GL	N/A
Construction date: 03/21/2019 (In Service)	**Installation date:** 03/21/2019 (In Service)	**Modification date(s):** N/A

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):

1,175 HP

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
8,912 scf/hr	4.46 MMscf/yr	500 hr/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ☒ Yes ☐ No	**If yes, is it?** ☐ Indirect Fired ☒ Direct Fired
Maximum design heat input and/or maximum horsepower rating: 9.09 MMBtu/hr 1,175 HP	**Type and Btu/hr rating of burners:** N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Natural Gas: 8,912 scf/hr; 4.46 MMscf/yr

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas	0.25 grains S/100 scf	0	1,020 Btu/scf

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	4.38	1.09
Nitrogen Oxides (NO_X)	5.18	1.30
Lead (Pb)	-	-
Particulate Matter ($PMFil_{2.5}$/$PMFil_{10}$)	<0.01	<0.01
Particulate Matter (PMCondensable)	0.09	0.02
Total Particulate Matter (TSP)	0.09	0.02
Sulfur Dioxide (SO_2)	0.52	<0.01
Volatile Organic Compounds (VOC)	0.13	0.03
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Formaldehyde	0.65	0.16
Total HAPs	0.77	0.19
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
CO_2e	1,063.98	265.99

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

NO_X, CO, VOC, and Formaldehyde: Vendor Data (Plus 30% safety factor for CO, VOC, CH_2O, NMNEHC used for VOC)

$PM_{2.5}$ / PM_{10} / PM and HAPs: AP-42 Table 3.2-2 (10/24) – 4SLB

SO_2: 20 grains S/100 scf (hourly); 0.25 grains S/100 scf (annual)

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

(1) Comply with 40 CFR 63 Subpart ZZZZ

(2) R13-3315C Condition 6.1.1: Operating hours limited to 500 hours/year.

(3) R13-3315C Condition 6.1.2: Maximum emissions limit: NO_X – 1.30 (tpy), CO – 1.04 (tpy), VOC – 0.21 (tpy).

(4) R13-3315C Condition 6.2.1: NO_X emissions shall not exceed 2.0 g/hp-hr or 160 ppmvd at 15% O_2. CO emissions shall not exceed 4.0 g/hp-hr or 540 ppmvd at 15% O_2. VOC emissions shall not exceed 1.0 g/hp-hr or 86 ppmvd at 15% O_2 (excluding CH_2O emissions). [40 CFR §60.4233(e), Table 1]

(5) R13-3315C Condition 6.2.2: Owners and operators of stationary SI ICE much operate and maintain stationary SI ICE that achieve the emission standards as required in §60.4233 over the entire life of the engine. [40 CFR §60.4234]

(6) 40 CFR 60 Subpart JJJJ work practice standards

(7) 40 CFR 60 Subpart JJJJ notification requirements

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For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

(1) 40 CFR 63 Subpart ZZZZ; §63.6590(c)(1): Comply with NESHAP Subpart ZZZZ by complying with NSPS Subpart JJJJ.

(2) R13-3315C Condition 6.6.1: Maintain records of hours of operation through the non-resettable hour meter including how many hours are spent for emergency operation, what classified the operation as an emergency, hours spent for non-emergency operation, and reason for non-emergency operation. [40 CFR §60.4245(b)]

(3) R13-3315C Condition 6.3.1: If the engine does not meet the standards applicable to non-emergency engines, the owner/operator must install a non-resettable hour meter. [40 CFR §60.4237(a)]

(4) R13-3315C Condition 6.4.1 & 6.6.1: Operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. Conduct an initial performance test and subsequent performance tests every 8,760 hours of operation or 3 years, whichever comes first. Submit a copy of the performance test within 60 days after test completion. [40 CFR §60.4243(b), §60.4245(d)]

(5) R13-3315C Condition 6.5.1: Each performance test must be conducted within 10 percent of 100 percent peak (or highest achievable) load and cannot be conducted during periods of startup, shutdown, or malfunction. [40 CFR §60.4244(a) and §604244(b)]

(6) R13-3315C Condition 6.4.1 Keep a maintenance plan and records of conducted maintenance as well as all notifications submitted. [40 CFR §60.4245(a)]

(7) R13-3315C Condition 6.6.1: Submit an initial notification within 30 days after construction. [40 CFR §60.4245(c)]

Are you in compliance with all applicable requirements for this emission unit? ☒ Yes ☐ No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
HTR1	Fuel Gas Heater	None

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Natural Gas-fired Fuel Gas Heater

Manufacturer:	**Model number:**	**Serial number:**
GasTech		

Construction date:	**Installation date:**	**Modification date(s):**
03/01/2019 (In Service)	03/01/2019 (In Service)	N/A

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):

1.50 MMBtu/hr

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
1,470.59 scf/hr	12.88 MMscf/yr	8,760 hr/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ☒ Yes ☐ No	**If yes, is it?** ☒ Indirect Fired ☐ Direct Fired
Maximum design heat input and/or maximum horsepower rating: Max Heat Input: 1.50 MMBtu/hr	**Type and Btu/hr rating of burners:** N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Natural Gas: 1,470.6 scf/hr; 12.88 MMscf/yr

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas	0.25 grains S/100 scf	0	1,020 Btu/scf

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0.12	0.54
Nitrogen Oxides (NO_X)	0.15	0.64
Lead (Pb)	-	-
Particulate Matter ($PMFil_{2.5}$/$PMFil_{10}$)	<0.01	0.01
Particulate Matter (PMCondensable)	<0.01	0.04
Total Particulate Matter (TSP)	0.01	0.05
Sulfur Dioxide (SO_2)	0.09	<0.01
Volatile Organic Compounds (VOC)	<0.01	0.04
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Formaldehyde	<0.01	<0.01
Total HAPs	<0.01	0.01
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
CO_2e	175.65	769.33

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

NO_X and CO: AP-42 Table 1.4-1 (7/98)

$PM_{2.5}$ / PM_{10} / PM, and VOC: AP-42 Table 1.4-2 (7/98)

SO_2: 20 grains S/100 scf (hourly); 0.25 grains S/100 scf (annual)

HAPs: AP-42 Table 1.4-3 & 1.4-4 (7/98)

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

(1) R13-3315C Condition 7.1.1: The Maximum Design Heat Input (MDHI) shall not exceed 1.50 MMBtu/hr. Each heater shall only be fired with pipeline-quality natural gas.

(2) R13-3315C Condition 7.1.2: Smoke and/or particulate matter emitted into the open air must not be greater than 10% opacity based on a six-minute block average. [45 CSR §2-3.1]

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For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

(2) R13-3315C Condition 7.2.1: When requested, conduct Method 9 emission observations. [45 CSR §2-3.1]

R13-3315C Condition 7.4.1: Maintain records of each visible emission check, the general weather conditions, the emission point or equipment ID number, the name or means of ID of the observer, the results of the check, whether the visible emissions are normal for the process, and all corrective measures taken or planned. Report any deviations from the allowable visible emissions requirements.

Are you in compliance with all applicable requirements for this emission unit? ☒ Yes ☐ No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
SH1	Catalytic Heaters	None

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Natural Gas-fired Flameless Catalytic Heaters – 2.88 MMBtu/hr (Total)

Manufacturer:	**Model number:**	**Serial number:**

Construction date:	**Installation date:**	**Modification date(s):**
03/01/2019 (In Service)	03/01/2019 (In Service)	None

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):

2.88 MMBtu/hr

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
2,823.5 scf/hr	24.7 MMscf/yr	8,760 hr/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ☒ Yes ☐ No	**If yes, is it?** ☐ Indirect Fired ☒ Direct Fired
Maximum design heat input and/or maximum horsepower rating: 2.88 MMBtu/hr	**Type and Btu/hr rating of burners:** N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Natural Gas: 2,823.5 scf/hr; 24.7 MMscf/yr

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas	0.25 grains S/100 scf	0	1,020 Btu/scf

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0.24	1.04
Nitrogen Oxides (NO_X)	0.28	1.24
Lead (Pb)	-	-
Particulate Matter ($PMFil_{2.5}$/$PMFil_{10}$)	<0.01	0.02
Particulate Matter (PMCondensable)	0.02	0.07
Total Particulate Matter (TSP)	0.02	0.09
Sulfur Dioxide (SO_2)	0.16	<0.01
Volatile Organic Compounds (VOC)	0.02	0.07
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Formaldehyde	<0.01	<0.01
Total HAPs	<0.01	0.02
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
CO_2e	337.24	1,477.11

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

NO_X and CO: AP-42 Table 1.4-1 (7/98)

$PM_{2.5}$ / PM_{10} / PM, Pb, and VOC: AP-42 Table 1.4-2 (7/98)

SO_2: 20 grains S/100 scf (hourly); 0.25 grains S/100 scf (annual)

HAPs: AP-42 Table 1.4-3 & 1.4-4 (7/98)

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

(1) R13-3315C Condition 7.1.1: The Maximum Design Heat Input (MDHI) shall not exceed 2.88 MMBtu/hr. Each heater shall only be fired with pipeline-quality natural gas.

(2) R13-3315C Condition 7.1.2: Smoke and/or particulate matter emitted into the open air must not be greater than 10% opacity based on a six-minute block average. [45 CSR §2-3.1]

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For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

(2) R13-3315C Condition 7.2.1: When requested, conduct Method 9 emission observations. [45 CSR §2-3.2]

R13-3315C Condition 7.4.1: Maintain records of each visible emission check, the general weather conditions, the emission point or equipment ID number, the name or means of ID of the observer, the results of the check, whether the visible emissions are normal for the process, and all corrective measures taken or planned. Report any deviations from the allowable visible emissions requirement.

Are you in compliance with all applicable requirements for this emission unit? ☒ Yes ☐ No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

STORAGE TANK DATA TABLE

List all deminimis storage tanks (i.e. lube oil, glycol, diesel etc.)

Source ID #[1]	Status[2]	Content[3]	Volume[4]
A01	EXIST	Pipeline Liquids	2,056 gal
A03	EXIST	Rainwater / Lube Oil	1,200 gal

1. Enter the appropriate Source Identification Numbers (Source ID #) for each storage tank located at the compressor station. Tanks should be designated T01, T02, T03, etc.
2. Enter storage tank Status using the following:
   - EXIST Existing Equipment
   - NEW Installation of New Equipment
   - REM Equipment Removed
3. Enter storage tank content such as condensate, pipeline liquids, glycol (DEG or TEG), lube oil, diesel, mercaptan etc.
4. Enter the maximum design storage tank volume in gallons.

Appendix A

Supporting Calculations

Columbia Gas Transmission, LLC
White Oak Compressor Station
Title V Permit Application - February 2025
Facility Total PTE

Source	Annual Emissions															
	VOC		Total HAPs		NO_x		CO		PM / $PM_{2.5}$ / PM_{10}		SO_2		CH_4		CO_2e	
	lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr
T01 - Solar Titan 130 Turbine	1.10	5.51	0.18	0.79	9.48	43.10	9.62	104.84	1.16	5.08	10.02	0.55	0.39	1.70	20,557.32	90,041.06
T02 - Solar Titan 130 Turbine	1.10	5.51	0.18	0.79	9.48	43.10	9.62	104.84	1.16	5.08	10.02	0.55	0.39	1.70	20,557.32	90,041.06
G1 - Waukesha Emergency Generator RICE	0.13	0.03	0.77	0.19	5.18	1.30	4.38	1.09	0.09	0.02	0.52	<0.01	0.02	<0.01	1,063.98	265.99
H1 - GT Fuel Gas Heater	<0.01	0.04	<0.01	0.01	0.15	0.64	0.12	0.54	0.01	0.05	0.09	<0.01	<0.01	0.01	175.65	769.33
SH1 - Catalytic Heaters	0.02	0.07	<0.01	0.02	0.28	1.24	0.24	1.04	0.02	0.09	0.16	<0.01	<0.01	0.03	337.24	1,477.11
Insignificant Sources	<0.01	<0.01	<0.01	<0.01									<0.01	0.03	<0.01	0.04
Equipment Leaks (fugitive emissions)	0.85	3.72	<0.01	0.03									37.32	163.44	1,045.08	4,577.46
Blowdowns	1.57	6.88	0.01	0.05									69.12	302.76	1,935.87	8,479.10
Proposed PTE[1]	3.92	18.05	1.15	1.88	24.57	89.38	23.98	212.35	2.44	10.32	20.82	1.11	69.93	306.23	44,627.38	191,073.69

Notes:

1. The facility PTE excludes fugitive emissions since transmission storage compressor stations are not one of the named source categories that include fugitive emissions under 45CSR30.

Columbia Gas Transmission, LLC
White Oak Compressor Station
Title V Permit Application - February 2025
Facility Total HAPs Emissions

Source	Annual Emissions																							
	Total HAPs		Methanol		Formaldehyde		Hexane		Benzene		Toluene		Ethylbenzene		Xylene		2,2,4-Trimethylpentane		Acetaldehyde		Acrolein		1,3-Butadiene	
	lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr
T01 - Solar Titan 130 Turbine	0.18	0.79	<0.01	<0.01	0.12	0.55	<0.01	<0.01	<0.01	<0.01	0.02	0.10	<0.01	0.02	0.01	0.05	<0.01	<0.01	<0.01	0.03	<0.01	<0.01	<0.01	<0.01
T02 - Solar Titan 130 Turbine	0.18	0.79	<0.01	<0.01	0.12	0.55	<0.01	<0.01	<0.01	<0.01	0.02	0.10	<0.01	0.02	0.01	0.05	<0.01	<0.01	<0.01	0.03	<0.01	<0.01	<0.01	<0.01
G1 - Waukesha Emergency Generator RICE	0.77	0.19	0.02	<0.01	0.65	0.16	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.08	0.02	0.05	0.01	<0.01	<0.01
H1 - GT Fuel Gas Heater	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
SH1 - Catalytic Heaters	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Insignificant Sources	<0.01	<0.01					<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01								
Equipment Leaks (fugitive emissions)	<0.01	0.03																						
Blowdowns	0.01	0.05																						
Proposed PTE[1]	1.15	1.88	0.02	<0.01	0.90	1.26	0.01	<0.01	<0.01	0.02	0.05	0.20	0.01	0.05	0.02	0.10	<0.01	<0.01	0.09	0.08	0.05	0.02	<0.01	<0.01

Notes:
1. The facility PTE excludes fugitive emissions since transmission storage compressor stations are not one of the named source categories that include fugitive emissions under 45CSR30

Columbia Gas Transmission, LLC
White Oak Compressor Station
Title V Permit Application - February 2025
Insignificant Source Emissions

White Oak Compressor Station - Insignificant Sources

Emission Sources	VOCs		HAPs	
	lb/hr	ton/year	lb/hr	ton/year
A01 - Pipeline Liquids Storage Tank	<0.01	<0.01	<0.01	<0.01
A03 - Wastewater Storage Tank	<0.01	<0.01	<0.01	<0.01
Totals	**<0.01**	**<0.01**	**<0.01**	**<0.01**

Columbia Gas Transmission, LLC
White Oak Compressor Station
Title V Permit Application - February 2025
Solar Titan 130 Turbine (T01 - T02)

Horsepower	20,912	hp	(32°F)
Brake Specific Fuel Consumption	7,563	Btu/bhp-hr	(LHV, 32°F)
Total Heat Input	158.16	MMBtu/hr	(LHV, 32°F)
Maximum Heat Input	175.56	MMBtu/hr	(HHV, 32°F)
Operating Hours	8,760	hr/yr	
Natural Gas Heat Content	1,020	Btu/scf	
Fuel Consumption	1,507.73	MMscf/yr	
	172,115.29	scf/hr	(based on 32°F)
Quantity	2		

Pollutant	Emission Factor			Emission Rate		Emission Factor Reference
	ppmvd @ 15% O_2	lb/MMBtu		lb/hr	ton/yr	
NO_x	15.00	0.067	HHV	9.48	43.10	Vendor Data
CO	25.00	0.068	HHV	9.62	104.84	Vendor Data
$PMFil_{2.5}$ / $PMFil_{10}$		0.0019	HHV	0.33	1.46	AP-42 Table 3.1-2a (4/00)
PMCondensable		0.0047	HHV	0.83	3.61	AP-42 Table 3.1-2a (4/00)
VOC	5.00	0.0077	HHV	1.10	5.51	Vendor Data (20% of UHC)
SO_2 (Maximum Hourly)		0.0571	HHV	10.02		20 grains S / 100 scf
SO_2 (Average Annual)		0.000714	HHV		0.55	0.25 grains S / 100 scf
CO_2		116.98		20,536.23	89,948.67	40 CFR Subpart C
CH_4		2.20E-03		0.39	1.70	40 CFR Subpart C
N_2O		2.20E-04		0.04	0.17	40 CFR Subpart C
1,3-Butadiene		4.30E-07	HHV	<0.01	<0.01	AP-42 Table 3.1-3 (4/00)
Acetaldehyde		4.00E-05	HHV	<0.01	0.03	AP-42 Table 3.1-3 (4/00)
Acrolein		6.40E-06	HHV	<0.01	<0.01	AP-42 Table 3.1-3 (4/00)
Benzene		1.20E-05	HHV	<0.01	<0.01	AP-42 Table 3.1-3 (4/00)
Ethylbenzene		3.20E-05	HHV	<0.01	0.02	AP-42 Table 3.1-3 (4/00)
Formaldehyde		7.10E-04	HHV	0.12	0.55	AP-42 Table 3.1-3 (4/00)
Naphthalene		1.30E-06	HHV	<0.01	<0.01	AP-42 Table 3.1-3 (4/00)
PAH		2.20E-06	HHV	<0.01	<0.01	AP-42 Table 3.1-3 (4/00)
Propylene Oxide		2.90E-05	HHV	<0.01	0.02	AP-42 Table 3.1-3 (4/00)
Toluene		1.30E-04	HHV	0.02	0.10	AP-42 Table 3.1-3 (4/00)
Xylenes		6.40E-05		0.01	0.05	AP-42 Table 3.1-3 (4/00)
CO_2e				20,557.32	90,041.06	40 CFR 98 Subpart C
Total HAPs				0.18	0.79	AP-42 Table 3.1-3 (4/00)

Notes:
- Emission rates are representative of a single Solar Titan 130 turbine.
- Maximum hourly emission rate based on maximum horsepower under optimum conditions.
- Greenhouse Gas Emissions are calculated using 40 CFR 98 Subpart C Table C-1 and C-2 emission factors.
- AP-42, Chapter 3.2 Table 3.2-1 references are from the August 2000 revision.
- Max. Annual Emissions based upon Max. Hourly Emissions @ 8,760 hr/yr.
- CO2 equivalency solved for using Global Warming Potentials found in 40CFR98 Table A-1 (effective January 2025). GWP CO_2=1, GWP CH_4=28, N_2O=265
- Assumed HHV = 1.11*LHV

Columbia Gas Transmission, LLC
White Oak Compressor Station
Title V Permit Application - February 2025
Solar Titan 130 (T01 & T02) - Emission Rates

Emission Rates per Operating Mode

Operating Mode	Units	NO_x	CO	VOC
Normal Load @ 32°F[1]	lb/hr	9.48	9.62	1.10
Low Temp (<0°F)[2]	lb/hr	28.40	41.16	2.35
Low-Load (<50%)[3]	lb/hr	20.97	850.77	9.72
Startup/ Shutdown[4]	lb/event	4.30	384.50	4.40

Notes:
1. Based on data from Solar Titan 130 Compressor Set data sheet and the following concentrations:
   15 ppm NOx; 25 ppm CO; 5 ppm VOC
2. Based on data from Solar Product Information Letter (PIL) 167
3. For the purpose of calculating potential annual emissions, non-startup/shutdown operation
   at <50% load is based on emissions data provided by Solar for 40% load.
4. Based on data from Solar PIL170
5. Emission rates are representative of a single Solar Titan 130 turbine.

Potential Annual Emissions Per Turbine

Operating Mode	Operating Time		NO_x	CO	VOC
	Cycles	hr/yr	ton/yr	ton/yr	ton/yr
Normal Load @ 32 °F		8527	40.42	41.01	4.69
Low Temp (<0 °F)		100	1.42	2.06	0.12
Low-Load (<50%)		100	1.05	42.54	0.49
Startup/ Shutdown	100	33	0.22	19.23	0.22
Total		8,760	43.10	104.84	5.51

Emission Rates During Normal Operation (g/hp-hr)[1]

Emission Point ID / Model	NO_x	CO	VOC[2]	SO_2[3]	PM_{10} / $PM_{2.5}$	CH_2O
T01 and T02 / Solar Titan 130	0.21	0.21	0.02	0.22	*0.03*	*0.003*

Notes:
1. Based on vendor performance data; values in italics based on AP-42 emission factors.
2. VOC is based on 20 percent of unburned hydrocarbons per Solar Product Information Letter 168.
3. Conservatively based on 20 grains sulfur per 100 standard cubic feet of natural gas for maximum short-term emissions.

Columbia Gas Transmission, LLC
White Oak Compressor Station
Title V Permit Application - February 2025
Waukesha VGF-P48GL Emergency Generator RICE (G1)

Horsepower	1,175	hp
Brake Specific Fuel Consumption	7,733	Btu/Bhp-hr
Total Heat Input	9.09	MMBtu/hr
Operating Hours	500	hr/yr
Natural Gas Heat Content	1,020	Btu/scf
Fuel Consumption	4.46	MMscf/yr
	8,912	scf/hr

Pollutant	Emission Factor			Emission Rate		Emission Factor Reference
	g/bhp-hr	lb/MMBtu	lb/bhp-hr	lb/hr	ton/yr	
NO_x	2.00		4.41E-03	5.18	1.30	Vendor Data
CO	1.69		3.73E-03	4.38	1.09	Vendor Data
$PMFil_{2.5}$ / $PMFil_{10}$		7.71E-05		<0.01	<0.01	AP-42 Table 3.2-2 (10/24) - 4SLB
PMCondensable		9.91E-03		0.09	0.02	AP-42 Table 3.2-2 (10/24) - 4SLB
VOC	0.05		1.10E-04	0.13	0.03	Vendor Data
SO_2 (Maximum Hourly)		0.0571	4.42E-04	0.52		20 grains S / 100 scf
SO_2 (Average Annual)		0.000714	5.52E-06		<0.01	0.25 grains S / 100 scf
CO_2		116.98	9.05E-01	1,062.89	265.72	40 CFR Subpart C
CH_4		2.20E-03	1.70E-05	0.02	<0.01	40 CFR Subpart C
N_2O		2.20E-04	1.70E-06	<0.01	<0.01	40 CFR Subpart C
2,2,4-Trimethylpentane		2.50E-04	1.93E-06	<0.01	<0.01	AP-42 Table 3.2-2 (10/24) - 4SLB
Acetaldehyde		8.36E-03	6.46E-05	0.08	0.02	AP-42 Table 3.2-2 (10/24) - 4SLB
Benzene		4.40E-04	3.40E-06	<0.01	<0.01	AP-42 Table 3.2-2 (10/24) - 4SLB
Ethylbenzene		3.97E-05	3.07E-07	<0.01	<0.01	AP-42 Table 3.2-2 (10/24) - 4SLB
Formaldehyde	0.25		5.51E-04	0.65	0.16	AP-42 Table 3.2-2 (10/24) - 4SLB
Methanol		2.50E-03	1.93E-05	0.02	<0.01	AP-42 Table 3.2-2 (10/24) - 4SLB
n-Hexane		1.11E-03	8.58E-06	0.01	<0.01	AP-42 Table 3.2-2 (10/24) - 4SLB
Toluene		4.08E-04	3.16E-06	<0.01	<0.01	AP-42 Table 3.2-2 (10/24) - 4SLB
Xylene		1.84E-04	1.42E-06	<0.01	<0.01	AP-42 Table 3.2-2 (10/24) - 4SLB
CO_2e				1,063.98	265.99	40 CFR 98 Subpart C
Total HAPs				0.77	0.19	AP-42 Table 3.2-2 (10/24) - 4SLB

Notes:
- Greenhouse Gas Emissions are calculated using 40 CFR 98 Subpart C Table C-1 and C-2 emission factors.
- AP-42, Chapter 3.2 Table 3.2-2 references are from the October 2024 revision.
- Max. Annual Emissions based upon Max. Hourly Emissions @ 500 hr/yr.
- CO_2 equivalency solved for using Global Warming Potentials found in 40CFR98 Table A-1 (effective January 2025). GWP CO_2=1, GWP CH_4=28, GWP N_2O=265

Columbia Gas Transmission, LLC
White Oak Compressor Station
Title V Permit Application - February 2025
GT Fuel Gas Heater (H1)

Heat Input	1.50	MMBtu/hr
Operating Hours	8,760	hr/yr
Natural Gas Heat Content	1,020	Btu/scf
Fuel Consumption	12.88	MMscf/yr
	1,470.59	scf/hr
Quantity	1	

Pollutant	Emission Factor		Emission Rate		Emission Factor Reference
	lb/MMscf	lb/MMBtu	lb/hr	ton/yr	
NO_x	100	0.098	0.15	0.64	AP-42 Table 1.4-1 (7/98)
CO	84	0.082	0.12	0.54	AP-42 Table 1.4-1 (7/98)
$PMFil_{2.5}$ / $PMFil_{10}$	1.9	0.002	<0.01	0.01	AP-42 Table 1.4-2 (7/98)
PMCondensable	5.7	0.006	<0.01	0.04	AP-42 Table 1.4-2 (7/98)
VOC	5.5	0.005	<0.01	0.04	AP-42 Table 1.4-2 (7/98)
SO_2 (Maximum Hourly)		0.0571	0.09		20 grains S / 100 scf
SO_2 (Average Annual)		7.14E-04		<0.01	0.25 grains S / 100 scf
CO_2		116.98	175.47	768.54	40 CFR Subpart C
CH_4		2.20E-03	<0.01	0.01	40 CFR Subpart C
N_2O		2.20E-04	<0.01	<0.01	40 CFR Subpart C
Hexane	1.800	1.76E-03	<0.01	0.01	AP-42 Table 1.4-3 (7/98)
Benzene	0.002100	2.06E-06	<0.01	<0.01	AP-42 Table 1.4-3 (7/98)
Toluene	0.003400	3.33E-06	<0.01	<0.01	AP-42 Table 1.4-3 (7/98)
Formaldehyde	0.075	7.35E-05	<0.01	<0.01	AP-42 Table 1.4-3 (7/98)
CO_2e			175.65	769.33	40 CFR 98 Subpart C
Total HAPs			<0.01	0.01	AP-42 Table 1.4-3 & 4 (7/98)

Notes:
- Greenhouse Gas Emissions are calculated using 40 CFR 98 Subpart C Table C-1 and C-2 emission factors.
- AP-42, Chapter 1.4 references are from the July 1998 revision.
- Max. Annual Emissions based upon Max. Hourly Emissions @ 8760 hr/yr.
- CO_2 equivalency solved for using Global Warming Potentials found in 40CFR98 Table A-1 (effective January 2025). GWP CO_2=1, GWP CH_4=28, GWP N_2O=265

Columbia Gas Transmission, LLC
White Oak Compressor Station
Title V Permit Application - February 2025
Catalytic Heaters (SH1)

Heat Input	2.88	MMBtu/hr (total)
Operating Hours	8,760	hr/yr
Natural Gas Heat Content	1,020	Btu/scf
Fuel Consumption	24.73	MMscf/yr
	0.002824	MMscf/hr
	2,823.53	scf/hr

Pollutant	Emission Factor		Emission Rate		Emission Factor Reference
	lb/MMscf	lb/MMBtu	lb/hr	ton/yr	
NO_x	100	0.098	0.28	1.24	AP-42 Table 1.4-1 (7/98)
CO	84	0.082	0.24	1.04	AP-42 Table 1.4-1 (7/98)
$PMFil_{2.5}$ / $PMFil_{10}$	1.9	0.002	<0.01	0.02	AP-42 Table 1.4-2 (7/98)
PMCondensable	5.7	0.006	0.02	0.07	AP-42 Table 1.4-2 (7/98)
VOC	5.5	0.005	0.02	0.07	AP-42 Table 1.4-2 (7/98)
SO_2 (Maximum Hourly)		0.0571	0.16		20 grains S / 100 scf
SO_2 (Average Annual)		7.14E-04		<0.01	0.25 grains S / 100 scf
CO_2		116.98	336.89	1,475.60	40 CFR Subpart C
CH_4		2.20E-03	<0.01	0.03	40 CFR Subpart C
N_2O		2.20E-04	<0.01	<0.01	40 CFR Subpart C
Hexane	1.800	1.76E-03	<0.01	0.02	AP-42 Table 1.4-3 (7/98)
Benzene	0.002100	2.06E-06	<0.01	<0.01	AP-42 Table 1.4-3 (7/98)
Toluene	0.003400	3.33E-06	<0.01	<0.01	AP-42 Table 1.4-3 (7/98)
Formaldehyde	0.075	7.35E-05	<0.01	<0.01	AP-42 Table 1.4-3 (7/98)
CO_2e			337.24	1,477.11	40 CFR 98 Subpart C
Total HAPs			<0.01	0.02	AP-42 Table 1.4-3 & 4 (7/98)

Notes:
- Greenhouse Gas Emissions are calculated using 40 CFR 98 Subpart C Table C-1 and C-2 emission factors.
- AP-42, Chapter 1.4 references are from the July 1998 revision.
- Max. Annual Emissions based upon Max. Hourly Emissions @ 8,760 hr/yr.
- CO_2 equivalency solved for using Global Warming Potentials found in 40CFR98 Table A-1 (effective January 2025). GWP CO_2=1, GWP CH_4=28, GWP N_2O=265

Columbia Gas Transmission, LLC
White Oak Compressor Station
Title V Permit Application - February 2025
Pipeline Liquids Storage Tank
Insignificant Source

Pollutant	Emission Rates	
	Hourly	Annual
	(lb/hr)	(tpy)
CH_4	<0.01	0.03
CO_2	<0.01	<0.01
Benzene	<0.01	<0.01
Ethylbenzene	<0.01	<0.01
Heptane	<0.01	<0.01
Hexane	<0.01	<0.01
Isobutane	<0.01	<0.01
Isopentane	<0.01	<0.01
m-Xylene	<0.01	<0.01
n-Butane	<0.01	<0.01
n-Pentane	<0.01	<0.01
Propane	<0.01	<0.01
Toluene	<0.01	<0.01
C_{6+}	<0.01	<0.01
VOCs	<0.01	<0.01
Total HAPs	<0.01	<0.01
CO_2e	<0.01	0.04

Notes:
- Tank emission rates were calculated using Promax software. Promax output emissions are attached.
- Emission profiles shown above are for one 2,056 gallon Pipeline Liquids Tank with 12 Turnovers per year.

Columbia Gas Transmission, LLC
White Oak Compressor Station
Title V Permit Application - February 2025
Wastewater Storage Tank
Insignificant Source

Pollutant	Emission Rates	
	Hourly	Annual
	(lb/hr)	(tpy)
CH_4	<0.01	<0.01
CO_2	<0.01	<0.01
Benzene	<0.01	<0.01
Ethylbenzene	<0.01	<0.01
Heptane	<0.01	<0.01
Hexane	<0.01	<0.01
Isobutane	<0.01	<0.01
Isopentane	<0.01	<0.01
m-Xylene	<0.01	<0.01
n-Butane	<0.01	<0.01
n-Pentane	<0.01	<0.01
Propane	<0.01	<0.01
Toluene	<0.01	<0.01
C_{6+}	<0.01	<0.01
VOCs	<0.01	<0.01
Total HAPs	<0.01	<0.01
CO_2e	<0.01	<0.01

Notes:

- Tank emission rates were calculated using Promax software. Promax output emissions are attached.
- Emission profiles shown above are for one (1) 1,200 gallon Wastewater Storage Tank with 12 Turnovers per year.

Columbia Gas Transmission, LLC
White Oak Compressor Station
Title V Permit Application - February 2025
Fugitive Emissions from Leaks
Number of Compressors: 2

Component	Facility Components	Estimated Leaking Components[2]	Emission Factor[3]	Fugitive Emissions							
				Total	CH_4[4]	CO_2[4]	CH_4[5]	CO_2[5]	CO_2e[6]	VOC[7]	HAPs[8]
			scf/hr / component	scf/yr	scf/yr	scf/yr	ton/yr	ton/yr	ton/yr	ton/yr	ton/yr
Compressor Service											
Valve	228	5	24.2	1,059,960.00	960,073.82	2,158.64	20.32	0.13	569.07	0.46	<0.01
Connector	558	12	9.13	959,745.60	869,303.21	1,954.55	18.40	0.11	515.26	0.42	<0.01
Open-Ended Line	0	0	28.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Pressure Relief Valve	8	1	64.8	567,648.00	514,155.24	1,156.03	10.88	0.07	304.76	0.25	<0.01
Meter	36	1	31.6	276,816.00	250,730.02	563.74	5.31	0.03	148.62	0.12	<0.01
Other	343	7	6.7	410,844.00	372,127.79	836.70	7.88	0.05	220.57	0.18	<0.01
Non-Compressor Service											
Valve	647	13	10.5	1,195,740.00	1,083,058.48	2,435.16	22.92	0.14	641.96	0.52	<0.01
Connector	1659	34	9.3	2,769,912.00	2,508,887.13	5,641.02	53.10	0.33	1,487.10	1.21	<0.01
Open ended line	11	1	18.4	322,368.00	291,989.39	656.51	6.18	0.04	173.07	0.14	<0.01
Pressure Relief Valve	12	1	3.28	57,465.60	52,050.28	117.03	1.10	<0.01	30.85	0.03	<0.01
Meter	11	1	4.79	83,920.80	76,012.46	170.91	1.61	<0.01	45.06	0.04	<0.01
Other	307	7	6.7	821,688.00	744,255.57	1,673.39	15.75	0.10	441.14	0.36	<0.01
						Total:	163.44	1.01	4,577.46	3.72	0.03

Notes:

1. Estimated component leaks per compressor based on average measurements throughout the Columbia pipeline system.
2. Estimated number of leaking components utilizing a 2% component leak rate factor throughout the Columbia pipeline system obtained from fugitive leak survey results at Columbia facilities, and rounded up to the nearest integer.
3. Emission factors from 40 CFR 98 Subpart W Table W-2, effective January 2025.
4. CH_4 and CO_2 emission rates based on 90.58 vol% CH_4 and 0.20 vol% CO_2 in White Oak natural gas data.
5. Conversion based on densities of GHG as provided in 40 CFR 98.233(v).
6. Based on 40 CFR 98 Subpart A Global Warming Potentials.
7. Based on a 0.0227 ratio of VOC to methane as calculated from White Oak gas composition data.
8. Based on a 0.00016 ratio of HAPs to methane as calculated from White Oak gas composition data.

Columbia Gas Transmission, LLC
White Oak Compressor Station
Title V Permit Application - February 2025
Gas Loss Emissions

Component	Emission Rate (ton/yr)				
	CH_4 [1]	CO_2	CO_2e	VOC [2]	HAPs [3]
Equipment Blowdowns	231.67	1.43	6,488.22	5.27	0.04
Pigging Blowdowns	10.51	0.06	294.36	0.24	<0.01
Station Emergency Shutdown	60.58	0.37	1,696.53	1.38	<0.01
Blowdown, Total	302.76	1.86	8,479.10	6.88	0.05

Notes:
1. CH_4 emission rates based on 90.58 vol% CH_4 in annualized White Oak natural gas data
2. Based on a 0.0227 ratio of VOC to methane as calculated from White Oak gas composition data
3. Based on a 0.00016 ratio of HAPs to methane as calculated from White Oak gas composition data

White Oak Facility Wide Emergency Shutdown (ESD) PTE Emission Calculations
Blowdown Emissions per Event (mscf/event): 1,580.0
Blowdown Events per Year: 2

Parameter	Gas Loss from ESD (mscf/yr)	CH_4 Gas Loss (mscf/yr)	CO_2 Gas Loss (mscf/yr)	CH_4 Emissions (ton/yr)	CO_2 Emissions (ton/yr)	CO_2e Emissions (ton/yr)	VOC Emissions (ton/yr)	HAPs Emissions (ton/yr)
ESD Emissions	3,160.0	2,862.21	6.44	60.58	0.37	1,696.53	1.38	0.010

Notes:
- Gas loss volume based on TC Energy Engineering Department calculations using estimated facility piping volume, the average suction pressure, and discharge at MAOP. This volume would also be used when reporting ESD gas loss events at White Oak to PHMSA.

Compressor Startup/Shutdown PTE Emission Calculations

Unit	Blowdown Count	Average Gas Loss per Event for Unit (mscf/event)	Annual Gas Loss from Unit (mscf/yr)	CH_4 Gas Loss (mscf/yr)	CO_2 Gas Loss (mscf/yr)	CH_4 Emissions (ton/yr)	CO_2 Emissions (ton/yr)	CO_2e Emissions (ton/yr)	VOC Emissions (ton/yr)	HAPs Emissions (ton/yr)
Unit 1-2	100	102.0	10,200	9,239	20.77	195.53	1.20	5,476.13	4.45	0.03
Filter Separators 201 A-C	9	209.5	1,885	1,707	3.84	36.14	0.22	1,012.09	0.82	<0.01
Total	--	--	12,085	10,946	24.61	231.67	1.43	6,488.22	5.27	0.04

Pigging PTE Emission Calculations

Unit	Blowdown Count	Average Gas Loss per Event for Unit (mscf/event)	Annual Gas Loss from Unit (mscf/yr)	CH_4 Gas Loss (mscf/yr)	CO_2 Gas Loss (mscf/yr)	CH_4 Emissions (ton/yr)	CO_2 Emissions (ton/yr)	CO_2e Emissions (ton/yr)	VOC Emissions (ton/yr)	HAPs Emissions (ton/yr)
MXP100N L&R	12	17.82	214	194	0.44	4.10	0.03	114.81	0.09	<0.01
MXP100S L&R	12	27.87	334	303	0.68	6.41	0.04	179.55	0.15	<0.01
Total	--	--	548	497	1.12	10.51	0.06	294.36	0.24	<0.01

Columbia Gas Transmission, LLC
White Oak Compressor Station
Title V Permit Application - February 2025
Natural Gas Composition

Representative Composition of Natural Gas

Natural Gas Composition	Molar Fraction[1] (mole %)	Molecular Weight (lb/lb-mole)	Weighted Sum (lb/lb-mole)	Weight Fraction (weight %)
Nitrogen	0.40	28.01	0.1123	0.6413
Carbon Dioxide	0.20	44.01	0.0896	0.5119
Methane	90.58	16.04	14.5312	82.9930
Ethane	8.14	30.07	2.4475	13.9788
Propane	0.53	44.10	0.2334	1.3333
iso-Butane	0.05	58.12	0.0280	0.1597
n-Butane	0.06	58.12	0.0368	0.2102
iso-Pentane	0.02	72.15	0.0118	0.0673
n-Pentane	0.01	72.15	0.0074	0.0425
C_{6+} Components	0.01	89.09	0.0109	0.0620
Total	100.00	-	17.51	100.00

C_{6+} HAP Composition[2]	Molar Fraction (mole %)	Molecular Weight (lb/lb-mole)	Weighted Sum (lb/lb-mole)	Weight Fraction (weight %)
2,2,4-Trimethylpentane	1.35E-04	114.23	1.55E-04	8.82E-04
Benzene	1.47E-04	78.11	1.15E-04	6.58E-04
Ethylbenzene	6.09E-06	106.17	6.47E-06	3.69E-05
n-Hexane	2.29E-03	86.18	1.98E-03	1.13E-02
Toluene	9.87E-05	92.14	9.09E-05	5.19E-04
Xylenes	4.87E-05	106.17	5.17E-05	2.96E-04
Total HAPs	2.73E-03	-	2.40E-03	1.37E-02

Totals	Mol %	Weight %
Total VOCs	0.68	1.89
Total HAPs	0.0027	0.0137

Ratios	Mol	Weight
VOC/Methane Ratio	0.0075	0.0227
HAPs/Methane Ratio	0.00003	0.00016

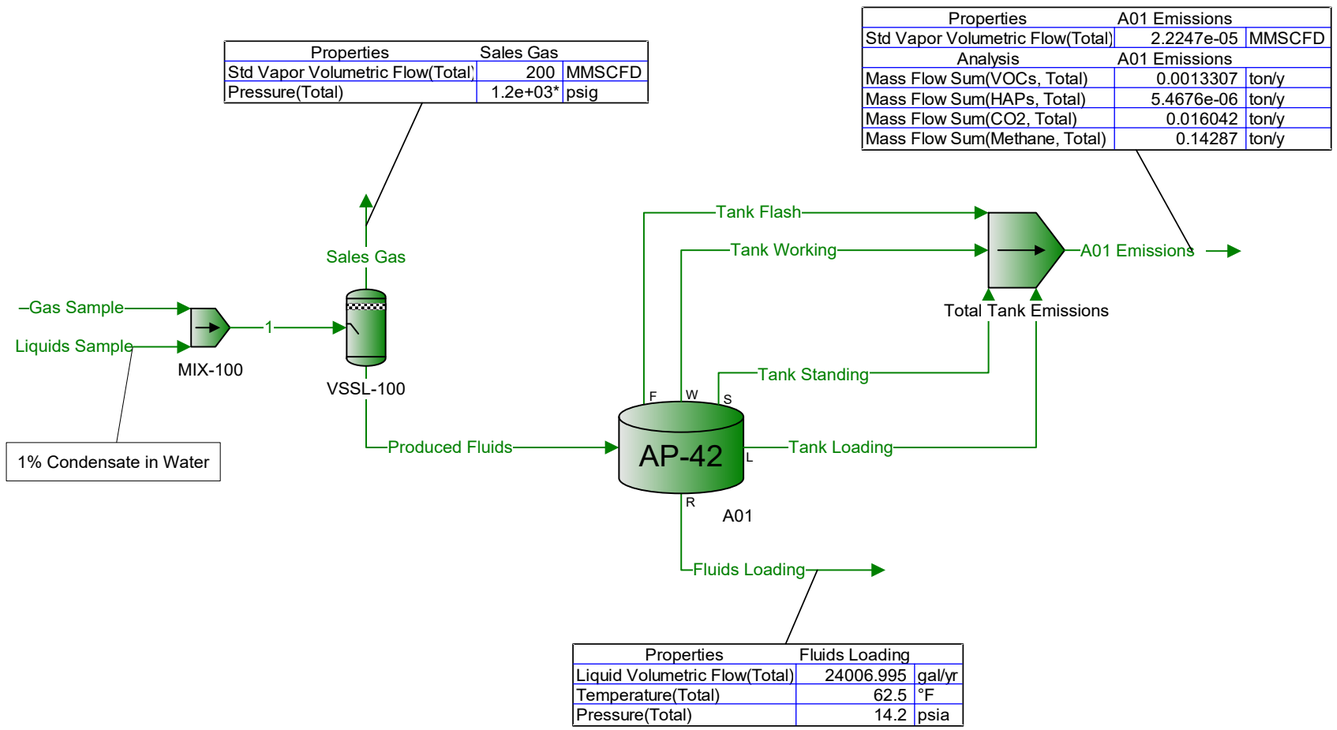
Mass Fraction Conversion Data

Compound	Mol Weight (g/mol)	Mass in Gas Sample (g)	Mass Fraction	Mass %
CO_2	44.01	8.96	0.0051	0.5119
N_2	28.02	11.23	0.0064	0.6415
Methane	16.04	1452.85	0.8298	82.9808
Ethane	30.07	244.75	0.1398	13.9794
Propane	44.09	23.34	0.0133	1.3331
I-Butane	58.12	2.80	0.0016	0.1597
N-Butane	58.12	3.68	0.0021	0.2102
I-Pentane	72.15	1.18	0.0007	0.0673
N-Pentane	72.15	0.74	0.0004	0.0425
Other hexanes	86.18	1.05	0.0006	0.0600
n-hexane	86.18	0.20	0.0001	0.0113
2,2,4 - Trimethylpentane	114.23	0.02	0.0000	0.0009
Benzene	78.11	0.01	0.0000	0.0007
Toluene	92.14	0.01	0.0000	0.0005
Ethylbenzene	106.17	0.001	0.0000	0.0000
Xylenes	106.17	0.01	0.0000	0.0003

Notes:

1. Natural gas analysis obtained from gas chromatograph readings from site data sheet.
2. C_{6+} HAP composition molar fractions were derived from the GRI-GLYCALC v4.0 C_{6+} analysis multipliers for the Natural Gas Transmission Industry Segment.

TC Energy
White Oak Compressor Station
2,056 gal Pipeline Liquids Tank Emissions



Properties	Sales Gas	
Std Vapor Volumetric Flow(Total)	200	MMSCFD
Pressure(Total)	1.2e+03*	psig

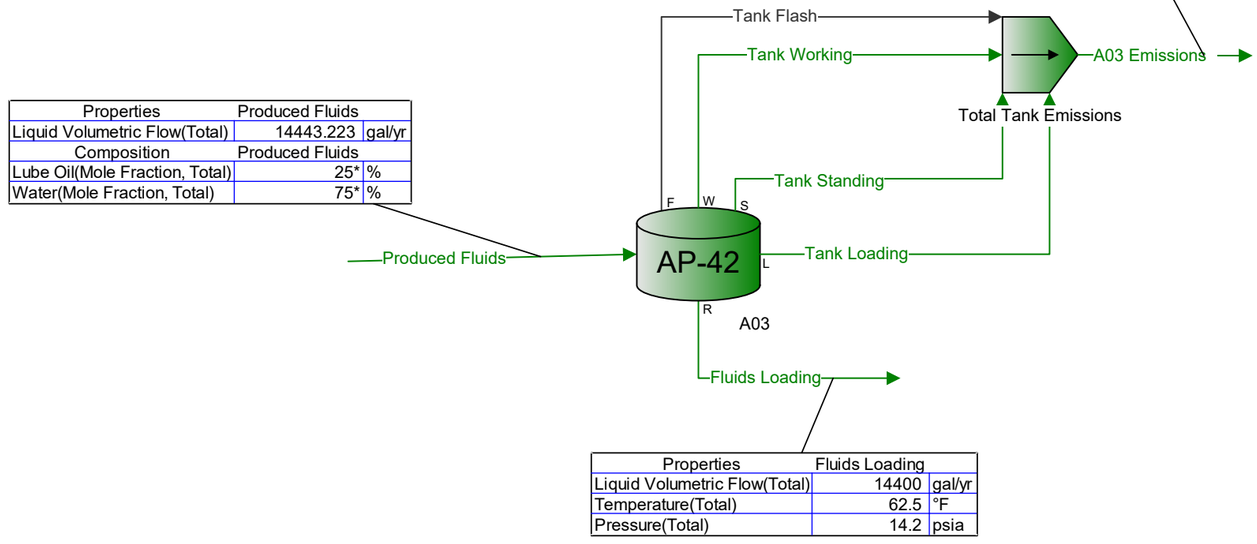
Properties	A01 Emissions	
Std Vapor Volumetric Flow(Total)	2.2247e-05	MMSCFD
Analysis	**A01 Emissions**	
Mass Flow Sum(VOCs, Total)	0.0013307	ton/y
Mass Flow Sum(HAPs, Total)	5.4676e-06	ton/y
Mass Flow Sum(CO2, Total)	0.016042	ton/y
Mass Flow Sum(Methane, Total)	0.14287	ton/y

Properties	Fluids Loading	
Liquid Volumetric Flow(Total)	24006.995	gal/yr
Temperature(Total)	62.5	°F
Pressure(Total)	14.2	psia

TC Energy
White Oak Compressor Station
1,200 gal Wastewater Tank Emissions

Properties	Produced Fluids	
Liquid Volumetric Flow(Total)	14443.223	gal/yr
Composition	Produced Fluids	
Lube Oil(Mole Fraction, Total)	25*	%
Water(Mole Fraction, Total)	75*	%

Properties	A03 Emissions	
Std Vapor Volumetric Flow(Total)	1.7255e-07	MMSCFD
Analysis	A03 Emissions	
Mass Flow Sum(VOCs, Total)	1.2651e-07	ton/y
Mass Flow Sum(HAPs, Total)	0	ton/y
Mass Flow Sum(CO2, Total)	1.2651e-07	ton/y
Mass Flow Sum(Methane, Total)	1.2651e-07	ton/y



Properties	Fluids Loading	
Liquid Volumetric Flow(Total)	14400	gal/yr
Temperature(Total)	62.5	°F
Pressure(Total)	14.2	psia