



AIR AND RADIATION ADMINISTRATION DRAFT PART 70 OPERATING PERMIT

DOCKET # 24-027-0223

COMPANY Transcontinental Gas Pipeline Co., LLC

LOCATION: Compressor Station 190
11910 Carroll Mill Road
Ellicott City MD 21042

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**MARYLAND DEPARTMENT OF THE ENVIRONMENT
AIR AND RADIATION ADMINISTRATION
AIR QUALITY PERMITS PROGRAM
TITLE V – PART 70 OPERATING PERMIT PROGRAM OVERVIEW**

Title V of the Clean Air Act (amended) requires each state to implement a federally enforceable operating permit program for major sources of air pollution. This program, the Part 70 Permit Program, also known as the Title V Permit Program, is designed to provide a comprehensive administrative document (a Part 70 Operating Permit) that identifies all air emissions sources at a given facility and the federal air quality regulations applicable to those sources. The permit establishes the methodology by which the owner/operator will demonstrate compliance, and includes testing, monitoring, record-keeping, and reporting requirements for each emissions source.

A Part 70 Operating Permit does not authorize new construction, and does not add any new emissions limitations, standards, or work practices on an affected facility. There may, however, be additional testing, record keeping, monitoring, and reporting requirements. A Part 70 Operating Permit is a five-year renewable permit. A responsible official for each facility subject to a Part 70 Operating Permit is required to annually certify compliance with each applicable requirement for that facility.

When an application for a Part 70 Operating Permit is received, the Department will complete a technical review of the application and will prepare a draft Part 70 Operating Permit and Fact Sheet. The Fact Sheet will explain the basis and technical analysis used by the Department to develop the federally enforceable permit conditions, including the required testing, monitoring, record keeping, and reporting provisions for each emissions unit at the permitted facility. The Fact Sheet will also include a description of the facility operations and the current compliance status with applicable requirements. If there are any discrepancies between the Part 70 Operating Permit application and the draft permit, the Fact Sheet will contain a discussion of the inconsistencies and the final resolution.

Public Participation Process

The Part 70 Operating Permit Program provides the public, adjacent states, and EPA the opportunity to review and submit comments on draft permits. The public may also request a public hearing on the draft permit.

The purpose of a public hearing is to give interested parties the opportunity to submit comments for the record which are germane to the draft federally enforceable permit conditions. Comments made at the hearing, or in writing to the Department during the comment period, should address errors and deficiencies in the permit such as unidentified emissions units, incorrect or deficient regulation citation, deficient record keeping, monitoring, reporting or testing requirements and unresolved compliance issues. After the public comment period has closed, the Department will review the formal testimony as part of the final review and prepare a Response to Comments document which will be sent to the EPA along with the draft Part 70 Operating Permit and Fact Sheet.

Testimony on state-only requirements will be kept on file at the Department as part of the formal record, however, state-only rules and regulations are not federally enforceable, and therefore are not within the scope of the EPA review. The Department will keep a record of the identity of the commenters, their statements, a summary of the issues raised during the public comment period, and the Response to Comments document for at least five years.

Citizen Petition to EPA to Object to Permit Issuance

Interested parties may petition the EPA to object to the Part 70 Permit if the EPA has not already objected, within 60 days after the 45-day EPA review period has ended. The petition period will be posted on the EPA website. The EPA will only consider objections to the federally enforceable provisions of the draft permit which were raised with reasonable specificity during the public comment period, unless: (1) the petitioner demonstrates that it was impractical to raise the objections within the public comment period, or (2) the grounds for the objection arose after the comment period. If the EPA agrees with the petition, the Department will reopen, revise, or revoke the permit as determined.

Applicant Objection to Permit Issuance and Recourse

If the applicant objects to the federally enforceable permit conditions contained in the issued Part 70 Operating permit, the applicant has 15 days from receipt of the issued permit to request a contested case hearing. More information on that can be found in 40 CFR, Part 70, and COMAR 26.11.03.11.

**MARYLAND DEPARTMENT OF THE ENVIRONMENT
AIR AND RADIATION ADMINISTRATION**

**NOTICE OF INTENT TO ISSUE PART 70 OPERATING PERMIT, OPPORTUNITY TO SUBMIT
WRITTEN COMMENTS OR TO REQUEST A PUBLIC HEARING**

The Department of the Environment, Air and Radiation Administration (ARA) has completed its review of the application for a renewal Part 70 Operating Permit submitted by the transcontinental Pipeline Co., LLC for the Ellicott City Compressor Station 190. The facility includes combustion turbines, boilers and emergency generator.

The applicant is represented by:

Mr. Glen Jasek
VP Eastern Interstate Transmission, Power & Gulf
Transcontinental Gas Pipe Line Co., LLC
PO Box 1396
Houston, TX 77251-1396

The Department has prepared a draft Part 70 Operating Permit for review and is now ready to receive public comment. A docket containing the application, draft permit, and supporting documentation is available for review on the Department's website, under the Air Quality Permitting Page's Title V link under "Draft Title V Permits" and may be viewed here:

<https://tinyurl.com/DraftTitleV>

Interested persons may submit written comments or request a public hearing on the draft permit. Written comments must be received by the Department no later than 30 days from the date of this notice. Requests for a public hearing must be submitted in writing and must also be received by the Department no later than 30 days from the date of this notice.

Comments and requests for a public hearing will be accepted by the Department if they raise issues of law or material fact regarding applicable requirements of Title V of the Clean Air Act, and/or regulations implementing the Title V Program in Maryland found in COMAR.

A Request for public hearing shall include the following:

- 1) The name, mailing address, and telephone number of the person making the request;
- 2) The names and addresses of any other persons for whom the person making the request is representing; and
- 3) The reason why a hearing is requested, including the air quality concern that forms the basis for the request and how this concern relates to the person making the request.

All written comments and requests for a public hearing should be directed to the attention of Ms. Shannon Heafey via email at Shannon.heafey@maryland.gov or by post at Air Quality Permits Program, Air and Radiation Administration, 1800 Washington Boulevard Suite 720, Baltimore, Maryland 21230-1720. Further information may be obtained by calling Ms. Shannon Heafey at (410) 537-4433.

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DRAFT PART 70 OPERATING PERMIT NO. 24-027-00223**

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SECTION I SOURCE IDENTIFICATION

1. DESCRIPTION OF FACILITY

Transcontinental Gas Pipe Line Company, LLC (Transco) owns and operates a multi-directional interstate natural gas pipeline system which extends from the Gulf Coast region to areas in the northeastern United States. Compressor Station 190 is used for compression purposes in order to keep the gas flowing through the system.

Natural gas enters the station at approximately 550 pounds per square inch (psi). Compressors boost the pressure of the gas to approximately 770 psi for transmission in the pipeline downstream of the compressor station. Each gas compressor is driven by a mainline (M/L) natural gas fired reciprocating internal combustion engine. Each of these engine/compressor sets includes an exhaust gas stack and a gas blowdown vent system.

2. FACILITY INVENTORY LIST

Emissions Unit Number	MDE Registration Number	Emissions Unit Name and Description	Date of Installation
M/L Unit 1	027-0223-5-0054	Mainline natural gas-fired reciprocating internal combustion engine, 2-cycle, lean-burn Clark HBA-8T, 2,050 BHP.	03/1951
M/L Unit 2	027-0223-5-0054	Mainline natural gas-fired reciprocating internal combustion engine, 2-cycle, lean-burn Clark HBA-8T, 2,050 BHP.	03/1951
M/L Unit 3	027-0223-5-0054	Mainline natural gas-fired reciprocating internal combustion engine, 2-cycle, lean-burn Clark HBA-8T, 2,050 BHP.	03/1951
M/L Unit 4	027-0223-5-0054	Mainline natural gas-fired reciprocating internal combustion engine, 2-cycle, lean-burn Clark HBA-8T, 2,050 BHP.	03/1951
M/L Unit 5	027-0223-5-0054	Mainline natural gas-fired reciprocating internal combustion engine, 2-cycle, lean-burn Clark HBA-8T, 2,050 BHP.	03/1951

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M/L Unit 6	027-0223-5-0054	Mainline natural gas-fired reciprocating internal combustion engine, 2-cycle, lean-burn Clark HBA-8T, 2,050 BHP.	03/1951
M/L Unit 7	027-0223-5-0054	Mainline natural gas-fired reciprocating internal combustion engine, 2-cycle, lean-burn Clark HBA-8T, 2,050 BHP.	03/1951
M/L Unit 8	027-0223-5-0054	Mainline natural gas-fired reciprocating internal combustion engine, 2-cycle, lean-burn Clark TLA-6, 2,100 BHP.	12/1960
M/L Unit 9	027-0223-5-0054	Mainline natural gas-fired reciprocating internal combustion engine, 2-cycle, lean-burn Clark TLA-6, 2,100 BHP.	09/1961
M/L Unit 10	027-0223-5-0054	Mainline natural gas-fired reciprocating internal combustion engine, 2-cycle, lean-burn Clark TLA-6, 2,100 HP.	07/1962
M/L Unit 11	027-0223-5-0054	Mainline natural gas-fired reciprocating internal combustion engine, 2-cycle, lean-burn Clark TCV-10, 3,400 HP.	03/1969
M/L Unit 12	027-0223-5-0054	Mainline natural gas-fired reciprocating internal combustion engine, 2-cycle, lean-burn, Clark TCV-16, 5,500 HP.	05/1970
AUX 1	027-0223-9-0186	Auxiliary electric power generator; 4-cycle, lean-burn, reciprocating IC engine, Waukesha 7042 GL, 1,478 HP.	03/1997
BLR 1	027-0223-5-0455	H.B. Smith (G28HE-13S) natural gas-fired 3.978 MMBtu/hr boiler.	2023
BLR 2	027-0223-5-0064	Cyclotherm C2800 natural gas-fired 3.3 MMBtu/hr boiler.	1960
FUG 1	n/a	Piping component fugitives.	1950's
FUG 2	n/a	Venting/blowdown emissions.	1950's
CT-1	027-0223-9-0391	One (1) Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine.	2017
AUX 1	027-0223-9-0186	Auxiliary electric power generator; 4-cycle, lean-burn, reciprocating IC engine, Waukesha 7042 GL, 1,478 HP.	03/1997

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EG-1 (Aux 2)	027-0223-9- 0392	One (1) natural gas-fired emergency generator rated at 1,450 BHP.	2017
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SECTION II GENERAL CONDITIONS

1. DEFINITIONS

[COMAR 26.11.01.01] and [COMAR 26.11.02.01]

The words or terms in this Part 70 permit shall have the meanings established under COMAR 26.11.01 and .02 unless otherwise stated in this permit.

2. ACRONYMS

ARA	Air and Radiation Administration
BACT	Best Available Control Technology
Btu	British thermal unit
CAA	Clean Air Act
CAM	Compliance Assurance Monitoring
CEM	Continuous Emissions Monitor
CFR	Code of Federal Regulations
CO	Carbon Monoxide
COMAR	Code of Maryland Regulations
EPA	United States Environmental Protection Agency
FR	Federal Register
gr	grains
HAP	Hazardous Air Pollutant
MACT	Maximum Achievable Control Technology
MDE	Maryland Department of the Environment
MVAC	Motor Vehicle Air Conditioner
NESHAPS	National Emission Standards for Hazardous Air Pollutants
NO _x	Nitrogen Oxides
NSPS	New Source Performance Standards
NSR	New Source Review
OTR	Ozone Transport Region
PM	Particulate Matter
PM10	Particulate Matter with Nominal Aerodynamic Diameter of 10 micrometers or less
ppm	parts per million
ppb	parts per billion
PSD	Prevention of Significant Deterioration
PTC	Permit to construct
PTO	Permit to operate (State)
SIC	Standard Industrial Classification
SO ₂	Sulfur Dioxide

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TAP	Toxic Air Pollutant
tpy	tons per year
VE	Visible Emissions
VOC	Volatile Organic Compounds

3. EFFECTIVE DATE

The effective date of the conditions in this Part 70 permit is the date of permit issuance, unless otherwise stated in the permit.

4. PERMIT EXPIRATION

[COMAR 26.11.03.13B(2)]

Upon expiration of this permit, the terms of the permit will automatically continue to remain in effect until a new Part 70 permit is issued for this facility provided that the Permittee has submitted a timely and complete application and has paid applicable fees under COMAR 26.11.02.16.

Otherwise, upon expiration of this permit the right of the Permittee to operate this facility is terminated.

5. PERMIT RENEWAL

[COMAR 26.11.03.02B(3)] and [COMAR 26.11.03.02E]

The Permittee shall submit to the Department a completed application for renewal of this Part 70 permit at least 12 months before the expiration of the permit. Upon submitting a completed application, the Permittee may continue to operate this facility pending final action by the Department on the renewal.

The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall submit such supplementary facts or corrected information no later than 10 days after becoming aware that this occurred. The Permittee shall also provide additional information as necessary to address any requirements that become applicable to the facility after the date a completed application was submitted, but prior to the release of a draft permit. This information shall be submitted to the Department no later than 20 days after a new requirement has been adopted.

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6. CONFIDENTIAL INFORMATION

[COMAR 26.11.02.02G]

In accordance with the provisions of the State Government Article, Sec. 10-611 et seq., Annotated Code of Maryland, all information submitted in an application shall be considered part of the public record and available for inspection and copying, unless the Permittee claims that the information is confidential when it is submitted to the Department. At the time of the request for inspection or copying, the Department will make a determination with regard to the confidentiality of the information. The Permittee, when requesting confidentiality, shall identify the information in a manner specified by the Department and, when requested by the Department, promptly provide specific reasons supporting the claim of confidentiality. Information submitted to the Department without a request that the information be deemed confidential may be made available to the public. Subject to approval of the Department, the Permittee may provide a summary of confidential information that is suitable for public review. The content of this Part 70 permit is not subject to confidential treatment.

7. PERMIT ACTIONS

[COMAR 26.11.03.06E(3)] and [COMAR 26.11.03.20(A)]

This Part 70 permit may be revoked or reopened and revised for cause. The filing of an application by the Permittee for a permit revision or renewal; or a notification of termination, planned changes or anticipated noncompliance by the facility, does not stay a term or condition of this permit.

The Department shall reopen and revise, or revoke the Permittee's Part 70 permit under the following circumstances:

- a. Additional requirements of the Clean Air Act become applicable to this facility and the remaining permit term is 3 years or more;
- b. The Department or the EPA determines that this Part 70 permit contains a material mistake, or is based on false or inaccurate information supplied by or on behalf of the Permittee;

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- c. The Department or the EPA determines that this Part 70 permit must be revised or revoked to assure compliance with applicable requirements of the Clean Air Act; or
- d. Additional requirements become applicable to an affected source under the Federal Acid Rain Program.

8. PERMIT AVAILABILITY

[COMAR 26.11.02.13G]

The Permittee shall maintain this Part 70 permit in the vicinity of the facility for which it was issued, unless it is not practical to do so, and make this permit immediately available to officials of the Department upon request.

9. REOPENING THE PART 70 PERMIT FOR CAUSE BY THE EPA

[COMAR 26.11.03.20B]

The EPA may terminate, modify, or revoke and reissue a permit for cause as prescribed in 40 CFR §70.7(g)

10. TRANSFER OF PERMIT

[COMAR 26.11.02.02E]

The Permittee shall not transfer this Part 70 permit except as provided in COMAR 26.11.03.15.

11. REVISION OF PART 70 PERMITS – GENERAL CONDITIONS

[COMAR 26.11.03.14] and [COMAR 26.11.03.06A(8)]

- a. The Permittee shall submit an application to the Department to revise this Part 70 permit when required under COMAR 26.11.03.15 -.17.
- b. When applying for a revision to a Part 70 permit, the Permittee shall comply with the requirements of COMAR 26.11.03.02 and .03 except that the application for a revision need include only information listed that is related to the proposed change to the source and revision to

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the permit. This information shall be sufficient to evaluate the proposed change and to determine whether it will comply with all applicable requirements of the Clean Air Act.

- c. The Permittee may not change any provision of a compliance plan or schedule in a Part 70 permit as an administrative permit amendment or as a minor permit modification unless the change has been approved by the Department in writing.
- d. A permit revision is not required for a change that is provided for in this permit relating to approved economic incentives, marketable permits, emissions trading, and other similar programs.

12. SIGNIFICANT PART 70 OPERATING PERMIT MODIFICATIONS

[COMAR 26.11.03.17]

The Permittee may apply to the Department to make a significant modification to its Part 70 Permit as provided in COMAR 26.11.03.17 and in accordance with the following conditions:

- a. A significant modification is a revision to the federally enforceable provisions in the permit that does not qualify as an administrative permit amendment under COMAR 26.11.03.15 or a minor permit modification as defined under COMAR 26.11.03.16.
- b. This permit does not preclude the Permittee from making changes, consistent with the provisions of COMAR 26.11.03, that would make the permit or particular terms and conditions of the permit irrelevant, such as by shutting down or reducing the level of operation of a source or of an emissions unit within the source. Air pollution control equipment shall not be shut down or its level of operation reduced if doing so would violate any term of this permit.
- c. Significant permit modifications are subject to all requirements of COMAR 26.11.03 as they apply to permit issuance and renewal, including the requirements for applications, public participation, and review by affected states and EPA, except:
 - (1) An application need include only information pertaining to the proposed change to the source and modification of this permit, including a description of the change and modification, and any

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new applicable requirements of the Clean Air Act that will apply if the change occurs;

- (2) Public participation, and review by affected states and EPA, is limited to only the application and those federally enforceable terms and conditions of the Part 70 permit that are affected by the significant permit modification.
- d. As provided in COMAR 26.11.03.15B(5), an administrative permit amendment may be used to make a change that would otherwise require a significant permit modification if procedures for enhanced preconstruction review of the change are followed that satisfy the requirements of 40 CFR 70.7(d)(1)(v).
- e. Before making a change that qualifies as a significant permit modification, the Permittee shall obtain all permits-to-construct and approvals required by COMAR 26.11.02.
- f. The Permittee shall not make a significant permit modification that results in a violation of any applicable requirement of the Clean Air Act.
- g. The permit shield in COMAR 26.11.03.23 applies to a final significant permit modification that has been issued by the Department, to the extent applicable under COMAR 26.11.03.23.

13. MINOR PERMIT MODIFICATIONS

[COMAR 26.11.03.16]

The Permittee may apply to the Department to make a minor modification to the federally enforceable provisions of this Part 70 permit as provided in COMAR 26.11.03.16 and in accordance with the following conditions:

- a. A minor permit modification is a Part 70 permit revision that:
 - (1) Does not result in a violation of any applicable requirement of the Clean Air Act;
 - (2) Does not significantly revise existing federally enforceable monitoring, including test methods, reporting, record keeping, or compliance certification requirements except by:

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- (a) Adding new requirements,
 - (b) Eliminating the requirements if they are rendered meaningless because the emissions to which the requirements apply will no longer occur, or
 - (c) Changing from one approved test method for a pollutant and source category to another;
 - (3) Does not require or modify a:
 - (a) Case-by-case determination of a federally enforceable emissions standard,
 - (b) Source specific determination for temporary sources of ambient impacts, or
 - (c) Visibility or increment analysis;
 - (4) Does not seek to establish or modify a federally enforceable permit term or condition for which there is no corresponding underlying applicable requirement of the Clean Air Act, but that the Permittee has assumed to avoid an applicable requirement to which the source would otherwise be subject, including:
 - (a) A federally enforceable emissions standard applied to the source pursuant to COMAR 26.11.02.03 to avoid classification as a Title I modification; and
 - (b) An alternative emissions standard applied to an emissions unit pursuant to regulations promulgated under Section 112(i)(5) of the Clean Air Act
 - (5) Is not a Title I modification; and
 - (6) Is not required under COMAR 26.11.03.17 to be processed as a significant modification to this Part 70 permit.
- b. Application for a Minor Permit Modification

The Permittee shall submit to the Department an application for a minor permit modification that satisfies the requirements of COMAR 26.11.03.03 which includes the following:

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- (1) A description of the proposed change, the emissions resulting from the change, and any new applicable requirements that will apply if the change is made;
- (2) The proposed minor permit modification;
- (3) Certification by a responsible official, in accordance with COMAR 26.11.02.02F, that:
 - (a) The proposed change meets the criteria for a minor permit modification, and
 - (b) The Permittee has obtained or applied for all required permits-to-construct required by COMAR 26.11.03.16 with respect to the proposed change;
- (4) Completed forms for the Department to use to notify the EPA and affected states, as required by COMAR 26.11.03.07-.12.

c. Permittee's Ability to Make Change

- (1) For changes proposed as minor permit modifications to this permit that will require the applicant to obtain a permit to construct, the permit to construct must be issued prior to the new change.
- (2) During the period of time after the Permittee applies for a minor modification but before the Department acts in accordance with COMAR 26.11.03.16F(2):
 - (a) The Permittee shall comply with applicable requirements of the Clean Air Act related to the change and the permit terms and conditions described in the application for the minor modification.
 - (b) The Permittee is not required to comply with the terms and conditions in the permit it seeks to modify. If the Permittee fails to comply with the terms and conditions in the application during this time, the terms and conditions of both this permit and the application for modification may be enforced against it.

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- d. The Permittee is subject to enforcement action if it is determined at any time that a change made under COMAR 26.11.03.16 is not within the scope of this regulation.
- e. Minor permit modification procedures may be used for Part 70 permit modifications involving the use of economic incentives, marketable permits, emissions trading, and other similar approaches, but only to the extent that the minor permit modification procedures are explicitly provided for in regulations approved by the EPA as part of the Maryland SIP or in other applicable requirements of the Clean Air Act.

14. ADMINISTRATIVE PART 70 OPERATING PERMIT AMENDMENTS

[COMAR 26.11.03.15]

The Permittee may apply to the department to make an administrative permit amendment as provided in COMAR 26.11.03.15 and in accordance with the following conditions:

- a. An application for an administrative permit amendment shall:
 - (1) Be in writing;
 - (2) Include a statement certified by a responsible official that the proposed amendment meets the criteria in COMAR 26.11.03.15 for an administrative permit amendment, and
 - (3) Identify those provisions of this part 70 permit for which the amendment is requested, including the basis for the request.
- b. An administrative permit amendment:
 - (1) Is a correction of a typographical error;
 - (2) Identifies a change in the name, address, or phone number of a person identified in this permit, or a similar administrative change involving the Permittee or other matters which are not directly related to the control of air pollution;
 - (3) requires more frequent monitoring or reporting by the Permittee;

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- (4) Allows for a change in ownership or operational control of a source for which the Department determines that no other revision to the permit is necessary and is documented as per COMAR 26.11.03.15B(4);
 - (5) Incorporates into this permit the requirements from preconstruction review permits or approvals issued by the Department in accordance with COMAR 26.11.03.15B(5), but only if it satisfies 40 CFR 70.7(d)(1)(v);
 - (6) Incorporates any other type of change, as approved by the EPA, which is similar to those in COMAR 26.11.03.15B(1)—(4);
 - (7) Notwithstanding COMAR 26.11.03.15B(1)—(6), all modifications to acid rain control provisions included in this Part 70 permit are governed by applicable requirements promulgated under Title IV of the Clean Air Act; or
 - (8) Incorporates any change to a term or condition specified as State-only enforceable, if the Permittee has obtained all necessary permits-to-construct and approvals that apply to the change.
- c. The Permittee may make the change addressed in the application for an administrative amendment upon receipt by the Department of the application, if all permits-to-construct or approvals otherwise required by COMAR 26.11.02 prior to making the change have first been obtained from the Department.
 - d. The permit shield in COMAR 26.11.03.23 applies to administrative permit amendments made under Section B(5) of COMAR 26.11.03.15 , but only after the Department takes final action to revise the permit.
 - e. The Permittee is subject to enforcement action if it is determined at any time that a change made under COMAR 26.11.03.15 is not within the scope of this regulation.

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15. OFF-PERMIT CHANGES TO THIS SOURCE

[COMAR 26.11.03.19]

The Permittee may make off-permit changes to this facility as provided in COMAR 26.11.03.19 and in accordance with the following conditions:

- a. The Permittee may make a change to this permitted facility that is not addressed or prohibited by the federally enforceable conditions of this Part 70 permit without obtaining a Part 70 permit revision if:
 - (1) The Permittee has obtained all permits and approvals required by COMAR 26.11.02 and .03;
 - (2) The change is not subject to any requirements under Title IV of the Clean Air Act;
 - (3) The change is not a Title I modification; and
 - (4) The change does not violate an applicable requirement of the Clean Air Act or a federally enforceable term or condition of the permit.
- b. For a change that qualifies under COMAR 26.11.03.19, the Permittee shall provide contemporaneous written notice to the Department and the EPA, except for a change to an emissions unit or activity that is exempt from the Part 70 permit application, as provided in COMAR 26.11.03.04. This written notice shall describe the change, including the date it was made, any change in emissions, including the pollutants emitted, and any new applicable requirements of the Clean Air Act that apply as a result of the change.
- c. Upon satisfying the requirements of COMAR 26.11.03.19, the Permittee may make the proposed change.
- d. The Permittee shall keep a record describing:
 - (1) Changes made at the facility that result in emissions of a regulated air pollutant subject to an applicable requirement of the Clean Air Act , but not otherwise regulated under this permit; and
 - (2) The emissions resulting from those changes.

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- e. Changes that qualify under COMAR 26.11.03.19 are not subject to the requirements for Part 70 revisions.
- f. The Permittee shall include each off-permit change under COMAR 26.11.03.19 in the application for renewal of the part 70 permit.
- g. The permit shield in COMAR 26.11.03.23 does not apply to off-permit changes made under COMAR 26.11.03.19.
- h. The Permittee is subject to enforcement action if it is determined that an off-permit change made under COMAR 26.11.03.19 is not within the scope of this regulation.

16. ON-PERMIT CHANGES TO SOURCES

[COMAR 26.11.03.18]

The Permittee may make on-permit changes that are allowed under Section 502(b)(10) of the Clean Air Act as provided in COMAR 26.11.03.18 and in accordance with the following conditions:

- a. The Permittee may make a change to this facility without obtaining a revision to this Part 70 permit if:
 - (1) The change is not a Title I modification;
 - (2) The change does not result in emissions in excess of those expressly allowed under the federally enforceable provisions of the Part 70 permit for the permitted facility or for an emissions unit within the facility, whether expressed as a rate of emissions or in terms of total emissions;
 - (3) The Permittee has obtained all permits and approvals required by COMAR 26.11.02 and .03;
 - (4) The change does not violate an applicable requirement of the Clean Air Act;
 - (5) The change does not violate a federally enforceable permit term or condition related to monitoring, including test methods, record keeping, reporting, or compliance certification requirements;

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- (6) The change does not violate a federally enforceable permit term or condition limiting hours of operation, work practices, fuel usage, raw material usage, or production levels if the term or condition has been established to limit emissions allowable under this permit;
 - (7) If applicable, the change does not modify a federally enforceable provision of a compliance plan or schedule in this Part 70 permit unless the Department has approved the change in writing; and
 - (8) This permit does not expressly prohibit the change under COMAR 26.11.03.18.
- b. The Permittee shall notify the Department and the EPA in writing of a proposed on-permit change under COMAR 26.11.03.18 not later than 7 days before the change is made. The written information shall include the following information:
 - (1) A description of the proposed change;
 - (2) The date on which the change is proposed to be made;
 - (3) Any change in emissions resulting from the change, including the pollutants emitted;
 - (4) Any new applicable requirement of the Clean Air Act; and
 - (5) Any permit term or condition that would no longer apply.
- c. The responsible official of this facility shall certify in accordance with COMAR 26.11.02.02F that the proposed change meets the criteria for the use of on-permit changes under COMAR 26.11.03.18.
- d. The Permittee shall attach a copy of each notice required by condition b. above to this Part 70 permit.
- e. On-permit changes that qualify under COMAR 26.11.03.18 are not subject to the requirements for part 70 permit revisions.
- f. Upon satisfying the requirements under COMAR 26.11.03.18, the Permittee may make the proposed change.

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- g. The permit shield in COMAR 26.11.03.23 does not apply to on-permit changes under COMAR 26.11.03.18.
- h. The Permittee is subject to enforcement action if it is determined that an on-permit change made under COMAR 26.11.03.18 is not within the scope of the regulation or violates any requirement of the State air pollution control law.

17. FEE PAYMENT

[COMAR 26.11.02.16A(2) & (5)(b)]

- a. The fee for this Part 70 permit is as prescribed in Regulation .19 of COMAR 26.11.02.
- b. The fee is due on and shall be paid on or before each 12-month anniversary date of the permit.
- c. Failure to pay the annual permit fee constitutes cause for revocation of the permit by the Department.

18. REQUIREMENTS FOR PERMITS-TO-CONSTRUCT AND APPROVALS

[COMAR 26.11.02.09.]

The Permittee may not construct or modify or cause to be constructed or modified any of the following sources without first obtaining, and having in current effect, the specified permits-to-construct and approvals:

- a. New Source Review source, as defined in COMAR 26.11.01.01, approval required, except for generating stations constructed by electric companies;
- b. Prevention of Significant Deterioration source, as defined in COMAR 26.11.01.01, approval required, except for generating stations constructed by electric companies;
- c. New Source Performance Standard source, as defined in COMAR 26.11.01.01, permit to construct required, except for generating stations constructed by electric companies;

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- d. National Emission Standards for Hazardous Air Pollutants source, as defined in COMAR 26.11.01.01, permit to construct required, except for generating stations constructed by electric companies;
- e. A stationary source of lead that discharges one ton per year or more of lead or lead compounds measured as elemental lead, permit to construct required, except for generating stations constructed by electric companies;
- f. All stationary sources of air pollution, including installations and air pollution control equipment, except as listed in COMAR 26.11.02.10, permit to construct required;
- g. In the event of a conflict between the applicability of (a.— e.) above and an exemption listed in COMAR 26.11.02.10, the provision that requires a permit applies.
- h. Approval of a PSD or NSR source by the Department does not relieve the Permittee obtaining an approval from also obtaining all permits-to-construct required by (c.— g.) above.

19. CONSOLIDATION OF PROCEDURES FOR PUBLIC PARTICIPATION

[COMAR 26.11.02.11C] and [COMAR 26.11.03.01K]

The Permittee may request the Department to authorize special procedures for the Permittee to apply simultaneously, to the extent possible, for a permit to construct and a revision to this permit.

These procedures may provide for combined public notices, informational meetings, and public hearings for both permits but shall not adversely affect the rights of a person, including EPA and affected states, to obtain information about the application for a permit, to comment on an application, or to challenge a permit that is issued.

These procedures shall not alter any existing permit procedures or time frames.

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20. PROPERTY RIGHTS

[COMAR 26.11.03.06E(4)]

This Part 70 permit does not convey any property rights of any sort, or any exclusive privileges.

21. SEVERABILITY

[COMAR 26.11.03.06A(5)]

If any portion of this Part 70 permit is challenged, or any term or condition deemed unenforceable, the remainder of the requirements of the permit continues to be valid.

22. INSPECTION AND ENTRY

[COMAR 26.11.03.06G(3)]

The Permittee shall allow employees and authorized representatives of the Department, the EPA, and local environmental health agencies, upon presentation of credentials or other documents as may be required by law, to:

- a. Enter at a reasonable time without delay and without prior notification the Permittee's property where a Part 70 source is located, emissions-related activity is conducted, or records required by this permit are kept;
- b. Have access to and make copies of records required by the permit;
- c. Inspect all emissions units within the facility subject to the permit and all related monitoring systems, air pollution control equipment, and practices or operations regulated or required by the permit; and
- d. Sample or monitor any substances or parameters at or related to the emissions units at the facility for the purpose of determining compliance with the permit.

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23. DUTY TO PROVIDE INFORMATION

[COMAR 26.11.03.06E(5)]

The Permittee shall furnish to the Department, within a reasonable time specified by the Department, information requested in writing by the Department in order to determine whether the Permittee is in compliance with the federally enforceable conditions of this Part 70 permit, or whether cause exists for revising or revoking the permit. Upon request, the Permittee shall also furnish to the Department records required to be kept under the permit.

For information claimed by the Permittee to be confidential and therefore potentially not discloseable to the public, the Department may require the Permittee to provide a copy of the records directly to the EPA along with a claim of confidentiality.

The Permittee shall also furnish to the Department, within a reasonable time specified by the Department, information or records requested in writing by the Department in order to determine if the Permittee is in compliance with the State-only enforceable conditions of this permit.

24. COMPLIANCE REQUIREMENTS

**[COMAR 26.11.03.06E(1)] and [COMAR 26.11.03.06A(11)] and
[COMAR 26.11.02.05]**

The Permittee shall comply with the conditions of this Part 70 permit. Noncompliance with the permit constitutes a violation of the Clean Air Act, and/or the Environment Article Title 2 of the Annotated Code of Maryland and may subject the Permittee to:

- a. Enforcement action,
- b. Permit revocation or revision,
- c. Denial of the renewal of a Part 70 permit, or
- d. Any combination of these actions.

The conditions in this Part 70 permit are enforceable by EPA and citizens under the Clean Air Act except for the State-only enforceable conditions.

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Under Environment Article Section 2-609, Annotated Code of Maryland, the Department may seek immediate injunctive relief against a person who violates this permit in such a manner as to cause a threat to human health or the environment.

25. CREDIBLE EVIDENCE

Nothing in this permit shall be interpreted to preclude the use of credible evidence to demonstrate noncompliance with any term of this permit.

26. NEED TO HALT OR REDUCE ACTIVITY NOT A DEFENSE

[COMAR 26.11.03.06E(2)]

The need to halt or reduce activity in order to comply with the conditions of this permit may not be used as a defense in an enforcement action.

27. CIRCUMVENTION

[COMAR 26.11.01.06]

The Permittee may not install or use any article, machine, equipment or other contrivance, the use of which, without resulting in a reduction in the total weight of emissions, conceals or dilutes emissions which would otherwise constitute a violation of any applicable air pollution control regulation.

28. PERMIT SHIELD

[COMAR 26.11.03.23]

A permit shield as described in COMAR 26.11.03.23 shall apply only to terms and conditions in this Part 70 permit that have been specifically identified as covered by the permit shield. Neither this permit nor COMAR 26.11.03.23 alters the following:

- a. The emergency order provisions in Section 303 of the Clean Air Act, including the authority of EPA under that section;

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- b. The liability of the Permittee for a violation of an applicable requirement of the Clean Air Act before or when this permit is issued or for a violation that continues after issuance;
- c. The requirements of the Acid Rain Program, consistent with Section 408(a) of the Clean Air Act;
- d. The ability of the Department or EPA to obtain information from a source pursuant to Maryland law and Section 114 of the Clean Air Act; or
- e. The authority of the Department to enforce an applicable requirement of the State air pollution control law that is not an applicable requirement of the Clean Air Act.

29. ALTERNATE OPERATING SCENARIOS

[COMAR 26.11.03.06A(9)]

For all alternate operating scenarios approved by the Department and contained within this permit, the Permittee, while changing from one approved scenario to another, shall contemporaneously record in a log maintained at the facility each scenario under which the emissions unit is operating and the date and time the scenario started and ended.

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SECTION III PLANT WIDE CONDITIONS

1. PARTICULATE MATTER FROM CONSTRUCTION AND DEMOLITION

[COMAR 26.11.06.03D]

The Permittee shall not cause or permit any building, its appurtenances, or a road to be used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne.

2. OPEN BURNING

[COMAR 26.11.07]

Except as provided in COMAR 26.11.07.04, the Permittee shall not cause or permit an open fire from June 1 through August 31 of any calendar year. Prior to any open burning, the Permittee shall request and receive approval from the Department.

3. AIR POLLUTION EPISODE

[COMAR 26.11.05.04]

When requested by the Department, the Permittee shall prepare in writing standby emissions reduction plans, consistent with good industrial practice and safe operating procedures, for reducing emissions creating air pollution during periods of Alert, Warning, and Emergency of an air pollution episode.

4. REPORT OF EXCESS EMISSIONS AND DEVIATIONS

[COMAR 26.11.01.07] and [COMAR 26.11.03.06C(7)]

The Permittee shall comply with the following conditions for occurrences of excess emissions and deviations from requirements of this permit, including those in Section VI – State-only Enforceable Conditions:

- a. Report any deviation from permit requirements that could endanger human health or the environment, by orally notifying the Department immediately upon discovery of the deviation;

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- b. Promptly report all occurrences of excess emissions that are expected to last for one hour or longer by orally notifying the Department of the onset and termination of the occurrence;
- c. When requested by the Department the Permittee shall report all deviations from permit conditions, including those attributed to malfunctions as defined in COMAR 26.11.01.07A, within 5 days of the request by submitting a written description of the deviation to the Department. The written report shall include the cause, dates and times of the onset and termination of the deviation, and an account of all actions planned or taken to reduce, eliminate, and prevent recurrence of the deviation;
- d. The Permittee shall submit to the Department semi-annual monitoring reports that confirm that all required monitoring was performed, and that provide accounts of all deviations from permit requirements that occurred during the reporting periods. Reporting periods shall be January 1 through June 30 and July 1 through December 31, and reports shall be submitted within 30 days of the end of each reporting period. Each account of deviation shall include a description of the deviation, the dates and times of onset and termination, identification of the person who observed or discovered the deviation, causes and corrective actions taken, and actions taken to prevent recurrence. If no deviations from permit conditions occurred during a reporting period, the Permittee shall submit a written report that so states.
- e. When requested by the Department, the Permittee shall submit a written report to the Department within 10 days of receiving the request concerning an occurrence of excess emissions. The report shall contain the information required in COMAR 26.11.01.07D(2).

5. ACCIDENTAL RELEASE PROVISIONS

[COMAR 26.11.03.03B(23)] and [40 CFR 68]

[1]. The Permittee shall submit risk management plans by the date specified in 40 CFR 68.150.

The Permittee shall certify compliance with the requirements of 40 CFR 68 as part of the annual compliance certification as required by 40 CFR 70.

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or

[2]. Should the Permittee become subject to 40 CFR 68 during the term of this permit, the Permittee shall submit risk management plans by the date specified in 40 CFR 68.150 and shall certify compliance with the requirements of 40 CFR 68 as part of the annual compliance certification as required by 40 CFR 70.

The Permittee shall initiate a permit revision or reopening according to the procedures of 40 CFR 70.7 to incorporate appropriate permit conditions into the Permittee's Part 70 permit.

6. GENERAL TESTING REQUIREMENTS

[COMAR 26.11.01.04]

The Department may require the Permittee to conduct, or have conducted, testing to determine compliance with this Part 70 permit. The Department, at its option, may witness or conduct these tests. This testing shall be done at a reasonable time, and all information gathered during a testing operation shall be provided to the Department.

7. EMISSIONS TEST METHODS

[COMAR 26.11.01.04]

Compliance with the emissions standards and limitations in this Part 70 permit shall be determined by the test methods designated and described below or other test methods submitted to and approved by the Department.

Reference documents of the test methods approved by the Department include the following:

- a. 40 CFR 60, appendix A
- b. 40 CFR 51, appendix M
- c. The Department's Technical Memorandum 91-01 "Test Methods and Equipment Specifications for Stationary Sources", (January 1991), as amended through Supplement 3, (October 1, 1997)

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8. EMISSIONS CERTIFICATION REPORT

**[COMAR 26.11.01.05-1] and [COMAR 26.11.02.19C] and
[COMAR 26.11.02.19D]**

The Permittee shall certify actual annual emissions of regulated pollutants from the facility on a calendar year basis.

- a. The certification shall be on forms obtained from the Department and submitted to the Department not later than April 1 of the year following the year for which the certification is required;
- b. The individual making the certification shall certify that the information is accurate to the individual's best knowledge. The individual shall be:
 - (1) Familiar with each source for which the certifications forms are submitted, and
 - (2) Responsible for the accuracy of the emissions information;
- c. The Permittee shall maintain records necessary to support the emissions certification including the following information if applicable:
 - (1) The total amount of actual emissions of each regulated pollutant and the total of all regulated pollutants;
 - (2) An explanation of the methods used to quantify the emissions and the operating schedules and production data that were used to determine emissions, including significant assumptions made;
 - (3) Amounts, types and analyses of all fuels used;
 - (4) Emissions data from continuous emissions monitors that are required by this permit, including monitor calibration and malfunction information;
 - (5) Identification, description, and use records of all air pollution control equipment and compliance monitoring equipment including:

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- (a) Significant maintenance performed,
 - (b) Malfunctions and downtime, and
 - (c) Episodes of reduced efficiency of all equipment;
- (6) Limitations on source operation or any work practice standards that significantly affect emissions; and
- (7) Other relevant information as required by the Department.

9. COMPLIANCE CERTIFICATION REPORT

[COMAR 26.11.03.06G(6) and (7)]

The Permittee shall submit to the Department and EPA Region III a report certifying compliance with each term of this Part 70 permit including each applicable standard, emissions limitation, and work practice for the previous calendar year by April 1 of each year.

- a. The compliance certification shall include:
 - (1) The identification of each term or condition of this permit which is the basis of the certification;
 - (2) The compliance status;
 - (3) Whether the compliance was continuous or intermittent;
 - (4) The methods used for determining the compliance status of each source, currently and over the reporting period; and
 - (5) Any other information required to be reported to the Department that is necessary to determine the compliance status of the Permittee with this permit.
- b. The Permittee shall submit the compliance certification reports to the Department and EPA simultaneously.

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10. CERTIFICATION BY RESPONSIBLE OFFICIAL

[COMAR 26.11.02.02F]

All application forms, reports, and compliance certifications submitted pursuant to this permit shall be certified by a responsible official as to truth, accuracy, and completeness. The Permittee shall expeditiously notify the Department of an appointment of a new responsible official.

The certification shall be in the following form:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

11. SAMPLING AND EMISSIONS TESTING RECORD KEEPING

[COMAR 26.11.03.06C(5)]

The Permittee shall gather and retain the following information when sampling and testing for compliance demonstrations:

- a. The location as specified in this permit, and the date and time that samples and measurements are taken;
- b. All pertinent operating conditions existing at the time that samples and measurements are taken;
- c. The date that each analysis of a sample or emissions test is performed and the name of the person taking the sample or performing the emissions test;
- d. The identity of the Permittee, individual, or other entity that performed the analysis;
- e. The analytical techniques and methods used; and

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- f. The results of each analysis.

12. GENERAL RECORDKEEPING

[COMAR 26.11.03.06C(6)]

The Permittee shall retain records of all monitoring data and information that support the compliance certification for a period of five (5) years from the date that the monitoring, sample measurement, application, report or emissions test was completed or submitted to the Department.

These records and support information shall include:

- a. All calibration and maintenance records;
- b. All original data collected from continuous monitoring instrumentation;
- c. Records which support the annual emissions certification; and
- d. Copies of all reports required by this permit.

13. GENERAL CONFORMITY

[COMAR 26.11.26.09]

The Permittee shall comply with the general conformity requirements of 40 CFR 93, Subpart B and COMAR 26.11.26.09.

14. ASBESTOS PROVISIONS

[40 CFR 61, Subpart M]

The Permittee shall comply with 40 CFR 61, Subpart M when conducting any renovation or demolition activities at the facility.

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15. OZONE DEPLETING REGULATIONS

[40 CFR 82, Subpart F]

The Permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR 82, Subpart F, except as provided for MVACs in subpart B:

- a. Persons opening appliances for maintenance, service, repair, or disposal shall comply with the prohibitions and required practices pursuant to 40 CFR 82.154 and 82.156.
- b. Equipment used during the maintenance, service, repair or disposal of appliances shall comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.
- c. Persons performing maintenance, service, repairs or disposal of appliances shall be certified by an approved technician certification program pursuant to 40 CFR 82.161.
- d. Persons disposing of small appliances, MVACS, and MVAC-like appliances as defined in 40 CFR 82.152, shall comply with record keeping requirements pursuant to 40 CFR 82.155.
- e. Persons owning commercial or industrial process refrigeration equipment shall comply with the leak repair requirements pursuant to 40 CFR 82.156.
- f. Owners/operators of appliances normally containing 50 or more pounds of refrigerant shall keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR 82.166.

16. ACID RAIN PERMIT

The renewal Phase II Acid Rain Permit is attached as Appendix A. The Permittee shall comply with all applicable requirements contained in the Phase II Acid Rain Permit. The combustion turbines/HRSGs are subject to provisions under 40 CFR 72, Acid Rain Provisions.

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SECTION IV PLANT SPECIFIC CONDITIONS

This section provides tables that include the emissions standards, emissions limitations, and work practices applicable to each emissions unit located at this facility. The Permittee shall comply with all applicable emissions standards, emissions limitations and work practices included herein.

The tables also include testing, monitoring, record keeping and reporting requirements specific to each emissions unit. In addition to the requirements included here in **Section IV**, the Permittee is also subject to the general testing, monitoring, record keeping and reporting requirements included in **Section III – Plant Wide Conditions** of this permit.

Unless otherwise provided in the specific requirements for an emissions unit, the Permittee shall maintain at the facility for at least five (5) years, and shall make available to the Department upon request, all records that the Permittee is required under this section to establish. [Authority: COMAR 26.11.03.06C(5)(g)]

Table IV-1	
1.0	<u>Emissions Unit Number(s): M/L Unit 1 through M/L Unit 10</u> [MDE Reg No. 027-0223-5-0054] Seven (7) Mainline natural gas-fired reciprocating internal combustion engines, 2-cycle, lean-burn Clark HBA-8T, each rated at 2,050 BHP. Three (3) Mainline natural gas-fired reciprocating internal combustion engines, 2-cycle, lean-burn Clark TLA-6, each rated at 2,100 BHP.
1.1	<u>Applicable Standards/Limits:</u> <u>A. Control of Visible Emissions</u> <u>[COMAR 26.11.09.05E(2)] – Stationary Internal Combustion Engine Powered Equipment.</u> “(2) <u>Emissions During Idle Mode</u>. A person may not cause or permit the discharge of emissions from any engine, operating at idle, greater than 10 percent opacity.” “(3) <u>Emissions During Operating Mode</u>. A person may not cause or permit the discharge of emissions from any engine, operating at other than idle conditions, greater than 40 percent opacity.” “(4) <u>Exceptions</u>. (i) Section E(2) of this regulation does not apply for a period of 2 consecutive minutes after a period of idling of 15 consecutive minutes for the purpose of clearing the exhaust

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Table IV-1	
	system. (ii) Section E(2) of this regulation does not apply to emissions resulting directly from cold engine start-up and warm-up for the following maximum periods: (i) Engines that are idled continuously when not in service: 30 minutes; (ii) All other engines: 15 minutes. (iii) Section E(2) and (3) of this regulation do not apply while maintenance, repair, or testing is being performed by qualified mechanics.” <u>B. Control of Nitrogen Oxides from Natural Gas Pipeline Compression Stations – Applicability and General Requirements [COMAR 26.11.29.02B(2)] – NOx Emission Limits.</u> “A person who owns or operates a stationary internal combustion engine to which this chapter applies shall perform either parametric optimization or engine rebuild to meet the following NOx emission limits: (1) <i>Not applicable</i> (2) Facilities with more than five engines shall meet a combined maximum hourly emission limit of 566 pounds per hour or less.” <u>C. Operational Limitations</u> The Permittee shall burn only pipeline quality natural gas unless the Permittee applies for and receives an approval or permit from the Department. [Authority: COMAR 26.11.02.09]
1.2	<u>Testing Requirements:</u> <u>A. Control of Visible Emissions – Stationary Internal Combustion Engine Powered Equipment.</u> The Permittee shall perform a Method 9 observation for a minimum of 30 minutes during any scheduled stack testing to show compliance with the applicable opacity standards. [Authority: COMAR 26.11.03.06C(3)] <u>B. Control of Nitrogen Oxides from Natural Gas Pipeline Compression Stations – NOx Emission Limits.</u> During the lifetime of this permit, the Permittee shall schedule and perform a NOx emission test on at least one of the seven Clark HBA-8T units and at least one of the three Clark TLA-6 engines.

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	The Permittee shall also perform a NO_x emission test on any engine that operates more than 2,190 hours in a calendar year. The Permittee shall submit a test protocol to the Department for approval at least 30 days prior to the proposed test date. The Permittee shall perform an annual NO_x emissions test using appropriate EPA Reference Methods unless alternative test methods receive prior approval from the Department. The most recent NO_x emission test results for each engine model category shall be used to determine compliance with the 566 pounds per hour NO_x emission limit for M/L engines. [Authority: COMAR 26.11.03.06C(3)] <u>C. Operational Limitations</u> See Record Keeping and Reporting Requirements.
1.3	<u>Monitoring Requirements:</u> <u>A. Control of Visible Emissions – Stationary Internal Combustion Engine Powered Equipment.</u> See Record Keeping Requirements. <u>B. Control of Nitrogen Oxides from Natural Gas Pipeline Compression Stations – NO_x Emission Limits.</u> If the results of the NO_x testing indicate that the NO_x emission limit for all M/L engines combined may be exceeded, the Permittee shall determine the cause of the excess NO_x emissions, take corrective action, and retest the units that contribute to the excess NO_x emissions. The Permittee shall complete the investigation, corrective action, and retest within 60 days after the results of testing indicate possible exceedance of the NO_x emission rate for all M/L engines combined. [Authority: COMAR 26.11.03.06C] Note: “In order to demonstrate compliance with the maximum facility-wide NO_x emissions limit of 566 pounds per hour, the Permittee shall calculate and aggregate the total hourly NO_x emissions resulting from the daily operation of each engine. The calculated hourly emissions shall be based on the representative NO_x emission rate established during stack tests for each engine model category.

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	C. <u>Operational Limitations</u> See Record Keeping and Reporting Requirements.
1.4	<u>Record Keeping Requirements:</u> Unless otherwise specified, all records required by the permit shall be kept for a period of at least five (5) years and shall be made available to the Department upon request. A. <u>Control of Visible Emissions</u> – <u>Stationary Internal Combustion Engine Powered Equipment.</u> The Permittee shall keep records of the Method 9 results and submit them to the Department upon request. [Authority: COMAR 26.11.03.06C] B. <u>Control of Nitrogen Oxides from Natural Gas Pipeline Compression Stations</u> – <u>NOx Emission Limits.</u> The Permittee shall maintain the records that shall include at a minimum: (1) The results of NOx testing to verify compliance with the NOx emission limit of 566 pounds per hour for all M/L engines combined; (2) Records of maintenance performed to the engines whenever such maintenance is required in order to avoid or remedy a possible exceedance of the NOx emission limit. [Authority: COMAR 26.11.03.06C] C. <u>Operational Limitations</u> The Permittee shall maintain a record of the type and quantity of fuel burned in each engine. [Authority: COMAR 26.11.02.19C(1)(c)]
1.5	<u>Reporting Requirements:</u> A. <u>Control of Visible Emissions</u> – <u>Stationary Internal Combustion Engine Powered Equipment.</u> The Permittee shall report incidents of visible emissions in accordance

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	with Condition 4, Section III, (Report of Excess Emissions and Deviations). <u>B. Control of Nitrogen Oxides from Natural Gas Pipeline Compression Stations – NOx Emission Limits.</u> The Permittee shall submit to the Department the results of the annual NOx emissions testing including the Method 9 results within 45 days of the completion of the tests. The supporting data that is the basis for the compliance demonstration with the combined maximum hourly emission rate of 566 pounds per hour shall also be included. [Authority: COMAR 26.11.03.06C] <u>C. Operational Limitations</u> The Permittee shall report the quantity of natural gas burned in each engine in the annual emissions certification report. [Authority: COMAR 26.11.02.19C(2) and 26.11.02.19D]

Table IV-2	
2.0	<u>Emissions Unit Number(s): M/L Unit 11 and M/L Unit 12</u> [MDE Reg No. 027-0223-5-0054] One (1) mainline natural gas-fired reciprocating internal combustion engine, 2-cycle, lean-burn Clark TCV-10, rated at 3,400 HP. One (1) mainline natural gas-fired reciprocating internal combustion engine, 2-cycle, lean-burn, Clark TCV-16, rated at 5,500 HP.
2.1	<u>Applicable Standards/Limits:</u> <u>A. Control of Visible Emissions</u> <u>[COMAR 26.11.09.05E(2)] – Stationary Internal Combustion Engine Powered Equipment.</u> “(2) <u>Emissions During Idle Mode.</u> A person may not cause or permit the discharge of emissions from any engine, operating at idle, greater than 10 percent opacity. (3) <u>Emissions During Operating Mode.</u> A person may not cause or permit the discharge of emissions from any engine, operating at other

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than idle conditions, greater than 40 percent opacity.

(4) Exceptions.

- (i) Section E(2) of this regulation does not apply for a period of 2 consecutive minutes after a period of idling of 15 consecutive minutes for the purpose of clearing the exhaust system.
- (ii) Section E(2) of this regulation does not apply to emissions resulting directly from cold engine start-up and warm-up for the following maximum periods:
 - (i) Engines that are idled continuously when not in service: 30 minutes;
 - (ii) All other engines: 15 minutes.
- (iii) Section E(2) and (3) of this regulation do not apply while maintenance, repair, or testing is being performed by qualified mechanics."

**B. Control of Nitrogen Oxides from Natural Gas Pipeline Compression Stations – Applicability and General Requirements
[COMAR 26.11.29.02(A)] – Applicability.**

"This chapter applies to stationary internal combustion engines used to compress natural gas located at natural gas pipeline compression stations."

[COMAR 26.11.29.02(C)(2)] – NO_x Emission Rates.

"A person who owns or operates a stationary internal combustion engine to which this chapter applies shall perform either parametric optimization or engine rebuild to meet the following NO_x emission limits:

(1) *Not applicable*

(2) Facilities with more than five engines shall meet a combined maximum hourly emission limit of 566 pounds per hour or less."

[COMAR 26.11.29.02(C)] – NO_x Emission Limits.

The NO_x emission rates in §C(2) of this regulation apply to a stationary internal combustion engine used to compress natural gas at a natural gas pipeline compression station if the engine is one of the types and corresponding sizes identified in §C(2) of this regulation.

(2) Emission Rates.

Type Engine	Size (Brake HP)	NO _x Emission Rate (15 Percent Oxygen)
Spark ignited lean burn	2400 HP or greater	125 ppmv

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	(3) The NOx emission rates in §C(2) of this regulation shall apply on and after May 1, 2003. C. <u>Carbon Monoxide and VOC Annual Emissions Limitation</u> PTC No. 027-9-0224M issued November 18, 2002 - To avoid triggering requirements of nonattainment New Source Review (NNSR) and Prevention of Significant Deterioration (PSD), emissions increases from both affected engines collectively as a result of the modifications performed shall be limited to less than 25 tons per year for VOC and 100 tons per year for CO for any period of 12 consecutive months. D. <u>Operational Limitations</u> The Permittee shall burn only pipeline quality natural gas unless the Permittee applies for and receives an approval or permit from the Department. [Authority: COMAR 26.11.02.09]
2.2	<u>Testing Requirements:</u> A. <u>Control of Visible Emissions</u> – <u>Stationary Internal Combustion Engine Powered Equipment.</u> The Permittee shall perform a Method 9 observation for a minimum of 30 minutes during any scheduled stack testing to show compliance with the applicable opacity standards. [Authority: COMAR 26.11.03.06C(3)] B. <u>Control of Nitrogen Oxides from Natural Gas Pipeline Compression Stations</u> During the lifetime of this permit, the Permittee shall schedule and perform a NOx emission test on the Clark TCV-10 and the Clark TCV-16 engines (M/L Units 11 and 12, respectively) in order to demonstrate compliance with the applicable NOx rates listed under Section 2.1.B, and with the applicable NOx emission limit of 125 ppm (at 15% O₂) and as specified under COMAR 26.11.29.02C(2). The Permittee shall submit a test protocol to the Department for approval at least 30 days prior to the proposed test date. The Permittee shall perform an annual NOx emissions test on each engine using appropriate EPA Reference Methods unless alternative

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	test methods receive prior approval from the Department. The most recent NOx emission test results for each engine model category shall be used to determine compliance with the 566 pounds per hour NOx emission limit for M/L engines. [Authority: COMAR 26.11.03.06C(3)] <u>C. Carbon Monoxide and VOC Annual Emissions Limitation</u> Beginning with calendar year 2014, the Permittee shall perform on a biennial basis and contemporaneously with the testing required in paragraph B above confirmatory emissions testing for VOC and CO on each engine using appropriate EPA Reference Methods, unless alternative test methods receive prior approval from the Department. The purpose of the testing is to demonstrate compliance with the nonattainment New Source Review emission limit for VOC and CO. In the event an engine's operating time does not exceed 2,190 hours in each calendar year of the biennial period, such engine would be exempt from the emissions testing requirement for VOC and CO for that biennial period. However, the Permittee shall schedule and perform a CO and VOC emission test on both units as listed, to demonstrate the maintenance of synthetic minor status with respect to CO and VOC. [Authority: COMAR 26.11.03.06C(3)] <u>D. Operational Limitations</u> See Record Keeping and Reporting Requirements.
2.3	<u>Monitoring Requirements:</u> <u>A. Control of Visible Emissions – Stationary Internal Combustion Engine Powered Equipment.</u> See Reporting Requirements. <u>B. Control of Nitrogen Oxides from Natural Gas Pipeline Compression Stations</u> (1) If the results of the NOx testing indicate that the NOx emission limit for all M/L engines combined may be exceeded, the Permittee shall determine the cause of the excess NOx emissions, take corrective action, and retest the units that contribute to the excess NOx emissions. The Permittee shall complete the investigation, corrective action, and retest within 60 days after the results of testing indicate possible exceedance of the NOx emission rate. [Authority: COMAR 26.11.03.06C]

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(2) The engines shall be equipped with a parametric emissions monitoring system (PEMS) that shall automatically sample data at fifteen-minute intervals or less and automatically record block hourly averages in a manner such that the data is retrievable on demand by inspectors. The following parameters shall be monitored and recorded by the system:

- (a) the engine speed in revolutions per minute (RPM);
- (b) the engine fuel flow rate in SCFM (FF_{SCFM});
- (c) the actual air manifold pressure (gage) in inches of mercury (P_M); and
- (d) the air manifold temperature in °F (T_M).

[Authority: PTC no. 027-9-0224 M issued November 18, 2002]

(3) The PEMS shall automatically sample data and calculate at 15-minute intervals or less and automatically record a block hourly average of the following parameters in a manner that the data is retrievable on demand by inspectors:

- (a) the calculated critical trapped air/fuel equivalence ratio (TER_C) based on a calculated fuel flow per revolution parameter $W = FF_{SCFM}/RPM$ and an equation of the type below:

$$TER_C = A * W^2 + B * W + C$$

Where: A, B, and C are constants to be determined from the emissions testing.

- (b) the calculated critical air manifold pressure (gage) in inches of mercury (P_{MC}).

$$P_{MC} = 2.036 * [AF_{ST} * (0.0765 * FSG) * W * (T_M + 460) / (2.699 * TER_C * V_{TRAP}) - 14.73]$$

Where:

V_{TRAP} = the engine trapped volume in cubic feet per revolution (a constant determined by the

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	geometry of the engine). T_M = air manifold temperature in °F. AF_{ST} = stoichiometric air/fuel mass ratio. FSG = the fuel gas specific gravity referenced to air. Note: The above equations may be adjusted or modified upon prior written approval from the Department if test data or other considerations indicate that such a modification or adjustment is warranted. [Authority: PTC No. 027-9-0224 M issued November 18, 2002 and COMAR 26.11.03.06C(3)] (4) The Permittee shall operate the Clark TCV-10 and Clark TCV-16 engines in compliance with the emissions standard stated in COMAR 26.11.29.05C for spark ignited lean burn engines (125 ppm NO_x corrected to 15 percent O₂ dry gas). In accordance with the permit to construct, the Permittee shall comply with the standard on a year-around basis. [Authority: PTC No. 027-9-0224 M issued November 18, 2002] Note: "In order to demonstrate compliance with the maximum facility-wide NO_x emissions limit of 566 pounds per hour, the Permittee shall calculate and aggregate the total hourly NO_x emissions resulting from the daily operation of each engine. The calculated hourly emissions shall be based on the NO_x emission rate established during stack tests for each engine. <u>C. Carbon Monoxide and VOC Annual Emissions Limitation</u> The Permittee should monitor the hours of operation for each engine to demonstrate compliance with the nonattainment New Source Review emission limits for VOC and CO, as stated in Section 2.1.C. <u>D. Operational Limitations</u> See Record Keeping and Reporting Requirements.

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2.4	<u>Record Keeping Requirements:</u> Unless otherwise specified all records required by the permit shall be kept for a period of at least five (5) years and shall be made available to the Department upon request. A. <u>Control of Visible Emissions</u> – <u>Stationary Internal Combustion Engine Powered Equipment.</u> The Permittee shall keep records of the Method 9 results and submit them to the Department upon request. [Authority: COMAR 26.11.03.06C] B. <u>Control of Nitrogen Oxides from Natural Gas Pipeline Compression Stations</u> (1) The Permittee shall keep the supporting data that is the basis for the compliance demonstration with the combined maximum hourly emission rate of 566 pounds per hour. (2) The Permittee shall keep the results of the annual NOx testing done to confirm the PEMS. [Authority: PTC No. 027-9-0224 M issued November 18, 2002] C. <u>Carbon Monoxide and VOC Annual Emissions Limitation</u> The Permittee shall maintain records of the calculation of emissions of CO and VOC sufficient to demonstrate that the emissions increase from the modification of the engines do not exceed the limitation based on any period of 12 consecutive months. [Authority: COMAR 26.11.03.06C] D. <u>Operational Limitations</u> The Permittee shall maintain a record of the type and quantity of fuel burned. [Authority: COMAR 26.11.02.19C(1)(c)]
2.5	<u>Reporting Requirements:</u> A. <u>Control of Visible Emissions</u> – <u>Stationary Internal Combustion Engine Powered Equipment.</u> The Permittee shall report incidents of visible emissions in accordance

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	with Condition 4, Section III, (Report of Excess Emissions and Deviations). B. <u>Control of Nitrogen Oxides from Natural Gas Pipeline Compression Stations</u> – <u>Nitrogen Oxides Reasonably Available Control Technology Requirements (NOx RACT)</u> (1) The Permittee shall submit the results of the annual NOx emissions testing for compliance with the hourly NOx emissions limit within 45 days of the completion of the testing. The supporting data that is the basis for the compliance demonstration with the combined maximum hourly emission rate of 566 pounds per hour and the emission limit of 125 ppm shall also be included. [Authority: COMAR 26.11.03.06C] (2) By November 30 of each year, the Permittee shall submit to the Department a stack test results report on the annual confirmatory emissions testing. [Authority: COMAR 26.11.03.06C(3)] (3) The Permittee shall report all excursions where the 1-hour block average P_M is less than the corresponding 1-hour block average P_{MC} to the Department within 30 days after the end of the each calendar quarter. More than two excursions within any calendar quarter or more than three excursions during the control period shall constitute a reportable occurrence of excess emissions, requiring a telephone report within 24 hours and a written report if requested by the Department within 10 days, in accordance with COMAR 26.11.01.07. [Authority: PTC No. 027-9-0224 M issued on November 18, 2002] C. <u>Carbon Monoxide and VOC Annual Emissions Limitation</u> The Permittee shall report the annual emissions of CO and VOC in the annual emissions certification report. [Authority: COMAR 26.11.02.19D] D. <u>Operational Limitations</u> The Permittee shall report the type and quantity of fuel burned in the annual emissions certification report. [Authority: COMAR 26.11.02.19D]

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3.0	<u>Emissions Unit Number(s):</u> AUX 1 [MDE Reg. No. 027-0223-9-0186] One (1) auxiliary electric power generator; 4-cycle, lean-burn, reciprocating IC engine, Waukesha 7042 GL, rated at 1,478 HP.
3.1	<u>Applicable Standards/Limits:</u> A. <u>Control of Visible Emissions</u> [COMAR 26.11.09.05E(2)] – <u>Stationary Internal Combustion Engine Powered Equipment.</u> “(2) <u>Emissions During Idle Mode.</u> A person may not cause or permit the discharge of emissions from any engine, operating at idle, greater than 10 percent opacity. (3) <u>Emissions During Operating Mode.</u> A person may not cause or permit the discharge of emissions from any engine, operating at other than idle conditions, greater than 40 percent opacity. (4) <u>Exceptions.</u> (i) Section E(2) of this regulation does not apply for a period of 2 consecutive minutes after a period of idling of 15 consecutive minutes for the purpose of clearing the exhaust system. (ii) Section E(2) of this regulation does not apply to emissions resulting directly from cold engine start-up and warm-up for the following maximum periods: (i) Engines that are idled continuously when not in service: 30 minutes; (ii) All other engines: 15 minutes. (iii) Section E(2) and (3) of this regulation do not apply while maintenance, repair, or testing is being performed by qualified mechanics.” B. <u>Control of NOx Emissions for Major Stationary Sources.</u> <u>Demonstration of Compliance</u> – <u>Reasonable Control Technology Requirements (NOx RACT).</u> [COMAR 26.11.09.08G(1)] – A person who owns or operates fuel-burning equipment with a capacity factor (as defined in 40 CFR Part 72.2) of 15 percent or less shall:

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	(1) Provide certification of the capacity factor of the equipment to the Department in writing; (2) For fuel-burning equipment that operates more than 500 hours during a calendar year, perform a combustion analysis and optimize combustion at least once annually; (3) Maintain the results of the combustion analysis at the site for at least 2 years and make these results available to the Department and the EPA upon request; (4) Require each operator of an installation, except combustion turbines, to attend operator training programs at least once every 3 years, on combustion optimization that are sponsored by the Department, the EPA, or equipment vendors; and (5) Maintain a record of training program attendance for each operator at the site, and make these records available to the Department upon request. [COMAR 26.11.09.08B(6)] – Operator Training: For the purpose of this regulation, the equipment operator to be trained may be the person who maintains the equipment and makes the necessary adjustments for efficient operation. <u>C. Operational Limits</u> (1) The Permittee shall burn only pipeline quality natural gas unless the Permittee applies for and receives an approval or permit from the Department. [Authority: COMAR 26.11.02.09] (2) The capacity factor shall be limited to 15 percent or less. [Authority: COMAR 26.11.09.08G]
3.2	<u>Testing Requirements:</u> <u>A. Control of Visible Emissions</u> [COMAR 26.11.09.05E(2)] – <u>Stationary Internal Combustion Engine Powered Equipment.</u> See Reporting Requirements.

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	<u>B. Control of NO_x Emissions for Major Stationary Sources, Demonstration of Compliance</u> – <u>Reasonable Control Technology Requirements (NO_x RACT).</u> Anytime the hours of operation of this engine exceed 500 hours in a calendar year, the Permittee shall perform a combustion analysis. [Authority: COMAR 26.11.09.08G(1)(b)] <u>C. Operational Limits</u> See Record Keeping and Reporting Requirements.
3.3	<u>Monitoring Requirements:</u> <u>A. Control of Visible Emissions</u> [COMAR 26.11.09.05E(2)] – <u>Stationary Internal Combustion Engine Powered Equipment.</u> See Reporting Requirements. <u>B. Control of NO_x Emissions for Major Stationary Sources, Demonstration of Compliance</u> – <u>Reasonable Control Technology Requirements (NO_x RACT).</u> The Permittee shall calculate the capacity factor of the engine at the end of each month. [Authority: COMAR 26.11.03.06C] <u>C. Operational Limits</u> See Record Keeping and Reporting Requirements.
3.4	<u>Record Keeping Requirements:</u> Unless otherwise specified all records required by the permit shall be kept for a period of at least five (5) years and shall be made available to the Department upon request <u>A. Control of Visible Emissions</u> [COMAR 26.11.09.05E(2)] – <u>Stationary Internal Combustion Engine Powered Equipment.</u> See Reporting Requirements.

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	<u>B. Control of NOx Emissions for Major Stationary Sources, Demonstration of Compliance</u> – <u>Reasonable Control Technology Requirements (NOx RACT).</u> The Permittee shall maintain: (1) Monthly records of the calculated capacity factors. [Authority: COMAR 26.11.03.06C] (2) Monthly records of the hours of operation. [Authority: COMAR 26.11.02.19.C(1)(b)] (3) Records of combustion analysis performed if the hours of operation exceed 500. [Authority: COMAR 26.11.09.08G(1)(c)] (4) Record of training program attendance for each operator. [Authority: COMAR 26.11.09.08G(1)(e)] <u>C. Operational Limits</u> The Permittee shall maintain a record of the type and quantity of fuel burned. [Authority: COMAR 26.11.02.19C(1)(c)]
3.5	<u>Reporting Requirements:</u> <u>A. Control of Visible Emissions</u> [COMAR 26.11.09.05E(2)] – <u>Stationary Internal Combustion Engine Powered Equipment.</u> The Permittee shall report incidents of visible emissions in accordance with Condition 4, Section III, (Report of Excess Emissions and Deviations). <u>B. Control of NOx Emissions for Major Stationary Sources, Demonstration of Compliance</u> – <u>Reasonable Control Technology Requirements (NOx RACT)</u> The Permittee shall provide certification of the capacity factor of the equipment to the Department in writing as part of the April 1 emission certification report. [Authority: COMAR 26.11.09.08G(1)(a) & COMAR 26.11.03.06C]

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	The Permittee shall submit: a record of training program attendance for each operator to the Department upon request. [Authority: COMAR 26.11.09.08G(1)(e)] C. <u>Operational Limits</u> The Permittee shall report the type and quantity of fuel burned in the annual emissions certification report. [Authority: COMAR 26.11.02.11C(2) and 26.11.02.19D]

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4.0	<u>Emissions Unit Number(s): BLR 1 & BLR 2</u> [MDE Reg No. 027-0223-5-0455] One (1) H.B. Smith (G28HE-13S) natural gas-fired 3.978 MMBtu/hr boiler. [MDE Reg No. 027-0223-5-0064] One (1) Cyclotherm C2800 natural gas-fired 3.3 MMBtu/hr boiler.
4.1	<u>Applicable Standards/Limits:</u> A. <u>Control of Visible Emissions</u> [COMAR 26.11.09.05A(2)] – <u>Fuel Burning Equipment</u>. “In Areas III and IV, a person may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is visible to human observers except that, for the purpose of demonstrating compliance using COM data, emissions that are visible to a human observer are those that are equal to or greater than 10 percent opacity. [COMAR 26.11.09.05A(3)] – <u>Exceptions</u>. “Section A(1) and (2) of this regulation do not apply to emissions during load changing, soot blowing, startup, or adjustments or occasional cleaning of control equipment if: (a) The visible emissions are not greater than 40 percent opacity; and (b) The visible emissions do not occur for more than 6 consecutive minutes in any sixty-minute period.”

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B. Control of Nitrogen Oxides

[COMAR 26.11.09.08B(1)(c)] – Emission Standards and Requirements.

“A person who owns or operates an installation that causes NOx emissions subject to this regulation is in compliance with this regulation if the person establishes compliance with the emissions standards in §B(1)(c) of this regulation.”

Fuel	Tangential-Fired	Wall-Fired
Gas only	0.20	0.20

C. Operational Limits

- (1) The Permittee shall burn only pipeline quality natural gas unless the Permittee applies for and receives an approval or permit from the Department. **[Authority: COMAR 26.11.02.09]**

NESHAP Operating Limits – 40 CFR, Part 63, Subpart DDDDD

- (2) The Permittee must meet each emission limit and work practice standard in 40 CFR, Part 63, Subpart DDDDD, Tables 1 through 3 and 11 through 13, that applies to the boilers. **[Authority: §63.7500(a)(1)]**

Note: The Permittee is subject only to the work practice standard requirements in Table 3, See §63.7540(e).

- (3) The Permittee shall meet the following two applicable work practice standards in 40 CFR, Part 63, Subpart DDDDD, Table 3 applicable to boilers combusting natural gas and rated at less than 5 million Btu per hour **[Authority: 40 CFR §63.7500(a)(1) and (e), §63.7510(e), §63.7515(d), and §63.7540(a)]:**

- (a) The Permittee must complete an initial tune-up of the boiler on or before the compliance date January 31, 2016 and conduct subsequent tune-ups once every 5 years thereafter as specified in § 63.7540(a)(10)(i)-(vi) and (a)(12)-(13). In accordance with §63.7515(d), each 5-year tune-up must be conducted no more than 61 months after the previous tune-up. Paragraphs §63.7540(a)(10)(i) through (a)(10)(vi) specify the requirements for a boiler tune-up.

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	Note: Initial tune-up of the boiler was performed on January 5, 2016. The most recent tune up for both boilers was done November 3, 2025. (b) On or before the compliance date, January 31, 2016, each boiler unit must have a one-time energy assessment performed by a qualified energy assessor. An energy assessment completed on or after January 1, 2008, that meets, or is amended to meet, the energy assessment requirements in this table, satisfies the energy assessment requirement. A facility that operates under an energy management program compatible with ISO 50001 that includes the affected units also satisfies the energy assessment requirement. Table 3 specifies the requirements of the energy assessment. The extent of the evaluation as appropriate for the on-site technical hours listed in § 63.7575. [Authority: §63.7510(e); Table 3 of Subpart DDDDD, item 4] Note: Energy assessment was performed on August 19, 2015. <i>Note: In accordance with § 63.7575 eight (8) on-site technical hours will fulfill the energy assessment requirement for natural gas-fired boilers rated at less than 5 million Btu per hour.</i>
4.2	<u>Testing Requirements:</u> A. <u>Control of Visible Emissions</u> The Permittee shall follow the procedures in the Monitoring Section. B. <u>Control of Nitrogen Oxides</u> See Record Keeping and Reporting Requirements. C. <u>Operational Limits</u> There are no testing requirements under Subpart DDDDD, §63.7520. See Record Keeping and Reporting Requirements.
4.3	<u>Monitoring Requirements:</u> A. <u>Control of Visible Emissions</u> The Permittee shall properly operate and maintain the boilers in a manner to prevent visible emissions. [Reference: COMAR 26.11.03.06C]

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	<u>B. Control of Nitrogen Oxides</u> See Record Keeping and Reporting Requirements. <u>C. Operational Limits</u> See Record Keeping and Reporting Requirements.
4.4	<u>Record Keeping Requirements:</u> <u>A. Control of Visible Emissions</u> The Permittee shall maintain an operations manual and preventative maintenance plan. The Permittee shall maintain a log of maintenance performed that relates to combustion performance. [Reference: COMAR 26.11.03.06C] <u>B. Control of Nitrogen Oxides</u> The Permittee shall maintain a record of the type and quantity of fuel burned. [Authority: COMAR 26.11.02.19C(1)(c)] <u>C. Operational Limits</u> The Permittee shall keep a copy of each notification and report submitted to comply with Subpart DDDDD, including all documentation supporting any initial Notification or Notification of Compliance Status or semiannual compliance report the Permittee submitted according to the requirements in §63.10(b)(2)(xiv). [Authority: 63.7555(a)(1)]
4.5	<u>Reporting Requirements:</u> <u>A. Control of Visible Emissions</u> The Permittee shall report incidents of visible emissions in accordance with Permit Condition 4, Section III, "Report of Excess Emissions and Deviations." <u>B. Control of Nitrogen Oxides</u> The Permittee shall report the type and quantity of fuel burned in the annual emissions certification report. [Authority: COMAR 26.11.02.19C(2) and .19D] <u>C. Operational Limits</u> The following reporting requirements under 40 CFR Part 63, Subpart DDDDD apply: (1) The Permittee shall submit a Notification of Compliance Status

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report, which is limited to the following information specified in § 63.7545(e)(1) and (e)(8) below. The report shall be postmarked or submitted no later than January 31, 2016. **[Authority: §63.7545(e)]:**

(a) A description of the affected unit(s) including identification of which subcategories the unit is in, the design heat input capacity of the unit, a statement that no add-on controls were used on the unit to comply with 40 CFR Part 63, Subpart DDDDD, a statement that no fuels other than natural gas were burned in the units. **[Authority: §63.7545(e)(1)]**

(b) In addition to the information required in § 63.9(h)(2), the Permittee's Notification of Compliance Status must include the following certification(s) of compliance, as applicable, and signed by a responsible official. **[Authority: §63.7530(d); §63.7545(e)(8)]:**

(i) "This facility complies with the required initial tune-up according to the procedures in § 63.7540(a)(10)(i) through (vi)"

(ii) "This facility has had an energy assessment performed according to § 63.7530(e)"

(2) The Permittee must submit each report in Table 9 to Subpart DDDDD of Part 63 that applies. The applicable portions of Table 9 are: **[Authority: § 63.7550(a)]**

You must submit	The report must contain . . .	You must submit the report . . .
1. Compliance report	a. Information required in §63.7550(c)(1) through (5); (Note: only (c)(1) and (c)(5)(i) through (iv), (xiv), and (xvii) apply) and	Semiannually, annually, biennially, or every 5 years according to the requirements in §63.7550(b).
	b. If ... there are no deviations from the requirements for work practice standards in Table 3 to this subpart that apply to you, a statement that there were no deviations from the ...work practice standards during the reporting period....	

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	(3) The first Subpart DDDDD Compliance Report must cover the 59-month period from January 1, 2016 through December 31, 2020 and must be postmarked or submitted to the delegated authority by January 31, 2021. [Authority: §63.7550(b)] (See fact sheet discussion under <u>Rationale</u>, paragraph §63.7550, page 29). (4) The Subpart DDDDD Compliance Report must contain the necessary information in accordance with 40CFR, §63.7550(c).

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5.0	<u>Emissions Unit Number(s)</u> FUG 1: Piping Component Fugitives FUG 2: Blow down/Venting Fugitives
5.1	<u>Applicable Standards/Limits:</u> <u>Control of VOC Emissions</u> <u>[COMAR 26.11.05.06B(1)(a)]</u> – <u>Installations Constructed Before May 12, 1972.</u> “A person may not cause or permit the discharge of VOC from any installation constructed before May 12, 1972 in excess of 200 pounds (90.7 kilograms) per day unless the discharge is reduced by 85 percent or more overall.”
5.2	<u>Testing Requirements:</u> See Monitoring Requirements.
5.3	<u>Monitoring Requirements:</u> Prior to any planned on-site blowdown or venting of natural gas whose uncontrolled emissions would be expected to exceed 200 pounds per day of VOC, the Permittee shall submit for approval to the Air and Radiation Management Administration’s Compliance Program, at least 10 days prior to the scheduled event, an emissions control plan that would lead to at least 85 percent control of the VOC emissions or limit the VOC emissions to less than 200 pounds per day. In the event that 10 days prior notice is not possible due to the nature of the blowdown or venting activity, the

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	Permittee shall submit an emissions control plan as early as practicable. [Authority: COMAR 26.11.03.06C]
5.4	<u>Record Keeping Requirements:</u> For each scheduled blowdown event the Permittee shall keep the following records for at least five years and make them available to the Department the following information [Authority: COMAR 26.11.03.06C]: (1) The date, time and duration of the each event; (2) The quantity of natural gas (DSCF) to be released before control and the resultant amount of VOC emissions, including supporting calculations; (3) The quantity of natural gas actually released to the atmosphere and the resultant amount of VOC, after control during each day including supporting calculations; (4) Methods of emissions control (e.g. flare; capture, recompression, and storage); and Copies of all requests for approval and copies approval letters from the department.
5.5	<u>Reporting Requirements:</u> (1) The records required to be kept shall be made available to the Department upon request. [Authority: COMAR 26.11.03.06C] (2) The total emissions from blowdown events shall be included as a separate line item on the Permittee's annual Emissions Certification Report required by Condition 8, Section III.

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6.0	<u>Emissions Unit Number(s)</u> CT-1 [MDE Reg No. 027-0223-9-0391] One (1) Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine.

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6.1	<u>Applicable Standards/Limits:</u> <u>A. New Source Performance Standards for Stationary Combustion Turbines 40 CFR, Part 60, Subpart KKKK</u> All applicable terms, provisions, emissions standards, testing, monitoring, record keeping, and reporting requirements included in federal New Source Performance Standards (NSPS) under 40 CFR Part 60, Subparts A and KKKK for Stationary Combustion Turbines. <u>B. National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Stationary Combustion Turbines 40 CFR, Part 63, Subpart YYYY</u> National Emissions Standards for Hazardous Air Pollutants (NESHAP) promulgated under 40 CFR Part 63, Subparts A and YYYY for Stationary Combustion Turbines. § 63.6095 When do I have to comply with this subpart? “(a) Affected sources. (1) ... (2) ... (3) If you start up a new or reconstructed stationary combustion turbine which is a lean premix gas-fired stationary combustion turbine or a diffusion flame gas-fired stationary combustion turbine as defined by this subpart on or before March 9, 2022, you must comply with the emissions limitations and operating limitations in this subpart no later than March 9, 2022.” [Reference: 40 CFR § 63.6095(a)(3)] § 63.6100 What emission and operating limitations must I meet? “For each new or reconstructed stationary combustion turbine which is a lean premix gas-fired stationary combustion turbine, a lean premix oil-fired stationary combustion turbine, a diffusion flame gas-fired stationary combustion turbine, or a diffusion flame oil-fired stationary combustion turbine as defined by this subpart, you must comply with the emission limitations and operating limitations in Table 1 and Table 2 of this subpart.” [Reference: 40 CFR § 63.6100] Excerpt from Table 1 to Subpart YYYY of Part 63—Emission Limitations “As stated in § 63.6100, you must comply with the following emission

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limitations.”

For each new or reconstructed stationary combustion turbine described in § 63.6100 which is ...	You must meet the following emission limitations...
1. a lean premix gas-fired stationary combustion turbine as defined in this subpart, 2., 3., 4.....	limit the concentration of formaldehyde to 91 ppbvd or less at 15-percent O ₂ , except during turbine startup. The period of time for turbine startup is subject to the limits specified in the definition of startup in § 63.6175.

Excerpt from Table 3 to Subpart YYYY of Part 63—Operating Limitations

“As stated in §§ 63.6100 and 63.6140, you must comply with the following operating limitations.

For ...	You must ...
1... 2. each stationary combustion turbine that is required to comply with the emission limitation for formaldehyde and is not using an oxidation catalyst	Maintain any operating limitations approved by the Administrator.

§ 63.6120 What performance tests and other procedures must I use?

“(e) If your stationary combustion turbine is not equipped with an oxidation catalyst, you must petition the Administrator for operating limitations that you will monitor to demonstrate compliance with the formaldehyde emission limitation in Table 1. You must measure these operating parameters during the initial performance test and continuously monitor thereafter. Alternatively, you may petition the Administrator for approval of no additional operating limitations. If you submit a petition under this section, you must not conduct the initial performance test until after the petition has been approved or disapproved by the Administrator.” **[Reference: 40 CFR § 63.6120(e)]**

§ 63.6125 What are my monitor installation, operation, and maintenance requirements?

(b) If you are operating a stationary combustion turbine that is required to comply with the formaldehyde emission limitation and you are not using an oxidation catalyst, you must continuously monitor any parameters specified in your approved petition to the Administrator, in

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order to comply with the operating limitations in Table 2 and as specified in Table 5 of this subpart. **[Reference: 40 CFR § 63.6125(b)]**

C. Visible Emissions Limitations

[COMAR 26.11.09.05A(2)] – Fuel Burning Equipment.

“In Areas III and IV, a person may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is visible to human observers except that, for the purpose of demonstrating compliance using COM data, emissions that are visible to a human observer are those that are equal to or greater than 10 percent opacity.

[COMAR 26.11.09.05A(2)] – Exceptions.

“Section A(1) and (2) of this regulation do not apply to emissions during load changing, soot blowing, startup, or adjustments or occasional cleaning of control equipment if:

- (a) The visible emissions are not greater than 40 percent opacity; and
- (b) The visible emissions do not occur for more than 6 consecutive minutes in any sixty-minute period.”

D. Control of NO_x Emissions for Major Stationary Sources, Requirements for Fuel Burning Equipment with a Capacity Factor of 15 Percent or Less, and Combustion Turbines with a Capacity Factor Greater than 15 Percent – [COMAR 26.11.09.08G(2)]

“A person who owns or operates a combustion turbine with a capacity factor greater than 15 percent shall meet an hourly average NO_x emission rate of not more than 42 ppm when burning gas or 65 ppm when burning fuel oil (dry volume at 15 percent oxygen) or meet applicable Prevention of Significant Deterioration limits, whichever is more restrictive.”

E. Operational Limitations

- (1) The Permittee shall maintain and operate the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine, and any associated air pollution control equipment, in such a manner as to ensure full and continuous compliance with all applicable regulations.
- (2) The Permittee shall properly maintain and keep in good working condition all control panel instrumentation and monitoring devices that the Permittee uses to determine if the air pollution control equipment is operating as designed.

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(3) The Permittee must operate and maintain the stationary combustion turbine, air pollution control equipment, and monitoring equipment in a manner consistent with good air pollution control practices for minimizing emissions at all times including during startup, shutdown, and malfunction. **[Reference: 40 CFR part 60, subpart KKKK, §60.4333]**

(4) The Permittee is subject to the following emission limits for the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine from 40 CFR part 60, subpart KKKK:

§60.4320(a) requires the Permittee to meet the emission limits for NO_x specified in Table 1 to subpart KKKK (see below).

From Table 1 to Subpart KKKK of Part 60—Nitrogen Oxide Emission Limits for New Stationary Combustion Turbines

Combustion turbine type	Combustion turbine heat input at peak load (HHV)	NO_x emission standard
New turbine firing natural gas	>50 MMBtu/hr and ≤ 850 MMBtu/hr	25 ppm at 15 percent O ₂

§60.4330(a)(2) requires the Permittee not to burn in the stationary turbine any fuel which contains total potential sulfur emission in excess of 0.060 lb SO₂ /MMBtu heat input.

(5) In accordance with the manufacturer's guarantee, the Permittee shall operate the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine and emission controls in a manner that complies with a NO_x emission limit of 15 ppm at 15 percent oxygen. Compliance with this limit shall serve to demonstrate compliance with NO_x limit under 40 CFR part 60, subpart KKKK and COMAR 26.11.09.08G(2).

6.2 Testing Requirements:

A. New Source Performance Standards for Stationary Combustion Turbines 40 CFR, Part 60, Subpart KKKK

(1) Testing Requirements for the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine from 40 CFR Part 60, Subpart KKKK.

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	§60.8 (a) ... within 60 days after achieving the maximum operating rate, but not later than 180 days after initial startup, ... conduct an initial performance test and furnish the [Department] a written report of the results of such performance test.... §60.8(f) ... each performance test shall consist of three separate runs using the applicable test methods. §60.4340 (a) “If you are not using water or steam injection to control NOx emissions, you must perform annual performance tests in accordance with §60.4400 to demonstrate continuous compliance. If the NOx emission result from the performance test is less than or equal to 75 percent of the NOx emission limit for the turbine, you may reduce the frequency of subsequent performance tests to once every 2 years (no more than 26 calendar months following the previous performance test). If the results of any subsequent performance test exceed 75 percent of the NOx emission limit for the turbine, you must resume annual performance tests.” §60.4400(a) you must conduct an initial performance test, as required in §60.8. Subsequent NOx performance tests shall be conducted on an annual basis (no more than 14 calendar months following the previous performance test). Note: An annual performance test is not required if a parameter monitoring plan is submitted meeting the requirements of §60.4340(b), §60.4355, and §60.4410. Note that §60.4410 requires: §60.4410 If you have chosen to monitor combustion parameters or parameters indicative of proper operation of NOx emission controls in accordance with §60.4340, the appropriate parameters must be continuously monitored and recorded during each run of the initial performance test, to establish acceptable operating ranges, for purposes of the parameter monitoring plan for the affected unit, as specified in §60.4355. §60.4400(a)(1) – (3) and §60.4400(b) specify in detail the procedures from 40 CFR Part 60, appendix A, that must be

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used to conduct the performance tests. See regulation for full text. Use the procedures specified in §60.4400(a)(1)(ii) to calculate the NO_x emission rate in lb/MMBtu as well as NO_x ppmvd adjusted to 15% O₂.

- (2) Within 180 days after initial startup of the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine, the Permittee shall perform initial performance tests for CO and VOC using approved 40 CFR part 60 appendix A methods or equivalent alternative methods if approved by the Department. Unless otherwise approved by the Department, Method 10 shall be used for CO and Methods 18 and 25 shall be used for VOC. Emission rates for CO and VOC shall be computed in terms of lb/MMBtu input in accordance with methodologies approved by the Department.
- (3) A stack test protocol addressing the testing requirements in conditions (1) - (3) above and a NO_x parameter monitoring protocol addressing §60.4340(b) and §60.4355(a) shall be submitted to the Department for review and approval at least 30 days prior to the anticipated stack test date.
- (4) The Permittee shall notify the Department of the date of the stack test at least 14 days prior to the actual date of the stack tests.

B. National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Stationary Combustion Turbines 40 CFR, Part 63, Subpart YYYY

Testing Requirements for the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine from 40 CFR Part 63, Subpart YYYY.

- (1) Initial Performance Testing.
40 CFR § 63.6110(a) – “You must conduct the initial performance tests or other initial compliance demonstrations in Table 4 of this subpart that apply to you within 180 calendar days after the compliance date that is specified for your stationary combustion turbine in § 63.6095 and according to the provisions in § 63.7(a)(2).” **[Reference: 40 CFR § 63.6110(a)]**

Note: Initial performance test was completed on January 30, 2025, with a result of 42 ppb at 15% O₂. A second test was performed on November 5,

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	2025, with 64 ppb at 15% O₂. This second test was performed to change the testing schedule moving forward. The results from both tests showed compliance with the permit limit of 91 with 64 ppb at 15% O₂, as stated in 40 CFR 63, Subpart YYYY. (2) <u>Subsequent Testing</u>. 40 CFR § 63.6115 – “Subsequent performance tests must be performed on an annual basis as specified in Table 3 of this subpart.” [Reference: 40 CFR § 63.6115] C. <u>Visible Emissions Limitations</u> [COMAR 26.11.09.05A(2)] – <u>Fuel Burning Equipment</u>. See Record Keeping Requirements. D. <u>Control of NOx Emissions for Major Stationary Sources, Requirements for Fuel Burning Equipment with a Capacity Factor of 15 Percent or Less, and Combustion Turbines with a Capacity Factor Greater than 15 Percent</u> – [COMAR 26.11.09.08G(2)] “A person who owns or operates a combustion turbine with a capacity factor greater than 15 percent shall meet an hourly average NOx emission rate of not more than 42 ppm when burning gas or 65 ppm when burning fuel oil (dry volume at 15 percent oxygen) or meet applicable Prevention of Significant Deterioration limits, whichever is more restrictive.” E. <u>Operational Limitations</u> See Record Keeping Requirements.
6.3	<u>Monitoring Requirements:</u> A. <u>New Source Performance Standards for Stationary Combustion Turbines 40 CFR, Part 60, Subpart KKKK</u> (1) Monitoring Requirements for the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine from 40 CFR, Part 60, Subpart KKKK: (a) Except as provided in §60.4340(b) below, §60.4340(a) provides that the Permittee must perform annual performance tests in accordance with §60.4400 to demonstrate continuous compliance. (b) In lieu of an annual performance test for NOx, the Permittee may submit to the Department for approval a parameter

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	monitoring plan for the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine. The parameter monitoring plan must meet the requirements of 40 CFR part 60, Subpart KKKK, §60.4340(b), §60.4355(a)(1) through (6) and §60.4410, as applicable. §60.4340(b) As an alternative [to conducting annual performance tests] you may install, calibrate, maintain and operate one of the following continuous monitoring systems: §60.4340(b)(2) Continuous parameter monitoring system as follows: §60.4340(b)(2)(ii) For any lean premix stationary combustion turbine, you must continuously monitor the appropriate parameters to determine whether the unit is operating in low-NOx mode. §60.4355(a) The parameters that are continuously monitored as described in §60.4340 must be monitored during the performance test required under §60.8, to establish acceptable values and ranges. You may supplement the performance test data with engineering analyses, design specifications, manufacturer's recommendations and other relevant information to define the acceptable parametric ranges more precisely. You must develop and keep on-site a parameter monitoring plan which explains the procedures used to document proper operation of the NOx emission controls.... <i>Note: §60.4355(a)(1) through §60.4355(a)(6) describes in detail the further regulatory requirements of the parametric monitoring plan. See regulation for complete text.</i> <u>B. National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Stationary Combustion Turbines 40 CFR, Part 63, Subpart YYYY</u> Testing Requirements for the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine from 40 CFR Part 63, Subpart YYYY. 40 CFR § 63.6125(b) – “If you are operating a stationary combustion turbine that is required to comply with the formaldehyde emission

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	limitation and you are not using an oxidation catalyst, you must continuously monitor any parameters specified in your approved petition to the Administrator, in order to comply with the operating limitations in Table 2 and as specified in Table 5 of this subpart.” [Reference: 40 CFR § 63.6125(b)] Note: A Monitoring Plan was approved by EPA Region 3 as outlined in a letter to Williams – Transco Pipeline (dated July 22, 2024). The following parameters will be monitored: Combustion Turbine Lean Premix Mode (LPM), gas producer turbine speed as a percent (%NGP), and Inlet Air Temperature (T1) as parameters to meet the Subpart YYYY monitoring requirements. C. <u>Visible Emissions Limitations</u> [COMAR 26.11.09.05A(2)] – <u>Fuel Burning Equipment</u>. See Record Keeping Requirements. D. <u>Control of NOx Emissions for Major Stationary Sources, Requirements for Fuel Burning Equipment with a Capacity Factor of 15 Percent or Less, and Combustion Turbines with a Capacity Factor Greater than 15 Percent</u> – [COMAR 26.11.09.08G(2)] See Record Keeping Requirements. E. <u>Operational Limitations</u> See Record Keeping Requirements.
6.4	<u>Record Keeping Requirements:</u> A. <u>New Source Performance Standards for Stationary Combustion Turbines 40 CFR, Part 60, Subpart KKKK</u> (1) The following records shall be kept on site for at least five (5) years and shall be made available to the Department upon request: (a) Monthly records of fuel usage for the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine, and the Waukesha 1,450 BHP natural gas-fired emergency generator; (b) Continuous records of 1-hour averages and 4-hour rolling averages, based on values recorded at least at 15-minute

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	intervals, of the monitored NOx parameters for the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine in keeping with §60.4340(b)(2)(ii) and §60.4355(a); (c) A copy of the initial performance test report(s) for NOx, CO, and VOC for the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine; (d) A copy of approved parametric monitoring plan for NOx, on site in accordance with §60.4355(a); and (e) Copies of annual performance tests for NOx if an approved NOx parametric monitoring plan is not submitted. (2) The Permittee shall keep records of all monitoring downtime and all periods of excess emissions as defined in §60.4380(c): §60.4380(c) For turbines required to monitor combustion parameters or parameters that document proper operation of the NOx emission controls: §60.4380(c)(1) An excess emission is a 4-hour rolling unit operating hour average in which any monitored parameter does not achieve the target value or is outside the acceptable range defined in the parameter monitoring plan for the unit. §60.4380(c)(2) A period of monitor downtime is a unit operating hour in which any of the required parametric data are either not recorded or are invalid. <u>B. National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Stationary Combustion Turbines 40 CFR, Part 63, Subpart YYYY</u> § 63.6155 What records must I keep? “(a) You must keep the records as described in paragraphs (a)(1) through (7) of this section. (1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted, according to the requirements in § 63.10(b)(2)(xiv). (2) Records of performance tests and performance evaluations as required in § 63.10(b)(2)(viii).

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	(3) ... (4) ... (5) Records of all maintenance on the air pollution control equipment as required in § 63.10(b)(2)(iii). (6) After September 8, 2020, records of the date, time, and duration of each startup period, recording the periods when the affected source was subject to the standard applicable to startup. (7) After September 8, 2020, keep records as follows. (i) Record the number of deviations. For each deviation, record the date, time, cause, and duration of the deviation. (ii) For each deviation, record and retain a list of the affected sources or equipment, an estimate of the quantity of each regulated pollutant emitted over any emission limit and a description of the method used to estimate the emissions. (iii) Record actions taken to minimize emissions in accordance with § 63.6105(c), and any corrective actions taken to return the affected unit to its normal or usual manner of operation.” [Reference: 40 CFR § 63.6125(b)] C. <u>Visible Emissions Limitations</u> [COMAR 26.11.09.05A(2)] – <u>Fuel Burning Equipment</u>. See Record Keeping Requirements. D. <u>Control of NOx Emissions for Major Stationary Sources, Requirements for Fuel Burning Equipment with a Capacity Factor of 15 Percent or Less, and Combustion Turbines with a Capacity Factor Greater than 15 Percent.</u> – [COMAR 26.11.09.08G(2)] See Record Keeping Requirements. E. <u>Operational Limitations</u> See Record Keeping Requirements.
6.5	<u>Reporting Requirements:</u> A. <u>New Source Performance Standards for Stationary Combustion Turbines 40 CFR, Part 60, Subpart KKKK</u> (1) Prior to the date that the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine commences operation the Permittee shall submit a stack test report reporting the results of the initial stack

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	tests on the HBA-8T and Clark TLA-6 engines in accordance with condition D(4), Permit to Construct number 027-0223-5-0054M issued on January 20, 2015. (2) The following semiannual monitoring reports covering the 6-month periods ending each December 31 and June 30 are required under 40 CFR part 60, subpart KKKK, §60.4375(a) for the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine: §60.4375(a) For each affected unit required to continuously monitor parameters ..., you must submit reports of excess emissions and monitor downtime, in accordance with §60.7(c). Excess emissions must be reported for all periods of unit operation, including start-up, shutdown, and malfunction. §60.7(c) (4) When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report. §60.4395 All reports required under §60.7(c) must be postmarked by the 30th day following the end of each 6-month period. (3) Reports of performance tests for NO_x are required under COMAR 26.11.09.08K(2) and 40 CFR part 60, subpart KKKK, §60.4375(b) for the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine. In order to comply with both requirements, the results of the NO_x performance (stack) tests shall be submitted to the Department within 45 days after the completion of the test. (4) Prior to the date that the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine commences operation the Permittee shall submit a stack test report reporting the results of the initial stack tests on the HBA-8T and Clark TLA-6 engines in accordance with condition D(4), Permit to Construct number 027-0223-5-0054M issued on January 20, 2015. (5) The following semiannual monitoring reports covering the 6-month periods ending each December 31 and June 30 are required under 40 CFR Part 60, Subpart KKKK, §60.4375(a) for the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine: §60.4375(a) For each affected unit required to continuously monitor parameters ..., you must submit reports of excess emissions and

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	monitor downtime, in accordance with §60.7(c). Excess emissions must be reported for all periods of unit operation, including start-up, shutdown, and malfunction. §60.7(c) (4) When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report. §60.4395 All reports required under §60.7(c) must be postmarked by the 30th day following the end of each 6-month period. (6) Reports of performance tests for NO_x are required under COMAR 26.11.09.08K(2) and 40 CFR part 60, subpart KKKK, §60.4375(b) for the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine. In order to comply with both requirements, the results of the NO_x performance (stack) tests shall be submitted to the Department within 45 days after the completion of the test. <u>B. National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Stationary Combustion Turbines 40 CFR, Part 63, Subpart YYYY</u> § 63.6150 What reports must I submit and when? “(a) Compliance report. Anyone who owns or operates a stationary combustion turbine which must meet the emission limitation for formaldehyde must submit a semiannual compliance report according to Table 6 of this subpart. The semiannual compliance report must contain the information described in paragraphs (a)(1) through (5) of this section. The semiannual compliance report, including the excess emissions and monitoring system performance reports of § 63.10(e)(3), must be submitted by the dates specified in paragraphs (b)(1) through (5) of this section, unless the Administrator has approved a different schedule. After September 8, 2020, or once the reporting template has been available on the Compliance and Emissions Data Reporting Interface (CEDRI) website for 180 days, whichever date is later, you must submit all subsequent reports to the EPA following the procedure specified in paragraph (g) of this section. (1) Company name and address. (2) Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report. (3) Date of report and beginning and ending dates of the reporting period.

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(4) ...

(5) After September 8, 2020, report each deviation in the semiannual compliance report. Report the information specified in paragraphs (a)(5)(i) through (iv) of this section.

(i) Report the number of deviations. For each instance, report the start date, start time, duration, and cause of each deviation, and the corrective action taken.

(ii) For each deviation, the report must include a list of the affected sources or equipment, an estimate of the quantity of each regulated pollutant emitted over any emission limit, a description of the method used to estimate the emissions.

(iii) Information on the number, duration, and cause for monitor downtime incidents (including unknown cause, if applicable, other than downtime associated with zero and span and other daily calibration checks), as applicable, and the corrective action taken.

(iv) Report the total operating time of the affected source during the reporting period.” **[Reference: 40 CFR § 63.6150(a)]**

C. Visible Emissions Limitations

[COMAR 26.11.09.05A(2)] – Fuel Burning Equipment.

See Record Keeping Requirements.

D. Control of NO_x Emissions for Major Stationary Sources, Requirements for Fuel Burning Equipment with a Capacity Factor of 15 Percent or Less, and Combustion Turbines with a Capacity Factor Greater than 15 Percent. – **[COMAR 26.11.09.08G(2)]**

See Record Keeping Requirements.

E. Operational Limitations

Within 45 days after the testing required in Section 4.6.1 above, the Permittee shall submit a stack test report to the Department. **[Reference: COMAR 26.11.09.08K(2)]**

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7.0	<u>Emissions Unit Number(s)</u> EG-1 [MDE Reg. No. 027-0223-9-0392] One (1) natural gas-fired emergency generator rated at 1,450 BHP. <i>NOTE: The design rating of the engine is 1,450 BHP, but the nameplate on the engine indicates a service rating of 1,325 HP and an overload rating of 1,391 HP.</i>
7.1	<u>Applicable Standards/Limits:</u> A. <u>New Source Performance Standards (NSPS) under 40 CFR Part 60, Subpart JJJJ for Stationary Spark Ignition Internal Combustion Engines</u> – [40 CFR, Part 60, Subpart JJJJ] All applicable terms, provisions, emissions standards, testing, monitoring, record keeping, and reporting requirements included in federal New Source Performance Standards (NSPS) under 40 CFR Part 60, Subpart JJJJ for Stationary Spark Ignition Internal Combustion Engines. B. <u>National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Reciprocating Internal Combustion Engines</u> – [40 CFR, Part 63, Subpart ZZZZ] The Permittee shall meet the requirements included in the National Emissions Standards for Hazardous Air Pollutants (NESHAP) promulgated under 40 CFR part 63, Subparts A and ZZZZ for Reciprocating Internal Combustion Engines by meeting the requirements of 40 CFR part 60, Subpart JJJJ for the emergency generator. No further requirements apply to the emergency generator under 40 CFR, Part 63, Subpart ZZZZ. [Reference: 40 CFR §63.6590(c)(1)] C. <u>Control of Visible Emissions</u> <u>Visible Emissions Stationary Internal Combustion Engines Powered Equipment</u> – [COMAR 26.11.09.05E(2) through (4)] (2) <u>Emissions During Idle Mode.</u> “A person may not cause or permit the discharge of emissions from any engine, operating at idle, greater than 10 percent opacity.”

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- (3) Emissions During Operating Mode.
“A person may not cause or permit the discharge of emissions from any engine, operating at other than idle conditions, greater than 40 percent opacity.”
- (4) Exceptions.
 - (a) “Section E(2) of this regulation does not apply for a period of 2 consecutive minutes after a period of idling of 15 consecutive minutes for the purpose of clearing the exhaust system.”
 - (b) “Section E(2) of this regulation does not apply to emissions resulting directly from cold engine start-up and warm-up for the following maximum periods:
 - (i) Engines that are idled continuously when not in service: 30 minutes;
 - (ii) All other engines: 15 minutes.”
 - (c) “Section E(2) and (3) of this regulation do not apply while maintenance, repair, or testing is being performed by qualified mechanics.”

D. Operational Limits

- (1) Operating requirements for the Waukesha 1,450 BHP natural gas-fired emergency generator from 40 CFR Part 60, Subpart JJJJ.

§60.4243(d) ... any operation other than emergency operation, [and] maintenance and testing, ... as described in paragraphs (d)(1) through (3) of this section, is prohibited. ...

§60.4243(d)(1) There is no time limit on the use of emergency generator in emergency situations.

§60.4243(d)(2) Allows the Permittee to operate the emergency generator the purposes specified in (d)(2)(i) for a maximum of 100 hours per calendar year.

§60.4243(d)(2)(i) Allows the emergency generator to be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, or the insurance company associated with the engine.

- (2) The Permittee shall maintain and operate the 1,450 BHP natural gas-fired emergency generator, and any associated air pollution

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	control equipment, in such a manner as to ensure full and continuous compliance with all applicable regulations.
7.2	<u>Testing Requirements:</u> <u>A. New Source Performance Standards (NSPS) under 40 CFR Part 60, Subpart JJJJ for Stationary Spark Ignition Internal Combustion Engines – [40 CFR, Part 60, Subpart JJJJ]</u> (1) The Permittee must comply with all applicable federal requirements. In accordance with 40 CFR § 60.4243(b), “if you are an owner or operator of a stationary SI internal combustion engine and must comply with the emission standards specified in § 60.4233(d) or (e), you must demonstrate compliance according to one of the methods specified in paragraphs (b)(1) and (2) of this section: b(1) Purchasing an engine certified according to procedures specified in this subpart, for the same model year and demonstrating compliance according to one of the methods specified in paragraph (a) of this section. <i>Note: This condition is not applicable as the engine is non-certified.</i> b(2) Purchasing a non-certified engine and demonstrating compliance with the emission standards specified in § 60.4233(d) or (e) and according to the requirements specified in § 60.4244, as applicable, and according to paragraphs (b)(2)(i) and (ii) of this section. (i) If you are an owner or operator of a stationary SI internal combustion engine greater than 25 HP and less than or equal to 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 to demonstrate compliance. <i>Note: This condition is not applicable as the engine is greater than 500 HP.</i> (ii) If you are an owner or operator of a stationary SI internal combustion engine greater than 500 HP, you must keep a maintenance plan and records of conducted

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	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.” (2) Compliance stack testing of the engine for NO_x, CO, VOCs shall be conducted within 180 days of initial start-up to quantify pollutant emissions and demonstrate compliance with the emission limits specified in the permit to construct. The Permittee shall simultaneously monitor electrical output from the engine/generator set during the stack test. <i>Note: Subsequent testing may be required in accordance to Part E, Condition 8.</i> (3) At least 30 days prior to conducting any compliance stack test, the Permittee shall submit a test protocol to ARA for review. Compliance stack testing shall be conducted in accordance with ARA Technical Memorandum™ 91-01, “Test Methods and Equipment Specifications for Stationary Sources” (January, 1991), as amended by Supplement 1 (July 1, 1991), 40 CFR 51, 40 CFR 60, or subsequent test protocols approved by ARA. Test ports shall be located in accordance with the TM 91-01 (January 1991), or subsequent or alternative measures approved by ARA. (4) The Permittee must comply with the applicable federal requirements. In accordance with 40 CFR § 60.4244, “owners and operators of stationary SI ICE who conduct performance tests must follow the procedures in paragraphs (a) through (f) of this section. (a) Each performance test must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and according to the requirements in Sec. 60.8 and under the specific conditions that are specified by Table 2 to this subpart. (b) You may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in Sec. 60.8(c). If your stationary SI internal combustion engine is non-operational, you do not need to startup

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	the engine solely to conduct a performance test; however, you must conduct the performance test immediately upon startup of the engine. (c) You must conduct three separate test runs for each performance test required in this section, as specified in § 60.8(f). Each test run must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and last at least 1 hour. (d) To determine compliance with the NO_x mass per unit output emission limitation, convert the concentration of NO_x in the engine exhaust using Equation 1 of this section: (Eq. 1) $ER = \frac{(C_d) \times (1.912 \times 10^{-3}) \times (Q) \times (T)}{HP - hr}$ Where: ER = Emission rate of NO_x in g/HP-hr. C_d = Measured NO_x concentration in parts per million by volume (ppmv). 1.912 x 10⁻³ = Conversion constant for ppm NO_x to grams per standard cubic meter at 20 degrees Celsius. Q = Stack gas volumetric flow rate, in standard cubic meter per hour, dry basis. T = Time of test run, in hours. HP-hr = Brake work of the engine, horsepower-hour (HP-hr). (e) To determine compliance with the CO mass per unit output emission limitation, convert the concentration of CO in the engine exhaust using Equation 2 of this section: (Eq. 2) $ER = \frac{(C_d) \times (1.164 \times 10^{-3}) \times (Q) \times (T)}{HP - hr}$

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Where:

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

C_d = Measured CO concentration in ppmv.

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

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

T = Time of test run, in hours.

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

- (f) To determine compliance with the VOC mass per unit output emission limitation, convert the concentration of VOC in the engine exhaust using Equation 3 of this section:

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

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.

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Note: For purposes of this subpart, when calculating emissions of VOC, emissions of formaldehyde should not be included [Reference: 40 CFR Section 60.4244(f)].

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

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

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.

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

Where:

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

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

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

Where:

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	C_{Peq} = Concentration of compound i in mg of propane equivalent per DSCM.” <u>B. National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Reciprocating Internal Combustion Engines – [40 CFR, Part 63, Subpart ZZZZ]</u> The Permittee shall meet the requirements included in the National Emissions Standards for Hazardous Air Pollutants (NESHAP) promulgated under 40 CFR part 63, Subparts A and ZZZZ for Reciprocating Internal Combustion Engines by meeting the requirements of 40 CFR part 60, Subpart JJJJ for the emergency generator. No further requirements apply to the emergency generator under 40 CFR, Part 63, Subpart ZZZZ. [Reference: 40 CFR §63.6590(c)(1)] <u>C. Control of Visible Emissions</u> <u>Visible Emissions Stationary Internal Combustion Engines Powered Equipment – [COMAR 26.11.09.05E(2) through (4)]</u> See Reporting Requirements. <u>D. Operational Limits</u> See Record Keeping and Reporting Requirements.
7.3	<u>Monitoring Requirements:</u> <u>A. New Source Performance Standards (NSPS) under 40 CFR Part 60, Subpart JJJJ for Stationary Spark Ignition Internal Combustion Engines – [40 CFR, Part 60, Subpart JJJJ]</u> The Permittee is subject to the emission standards specified in 40 CFR Part 60, Subpart JJJJ, §60.4233(e). <u>B. National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Reciprocating Internal Combustion Engines – [40 CFR, Part 63, Subpart ZZZZ]</u> See Reporting Requirements.

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	C. <u>Control of Visible Emissions</u> <u>Visible Emissions Stationary Internal Combustion Engines</u> <u>Powered Equipment</u> – [COMAR 26.11.09.05E(2) through (4)] See Record Keeping and Reporting Requirements. D. <u>Operational Limits</u> See Record Keeping and Reporting Requirements.
7.4	<u>Record Keeping Requirements:</u> A. <u>New Source Performance Standards (NSPS) under 40 CFR Part 60, Subpart JJJJ for Stationary Spark Ignition Internal Combustion Engines</u> – [40 CFR, Part 60, Subpart JJJJ] (1) The following records shall be kept on site and shall be made available to the Department upon request: (a) Monthly records of fuel usage for the 1,450 BHP natural gas-fired emergency generator; (b) A copy of the initial performance test report(s) for NO_x, CO, and VOC for the Waukesha 1,450 BHP natural gas-fired emergency generator; (c) A copy of each subsequent performance test report (s) for NO_x, CO, and VOC for the Waukesha 1,450 BHP natural gas-fired emergency generator; (2) The following records for the 1,450 HP natural gas-fired emergency generator must be kept on site for at least five (5) years and shall be made available to the Department upon request: §60.4245(a) Owners or operators of stationary SI ICE must keep records of the information in paragraphs (a)(1) through (4) of this section: §60.4245(a)(1) All notifications required to comply with this subpart. §60.4245(a)(2) Maintenance conducted on the engine. §60.4245(a)(3) <i>This condition is not applicable as the engine is non-certified.</i>

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	§60.4245(b) For all stationary SI emergency ICE ... 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. <u>B. National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Reciprocating Internal Combustion Engines – [40 CFR, Part 63, Subpart ZZZZ]</u> See Record Keeping Requirements. <u>C. Control of Visible Emissions</u> <u>Visible Emissions Stationary Internal Combustion Engines Powered Equipment – [COMAR 26.11.09.05E(2) through (4)]</u> See Record Keeping Requirements. <u>D. Operational Limits</u> See Record Keeping Requirements.
7.5	<u>Reporting Requirements:</u> <u>A. New Source Performance Standards (NSPS) under 40 CFR Part 60, Subpart JJJJ for Stationary Spark Ignition Internal Combustion Engines – [40 CFR, Part 60, Subpart JJJJ]</u> The records required to be kept shall be made available to the Department upon request. [Authority: COMAR 26.11.03.06C] <u>B. National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Reciprocating Internal Combustion Engines – [40 CFR, Part 63, Subpart ZZZZ]</u> See Reporting Requirements. <u>C. Control of Visible Emissions</u> <u>Visible Emissions Stationary Internal Combustion Engines Powered Equipment – [COMAR 26.11.09.05E(2) through (4)]</u>

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	See Reporting Requirements.
	D. <u>Operational Limits</u> See Reporting Requirements.

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SECTION V INSIGNIFICANT ACTIVITIES

This section provides a list of insignificant emissions units that were reported in the Title V permit application. The applicable Clean Air Act requirements, if any, are listed below the insignificant activity.

- (1) ✓ Space heaters utilizing direct heat transfer and used solely for comfort heat;

- (2) No. 1 Unheated VOC dispensing containers or unheated VOC rinsing containers of 60 gallons (227 liters) capacity or less;

The containers are subject to COMAR 26.11.19.09D, which requires that the Permittee control emissions of volatile organic compounds (VOC) from cold degreasing operations by meeting the following requirements:

- (a) COMAR 26.11.19.09D(2)(b), which establishes that the Permittee shall not use any VOC degreasing material that exceeds a vapor pressure of 1 mm Hg at 20 ° C;

- (b) COMAR 26.11.19.09D(3)(a—d), which requires that the Permittee implement good operating practices designed to minimize spills and evaporation of VOC degreasing material. These practices, which shall be established in writing and displayed such that they are clearly visible to operators, shall include covers (including water covers), lids, or other methods of minimizing evaporative losses, and reducing the time and frequency during which parts are cleaned;

- (c) COMAR 26.11.19.09D(4), which prohibits the use of any halogenated VOC for cold degreasing.

The Permittee shall maintain on site for at least five (5) years, and shall make available to the Department upon request, the following records of operating data:

- (a) Monthly records of the total VOC degreasing materials used; and

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- (b) Written descriptions of good operating practices designed to minimize spills and evaporation of VOC degreasing materials.
- (3) ✓ Equipment for drilling, carving, cutting, routing, turning, sawing, planing, spindle sanding, or disc sanding of wood or wood products;
- (4) ✓ Brazing, soldering, or welding equipment, and cutting torches related to manufacturing and construction activities that emit HAP metals and not directly related to plant maintenance, upkeep and repair or maintenance shop activities;
- (5) ✓ Equipment for washing or drying products fabricated from metal or glass, provided that no VOC is used in the process and that no oil or solid fuel is burned;
- (6) Containers, reservoirs, or tanks used exclusively for:
- (d) No. 6 Storage of lubricating oils;
- (e) No. 1 Unheated storage of VOC with an initial boiling point of 300 °F (149 °C) or greater;
- (f) No. 1 Storage of Numbers 1, 2, 4, 5, and 6 fuel oil and aviation jet engine fuel;
- (7) ✓ First aid and emergency medical care provided at the facility, including related activities such as sterilization and medicine preparation used in support of a manufacturing or production process;
- (8) ✓ Certain recreational equipment and activities, such as fireplaces, barbecue pits and cookers, fireworks displays, and kerosene fuel use;
- (9) ✓ Comfort air conditioning subject to requirements of Title VI of the Clean Air Act;
- (10) ✓ Natural draft hoods or natural draft ventilators that exhaust air pollutants into the ambient air from manufacturing/industrial or commercial processes;

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SECTION VI STATE-ONLY ENFORCEABLE CONDITIONS

The Permittee is subject to the following State-only enforceable requirements:

Applicable Regulations:

- (a) COMAR 26.11.06.08 and 26.11.06.09, which generally prohibit the discharge of emissions beyond the property line in such a manner that a nuisance or air pollution is created.
- (b) COMAR 26.11.15.05, which requires that the Permittee implement “Best Available Control Technology for Toxics” (T – BACT) to control emissions of toxic air pollutants.
- (c) **COMAR 26.11.41 – Control of Methane Emissions from the Natural Gas Industry.**

COMAR 26.11.41.02 – Applicability.

“The provisions of this chapter apply to an affected facility as that term is defined in Regulation .01B of this chapter.

COMAR 26.11.41.01(B) – Definitions – Terms Defined.

“The provisions of this chapter apply to an affected facility as that term is defined in Regulation .01B of this chapter.

“(1)(e) Ellicott City Natural Compressor Station;”

“(5) Component” means a valve, fitting, flange, threaded-connection, process drain, stuffing box, pressure-vacuum valve, pressure-relief device, pipes, seal fluid system, diaphragm, hatch, sight-glass, meter, open-ended line, well casing, natural gas powered pneumatic device, natural gas powered pneumatic pump, reciprocating compressor rod packing/seal, metal to metal joint or seal of nonwelded connection separated by a compression gasket, screwed thread (with or without thread sealing compound), metal to metal compression, or fluid barrier through which natural gas or liquid can escape to the atmosphere.”

“(17) Natural gas compressor station” means all equipment and components located within a facility fence line associated with moving natural gas from production fields or natural gas

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processing plants through natural gas transmission pipelines, or
within natural gas storage fields.”

(d) **COMAR 26.11.41.03 – Leak Detection and Repair Requirements.**

“A. Affected facilities that are natural gas compressor stations or natural gas underground storage facilities and that use natural gas-powered equipment to compress natural gas shall comply with the following leak detection and repair requirements.

- (1) Owners and operators of affected facilities subject to this section shall develop and submit to the Department an initial methane emissions monitoring plan that includes a technique for determining fugitive emissions (for example, EPA Method 21 at 40 CFR part 60, appendix A-7, or optical gas imaging).
- (2) If an affected facility uses optical gas imaging for leak detection, the following information shall be included in the initial methane emissions monitoring plan:
 - (a) A list of the unsafe-to-monitor components;
 - (b) Procedures and time frames for identifying and repairing fugitive emissions components;
 - (c) A defined observation path throughout the site to confirm all components can be viewed and recorded;
 - (d) Manufacturer and model number of fugitive emissions detection equipment to be used; and
 - (e) Equipment specifications and procedures as specified in 40 CFR §60.5397a(c)(7), as published in July 2017.
- (3) If an affected facility uses EPA Method 21 (40 CFR 60, Appendix A-7) for leak detection, the following information shall be included in the initial methane emissions monitoring plan:
 - (a) A list of all fugitive emission components, difficult-to-monitor components, and unsafe-to-monitor components at an affected facility;
 - (b) Procedures and time frames for identifying and repairing fugitive emission components; and

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- (c) Equipment specifications and procedures as specified in 40 CFR §60.5397a(c)(8), as published in July 2017.
- (4) Each difficult-to-monitor and unsafe-to-monitor component shall be identified in the written initial methane monitoring plan explaining the location and why the fugitive emissions components are difficult-to-monitor and unsafe-to-monitor.
- (5) Initial Methane Emissions Monitoring Plan Submission.
 - (a) Except for a new natural gas compressor station or natural gas underground storage facility, owners and operators of the affected facilities subject to this section shall submit the initial methane emissions monitoring plan required in §A(1)—(4) of this regulation to the Department within 90 days of the adoption of this regulation.
 - (b) Owners and operators of a new natural gas compressor station or natural gas underground storage facility subject to this section shall submit the initial methane emissions monitoring plan required in §A(1)—(4) of this regulation to the Department within 60 days of startup.
- (6) Owners and operators of affected facilities that modify or reconstruct a natural gas compressor station or underground storage facility shall submit an initial monitoring plan with the elements in §A(1)—(4) of this regulation within 90 days of the facility startup operation for each new collection of fugitive emissions components at the modified or reconstructed compressor station or underground storage facility.

Note: Transcontinental Gas Pipe Line Company (Transco) – Transco Compressor Station 190, in Howard Count, Maryland, maintains a “**Methane Emissions Monitoring Plan (EMP)**” (January 15, 2021, Revised April 27, 2021) **Project No.: 0578546**. This document serves as the site-specific EMP for the leak, detection, and repair for fugitive emissions from process components at the station and to satisfy the requirements of COMAR 26.11.41.03(A)(1). Revisions to the EMP are made and implemented as needed.

- (7) Owners or operators of affected facilities subject to this section shall conduct an audio, visual, and olfactory inspection of all fugitive emission components for leaks or indications of leaks at least once per calendar week except for:

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(a) Unsafe-to-monitor components; and

(b){*Not applicable*}

(8) Leak Monitoring Survey.

(a) Owners and operators of affected facilities shall follow the initial monitoring methane plan and shall inspect all fugitive emission components, except for unsafe-to-monitor components, for leaks using OGI or EPA Method 21 within 180 days of the adoption of this chapter and quarterly thereafter.

(b) Owners and operators of affected facilities that install any new, modified, or reconstructed natural gas compressor station or underground storage facility that uses natural gas-powered equipment to compress natural gas shall meet the requirements of §A(8)(a) of this regulation within 180 days of the startup of the facility's operations.

(c) At least annually, all difficult-to-monitor fugitive emissions components shall be inspected for leaks using an OGI camera.

Note: Transcontinental Gas Pipe Line Company (Transco) – Transco Compressor Station 190, in Howard Count, Maryland, has stated that “at least annually, all difficult-to-monitor fugitive emissions components shall be inspected for leaks using an OGI camera.”

(9) Repair Requirements.

(a) Any leaking fugitive emissions component identified during a leak monitoring survey or audio, visual, and olfactory inspection shall be successfully repaired, replaced, or removed from service as soon as practicable, but no later than 30 calendar days after leak detection.

(b) Fugitive Emissions Component Resurvey.

(i) Each repaired or replaced fugitive emissions component shall be resurveyed within 30 days after being repaired or replaced using either OGI or EPA Method 21 (40 CFR 60, Appendix A-7).

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- (ii) Owners and operators of facilities subject to this section that use EPA Method 21 (40 CFR 60, Appendix A-7) to resurvey the repaired or replaced fugitive emissions component shall consider the fugitive emissions component repaired when the EPA Method 21 (40 CFR 60, Appendix A-7) instrument indicates a concentration of less than 500 ppm of methane or when no soap bubbles are observed during a bubble test.
 - (iii) Owners and operators of affected facilities subject to this section that use OGI to resurvey the repaired or replaced fugitive emissions component shall consider the fugitive emissions component repaired when the OGI instrument shows no indication of visible emissions or when no soap bubbles are observed during a bubble test.
- (c) A delay of repair may occur when, upon request, the owner or operator provides documentation to the Department that supports the following:
 - (i) The parts or equipment required to make necessary repairs will take longer than 30 days to be ordered and delivered, but the repair may not exceed 1 year;
 - (ii) The repair is unsafe to perform during the operation of the unit; or
 - (iii) The repair requires a blowdown or facility shutdown in order to complete.
- (d) Leaking fugitive emission components awaiting repair or replacement under a delay of repair shall be clearly marked or identified in the facility's records.
- (e) Leaking fugitive emission components under a delay of repair according to §A(9)(c)(i) of this regulation shall:
 - (i) Be repaired or replaced within 7 days after the owner or operator receives parts or equipment; or
 - (ii) Be repaired or replaced at the next vent or compressor station blowdown if the owner or operator has identified this fugitive emission component as needing a vent or compressor station blowdown.

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- (f) Fugitive emission components under a delay of repair according to §A(9)(c)(ii) and (iii) of this regulation shall be repaired or replaced within 1 year, at the next vent blowdown or facility shutdown, whichever occurs first.
 - (g) If a repair of a leak cannot be successfully completed according to this subsection, the owner or operator of the affected facility shall prepare a plan, for Department approval, that includes:
 - (i) An explanation of the technical difficulty;
 - (ii) A timeline to successfully repair the fugitive emission components;
 - (iii) A calculation of the additional methane that is expected to be released while on delay of repair; and
 - (iv) Upon written request from the Department, any other information that the Department determines is necessary to evaluate the plan.
 - (h) The owner or operator of the affected facility shall submit any plan required under §A(9)(g) of this regulation to the Department within 30 days from identifying the leak.”
- (e) **COMAR 26.11.41.05 – Reciprocating Natural Gas Compressor Methane Emission Control Requirements.**
 - A. All reciprocating natural gas compressor components at an affected facility shall comply with the leak detection and repair requirements in Regulation .03 of this chapter where applicable.

Note: Transcontinental Gas Pipe Line Company (Transco) – Transco Compressor Station 190, in Howard Count, Maryland, maintains a “**Methane Emissions Monitoring Plan (EMP)**” (January 15, 2021, Revised April 27, 2021) Project No.: 0578546. This document serves as the site-specific EMP for the leak, detection, and repair for fugitive emissions from process components at the station and to satisfy the requirements of COMAR 26.11.41.03(A)(1). Revisions to the EMP are made and implemented as needed.
- (f) **COMAR 26.11.41.07 – Record-Keeping and Reporting Requirements.**
 - A. Owners or operators of affected facilities shall maintain, submit as described in this section, and make available upon request by the

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Department a copy of records necessary to verify compliance with the provisions of this chapter, as follows:

- (1) For each leak monitoring survey and audio, visual, and olfactory inspection conducted according to Regulation .03 of this chapter, owners and operators shall:
 - (a) Submit a report to the Department within 60 days of each leak monitoring survey with the following information:
 - (i) Date of the survey;
 - (ii) A list of each fugitive emission and repair;
 - (iii) Any deviations from the initial methane monitoring plan or a statement that there were no deviations from the initial methane monitoring plan;
 - (iv) Number and type of components for which fugitive emissions were detected;
 - (v) Number and type of difficult-to-monitor fugitive emission components monitored;
 - (vi) Instrument reading of each fugitive emissions component that requires repair when EPA Method 21 (40 CFR 60, Appendix A-7) is used for monitoring;
 - (vii) Number and type of fugitive emissions components that were not repaired;
 - (viii) Number and type of fugitive emission components placed on delay of repair and explanation for each delay of repair;
 - (ix) The date of successful repair of the fugitive emissions component; and
 - (x) Instrumentation used to resurvey a repaired fugitive emissions component that could not be repaired during the initial fugitive emissions finding;
 - (b) Maintain, for a minimum of 5 years, record of each leak monitoring survey along with the following information:

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- (i) Reports submitted according to §A(1)(a) of this regulation;
 - (ii) Beginning and end time of the survey;
 - (iii) Name of operator(s) performing survey;
 - (iv) Monitoring instrument used, including the manufacturer, model number, serial number, and calibration documentation;
 - (v) When optical gas imaging is used to perform the survey, one or more digital photographs or videos, captured from the optical gas imaging instrument used for conduct of monitoring, of each required monitoring survey being performed;
 - (vi) Fugitive emissions component identification when EPA Method 21 (40 CFR 60, Appendix A-7) is used to perform the monitoring survey;
 - (vii) Ambient temperature, sky conditions, and maximum wind speed at the time of the survey;
 - (viii) Any deviations from the initial methane monitoring plan or a statement that there were no deviations from the initial methane monitoring plan;
 - (ix) Proof that parts or equipment required to make necessary repairs, as required by this chapter, have been ordered;
 - (x) If a fugitive emissions component is not tagged, a digital photograph or video of each fugitive emissions component that could not be repaired during the leak monitoring survey at the time the fugitive emissions were initially found; and
 - (xi) Repair methods applied in each attempt to repair the fugitive emissions components;
- (c) Post a quarterly report summary to a publicly available website of each leak monitoring survey, including the information required in §A(1)(a) of this regulation, 60 days after the leak monitoring survey; and

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- (d) Maintain records of audio, visual, and olfactory inspections for at least 5 years from the date of inspection.
- (2) For each natural gas-powered continuous bleed pneumatic device, owners and operators shall:
 - (a) Maintain a record of the emission flow rate measurement and report annually beginning April 1, 2021, for at least 5 years from the date of each emissions flow rate measurement;
 - (b) Maintain records of the date, location, and manufacturer specifications for each continuous bleed pneumatic device constructed, modified, or reconstructed and report annually beginning April 1, 2021;
 - (c) Maintain records of the manufacturer's specifications indicating that the device is designed such that natural gas bleed rate is less than or equal to 6 standard cubic feet per hour, if applicable;
 - (d) Maintain records of deviations in cases where the pneumatic device was not operated in compliance with the requirements specified in Regulation .04 of this chapter and report annually beginning April 1, 2021;
 - (e) Maintain purchase orders, work orders, or any in-house or third-party reports produced or provided to the affected facility relating to the device for at least 5 years; and
 - (f) Maintain a record of each continuous bleed pneumatic inspection and any corrective or maintenance action taken for at least 5 years.
- (3) For each reciprocating natural gas compressor, owners and operators shall:
 - (a) Maintain a record of each rod packing leak concentration measurement found above the minimum leak threshold and report annually beginning April 1, 2021, for at least 5 years from the date of each leak concentration measurement;
 - (b) Maintain a record of each rod packing or seal emission flow rate measurement and report annually beginning April 1,

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2021, for at least 5 years from the date of each emissions flow rate measurement;

- (c) Maintain a record that documents the date(s) and hours of operation a compressor is operated in order to demonstrate compliance with the rod packing leak concentration or emission flow rate measurement in the event that the compressor is not operating during a scheduled inspection for at least 1 calendar year;
- (d) Maintain records that provide proof that parts or equipment required to make necessary repairs required by this chapter have been ordered;
- (e) Report annually the cumulative number of hours of operation or the number of months since initial startup or the previous reciprocating compressor rod packing replacement, whichever is later, beginning April 1, 2021;
- (f) If applicable, submit a statement that emissions from the rod packing are being routed to applicable vapor control system under Regulation .06 of this chapter;
- (g) Report records of deviations from this chapter that occurred during the reporting period annually, beginning April 1, 2021; and
- (h) Maintain a record of purchase orders, work orders, or any in-house or third-party reports produced or provided to the affected facility necessary to demonstrate compliance with the delay of repair provisions of this chapter for at least 5 years.

B. Blowdown Events and Reports.

Note: Transcontinental Gas Pipe Line Company (Transco) – Transco Compressor Station 190, in Howard Count, Maryland, maintains a “**Blowdown Notification Plan**” that was submitted to the Department by Williams on August 7, 2021, for Station 190. The Department reviewed the plan and found that it meets the requirements of COMAR 26.11.41 and was approved (letter dated September 3, 2021).

- (1) Within 90 days of the effective date of this chapter, affected facilities shall submit a blowdown notification plan to the Department for approval of any blowdown event in excess of 1,000,000 standard cubic feet.

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- (2) The blowdown notification plan according to §B(1) of this regulation shall include:
 - (a) The notification format (for example, website, email, robocall, text message, social media announcement, etc.) to local authorities, the Department, and interested parties for blowdown emissions in excess of 1,000,000 standard cubic feet;
 - (b) A public outreach plan to inform interested parties of the availability to be notified of blowdown events in excess of 1,000,000 standard cubic feet;
 - (c) The affected facility's responsible personnel for blowdown notifications; and
 - (d) A sitemap of the facility with clearly marked designated area(s) for blowdown emissions in excess of 1,000,000 standard cubic feet.
- (3) For any blowdown event in excess of 1,000,000 standard cubic feet, affected facilities shall make information publicly available in accordance with the facility's approved blowdown notification plan, including notification to the Department, at least 7 days prior.
- (4) For any blowdown event in excess of 1,000,000 standard cubic feet that is scheduled less than 7 days prior to the blowdown event, affected facilities shall, as soon as practicable:
 - (a) Make information publicly available in accordance with the facility's approved blowdown notification plan; and
 - (b) Provide an explanation to the Department of the reason for the blowdown event.
- (5) For any emergency or unplanned blowdown event in excess of 1,000,000 standard cubic feet, affected facilities shall make information publicly available in accordance with the facility's approved blowdown notification plan and notify the Department within 1 hour of the emergency or unplanned blowdown event.

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- (6) When safety concerns preclude a facility from providing prior notification of an emergency or unplanned blowdown under §B(5) of this regulation, the facility shall send notice to the Department within 24 hours of the blowdown event indicating the reason(s) why prior notice was not possible.
- (7) Affected facilities shall report the following information to the Department of blowdown emissions in excess of 50 cubic feet within the facility's fence line annually by April 1 of each year:
 - (a) Date and type (that is, planned or emergency) of each blowdown event;
 - (b) Methane emissions in metric tons released from each blowdown event; and
 - (c) Annual methane emissions in metric tons from all blowdown events.
- (8) Methane emissions shall be calculated according to procedures in 40 CFR Part 98, Subpart W, §98.233.

C. Greenhouse Gas Emissions Reporting.

- (1) Owners and operators of affected facilities shall report methane, carbon dioxide, and nitrous oxide mass emissions to the Department annually by April 1 of each year.
- (2) Owners and operators of affected facilities shall follow the procedures for emission calculation, monitoring, quality assurance, missing data, record keeping, and reporting that are specified in 40 CFR Part 98, Subpart C, and 40 CFR Part 98, Subpart W.
- (3) When reporting to the Department, owners and operators of affected facilities shall expand the fugitive emissions reporting requirements of 40 CFR Part 98, Subpart W, to include a Microsoft Excel format list providing calculations summarized by category under 40 CFR §98.232(e)—(h) as applicable.
- (4) The reporting threshold in 40 CFR §§98.2, 98.31 and 98.231 of 25,000 metric tons of CO₂ equivalent does not exempt an affected facility from following the requirements of this section.

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- D. All required reports shall be submitted to the Industrial Compliance Division in written or electronic format and mailed to Maryland Department of the Environment, Air Quality Compliance Program, 1800 Washington Boulevard, 7th Floor, Baltimore, MD 21230, Attention: Industrial Compliance Division.

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BACKGROUND

Transcontinental Gas Pipe Line Company, LLC (Transco) owns and operates a multi-directional interstate natural gas pipeline system which extends from the Gulf Coast region to areas in the northeastern United States. Compressor Station 190 is used for compression purposes in order to keep the gas flowing through the system.

Natural gas enters the station at approximately 550 pounds per square inch (psi). Compressors boost the pressure of the gas to approximately 770 psi for transmission in the pipeline downstream of the compressor station. Each gas compressor is driven by a mainline (M/L) natural gas fired reciprocating internal combustion engine. Each engine/compressor set includes an exhaust gas stack and a gas blowdown vent system.

Historical Background

Between 1950 and 1951, Transco installed the interstate natural gas pipeline system compression station starting with seven (7) 2,050 brake horsepower (BHP) mainline natural gas fired reciprocating internal combustion engines. Other equipment that was installed included a Cyclotherm 3.3 MMBtu/hr natural gas fired boiler, and an H.B. Smith (G28HE-13S) natural gas-fired 3.978 MMBtu/hr boiler, all the supporting compression station piping components, and other supporting equipment.

Additional internal combustion engines were installed with sizes ranging between 2,100 up to 5,500 BHP to meet increased demand for pipeline natural gas. These installations occurred during the years of 1960, 1961, 1962, and 1969, with a total of twelve (12) engines installed by the end of 1970. In 1997, the facility installed an auxiliary electric power generator powered by a 1,478 HP lean-burn reciprocating IC engine.

On January 20, 2015, Transco received Permit to Construct (PTC) No. 027-0223-5-0054M for the modification of the seven (7) Clark HBA-8T 2,050 BHP engines, and three (3) Clark TLA-6 2,100 BHP engines for the installation of pre-combustion chambers and HPFI technology for the purpose of reducing the NOx emissions of the above-cited 10 engines from a calculated baseline level of 1,196 tons per year to a projected level of at most 294.3 tons per year.

In 2016, Transco submitted a PTC struct (PTC) application for the installation of one (1) Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine, and one (1) natural gas-fired emergency generator rated at 1,450 BHP, as well as

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piping changes to allow multidirectional flow. The permit was issued on March 17, 2016, and the equipment was installed during the year 2017.

The PTC was amended to make a correction to the actual engine power output rating (1,450 BHP) for the emergency generator. The amendment was also aimed at making a clarification with regards to the allowable nitrogen oxide (NO_x) emissions from the Solar Titan 250 combustion turbine which limits nitrogen oxide (NO_x) emissions to 25 ppm at 15 percent oxygen as promulgated under 40 CFR Part 60, Subpart KKKK Table 1 for new natural gas-fired turbines between 50 and 850 MMBtu/hr. Transco requested that NO_x emissions from the Solar Titan 250 combustion turbine be limited to 15 ppm at 15 percent oxygen, which is guaranteed by the manufacturer specification data. Emission stack testing was conducted on the combustion turbine on September 19, 2018, for NO_x, CO, and VOC emissions. Results demonstrated compliance with the permitted emission limits.

In late 2022, Transco received a PTC to replace the existing Cyclotherm C2800 natural gas-fired 3.3 MMBtu/hr boiler with a more efficient H.B. Smith Model G28HE-13S Boiler 3.9 MMBtu/hr natural gas-fired boiler for space heat.

Air Emissions

Transco major air emissions sources consist of twelve (12) mainline natural-gas fired reciprocating internal combustion engines installed by the end of 1970, an auxiliary electric power generator powered by one (1) 1,478 BHP lean-burn reciprocating IC engine, installed in 1997, two (2) natural gas-fired boilers, a 30,000 HP combustion turbine, and a 1,450 BHP natural gas-fired emergency generator, both installed in 2017.

The combustion turbine is equipped with SoLoNO_xTM emission controls designed to limit the NO_x, CO, and unburned hydrocarbon (UHC) emissions. The exhaust gas emission concentrations are guaranteed by the manufacturer and apply while operating between 40 to 100% of full load and at ambient air temperatures greater than -20°F.

The following Table 1 summarizes the actual emissions from Transco based on its Annual Emission Certification Reports:

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Table 1: Actual Emissions⁽¹⁾

Year	NO_x (TPY)	SO_x (TPY)	PM₁₀ (TPY)	CO (TPY)	VOC (TPY)	HAP² (TPY)
2025	41.9	0.48	9.2	62.7	38.5	5.98
2024	29.4	0.50	7.88	40.0	36.4	3.45
2023	57.55	0.63	6.80	84.27	53.42	8.28
2022	60.22	0.13	8.13	142.03	51.69	9.04
2021	61.50	0.11	7.26	195.90	69.81	11.93
2020	136.82	0.13	7.88	211.61	71.16	10.44
2019	155.23	0.04	2.55	98.88	39.79	3.57

Note 1: Since 2018, emission levels have increased back to historical levels primarily after the completion of the project that installed the HPFI/PCC retrofit project (2017) for compressor M/L Units 1 through 10.

Note 2: TRANSCO's certified emissions only include the HAP formaldehyde, which is expected to be the bulk of the HAP emissions.

The applicable major source threshold for triggering Title V permitting requirements in Howard County is a potential to emit of 25 tons per year for NO_x, 25 tons per year for VOC, 100 tons per year for any other criteria pollutant, and 10 tons per year for any single Hazardous Air Pollutant (HAP) or 25 tons per year for total HAPS. Since the facility-wide actual emissions of NO_x, VOC, and CO are each over the major source threshold, Transco is required to obtain a Part 70 permit under COMAR 26.11.03.01. The facility is a major source for the individual HAP formaldehyde as well as aggregate HAP emissions.

The Part 70 permit renewal application from Transco was received by the Department on December 1, 2022. An administrative completeness review was conducted, and the application was deemed to be complete. The completeness determination letter was sent on December 28, 2022 granting the facility an application shield.

GREENHOUSE GAS (GHG) EMISSIONS

Transco emits the following greenhouse gases (GHGs) related to Clean Air Act requirements: carbon dioxide, methane, and nitrous oxide. These GHGs originate from gas fugitives, internal combustion engines, and small boilers contained within the facility premises applicable to Transco. The facility has not triggered Prevention of Significant Deterioration (PSD) requirements for GHG emissions; therefore, there are no applicable GHG Clean Air Act requirements.

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There may be no applicable requirements as a result of PSD, emission certifications report for the years 2021, 2022, 2023, 2024 and 2025 (see Table 2 shown below). However, during the same years mentioned earlier, emission certification reports showed that Transco is a major source (threshold: 100,000 tpy CO_{2e}) for GHGs. The Permittee must quantify facility wide GHGs emissions and report them in accordance with Section 3 of the Part 70 permit.

The following table summarizes the actual emissions from Transco based on its Annual Emission Certification Reports:

Table 2: Greenhouse Gases Emissions Summary

GHG	Conversion factor	2025 tpy CO_{2e}	2024 tpy CO_{2e}	2023 tpy CO_{2e}	2022 tpy CO_{2e}
Carbon Dioxide CO ₂	1	89,202	93,165	118,195	120,586
Methane CH ₄	25	195	147	1547	1576
Nitrous Oxide N ₂ O	310	0.03	0.02	0.15	n/r
Total GHG CO_{2eq}		89,397	119,742	93,312	122,162

Transco did not quantify its emissions of nitrous oxide although some emissions would be expected from fuel burning equipment. AP-42 emission factor data is very limited, but from AP-42 Tables 1.4 and 3.1 - 2a, one would perhaps expect in the order of 500 - 2000 tpy CO_{2eq}.

Compliance Assurance Monitoring

The Compliance Assurance Monitoring (CAM) Rule 40 CFR Subpart 64 is not applicable because Transco Station 190 is subject to an emissions limitation that was proposed by the EPA administrator after November 15, 1990 pursuant to Section 111 or 112 of the Clean Air Act (specifically the facility is subject to the NSPS for 40 CFR 60, Subpart Dc, for Small Industrial-Commercial-Institutional Steam Generating Units, 40 CFR 60, Subpart IIII for Stationary Compression-Ignition Internal Combustion Engines, 40 CFR 60, Subpart JJJJ for Stationary SI Internal Combustion Engines, and 40 CFR 60, Subpart KKKK—NSPS for Stationary Combustion Turbines and HRSGs.

Transco is exempt from CAM requirements since no installation employs an add-on control device within the meaning of the regulation 40 CFR §64.1 to achieve compliance with any emissions regulation.

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EMISSION UNIT IDENTIFICATION

Transco has identified the following emission units at the facility as being subject to Title V permitting requirements and having applicable requirements.

Table 3: Emission Unit Identification

Emissions Unit Number	MDE Registration Number	Emissions Unit Name and Description	Date of Installation
M/L Unit 1	027-0223-5-0054	Mainline natural gas-fired reciprocating internal combustion engine, 2-cycle, lean-burn Clark HBA-8T, 2,050 BHP	03/1951
M/L Unit 2	027-0223-5-0054	Mainline natural gas-fired reciprocating internal combustion engine, 2-cycle, lean-burn Clark HBA-8T, 2,050 BHP	03/1951
M/L Unit 3	027-0223-5-0054	Mainline natural gas-fired reciprocating internal combustion engine, 2-cycle, lean-burn Clark HBA-8T, 2,050 BHP	03/1951
M/L Unit 4	027-0223-5-0054	Mainline natural gas-fired reciprocating internal combustion engine, 2-cycle, lean-burn Clark HBA-8T, 2,050 BHP	03/1951
M/L Unit 5	027-0223-5-0054	Mainline natural gas-fired reciprocating internal combustion engine, 2-cycle, lean-burn Clark HBA-8T, 2,050 BHP	03/1951
M/L Unit 6	027-0223-5-0054	Mainline natural gas-fired reciprocating internal combustion engine, 2-cycle, lean-burn Clark HBA-8T, 2,050 BHP	03/1951
M/L Unit 7	027-0223-5-0054	Mainline natural gas-fired reciprocating internal combustion engine, 2-cycle, lean-burn Clark HBA-8T, 2,050 BHP	03/1951
M/L Unit 8	027-0223-5-0054	Mainline natural gas-fired reciprocating internal combustion engine, 2-cycle, lean-burn Clark	12/1960

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		TLA-6, 2,100 BHP	
M/L Unit 9	027-0223-5-0054	Mainline natural gas-fired reciprocating internal combustion engine, 2-cycle, lean-burn Clark TLA-6, 2,100 BHP	09/1961
M/L Unit 10	027-0223-5-0054	Mainline natural gas-fired reciprocating internal combustion engine, 2-cycle, lean-burn Clark TLA-6, 2,100 HP	07/1962
M/L Unit 11	027-0223-5-0054	Mainline natural gas-fired reciprocating internal combustion engine, 2-cycle, lean-burn Clark TCV-10, 3,400 HP	03/1969
M/L Unit 12	027-0223-5-0054	Mainline natural gas-fired reciprocating internal combustion engine, 2-cycle, lean-burn, Clark TCV-16, 5,500 HP	05/1970
AUX 1	027-0223-9-0186	Auxiliary electric power generator; 4-cycle, lean-burn, reciprocating IC engine, Waukesha 7042 GL, 1,478 HP	03/1997
BLR 1	027-0223-5-0455	H.B. Smith (G28HE-13S) natural gas-fired 3.978 MMBtu/hr boiler.	2023
BLR 2	027-0223-5-0064	Cyclotherm C2800 natural gas-fired 3.3 MMBtu/hr boiler.	1960
FUG 1	n/a	Piping component fugitives	1950's
FUG 2	n/a	Venting/blowdown emissions	1950's
CT-1	027-0223-9-0391	One (1) Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine.	2017
EG-1	027-0223-9-0392	One (1) natural gas-fired emergency generator rated at 1,450 BHP.	2017

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AN OVERVIEW OF THE PART 70 PERMIT

The Fact Sheet is an informational document. If there are any discrepancies between the Fact Sheet and the Part 70 permit, the Part 70 permit is the enforceable document.

Section I of the Part 70 Permit contains a brief description of the facility and an inventory list of the emissions units for which applicable requirements are identified in Section IV of the permit.

Section II of the Part 70 Permit contains the general requirements that relate to administrative permit actions. This section includes the procedures for renewing, amending, reopening, and transferring permits, the relationship to permits to construct and approvals, and the general duty to provide information and to comply with all applicable requirements.

Section III of the Part 70 Permit contains the general requirements for testing, record keeping and reporting; and requirements that affect the facility as a whole, such as open burning, air pollution episodes, particulate matter from construction and demolition activities, asbestos provisions, ozone depleting substance provisions, general conformity, and acid rain permit. This section includes the requirement to report excess emissions and deviations, to submit an annual emissions certification report and an annual compliance certification report, and results of sampling and testing.

Section IV of the Part 70 Permit identifies the emissions standards, emissions limitations, operational limitations, and work practices applicable to each emissions unit located at the facility. For each standard, limitation, and work practice, the permit identifies the basis upon which the Permittee will demonstrate compliance. The basis will include testing, monitoring, record keeping, and reporting requirements. The demonstration may include one or more of these methods.

Section V of the Part 70 Permit contains a list of insignificant activities. These activities emit very small quantities of regulated air pollutants and do not require a permit to construct or registration with the Department. For insignificant activities that are subject to a requirement under the Clean Air Act, the requirement is listed under the activity.

Section VI of the Part 70 Permit contains State-only enforceable requirements. Section VI identifies requirements that are not based on the Clean Air Act, but solely on Maryland air pollution regulations. These requirements generally relate

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to the prevention of nuisances and implementation of Maryland's Air Toxics Program.

**REGULATORY REVIEW/TECHNICAL REVIEW/COMPLIANCE
METHODOLOGY**

Federal Applicable Regulations

Transco is subject to both federal as well as state regulations that are applicable to the emission sources listed at the facility. Transco is subject to the following federal air regulations from Title 40, Code of Federal Regulations (CFR):

40 CFR 60—New Source Performance Standards (NSPS)

• **40 CFR 60, Subpart A**—NSPS General Provisions, which applies to emissions units subject to a categorical NSPS.

• **40 CFR 60, Subpart JJJJ**—Source Performance Standards (NSPS) for Stationary SI Internal Combustion Engines, including, but not limited to, the following sections:

§60.4231(e) Stationary SI internal combustion engine manufacturers who choose to certify their stationary SI ICE with a maximum engine power greater than or equal to 75 KW (100 HP) ... under the voluntary manufacturer certification program described in this subpart must certify those engines to the emission standards in Table 1 to this subpart...

§60.4233(e) Owners and operators of stationary SI ICE with a maximum engine power greater than or equal to 75 KW (100 HP) ... must comply with the emission standards in Table 1 to this subpart for their stationary SI ICE.

Table 1 to Subpart JJJJ of Part 60—NO_x, CO, and VOC Emission Standards for ... Stationary Emergency Engines >25 HP

Engine type and fuel	Maximum engine power	Manufacture date	Emission standards					
			g/HP-hr			ppmvd at 15% O ₂		
			NO _x	CO	VOC	NO _x	CO	VOC
Emergency	25<HP<130	1/1/2009	≤10	387	N/A	N/A	N/A	N/A
	HP≥130		2.0	4.0	1.0	160	540	86

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• **40 CFR 60, Subpart KKKK**—NSPS for Stationary Combustion Turbines, which applies to the Solar Titan 30,000 HP natural gas-fired combustion turbine, including but not limited to the following sections:

§60.4320(a) You must meet the emission limits for NO_x specified in Table 1 to this subpart.

Table 1 to 40 CFR, Subpart KKKK—Nitrogen Oxide Emission Limits for New Stationary Combustion Turbines

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

§60.4330(a)(2) You must not burn in the subject stationary combustion turbine any fuel which contains total potential sulfur emissions in excess of 26 ng SO₂/J (0.060 lb SO₂/MMBtu) heat input....

40 CFR 63—National Emissions Standards for Hazardous Air Pollutants (NESHAP)

• **40 CFR 63, Subpart A**—NESHAP General Provisions. Traditionally, the facility has been a major source of HAPs. However, during the last five years the facility has decreased its emissions due primarily to the idling of the compressor M/L Units 1 thru 10. The compressor M/L Units 1-10 operation dropped off significantly from historical levels in 2013 and continued to be idle through installation of the HPFi/PCC retrofits in 2017. As natural gas demand increases in future years it is expected that HAP emission will resume to the more traditional levels.

• **40 CFR 63, Subparts YYYY** for Stationary Combustion Turbines. Only the following apply.

§63.6095(c) You must meet the notification requirements in §63.6145 according to the schedule in §63.6145 and in 40 CFR 63, Subpart A.

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§63.6095(d) *Stay of standards for gas-fired subcategories.* If you start up a new or reconstructed stationary combustion turbine that is a lean-premix gas-fired stationary combustion turbine or diffusion flame gas-fired stationary combustion turbine as defined by this subpart, you must comply with the Initial Notification requirements set forth in §63.6145 but need not comply with any other requirement of this subpart until EPA takes final action to require compliance and publishes a document in the FEDERAL REGISTER.

• **40 CFR 63, Subpart DDDDD**—NESHAP for Industrial, Commercial, and Institutional Boilers and Process Heaters. There are only two small natural gas fired boilers at the facility, the larger of which is 3.3 million Btu/hr. The facility's boilers fall into 40 CFR Part 63, Subpart DDDDD MACT source category for Industrial, Commercial, and Institutional Boilers and Process Heaters which was initially promulgated on September 13, 2004. Under the rule as promulgated on that date, the boilers were exempt from any requirements under the rule. However, the rule was vacated and remanded by the D.C. Court of Appeals on June 7, 2007. In response to the Court's vacatur and remand, EPA promulgated a revised final rule on March 21, 2011 and on the same day published a notice to reconsider certain provisions to the final rule. In response to comments received, EPA promulgated the current version of the final rule on January 31, 2013, removing the vacatur. The boilers now qualify under the gaseous fuel-1 subcategory and are required to have an initial energy assessment and complete a tune up every 5 years, but are not subject to any emission limits. The initial tune-up of the boiler was performed on January 5, 2016. The energy assessment was performed on August 19, 2015.

• **40 CFR 63, Subpart ZZZZ**—NESHAP for Stationary Reciprocating Internal Combustion Engines.

Existing Sources

Since facility is a major source of HAPs, the facility is potentially subject to several NESHAPs. The NESHAP for reciprocating stationary internal combustion engines (RICE), 40 CFR Part 63, Subpart ZZZZ, was first promulgated on June 15, 2004. Regulation amendments were promulgated on January 18, 2008 and January 30, 2013, which, however, did not affect this facility. The engines continue to fall into an exemption provided under §63.6590(b)(3)(i) – (ii), which exempt existing spark ignition 2-stroke and 4-stroke lean burn engines from having to comply with the requirements of Subpart ZZZZ and Subpart A (an existing engine is one manufactured before December 19, 2002). The facility is also exempt from the initial notification requirement.

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New Sources

During the last five years, the Permittee installed a one (1) natural gas-fired boiler (H.B. Smith, Model G28HE-13S) rated at 3.3 MMBtu/hr. **[ARA Reg. No. 027-0223-5-0455]** The new boiler was installed in 2022. The boiler will be listed as **BLR2**.

The new boiler [5-0455] is subject to 40 CFR 63, Subpart DDDDD, for Industrial, Commercial, and Institutional Boilers and Process Heaters. The Permittee will be required to meet each emission limit, and work practice standard in Tables 1 through 3 and 11 through 13, as well as record-keeping, reporting requirements that apply to the boiler, all listed in the referenced standard.

The new boiler substituted the existing boiler Cyclotherm C2800 natural gas-fired 3.3 MMBtu/hr boiler **[ARA Reg. No. 027-0223-5-0064]**, originally installed in 1960. The new boiler (H.B. Smith) is more efficient for burning natural gas and will be used to provide space heating.

State Applicable Regulations

Applicable state regulations include but are not limited to the control of visible emissions, control of nitrogen oxides from natural gas pipeline, and control of sulfur oxides from fuel burning equipment. The facility is also subject to federally enforceable state air quality requirements, including but not limited to:

COMAR 26.11.09.05A(2), which controls Visible Emissions, originating from the 30,000 HP natural gas-fired combustion turbine only.

COMAR 26.11.09.05E, which limits emissions from internal combustion engines to 10 percent opacity while operating at idle and 40 percent opacity while operating during non-idle condition, originating from the 1,450 HP natural gas-fired emergency generator.

Inapplicable Regulations

The Permittee specifically identified the following requirements as being inapplicable to the facility. The Department concurs with these inapplicability determinations:

- **40 CFR 60, Subparts OOOO**—(NSPS for Crude Oil and Natural Gas Production, Transmission, and Distribution): applies to crude oil, condensate, and

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produced water storage tanks, installed after August 23, 2011, that emit more than 6 tons of VOC per years. This rule does not apply to Transco Compressor Station 190.

• **40 CFR 60, Subpart OOOOa**—(NSPS for Crude Oil and Natural Gas Production, Transmission, and Distribution):

The EPA amended Subpart OOOO and added a new Subpart, OOOOa. The new Subpart OOOOa will apply to facilities constructed, modified or reconstructed after September 18, 2015. Transco Compressor Station 190 installed a new combustion turbine on March 2017. Under Subpart OOOOa EPA proposed requirements to control methane and VOC emissions from two types of compressors used at natural gas compressor stations: centrifugal compressors and reciprocating compressors. However, the 30,000 HP combustion turbine drives a centrifugal compressor equipped with a dry seal system. Centrifugal compressors using dry seal systems have low methane and VOC emissions and currently do not have emission limits or applicable requirements under Subpart OOOOa.

• **40 CFR 63, Subpart HH**—(Oil and Natural Gas Production): applies to major HAP facilities that process, upgrade, or store, hydrocarbon liquids and natural gas from the well up to and including the natural gas processing plant. The facility is a natural gas transmission/transportation facility located downstream of any natural gas processing plants. Therefore, the facility is not subject to the requirements of this Subpart HH.

• **40 CFR 63, Subpart HHH**—(Natural Gas Transmission and Storage): applies to facilities that process, upgrade, transport or store natural gas prior to distribution to a local distribution company (LDC) or a final end user if no LDC is present. The final standards require that the owner or operator of a major source of HAPs reduce HAP emissions from glycol dehydration units through the application of air emission control equipment or pollution prevention measures, or a combination of both. Since the facility does not have any glycol dehydration units, there are no applicable requirements from this Subpart.

• **40 CFR 68 and CAA §112(r)**—The facility is exempt as a natural gas pipeline facility subject to regulation by the Department of Transportation.

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Emissions Units: M/L Unit 1 through M/L Unit 10

[MDE Reg No. 027-0223-5-0054]

Seven (7) Clark HBA-8T mainline natural gas-fired reciprocating internal combustion engines (2-cycle, lean-burn) each rated at 2,050 BHP; and

Three (3) Clark TLA-6 mainline natural gas-fired reciprocating internal combustion engines (2-cycle, lean-burn) each rated at 2,100 BHP

Permitting History

The engines were installed between 1950 and 1962, prior to the enactment of the Clean Air Act.

The engines are not subject to any emissions limitations associated with New Source Review or to any NSPS or NESHAP standard.

Compliance Status

Transco was issued a Construction Permit (1/20/2015) to modify ten engines at the facility to reduce NOx emissions. The permit requires an initial performance stack test for NOx, CO, and VOC after the engine modifications are completed. Initial testing was conducted in March of 2017 which demonstrated compliance. After some engine adjustments to the High-Pressure Fuel Injection and pre-combustion chambers, Transco tested the units again to gain a more accurate demonstration of the emissions of the units. Results show an average NOx rate of 5.20 lb/hr; an average CO rate of 5.06 lb/hr; and an average VOC rate of 0.83 lb/hr. The units also demonstrated compliance with the NOx emission rate of 1.5 g/HP-hr (per unit).

On March 24, 2025, the Air Compliance Program performed a full compliance review of the facility and documented it in a report. The engines were found to be complete and no deviations were reported.

Applicable Standards

A. Control of Visible Emissions

[COMAR 26.11.09.05E(2)] – Stationary Internal Combustion Engine Powered Equipment.

COMAR 26.11.09.05E(2) – which limits visible emissions from an internal combustion engine to 10 percent opacity during idle mode.

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COMAR 26.11.09.05E(3) – which limits visible emissions from an internal combustion engine to 40 percent opacity during operating mode.

COMAR 26.11.09.05E(4)(a) & (b) – which allows the following exceptions from the requirement of COMAR 26.11.09.05E(2):

The requirement does not apply for a period of 2 consecutive minutes after a period of idling of 15 consecutive minutes for the purpose of clearing the exhaust system.

The requirement does not apply to emissions resulting directly from cold engine start-up and warm-up for a maximum period of 30 minutes for engines that are idled continuously when not in service; or for a maximum period of 15 minutes for all other engines.

COMAR 26.11.09.05E(4)(c) allows the exception from the requirements of COMAR 26.11.09.05E(2)&(3) when maintenance, repair, or testing is being performed by qualified mechanics.

Compliance Demonstration:

The Permittee is required to report incidents of visible emissions in accordance with the requirements to report excess emissions and deviations. See permit Condition 4, of Section III of the permit. The Permittee shall perform Method 9 observation for 30 minutes during the scheduled stack testing to show compliance with the applicable opacity standards.

[Authority: COMAR 26.11.03.06C(3)] The Permittee shall keep record of the Method 9 results and submit to the Department upon request.

[Authority: COMAR 26.11.03.06C]

Rationale for Periodic Monitoring:

The engines may burn only natural gas, a very clean burning fuel. The engines are designed to operate with little or no visible emissions. The engines would have to undergo a serious malfunction in order to have significant visible emissions. Preventative maintenance as recommended by the engine manufacturer and supplemented with the facility's maintenance experiences will ensure that the engines will continue to operate with little or no visible emissions and minimize the possibility of a malfunction.

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B. Control of Nitrogen Oxides from Natural Gas Pipeline Compression Stations – Applicability and General Requirements [COMAR 26.11.29.02B(2)] – NOx Emission Limits.

COMAR 26.11.29.02B(2) – which states that a person who owns or operates an internal combustion engine at a natural gas pipeline station shall perform either parametric optimization or engine rebuild to meet the following NOx emissions standards: facilities with more than five engines shall meet a combined maximum hourly emission rate of 566 pounds per hour.

Note: On January 20, 2015, the Department issued to Transco, Permit to Construct No. 027-0223-5-0054M for the modification of the seven (7) Clark HBA-8T 2,050 BHP engines, and three (3) Clark TLA-6 2,100 BHP engines for the installation of pre-combustion chambers and HPFI technology for the purpose of reducing the NOx emissions of the above-cited 10 engines from a calculated baseline level of 1,196 tons per year to a projected level of at most 294.3 tons per year.

Compliance Demonstration:

During the lifetime of this permit, the Permittee shall schedule and perform a NOx emission test on at least one of the seven Clark HBA-8T units and at least one of the three Clark TLA-6 engines. The Permittee shall also perform a NOx emission test on any engine that operates more than 2,190 hours in a calendar year. The Permittee shall submit a test protocol to the Department for approval at least 30 days prior to the proposed test date.

The Permittee shall perform an annual NOx emissions test using appropriate EPA Reference Methods unless alternative test methods receive prior approval from the Department. The most recent NOx emission test results for each engine model category shall be used to determine compliance with the 566 pounds per hour NOx emission limit for M/L engines. **[Authority: COMAR 26.11.03.06C(3)]**

An exemption from the annual testing requirement is provided for an individual engine if such engine's operation does not exceed 2,190 hours during a calendar year (i.e., ¼ of the maximum potential 8760 operating hours).

If the results of the NOx testing indicate that the NOx emission limit for all M/L engines combined may be exceeded, the Permittee is required to determine the cause of the excess NOx emissions, take corrective action, and retest the units that contribute to the excess NOx emissions. The Permittee shall

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complete the investigation, corrective action, and retest within 60 days after the results of testing indicate possible exceedance of the facility-wide NOx emission rate.

The Permittee is required to maintain records that include at a minimum the results of annual NOx testing to establish and verify compliance with the NOx emission limit of 566 pounds per hour and records of maintenance performed on the engines whenever required in order to avoid a possible exceedance of the NOx emission limit for all M/L engines combined.

On March 24, 2025, the Air Compliance Program performed a full compliance review of the facility and documented it in a report. The engines were found to be complete and no deviations were reported.

The NOx emissions test results that were conducted during the last 6 years is given below. The combined NOx emissions from engines M/L #1 through #12 continue to be well under 566 pounds per hour.

Engine	2024	2023	2022	2021	2020	2019
M/L # 1						
M/L # 2		6.9	5.7	4.08	4.19	
M/L # 3						
M/L # 4	5.1	4.5	3.4		4.01	
M/L # 5			6.5	3.73	2.27	
M/L # 6						
M/L # 7			6.3	4.1	3.69	
M/L # 8		4.3			6.05	
M/L # 9	1.8	5.3		2.68		
M/L # 10			6.2	2.83	4.66	
M/L # 11	9.2	4.1	8.7	1.89	2.92	8.92
M/L # 12	7.7	14.5	13.5		14.91	13.15
Total						

NOTE: Engines are operated in response to changing market demands. To address the testing requirements during periods of reduced operation, the Title V Operating Permit issued on September 1, 2014 included the following language in Section 1.2 B.

“In the event an engine’s operating time does not exceed 2,190 hours in a calendar year, such engine would be exempt from the testing requirement for that calendar year. The most recent previous NOx emission test results for that engine shall be used to determine compliance with the 566 pounds per hour NOx emission limit for M/L engines.”

Testing was conducted during the 2024 calendar year on M/L Units 4, 9, 11 and 12.
Testing was conducted during the 2023 calendar year on M/L Units 2, 4, 9, 11 and 12.
Testing was conducted during the 2022 calendar year on M/L Units 2, 4, 5, 7, 10 and 12.

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Testing was conducted during the 2021 calendar year on M/L Units 2, 5, 7, 9 and 10, as each unit operated less than 2,190 hours. Testing was conducted on M/L Unit 11 in 2021. However, M/L Unit 12 was down for major repair and was not tested during 2021. No testing was conducted during the 2020 calendar year on M/L Units 1, 3, 6 and 9, as each unit operated less than 2,190 hours. No testing was conducted during the 2019 calendar year on M/L Unit 1 thru 10, as each unit operated less than 2,190 hours. Testing was conducted on M/L Unit 11 and M/L Unit 12 during 2019.

Rationale for Periodic Monitoring:

The Department believes an annual determination of the maximum hourly NO_x emission rate of all engines should be sufficient to assure compliance with the regulation. The Permittee has performed NO_x emissions tests at near maximum load on at least two of the engines each year since 1997. The accumulated emissions test data indicates that the expected mean value of the maximum hourly emissions from all engines M/L #1 through M/L #12 would be 372 lb/hr, well within the 566 lb/hr regulatory limit. The actual variation of the emissions from year to year and engine to engine indicate that, provided that the engines are well maintained, the potential for an exceedance of this limit is unlikely.¹

C. Operational Limitations

The Permittee shall burn only pipe line quality natural gas unless the Permittee applies for and receives an approval or permit from the Department. **[Authority: COMAR 26.11.02.09]**

Compliance demonstration:

The Permittee is required to maintain a record of the type and quantity of fuel burned in each engine and report the information in the annual emissions certification report.

Rationale:

This operational limit clarifies that the Permittee is limited to burning natural gas. By limiting the fuel to natural gas, little or no visible emissions are expected from the engines. The engines are designed to burn only natural

¹ the mean hourly emission rate for each Clark HBA-8T engine was 24.5 lb/hr with a standard deviation of 3.9 lb/hr. For each Clark TLA-6 engines the mean hourly emission rate was 45.5 lb/hr with a standard deviation of 13.3 lb/hr.

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gas. The Permittee is required to seek approval from the Department prior to modifying the engines to burn an alternate fuel. The facility handles only natural gas and it is the only source of fuel on site.

Emissions Units: M/L Unit 11 and M/L Unit 12

[MDE Reg No. 027-0223-5-0054]

One (1) Clark TCV-10 mainline natural gas fired reciprocating internal combustion engine (2-cycle, lean-burn) rated at 3,400 HP;

One (1) Clark TCV-16 mainline natural gas fired reciprocating internal combustion engine (2-cycle, lean-burn), rated at 5,500 HP.

Permitting History

The engines were installed in March 1969 and May 1970, prior to the effective date of the PSD regulations. The engines are not subject to any New Source Performance Standard.

Permit to Construct No. 027-9-0224 M was issued on November 18, 2002 enabling the installation of NOx emissions control to achieve compliance with the new requirements for IC engines located at natural gas pipeline pumping stations now under COMAR 26.11.29.01-.05.

Compliance Status

On March 24, 2025, the Air Compliance Program performed a full compliance review of the facility and documented it in a report. The engines were found to be complete and no deviations were reported.

Applicable Standards

A. Control of Visible Emissions

[COMAR 26.11.09.05E(2)] – Stationary Internal Combustion Engine Powered Equipment.

COMAR 26.11.09.05E(2) – which limits visible emissions from an internal combustion engine to 10 percent opacity during idle mode.

COMAR 26.11.09.05E(3) – which limits visible emissions from an internal combustion engine to 40 percent opacity during operating mode.

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COMAR 26.11.09.05E(4)(a) & (b) – which allows the following exceptions from the requirement of COMAR 26.11.09.05E(2):

The requirement does not apply for a period of 2 consecutive minutes after a period of idling of 15 consecutive minutes for the purpose of clearing the exhaust system.

The requirement does not apply to emissions resulting directly from cold engine start-up and warm-up for a maximum period of 30 minutes for engines that are idled continuously when not in service; or for a maximum period of 15 minutes for all other engines.

COMAR 26.11.09.05E(4)(c) allows the exception from the requirements of COMAR 26.11.09.05E(2)&(3) when maintenance, repair, or testing is being performed by qualified mechanics.

Compliance Demonstration:

The Permittee is required to report incidents of visible emissions in accordance with the requirements to report excess emissions and deviations. See permit Condition 4, of Section III of the permit. The Permittee shall perform Method 9 observation for 30 minutes during the scheduled stack testing to show compliance with the applicable opacity standards.

[Authority: COMAR 26.11.03.06C(3)] The Permittee shall keep record of the Method 9 results and submit them to the Department upon request.

[Authority: COMAR 26.11.03.06C]

Rationale for Periodic Monitoring:

The engines may burn only natural gas, a very clean burning fuel. The engines are designed to operate with little or no visible emissions. The engines would have to undergo a serious malfunction in order to have significant visible emissions. The preventative maintenance performed by the Permittee as recommended by the engine manufacturer and supplemented with the facility's maintenance experiences assures that the engines will continue to operate without significant visible emissions and minimize the possibility of a malfunction. In addition, the parametric monitoring of operating conditions required for the control of nitrogen oxide emissions (NOx) will provide continuous data on the performance of the engines.

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B. Control of Nitrogen Oxides from Natural Gas Pipeline Compression Stations – Applicability and General Requirements

[COMAR 26.11.29.02(A)] – Applicability.

“This chapter applies to stationary internal combustion engines used to compress natural gas located at natural gas pipeline compression stations.”

[COMAR 26.11.29.02(C)(2)] – NOx Emission Rates.

“A person who owns or operates a stationary internal combustion engine to which this chapter applies shall perform either parametric optimization or engine rebuild to meet the following NOx emission limits:

(1) *Not applicable*

(2) Facilities with more than five engines shall meet a combined maximum hourly emission limit of 566 pounds per hour or less.”

[COMAR 26.11.29.02(C)] – NOx Emission Limits.

The NOx emission rates in §C(2) of this regulation apply to a stationary internal combustion engine used to compress natural gas at a natural gas pipeline compression station if the engine is one of the types and corresponding sizes identified in §C(2) of this regulation.

(2) Emission Rates.

Type Engine	Size (Brake HP)	NO _x Emission Rate (15 Percent Oxygen)
Spark ignited lean burn	2400 HP or greater	125 ppmv

(3) The NOx emission rates in §C(2) of this regulation shall apply on and after May 1, 2003.

Note: The Permittee selected engine rebuilds on M/L Unit 11 and Unit 12 as a means of compliance with the standard for all M/L engines combined. The modifications to Units 11 and 12 were completed in 1997. Compliance with the standard has been demonstrated by testing since 1998.

Compliance Demonstration:

During the lifetime of this permit, the Permittee shall schedule and perform a NOx emission test on the Clark TCV-10 and the Clark TCV-16 engines (M/L Units 11 and 12, respectively) in order to demonstrate compliance with the applicable NOx rates listed under Section 2.1.B, and with the applicable NOx emission limit of 125 ppm (at 15% O₂) and as specified under COMAR 26.11.29.02C(2).

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The Permittee shall submit a test protocol to the Department for approval at least 30 days prior to the proposed test date.

The Permittee shall perform an annual NO_x emissions test on each engine using appropriate EPA Reference Methods unless alternative test methods receive prior approval from the Department. The most recent NO_x emission test results for each engine model category shall be used to determine compliance with the 566 pounds per hour NO_x emission limit for M/L engines. **[Authority: COMAR 26.11.03.06C(3)]**

To comply with the CEM requirements of COMAR 26.11.29.04, the Permittee elected to install a parametric emissions monitoring system (PEMS) in conjunction with high pressure fuel injection developed by Enginuity, Inc. The PEMS methodology was given general approval by the Department subject to confirmatory testing. In April 2003, a series of initial stack tests for NO_x were conducted on both engines. The tests showed the NO_x emissions to be well within compliance levels for the anticipated range of engine operating parameters. The PEMS monitoring requirements apply year-around as stated on PTC 027-0223-5-0054M. **[Authority: PTC 027-9-0224 M issued November 18, 2002, condition D(6)]**

In accordance with the requirements of Permit to Construct No. 027-9-0224 M issued on November 18, 2002, the PEMS is required to automatically sample data at fifteen-minute intervals or less and automatically record block hourly averages in a manner such that the data is retrievable on demand by inspectors. The following parameters are required to be monitored and recorded by the system:

- the engine speed in revolutions per minute (RPM)
- the engine fuel flow rate in SCFM (FF_{SCFM}).
- the actual air manifold pressure in inches of mercury (P_M).
- the air manifold temperature in °F (T_M).

After May 1, 2003, during the Control Period of each year, from May 1 through September 30, the PEMS is required to automatically sample data and calculate at 15 minute intervals or less and automatically record a block hourly average of the following additional parameters in a manner that the data is retrievable on demand by inspectors:

- the calculated critical trapped air/fuel equivalence ratio (TER_C) based on a calculated fuel flow per revolution parameter $W = FF_{SCFM}/RPM$ and an equation of the type below:

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$$TER_C = A * W^2 + B * W + C$$

Where A, B, and C are constants to be determined from the emissions testing.

- the calculated critical air manifold pressure (gage) in inches of mercury (P_{MC}).

$$P_{MC} = 2.036 * [AF_{ST} * (0.0765 * FSG) * W * (T_M + 460) / (2.699 * TER_C * V_{TRAP}) - 14.73]$$

Where:

V_{TRAP} = the engine trapped volume in cubic feet per revolution
(a constant determined by the geometry of the engine).

AF_{ST} = stoichiometric air/fuel mass ratio

FSG = the fuel gas specific gravity referenced to air.

Note: The above equations may be adjusted or modified upon prior written approval from the Department if test data or other considerations indicate that such a modification or adjustment is warranted.

Operation of either engine during the Control Period beginning May 1 of each year and ending September 30 of each year for any period during which a recorded 1-hr block average engine air manifold pressure (P_M) less than the critical air manifold pressure (P_{MC}) value occurs shall constitute an excursion that must be reported to the Department within 30 days after the end of each calendar quarter. More than two excursions per quarter or three excursions during the control period shall constitute a violation of regulation COMAR 26.11.29.05 unless the Permittee can otherwise show that the engine operated in compliance with the regulation during the periods of excursion.

The Permittee is required to maintain the records that demonstrate the performance of parametric optimization to achieve the NOx emissions limit of 125 ppmv at 15 % oxygen. The records shall include at a minimum the results of NOx testing to establish and verify the parametric optimization and the readings of operating parameters that demonstrate that the engines are operated in accordance with the parametric optimization. The Permittee is required to report all excursions where the 1-hour block average P_M is less than the corresponding 1-hour block average P_{MC} to the Department within 30 days after the end of the each calendar quarter. More

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than two excursions within any calendar quarter or more than three excursions during the control period shall constitute a reportable occurrence of excess emissions, requiring a telephone report within 24 hours and a written report if requested by the Department within 10 days, in accordance with COMAR 26.11.01.07 **[Authority: PTC No. 027-9-0224 M issued November 18, 2002]**

Rationale and Discussion:

The NOx Reduction Requirement for Non-Electric Generating Units under COMAR 26.11.29.01-.05 apply only during the Control Period, May 1 through September 30. The Department issued a permit to construct to the Permittee to allow for the modification of the engines in order that the engines could achieve the applicable NOx emissions rate. The permit to construct specified the NOx monitoring requirements and defined what constitutes a violation of the NOx standard.

C. Carbon Monoxide and VOC Annual Emissions Limitation

PTC No. 027-9-0224M issued November 18, 2002 - To avoid triggering requirements of nonattainment New Source Review (NNSR) and Prevention of Significant Deterioration (PSD), emissions increases from both affected engines collectively as a result of the modifications performed shall be limited to less than 25 tons per year for VOC and 100 tons per year for CO for any period of 12 consecutive months.

Compliance Demonstration:

Beginning with calendar year 2014, the Permittee shall perform on a biennial basis and contemporaneously with the testing required in paragraph B above confirmatory emissions testing for VOC and CO on each engine using appropriate EPA Reference Methods, unless alternative test methods receive prior approval from the Department. The purpose of the testing is to demonstrate compliance with the nonattainment New Source Review emission limit for VOC and CO. In the event an engine's operating time does not exceed 2,190 hours in each calendar year of the biennial period, such engine would be exempt from the emissions testing requirement for VOC and CO for that biennial period. However, the Permittee is required to schedule and perform a CO and VOC emission test on the Clark TCV-10 and the Clark TCV-16 engines, to demonstrate compliance with the nonattainment New Source Review emission limit for VOC and CO as stated in Section 2.1.C. The Permittee will perform visible emission observation during the scheduled stack testing to show compliance with the applicable opacity standards listed in Section 1.1.A. **[Authority: COMAR 26.11.03.06C(3)]**

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The Permittee is required to maintain a record of the calculation of emissions of CO and VOC sufficient to demonstrate that the emissions increase from the modification of the engines do not exceed the limitation based on any period of 12 consecutive months. The Permittee is required to report the annual emissions of CO and VOC in the annual emissions certification report.

[Authority: Periodic Monitoring - COMAR 26.11.03.06C and COMAR 26.11.02.19D]

D. Operational Limitation

The Permittee is required to burn only natural gas unless the Permittee applies for and receives an approval or permit from the Department.

[Authority: COMAR 26.11.02.09]

Compliance demonstration:

The Permittee is required to maintain a record of the type and quantity of fuel burned in each engine and report the information in the annual emissions certification report.

Rationale:

This operational limit clarifies that the Permittee is limited to burning natural gas. By limiting the fuel to natural gas, little or no visible emissions are expected from the engines. The engines are designed to burn only natural gas. The Permittee is required to seek approval from the Department prior to modifying the engines to burn an alternate fuel. The facility handles only natural gas and it is the only source of fuel on site.

Emissions Units: AUX 1

[MDE Reg No. 027-0223-9-0186]

One (1) Auxiliary electric power generator; 4-cycle, lean-burn, reciprocating IC engine, Waukesha 7042 GL, rated at 1,478 HP.

Permitting History Installed in March 1997. A Permit to Construct was issued for an emergency generator on March 14, 1997.

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Compliance Status

On April 25, 2018, the Air Compliance Program performed a review of the Permittee's Annual Compliance Certification for the year 2017. The report was found to be complete and no deviations were reported.

Applicable Standards

A. Control of Visible Emissions

[COMAR 26.11.09.05E(2)] – Stationary Internal Combustion Engine Powered Equipment.

COMAR 26.11.09.05E(2) – which limits visible emissions from an internal combustion engine to 10 percent opacity during idle mode.

COMAR 26.11.09.05E(3) – which limits visible emissions from an internal combustion engine to 40 percent opacity during operating mode.

COMAR 26.11.09.05E(4)(a) & (b) – which allows the following exceptions from the requirement of COMAR 26.11.09.05E(2):

The requirement does not apply for a period of 2 consecutive minutes after a period of idling of 15 consecutive minutes for the purpose of clearing the exhaust system.

The requirement does not apply to emissions resulting directly from cold engine start-up and warm-up for a maximum period of 30 minutes for engines that are idled continuously when not in service; or for a maximum period of 15 minutes for all other engines.

COMAR 26.11.09.05E(4)(c) allows the exception from the requirements of COMAR 26.11.09.05E(2)&(3) when maintenance, repair, or testing is being performed by qualified mechanics.

Compliance Demonstration:

The Permittee is required to report incidents of visible emissions in accordance with the requirements to report excess emissions and deviations. See permit condition 4 of Section III of the permit.

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Rationale for Periodic Monitoring:

The engine may burn only natural gas, a very clean burning fuel. The engine is designed to operate with little or no visible emissions. The engine would have to undergo a serious malfunction in order to have significant visible emissions. The preventative maintenance performed by the Permittee as recommended by the engine manufacturer and supplemented with the facility's maintenance experiences assures that the engine will continue to operate with little or no visible emissions and minimize the possibility of a malfunction.

B. Control of NOx Emissions for Major Stationary Sources, Demonstration of Compliance – Reasonable Control Technology Requirements (NOx RACT).

[COMAR 26.11.09.08G(1)] – A person who owns or operates fuel-burning equipment with a capacity factor (as defined in 40 CFR Part 72.2) of 15 percent or less shall:

- (1) Provide certification of the capacity factor of the equipment to the Department in writing;
- (2) For fuel-burning equipment that operates more than 500 hours during a calendar year, perform a combustion analysis and optimize combustion at least once annually;
- (3) Maintain the results of the combustion analysis at the site for at least 2 years and make these results available to the Department and the EPA upon request;
- (4) Require each operator of an installation, except combustion turbines, to attend operator training programs at least once every 3 years, on combustion optimization that are sponsored by the Department, the EPA, or equipment vendors; and
- (5) Maintain a record of training program attendance for each operator at the site, and make these records available to the Department upon request.

[COMAR 26.11.09.08B(6)] – Operator Training: For the purpose of this regulation, the equipment operator to be trained may be the person who maintains the equipment and makes the necessary adjustments for efficient operation.

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Compliance Demonstration:

The Permittee is required to maintain records of hours of operation and the calculated annual capacity factor on a updated on a monthly basis sufficient to demonstrate that the annual capacity factor of the engine is less than 15 percent and to provide certification of the capacity factor of the equipment to the Department in writing as part of the April 1 emission certification report.

[Authority: COMAR 26.11.09.08G(1)(a) and COMAR 26.11.03.06C]

If the hours of operation exceeds 500 hours per year, the Permittee must perform an annual combustion analysis at least once annually **[Authority: COMAR 26.11.09.08G(1)(b)]**

The Permittee is required either to have each operator or person who maintains the equipment and makes the necessary adjustments for efficient operation attend operator training programs at least once every 3 years, on combustion optimization that are sponsored by the Department, the EPA, or equipment vendors and to maintain a record of training program attendance for each operator at the site, and make these records available to the Department upon request. **[Authority: COMAR 26.11.09.08G(1)(c) & (d)]**

Rationale for Periodic Monitoring:

The requirements for a compliance demonstration with the regulation COMAR 26.11.09.08G(1) are largely self contained. Conditions were added, however, to require that the hours of operation and capacity factor be updated monthly and to specify that the capacity factor must be certified annually by a specific date, April 1 of each year. **[Authority: COMAR 26.11.03.06C]**

C. Operational Limits

- (1) The Permittee shall burn only pipeline quality natural gas unless the Permittee applies for and receives an approval or permit from the Department. **[Authority: COMAR 26.11.02.09]**
- (2) The capacity factor shall be limited to 15 percent or less. **[Authority: COMAR 26.11.09.08G]**

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Compliance demonstration:

The Permittee is required to maintain a record of the type and quantity of fuel burned in the engine, and report the information in the annual emissions certification report.

Rationale:

This operational limit clarifies that the Permittee is limited to burning natural gas. The engine is designed to burn only natural gas. The Permittee is required to seek approval from the Department prior to modifying the engines to burn an alternate fuel. The facility handles only natural gas and it is the only source of fuel on site.

Emissions Units: BLR 1 and BLR 2

[MDE Reg No. 027-0223-5-0455]

One (1) H.B. Smith (G28HE-13S) natural gas-fired 3.978 MMBtu/hr boiler.

[MDE Reg No. 027-0223-5-0064]

One (1) Cyclotherm C2800 natural gas-fired 3.3 MMBtu/hr boiler.

Permitting History

The Cyclotherm boiler was installed in 1960, prior to the enactment of the Clean Air Act. The H.B. Smith boiler was installed in February 2023.

Compliance Status

On March 24, 2025, the Air Compliance Program performed a full compliance review of the facility and documented it in a report. The engines were found to be complete and no deviations were reported.

The initial tune-up of the boiler was performed on January 5, 2016. The most recent tune up for both boilers was done November 3, 2025. The energy assessment was performed on August 19, 2015.

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Applicable Standards

A. Control of Visible Emissions

[COMAR 26.11.09.05A(2)] – Fuel Burning Equipment.

“In Areas III and IV, a person may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is visible to human observers except that, for the purpose of demonstrating compliance using COM data, emissions that are visible to a human observer are those that are equal to or greater than 10 percent opacity.

[COMAR 26.11.09.05A(3)] – Exceptions.

“Section A(1) and (2) of this regulation do not apply to emissions during load changing, soot blowing, startup, or adjustments or occasional cleaning of control equipment if:

- (a) The visible emissions are not greater than 40 percent opacity; and
- (b) The visible emissions do not occur for more than 6 consecutive minutes in any sixty-minute period.”

Compliance Demonstration:

The Permittee shall report incidences of visible emissions in accordance with the reporting of excess emissions and deviations, Condition 4, Section III of the permit.

Rationale:

These very small boilers that burn only natural gas will never have visible emissions unless they are operating in an extremely unsafe mode. With routine maintenance, these boilers will operate in a normal manner. Therefore, no periodic monitoring will be required. However, under the unlikely scenario of visible emissions occurring, the Permittee is required to report excess emissions and deviations in accordance with Condition 4, Section III of the permit.

B. Control of Nitrogen Oxides

[COMAR 26.11.09.08B(1)(c)] – Emission Standards and Requirements.

“A person who owns or operates an installation that causes NO_x emissions subject to this regulation is in compliance with this regulation if the person establishes compliance with the emissions standards in §B(1)(c) of this regulation.”

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Fuel	Tangential-Fired	Wall-Fired
Gas only	0.20	0.20

Compliance demonstration:

The Permittee is required to maintain a record of the type and quantity of fuel burned in the boilers and report the information in the annual emissions certification report.

Rationale:

Limiting the boilers to burning natural gas only will be sufficient to assure compliance with the emission limit of 0.20 lb per million Btu. The current AP-42 emission factor for a natural gas fired boiler sized less than 10 million Btu/hr is 0.10 lb per million Btu. These boilers would therefore ordinarily be expected to be in compliance with this regulation provided they are properly maintained and adjusted. The boilers are used only for space heating and hot water generation. Considering their very limited potential for NO_x air emissions, no further periodic monitoring is warranted.

C. Operational Limits

- (1) The Permittee shall burn only pipeline quality natural gas unless the Permittee applies for and receives an approval or permit from the Department. **[Authority: COMAR 26.11.02.09]**

NESHAP Operating Limits – 40 CFR, Part 63, Subpart DDDDD

- (2) The Permittee must meet each emission limit and work practice standard in 40 CFR, Part 63, Subpart DDDDD, Tables 1 through 3 and 11 through 13, that applies to the boilers. **[Authority: §63.7500(a)(1)]**

Note: The Permittee is subject only to the work practice standard requirements in Table 3, See §63.7540(e).

- (3) The Permittee shall meet the following two applicable work practice standards in 40 CFR, Part 63, Subpart DDDDD, Table 3 applicable to boilers combusting natural gas and rated at less than 5 million Btu per hour **[Authority: 40 CFR §63.7500(a)(1) and (e), §63.7510(e), §63.7515(d), and §63.7540(a)]:**

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- (a) The Permittee must complete an initial tune-up of the boiler on or before the compliance date January 31, 2016 and conduct subsequent tune-ups once every 5 years thereafter as specified in § 63.7540(a)(10)(i)-(vi) and (a)(12)-(13). In accordance with §63.7515(d), each 5-year tune-up must be conducted no more than 61 months after the previous tune-up. Paragraphs §63.7540(a)(10)(i) through (a)(10)(vi) specify the requirements for a boiler tune-up.

Note: Initial tune-up of the boiler was performed on January 5, 2016. The most recent tune up for both boilers was done November 3, 2025.

- (b) On or before the compliance date, January 31, 2016, each boiler unit must have a one-time energy assessment performed by a qualified energy assessor. An energy assessment completed on or after January 1, 2008, that meets, or is amended to meet, the energy assessment requirements in this table, satisfies the energy assessment requirement. A facility that operates under an energy management program compatible with ISO 50001 that includes the affected units also satisfies the energy assessment requirement. Table 3 specifies the requirements of the energy assessment. The extent of the evaluation as appropriate for the on-site technical hours listed in § 63.7575. **[Authority: §63.7510(e); Table 3 of Subpart DDDDD, item 4]**

Note: Energy assessment was performed on August 19, 2015.

Note: In accordance with § 63.7575 eight (8) on-site technical hours will fulfill the energy assessment requirement for natural gas-fired boilers rated at less than 5 million Btu per hour.

Compliance demonstration:

There are no testing or monitoring requirements under Subpart DDDDD to Part 63. However, the Permittee must keep records of the results of the initial and subsequent 5-year tune ups and one-time energy assessment required and a responsible official must certify that these requirements were met in a timely manner. The most recent tune up for both boilers was done November 3, 2025.

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Emission Units:

FUG 1: Piping Component Fugitives (0.10 tons per year VOC).

FUG 2: Venting/Blow down Emissions (0.05 tons per year VOC).

Both units were installed in Installed in 1950's.

Permitting History 1950's, prior to the enactment of the Clean Air Act.

Applicable Standards

Control of VOC Emissions

[COMAR 26.11.05.06B(1)(a)] – Installations Constructed Before May 12, 1972.

"A person may not cause or permit the discharge of VOC from any installation constructed before May 12, 1972 in excess of 200 pounds (90.7 kilograms) per day unless the discharge is reduced by 85 percent or more overall."

Compliance demonstration:

Prior to any planned on-site blowdown or venting of natural gas whose uncontrolled VOC emissions would be expected to exceed 200 pounds per day, the Permittee shall submit for approval to the Department Air and Radiation Management Administration's Compliance Program, at least 10 days prior to the scheduled event, an emissions control plan that would lead to at least 85 percent control of the VOC emissions or limit the VOC emissions to less than 200 pounds per day. In the event that that 10 days prior notice is not possible due to the nature of the blowdown or venting activity, the Permittee shall submit an emission control plan as early as practicable. **[Authority: COMAR 26.11.03.06C]**

Rationale:

From time to time, the Permittee is required to vent on-site natural gas to the atmosphere. The Permittee recognizes that the resultant VOC emissions are subject to regulation COMAR 26.11.06.06B(1)(a). This requirement incorporates the existing on-going customary approval process into the Title V permit.

According to the 2025 emissions certification report, VOC fugitive emissions from the Process Piping Component (FUG-1) were 0.10 tons per year, and Venting/Blow down (FUG-2) were 0.05 tons per year.

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Emissions Units: CT-1

[MDE Reg No. 027-0223-9-0391]

One (1) Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine.

Applicable Standards/Limits

**A. New Source Performance Standards for Stationary Combustion
Turbines 40 CFR, Part 60, Subpart KKKK.**

All applicable terms, provisions, emissions standards, testing, monitoring, record keeping, and reporting requirements included in federal New Source Performance Standards (NSPS) under 40 CFR Part 60, Subparts A and KKKK for Stationary Combustion Turbines.

Compliance Demonstration

The Permittee should follow the testing requirements for the combustion engine in 40 CFR Part 60, Subpart KKKK, Sections (§60.4340, §60.4400, §60.4410 and §60.8(a)). The Permittee conducted the most recent stack testing on December 19, 2017.

- (1) Testing Requirements for the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine from 40 CFR Part 60, Subpart KKKK.

§60.8 (a) ... within 60 days after achieving the maximum operating rate, but not later than 180 days after initial startup, ... conduct an initial performance test and furnish the [Department] a written report of the results of such performance test....

§60.8(f) ... each performance test shall consist of three separate runs using the applicable test methods.

§60.4340 (a) "If you are not using water or steam injection to control NOx emissions, you must perform annual performance tests in accordance with §60.4400 to demonstrate continuous compliance. If the NOx emission result from the performance test is less than or equal to 75 percent of the NOx emission limit for the turbine, you may reduce the frequency of subsequent performance tests to once every 2 years (no more than 26 calendar months following the previous performance test). If the results of any subsequent

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performance test exceed 75 percent of the NO_x emission limit for the turbine, you must resume annual performance tests.”

§60.4400(a) you must conduct an initial performance test, as required in §60.8. Subsequent NO_x performance tests shall be conducted on an annual basis (no more than 14 calendar months following the previous performance test). **Note:** An annual performance test is not required if a parameter monitoring plan is submitted meeting the requirements of §60.4340(b), §60.4355, and §60.4410. Note that §60.4410 requires:

§60.4410 If you have chosen to monitor combustion parameters or parameters indicative of proper operation of NO_x emission controls in accordance with §60.4340, the appropriate parameters must be continuously monitored and recorded during each run of the initial performance test, to establish acceptable operating ranges, for purposes of the parameter monitoring plan for the affected unit, as specified in §60.4355.

§60.4400(a)(1) – (3) and §60.4400(b) specify in detail the procedures from 40 CFR Part 60, appendix A, that must be used to conduct the performance tests. See regulation for full text. Use the procedures specified in §60.4400(a)(1)(ii) to calculate the NO_x emission rate in lb/MMBtu as well as NO_x ppmvd adjusted to 15% O₂.

- (2) Within 180 days after initial startup of the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine, the Permittee shall perform initial performance tests for CO and VOC using approved 40 CFR part 60 appendix A methods or equivalent alternative methods if approved by the Department. Unless otherwise approved by the Department, Method 10 shall be used for CO and Methods 18 and 25 shall be used for VOC. Emission rates for CO and VOC shall be computed in terms of lb/MMBtu input in accordance with methodologies approved by the Department.
- (3) A stack test protocol addressing the testing requirements in conditions (1) - (3) above and a NO_x parameter monitoring protocol addressing §60.4340(b) and §60.4355(a) shall be submitted to the Department for review and approval at least 30 days prior to the anticipated stack test date.
- (4) The Permittee shall notify the Department of the date of the stack test at least 14 days prior to the actual date of the stack tests.

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Note: Emission stack testing was conducted on the combustion turbine on September 19, 2018 for NO_x, CO, and VOC emissions. Results demonstrated compliance with the permitted emission limits.

The Permittee should follow the monitoring requirements for the combustion engine in 40 CFR Part 60, Subpart KKKK, Sections (§60.4340, §60.4355, §60.4400, and §60.4410).

- (1) Monitoring Requirements for the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine from 40 CFR, Part 60, Subpart KKKK:
 - (a) Except as provided in §60.4340(b) below, §60.4340(a) provides that the Permittee must perform **annual performance tests** in accordance with §60.4400 to demonstrate continuous compliance.
 - (b) In lieu of an annual performance test for NO_x, the Permittee may submit to the Department for approval a **parameter monitoring plan** for the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine. The parameter monitoring plan must meet the requirements of 40 CFR part 60, Subpart KKKK, §60.4340(b), §60.4355(a)(1) through (6) and §60.4410, as applicable.

§60.4340(b) As an alternative [to conducting annual performance tests] you may install, calibrate, maintain and operate one of the following continuous monitoring systems:

...

§60.4340(b)(2) Continuous parameter monitoring system as follows:

§60.4340(b)(2)(ii) For any lean premix stationary combustion turbine, you must continuously monitor the appropriate parameters to determine whether the unit is operating in low-NO_x mode.

§60.4355(a) The parameters that are continuously monitored as described in §60.4340 must be monitored during the performance test required under §60.8, to establish acceptable values and ranges. You may supplement the performance test data with engineering analyses, design specifications, manufacturer's recommendations and other relevant information to define the acceptable parametric ranges more precisely. You must develop and keep on-site a parameter monitoring plan which explains the procedures used to document proper operation of the NO_x emission controls....

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Note: §60.4355(a)(1) through §60.4355(a)(6) describes in detail the further regulatory requirements of the parametric monitoring plan. See regulation for complete text.

The Permittee should follow the Record Keeping requirements for the combustion engine in 40 CFR Part 60, Subpart KKKK, Sections (§60.4340, §60.4355, and §60.4380).

- (1) The following records shall be kept on site for at least five (5) years and shall be made available to the Department upon request:
 - (a) Monthly records of fuel usage for the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine, and the Waukesha 1,450 BHP natural gas-fired emergency generator;
 - (b) Continuous records of 1-hour averages and 4-hour rolling averages, based on values recorded at least at 15 minute intervals, of the monitored NO_x parameters for the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine in keeping with §60.4340(b)(2)(ii) and §60.4355(a);
 - (c) A copy of the initial performance test report(s) for NO_x, CO, and VOC for the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine;
 - (d) A copy of approved parametric monitoring plan for NO_x, on site in accordance with §60.4355(a); and
 - (e) Copies of annual performance tests for NO_x if an approved NO_x parametric monitoring plan is not submitted.
- (2) The Permittee shall keep records of all monitoring downtime and all periods of excess emissions as defined in §60.4380(c):

§60.4380(c) For turbines required to monitor combustion parameters or parameters that document proper operation of the NO_x emission controls:

§60.4380(c)(1) An excess emission is a 4-hour rolling unit operating hour average in which any monitored parameter does not achieve the target value or is outside the acceptable range defined in the parameter monitoring plan for the unit.

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§60.4380(c)(2) A period of monitor downtime is a unit operating hour in which any of the required parametric data are either not recorded or are invalid.

The Permittee should follow the Reporting requirements shown below:

- (1) Prior to the date that the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine commences operation the Permittee shall submit a stack test report reporting the results of the initial stack tests on the HBA-8T and Clark TLA-6 engines in accordance with condition D(4), **Permit to Construct number 027-0223-5-0054M** issued on January 20, 2015.
- (2) The following semiannual monitoring reports covering the 6-month periods ending each December 31 and June 30 are required under 40 CFR part 60, subpart KKKK, §60.4375(a) for the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine:

§60.4375(a) For each affected unit required to continuously monitor parameters ..., you must submit reports of excess emissions and monitor downtime, in accordance with §60.7(c). Excess emissions must be reported for all periods of unit operation, including start-up, shutdown, and malfunction.

§60.7(c) (4) When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report.

§60.4395 All reports required under §60.7(c) must be postmarked by the 30th day following the end of each 6-month period.

- (3) Reports of performance tests for NO_x are required under COMAR 26.11.09.08K(2) and 40 CFR part 60, subpart KKKK, §60.4375(b) for the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine. In order to comply with both requirements, the results of the NO_x performance (stack) tests shall be submitted to the Department within 45 days after the completion of the test.
- (3) Prior to the date that the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine commences operation the Permittee shall submit a stack test report reporting the results of the initial stack tests on the HBA-8T and Clark TLA-6 engines in accordance with condition D(4), **Permit to Construct number 027-0223-5-0054M** issued on January 20, 2015.

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- (4) The following semiannual monitoring reports covering the 6-month periods ending each December 31 and June 30 are required under 40 CFR Part 60, Subpart KKKK, §60.4375(a) for the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine:

§60.4375(a) For each affected unit required to continuously monitor parameters ..., you must submit reports of excess emissions and monitor downtime, in accordance with §60.7(c). Excess emissions must be reported for all periods of unit operation, including start-up, shutdown, and malfunction.

§60.7(c) (4) When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report.

§60.4395 All reports required under §60.7(c) must be postmarked by the 30th day following the end of each 6-month period.

- (5) Reports of performance tests for NO_x are required under COMAR 26.11.09.08K(2) and 40 CFR part 60, subpart KKKK, §60.4375(b) for the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine. In order to comply with both requirements, the results of the NO_x performance (stack) tests shall be submitted to the Department within 45 days after the completion of the test.

B. National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Stationary Combustion Turbines 40 CFR, Part 63, Subpart YYYY

National Emissions Standards for Hazardous Air Pollutants (NESHAP) promulgated under 40 CFR Part 63, Subparts A and YYYY for Stationary Combustion Turbines. Subpart YYYY requirements as applicable are in full effect.

§ 63.6095 When do I have to comply with this subpart?

“(a) Affected sources.

(1) ...

(2) ...

(3) If you start up a new or reconstructed stationary combustion turbine which is a lean premix gas-fired stationary combustion turbine or a diffusion flame gas-fired stationary combustion turbine as defined by this subpart on or before March 9, 2022, you must comply with the emissions limitations and operating limitations in this subpart no later than March 9, 2022.” **[Reference: 40 CFR § 63.6095(a)(3)]**

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§ 63.6100 What emission and operating limitations must I meet?

“For each new or reconstructed stationary combustion turbine which is a lean premix gas-fired stationary combustion turbine, a lean premix oil-fired stationary combustion turbine, a diffusion flame gas-fired stationary combustion turbine, or a diffusion flame oil-fired stationary combustion turbine as defined by this subpart, you must comply with the emission limitations and operating limitations in **Table 1** and **Table 2** of this subpart.” **[Reference: 40 CFR § 63.6100]**

Excerpt from Table 1 to Subpart YYYY of Part 63—Emission Limitations

“As stated in § 63.6100, you must comply with the following emission limitations.”

For each new or reconstructed stationary combustion turbine described in § 63.6100 which is ...	You must meet the following emission limitations...
1. a lean premix gas-fired stationary combustion turbine as defined in this subpart, 2., 3., 4.....	limit the concentration of formaldehyde to 91 ppbvd or less at 15-percent O ₂ , except during turbine startup. The period of time for turbine startup is subject to the limits specified in the definition of startup in § 63.6175.

Excerpt from Table 3 to Subpart YYYY of Part 63—Operating Limitations

“As stated in §§ 63.6100 and 63.6140, you must comply with the following operating limitations.

For ...	You must ...
1... 2. each stationary combustion turbine that is required to comply with the emission limitation for formaldehyde and is not using an oxidation catalyst	Maintain any operating limitations approved by the Administrator.

§ 63.6120 What performance tests and other procedures must I use?

“(e) If your stationary combustion turbine is not equipped with an oxidation catalyst, you must petition the Administrator for operating limitations that you will monitor to demonstrate compliance with the formaldehyde emission limitation in Table 1. You must measure these operating parameters during the initial performance test and continuously monitor thereafter. Alternatively, you may petition the Administrator for approval of no additional operating

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limitations. If you submit a petition under this section, you must not conduct the initial performance test until after the petition has been approved or disapproved by the Administrator.” **[Reference: 40 CFR § 63.6120(e)]**

§ 63.6125 What are my monitor installation, operation, and maintenance requirements?

(b) If you are operating a stationary combustion turbine that is required to comply with the formaldehyde emission limitation and you are not using an oxidation catalyst, you must continuously monitor any parameters specified in your approved petition to the Administrator, in order to comply with the operating limitations in Table 2 and as specified in Table 5 of this subpart.

[Reference: 40 CFR § 63.6125(b)]

Compliance Demonstration:

Compliance demonstration should be accomplished by following the requirements listed under 40 CFR, Part 60, Subpart KKKK.

Initial testing requirements for the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine should be fulfilled as stated in 40 CFR § 63.6110(a). The **initial** performance test was completed on **January 30, 2025**, with a result of 42 ppb at 15% O₂. A second test was performed on November 5, 2025, with 64 ppb at 15% O₂. This second test was performed to change the testing schedule moving forward. The results from both tests showed compliance with the permit limit of 91 with 64 ppb at 15% O₂, as stated in 40 CFR 63, Subpart YYYY.

[Reference: 40 CFR § 63.6110(a)] The Permittee must also do **subsequent** performance testing in accordance with 40 CFR § 63.6115, “on an annual basis as specified in Table 3 of this subpart.” **[Reference: 40 CFR § 63.6115]**

Monitoring requirements must be fulfilled as stated in 40 CFR § 63.6125(b) and continuously monitor any parameters specified in the “approved petition to the Administrator, in order to comply with the operating limitations in Table 2 and as specified in Table 5 of this subpart.”

[Reference: 40 CFR § 63.6125(b)] **Note:** A Monitoring Plan was approved by EPA Region 3 as outlined in a letter to Williams – Transco Pipeline (dated July 22, 2024). The following parameters will be monitored: Combustion Turbine Lean Premix Mode (LPM), **gas producer turbine speed as a percent (%NGP)**, and **Inlet Air Temperature (T1)** as parameters to meet the Subpart YYYY monitoring requirements.

The Permittee must keep records as stated in § 63.6155, which includes at least copies of notifications and reports to comply with this subpart,

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records of all maintenance on the air pollution control equipment, records of the date, time, and duration of each startup period, recording the periods and the number of deviations, and actions taken to minimize emissions. **[Reference: 40 CFR § 63.6125(b)]** The Permittee must follow the reporting requirements as stated in § 63.61505. **[Reference: 40 CFR § 63.6150(a)]**

C. Visible Emissions Limitations

[COMAR 26.11.09.05A(2)] – Fuel Burning Equipment.

“In Areas III and IV, a person may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is visible to human observers except that, for the purpose of demonstrating compliance using COM data, emissions that are visible to a human observer are those that are equal to or greater than 10 percent opacity.

[COMAR 26.11.09.05A(2)] – Exceptions.

“Section A(1) and (2) of this regulation do not apply to emissions during load changing, soot blowing, startup, or adjustments or occasional cleaning of control equipment if:

- (a) The visible emissions are not greater than 40 percent opacity; and
- (b) The visible emissions do not occur for more than 6 consecutive minutes in any sixty-minute period.”

Compliance Demonstration:

The Permittee is required to report incidents of visible emissions in accordance with the requirements to report excess emissions and deviations. See permit Condition 4, of Section III of the permit.

D. Control of NO_x Emissions for Major Stationary Sources, Requirements for Fuel Burning Equipment with a Capacity Factor of 15 Percent or Less, and Combustion Turbines with a Capacity Factor Greater than 15 Percent – [COMAR 26.11.09.08G(2)]

“A person who owns or operates a combustion turbine with a capacity factor greater than 15 percent shall meet an hourly average NO_x emission rate of not more than 42 ppm when burning gas or 65 ppm when burning fuel oil (dry volume at 15 percent oxygen) or meet applicable Prevention of Significant Deterioration limits, whichever is more restrictive.”

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Compliance Demonstration:

Compliance demonstration should be accomplished by following the requirements listed under 40 CFR, Part 60, Subpart KKKK.

E. Operational Limitations

- (1) The Permittee shall maintain and operate the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine, and any associated air pollution control equipment, in such a manner as to ensure full and continuous compliance with all applicable regulations.
- (2) The Permittee shall properly maintain and keep in good working condition all control panel instrumentation and monitoring devices that the Permittee uses to determine if the air pollution control equipment is operating as designed.
- (3) The Permittee must operate and maintain the stationary combustion turbine, air pollution control equipment, and monitoring equipment in a manner consistent with good air pollution control practices for minimizing emissions at all times including during startup, shutdown, and malfunction.
[Reference: 40 CFR Part 60, Subpart KKKK, §60.4333]
- (4) The Permittee is subject to the following emission limits for the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine from 40 CFR part 60, subpart KKKK:

§60.4320(a) requires the Permittee to meet the emission limits for NO_x specified in Table 1 to subpart KKKK (see below).

From Table 1 to Subpart KKKK of Part 60—Nitrogen Oxide Emission Limits for New Stationary Combustion Turbines

Combustion turbine type	Combustion turbine heat input at peak load (HHV)	NO_x emission standard
New turbine firing natural gas	>50 MMBtu/hr and ≤ 850 MMBtu/hr	25 ppm at 15 percent O ₂

§60.4330(a)(2) requires the Permittee not to burn in the stationary turbine any fuel which contains total potential sulfur emission in excess of 0.060 lb SO₂ /MMBtu heat input.

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- (5) In accordance with the manufacturer's guarantee, the Permittee shall operate the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine and emission controls in a manner that complies with a NO_x emission limit of 15 ppm at 15 percent oxygen. Compliance with this limit shall serve to demonstrate compliance with NO_x limit under 40 CFR part 60, subpart KKKK and COMAR 26.11.09.08G(2).

Compliance Demonstration:

Compliance demonstration should be accomplished by following the requirements listed under 40 CFR, Part 60, Subpart KKKK. Within 45 days after the performance testing, the Permittee shall submit a stack test report to the Department. **[Reference: COMAR 26.11.09.08K(2)]**

Emissions Units: EG-1

[MDE Reg No. 027-0223-9-0392]

One (1) natural gas-fired emergency generator rated at 1,450 BHP.

NOTE: The design rating of the engine is 1,450 BHP, but the nameplate on the engine indicates a service rating of 1,325 HP and an overload rating of 1,391 HP.

A. New Source Performance Standards (NSPS) under 40 CFR Part 60, Subpart JJJJ for Stationary Spark Ignition Internal Combustion Engines – [40 CFR, Part 60, Subpart JJJJ]

All applicable terms, provisions, emissions standards, testing, monitoring, record keeping, and reporting requirements included in federal New Source Performance Standards (NSPS) under 40 CFR Part 60, Subpart JJJJ for Stationary Spark Ignition Internal Combustion Engines.

Compliance Demonstration:

The Permittee shall demonstrate compliance with the testing requirements following the procedures listed under 40 CFR, Part 60, §60.4333. The Permittee shall demonstrate compliance with the record keeping requirements by keeping records of the monthly records of fuel usage, a copy of the initial performance test report(s) for NO_x, CO, and VOC emissions, copies of each

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subsequent performance test reports, and a copy of the approved parametric monitoring plan for NOx, on site in accordance with §60.4355(a).

B. National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Reciprocating Internal Combustion Engines – [40 CFR, Part 63, Subpart ZZZZ]

The Permittee shall meet the requirements included in the National Emissions Standards for Hazardous Air Pollutants (NESHAP) promulgated under 40 CFR, Part 63, Subparts A and ZZZZ for Reciprocating Internal Combustion Engines by meeting the requirements of 40 CFR, Part 60, Subpart JJJJ for the emergency generator. No further requirements apply to the emergency generator under 40 CFR, Part 63, Subpart ZZZZ. **[Reference: 40 CFR §63.6590(c)(1)]**

Compliance Demonstration:

To comply with the testing requirements, the Permittee shall follow the requirements listed under 40 CFR, Part 60, Subpart JJJJ for the emergency generators.

**C. Control of Visible Emissions
Visible Emissions Stationary Internal Combustion Engines Powered Equipment – [COMAR 26.11.09.05E(2) through (4)]**

(2) Emissions During Idle Mode.

“A person may not cause or permit the discharge of emissions from any engine, operating at idle, greater than 10 percent opacity.”

(3) Emissions During Operating Mode.

“A person may not cause or permit the discharge of emissions from any engine, operating at other than idle conditions, greater than 40 percent opacity.”

(4) Exceptions.

(a) “Section E(2) of this regulation does not apply for a period of 2 consecutive minutes after a period of idling of 15 consecutive minutes for the purpose of clearing the exhaust system.”

(b) “Section E(2) of this regulation does not apply to emissions resulting directly from cold engine start-up and warm-up for the following maximum periods:

(i) Engines that are idled continuously when not in service: 30 minutes;

(ii) All other engines: 15 minutes.”

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- (c) "Section E(2) and (3) of this regulation do not apply while maintenance, repair, or testing is being performed by qualified mechanics."

Compliance Demonstration:

The Permittee is required to report incidents of visible emissions in accordance with the requirements to report excess emissions and deviations. See permit Condition 4, of Section III of the permit.

D. Operational Limits

- (1) Operating requirements for the Waukesha 1,450 BHP natural gas-fired emergency generator from 40 CFR Part 60, Subpart JJJJ.

§60.4243(d) ... any operation other than emergency operation, [and] maintenance and testing, ... as described in paragraphs (d)(1) through (3) of this section, is prohibited. ...

§60.4243(d)(1) There is no time limit on the use of emergency generator in emergency situations.

§60.4243(d)(2) Allows the Permittee to operate the emergency generator the purposes specified in (d)(2)(i) for a maximum of 100 hours per calendar year.

§60.4243(d)(2)(i) Allows the emergency generator to be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, or the insurance company associated with the engine.

- (2) The Permittee shall maintain and operate the 1,450 BHP natural gas-fired emergency generator, and any associated air pollution control equipment, in such a manner as to ensure full and continuous compliance with all applicable regulations.

Compliance Demonstration:

To comply with the operational limits, the Permittee shall follow the requirements listed under 40 CFR, Part 60, Subpart JJJJ for the emergency generators.

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COMPLIANCE SCHEDULE

Transco is currently in compliance with all applicable air quality regulations. It is not currently under any compliance schedule

TITLE IV – ACID RAIN

The Permittee is not subject to the requirements of Title IV.

TITLE VI – OZONE DEPLETING SUBSTANCES

The Permittee is not subject to Title VI requirements.

SECTION 112(r) – ACCIDENTAL RELEASE

The Permittee no longer uses anhydrous ammonia and is no longer required to submit a Risk Management Plan (RMP).

PERMIT SHIELD

The Transco requested that a permit shield be expressly included in the Permittee's Part 70 permit. Permit shields are granted on an emission unit by emission unit basis. If an emission unit is covered by a permit shield, a permit shield statement will follow the emission unit table for that unit in Section IV – Plant Specific Conditions of the permit. In this case, a permit shield was granted for each emission unit covered by the permit.

INSIGNIFICANT ACTIVITIES

This section provides a list of insignificant emissions units that were reported in the Title V permit application. The applicable Clean Air Act requirements, if any, are listed below the insignificant activity.

- (1) ✓ Space heaters utilizing direct heat transfer and used solely for comfort heat;

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- (2) No. 1 Unheated VOC dispensing containers or unheated VOC rinsing containers of 60 gallons (227 liters) capacity or less;

The containers are subject to COMAR 26.11.19.09D, which requires that the Permittee control emissions of volatile organic compounds (VOC) from cold degreasing operations by meeting the following requirements:

- (a) COMAR 26.11.19.09D(2)(b), which establishes that the Permittee shall not use any VOC degreasing material that exceeds a vapor pressure of 1 mm Hg at 20 ° C;
- (b) COMAR 26.11.19.09D(3)(a—d), which requires that the Permittee implement good operating practices designed to minimize spills and evaporation of VOC degreasing material. These practices, which shall be established in writing and displayed such that they are clearly visible to operators, shall include covers (including water covers), lids, or other methods of minimizing evaporative losses, and reducing the time and frequency during which parts are cleaned;
- (c) COMAR 26.11.19.09D(4), which prohibits the use of any halogenated VOC for cold degreasing.

The Permittee shall maintain on site for at least five (5) years, and shall make available to the Department upon request, the following records of operating data:

- (a) Monthly records of the total VOC degreasing materials used; and
 - (b) Written descriptions of good operating practices designed to minimize spills and evaporation of VOC degreasing materials.
- (3) ✓ Equipment for drilling, carving, cutting, routing, turning, sawing, planing, spindle sanding, or disc sanding of wood or wood products;
- (4) ✓ Brazing, soldering, or welding equipment, and cutting torches related to manufacturing and construction activities that emit HAP metals and not directly related to plant maintenance, upkeep and repair or maintenance shop activities;

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- (5) ✓ Equipment for washing or drying products fabricated from metal or glass, provided that no VOC is used in the process and that no oil or solid fuel is burned;
- (6) Containers, reservoirs, or tanks used exclusively for:
- (d) No. 6 Storage of lubricating oils;
- (e) No. 1 Unheated storage of VOC with an initial boiling point of 300 °F (149 °C) or greater;
- (f) No. 1 Storage of Numbers 1, 2, 4, 5, and 6 fuel oil and aviation jet engine fuel;
- (7) ✓ First aid and emergency medical care provided at the facility, including related activities such as sterilization and medicine preparation used in support of a manufacturing or production process;
- (8) ✓ Certain recreational equipment and activities, such as fireplaces, barbecue pits and cookers, fireworks displays, and kerosene fuel use;
- (9) ✓ Comfort air conditioning subject to requirements of Title VI of the Clean Air Act;
- (10) ✓ Natural draft hoods or natural draft ventilators that exhaust air pollutants into the ambient air from manufacturing/industrial or commercial processes;

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SECTION VI STATE-ONLY ENFORCEABLE CONDITIONS

The Permittee is subject to the following State-only enforceable requirements:

Applicable Regulations:

- (a) COMAR 26.11.06.08 and 26.11.06.09, which generally prohibit the discharge of emissions beyond the property line in such a manner that a nuisance or air pollution is created.
- (b) COMAR 26.11.15.05, which requires that the Permittee implement “Best Available Control Technology for Toxics” (T – BACT) to control emissions of toxic air pollutants.
- (c) **COMAR 26.11.41** – Control of Methane Emissions from the Natural Gas Industry.

COMAR 26.11.41.02 – Applicability.

“The provisions of this chapter apply to an affected facility as that term is defined in Regulation .01B of this chapter.

COMAR 26.11.41.01(B) – Definitions – Terms Defined.

“The provisions of this chapter apply to an affected facility as that term is defined in Regulation .01B of this chapter.

“(1)(e) Ellicott City Natural Compressor Station;”

“(5) Component” means a valve, fitting, flange, threaded-connection, process drain, stuffing box, pressure-vacuum valve, pressure-relief device, pipes, seal fluid system, diaphragm, hatch, sight-glass, meter, open-ended line, well casing, natural gas powered pneumatic device, natural gas powered pneumatic pump, reciprocating compressor rod packing/seal, metal to metal joint or seal of nonwelded connection separated by a compression gasket, screwed thread (with or without thread sealing compound), metal to metal compression, or fluid barrier through which natural gas or liquid can escape to the atmosphere.”

“(17) Natural gas compressor station” means all equipment and components located within a facility fence line associated with moving natural gas from production fields or natural gas

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processing plants through natural gas transmission pipelines, or
within natural gas storage fields.”

(d) **COMAR 26.11.41.03 – Leak Detection and Repair Requirements.**

“A. Affected facilities that are natural gas compressor stations or natural gas underground storage facilities and that use natural gas-powered equipment to compress natural gas shall comply with the following leak detection and repair requirements.

- (1) Owners and operators of affected facilities subject to this section shall develop and submit to the Department an initial methane emissions monitoring plan that includes a technique for determining fugitive emissions (for example, EPA Method 21 at 40 CFR part 60, appendix A-7, or optical gas imaging).
- (2) If an affected facility uses optical gas imaging for leak detection, the following information shall be included in the initial methane emissions monitoring plan:
 - (a) A list of the unsafe-to-monitor components;
 - (b) Procedures and time frames for identifying and repairing fugitive emissions components;
 - (c) A defined observation path throughout the site to confirm all components can be viewed and recorded;
 - (d) Manufacturer and model number of fugitive emissions detection equipment to be used; and
 - (e) Equipment specifications and procedures as specified in 40 CFR §60.5397a(c)(7), as published in July 2017.
- (3) If an affected facility uses EPA Method 21 (40 CFR 60, Appendix A-7) for leak detection, the following information shall be included in the initial methane emissions monitoring plan:
 - (a) A list of all fugitive emission components, difficult-to-monitor components, and unsafe-to-monitor components at an affected facility;

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- (b) Procedures and time frames for identifying and repairing fugitive emission components; and
 - (c) Equipment specifications and procedures as specified in 40 CFR §60.5397a(c)(8), as published in July 2017.
- (4) Each difficult-to-monitor and unsafe-to-monitor component shall be identified in the written initial methane monitoring plan explaining the location and why the fugitive emissions components are difficult-to-monitor and unsafe-to-monitor.
- (5) Initial Methane Emissions Monitoring Plan Submission.
 - (a) Except for a new natural gas compressor station or natural gas underground storage facility, owners and operators of the affected facilities subject to this section shall submit the initial methane emissions monitoring plan required in §A(1)—(4) of this regulation to the Department within 90 days of the adoption of this regulation.
 - (b) Owners and operators of a new natural gas compressor station or natural gas underground storage facility subject to this section shall submit the initial methane emissions monitoring plan required in §A(1)—(4) of this regulation to the Department within 60 days of startup.
- (6) Owners and operators of affected facilities that modify or reconstruct a natural gas compressor station or underground storage facility shall submit an initial monitoring plan with the elements in §A(1)—(4) of this regulation within 90 days of the facility startup operation for each new collection of fugitive emissions components at the modified or reconstructed compressor station or underground storage facility.

Note: Transcontinental Gas Pipe Line Company (Transco) – Transco Compressor Station 190, in Howard Count, Maryland, maintains a “**Methane Emissions Monitoring Plan (EMP)**” (January 15, 2021, Revised April 27, 2021) **Project No.: 0578546**. This document serves as the site-specific EMP for the leak, detection, and repair for fugitive emissions from process components at the station and to satisfy the requirements of COMAR 26.11.41.03(A)(1). Revisions to the EMP are made and implemented as needed.

- (7) Owners or operators of affected facilities subject to this section shall conduct an audio, visual, and olfactory inspection of all

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fugitive emission components for leaks or indications of leaks at least once per calendar week except for:

(a) Unsafe-to-monitor components; and

(b){*Not applicable*}

(8) Leak Monitoring Survey.

(a) Owners and operators of affected facilities shall follow the initial monitoring methane plan and shall inspect all fugitive emission components, except for unsafe-to-monitor components, for leaks using OGI or EPA Method 21 within 180 days of the adoption of this chapter and quarterly thereafter.

(b) Owners and operators of affected facilities that install any new, modified, or reconstructed natural gas compressor station or underground storage facility that uses natural gas-powered equipment to compress natural gas shall meet the requirements of §A(8)(a) of this regulation within 180 days of the startup of the facility's operations.

(c) At least annually, all difficult-to-monitor fugitive emissions components shall be inspected for leaks using an OGI camera.

Note: Transcontinental Gas Pipe Line Company (Transco) – Transco Compressor Station 190, in Howard Count, Maryland, has stated that “at least annually, all difficult-to-monitor fugitive emissions components shall be inspected for leaks using an OGI camera.”

(9) Repair Requirements.

(a) Any leaking fugitive emissions component identified during a leak monitoring survey or audio, visual, and olfactory inspection shall be successfully repaired, replaced, or removed from service as soon as practicable, but no later than 30 calendar days after leak detection.

(b) Fugitive Emissions Component Resurvey.

(i) Each repaired or replaced fugitive emissions component shall be resurveyed within 30 days after being repaired or

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replaced using either OGI or EPA Method 21 (40 CFR 60, Appendix A-7).

- (ii) Owners and operators of facilities subject to this section that use EPA Method 21 (40 CFR 60, Appendix A-7) to resurvey the repaired or replaced fugitive emissions component shall consider the fugitive emissions component repaired when the EPA Method 21 (40 CFR 60, Appendix A-7) instrument indicates a concentration of less than 500 ppm of methane or when no soap bubbles are observed during a bubble test.
- (iii) Owners and operators of affected facilities subject to this section that use OGI to resurvey the repaired or replaced fugitive emissions component shall consider the fugitive emissions component repaired when the OGI instrument shows no indication of visible emissions or when no soap bubbles are observed during a bubble test.
- (c) A delay of repair may occur when, upon request, the owner or operator provides documentation to the Department that supports the following:
 - (i) The parts or equipment required to make necessary repairs will take longer than 30 days to be ordered and delivered, but the repair may not exceed 1 year;
 - (ii) The repair is unsafe to perform during the operation of the unit; or
 - (iii) The repair requires a blowdown or facility shutdown in order to complete.
- (d) Leaking fugitive emission components awaiting repair or replacement under a delay of repair shall be clearly marked or identified in the facility's records.
- (e) Leaking fugitive emission components under a delay of repair according to §A(9)(c)(i) of this regulation shall:
 - (i) Be repaired or replaced within 7 days after the owner or operator receives parts or equipment; or

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- (ii) Be repaired or replaced at the next vent or compressor station blowdown if the owner or operator has identified this fugitive emission component as needing a vent or compressor station blowdown.
- (f) Fugitive emission components under a delay of repair according to §A(9)(c)(ii) and (iii) of this regulation shall be repaired or replaced within 1 year, at the next vent blowdown or facility shutdown, whichever occurs first.
- (g) If a repair of a leak cannot be successfully completed according to this subsection, the owner or operator of the affected facility shall prepare a plan, for Department approval, that includes:
 - (i) An explanation of the technical difficulty;
 - (ii) A timeline to successfully repair the fugitive emission components;
 - (iii) A calculation of the additional methane that is expected to be released while on delay of repair; and
 - (iv) Upon written request from the Department, any other information that the Department determines is necessary to evaluate the plan.
- (h) The owner or operator of the affected facility shall submit any plan required under §A(9)(g) of this regulation to the Department within 30 days from identifying the leak.”
- (e) **COMAR 26.11.41.05 – Reciprocating Natural Gas Compressor Methane Emission Control Requirements.**
 - A. All reciprocating natural gas compressor components at an affected facility shall comply with the leak detection and repair requirements in Regulation .03 of this chapter where applicable.

Note: Transcontinental Gas Pipe Line Company (Transco) – Transco Compressor Station 190, in Howard Count, Maryland, maintains a “**Methane Emissions Monitoring Plan (EMP)**” (January 15, 2021, Revised April 27, 2021) Project No.: 0578546. This document serves as the site-specific EMP for the leak, detection, and repair for fugitive emissions from process components at the station and to satisfy the requirements of COMAR 26.11.41.03(A)(1). Revisions to the EMP are made and implemented as needed.

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- (f) **COMAR 26.11.41.07 – Record-Keeping and Reporting Requirements.**
- A. Owners or operators of affected facilities shall maintain, submit as described in this section, and make available upon request by the Department a copy of records necessary to verify compliance with the provisions of this chapter, as follows:
- (1) For each leak monitoring survey and audio, visual, and olfactory inspection conducted according to Regulation .03 of this chapter, owners and operators shall:
- (a) Submit a report to the Department within 60 days of each leak monitoring survey with the following information:
- (i) Date of the survey;
- (ii) A list of each fugitive emission and repair;
- (iii) Any deviations from the initial methane monitoring plan or a statement that there were no deviations from the initial methane monitoring plan;
- (iv) Number and type of components for which fugitive emissions were detected;
- (v) Number and type of difficult-to-monitor fugitive emission components monitored;
- (vi) Instrument reading of each fugitive emissions component that requires repair when EPA Method 21 (40 CFR 60, Appendix A-7) is used for monitoring;
- (vii) Number and type of fugitive emissions components that were not repaired;
- (viii) Number and type of fugitive emission components placed on delay of repair and explanation for each delay of repair;
- (ix) The date of successful repair of the fugitive emissions component; and

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- (x) Instrumentation used to resurvey a repaired fugitive emissions component that could not be repaired during the initial fugitive emissions finding;
- (b) Maintain, for a minimum of 5 years, record of each leak monitoring survey along with the following information:
 - (i) Reports submitted according to §A(1)(a) of this regulation;
 - (ii) Beginning and end time of the survey;
 - (iii) Name of operator(s) performing survey;
 - (iv) Monitoring instrument used, including the manufacturer, model number, serial number, and calibration documentation;
 - (v) When optical gas imaging is used to perform the survey, one or more digital photographs or videos, captured from the optical gas imaging instrument used for conduct of monitoring, of each required monitoring survey being performed;
 - (vi) Fugitive emissions component identification when EPA Method 21 (40 CFR 60, Appendix A-7) is used to perform the monitoring survey;
 - (vii) Ambient temperature, sky conditions, and maximum wind speed at the time of the survey;
 - (viii) Any deviations from the initial methane monitoring plan or a statement that there were no deviations from the initial methane monitoring plan;
 - (ix) Proof that parts or equipment required to make necessary repairs, as required by this chapter, have been ordered;
 - (x) If a fugitive emissions component is not tagged, a digital photograph or video of each fugitive emissions component that could not be repaired during the leak monitoring survey at the time the fugitive emissions were initially found; and

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- (xi) Repair methods applied in each attempt to repair the fugitive emissions components;
 - (c) Post a quarterly report summary to a publicly available website of each leak monitoring survey, including the information required in §A(1)(a) of this regulation, 60 days after the leak monitoring survey; and
 - (d) Maintain records of audio, visual, and olfactory inspections for at least 5 years from the date of inspection.
- (2) For each natural gas-powered continuous bleed pneumatic device, owners and operators shall:
 - (a) Maintain a record of the emission flow rate measurement and report annually beginning April 1, 2021, for at least 5 years from the date of each emissions flow rate measurement;
 - (b) Maintain records of the date, location, and manufacturer specifications for each continuous bleed pneumatic device constructed, modified, or reconstructed and report annually beginning April 1, 2021;
 - (c) Maintain records of the manufacturer's specifications indicating that the device is designed such that natural gas bleed rate is less than or equal to 6 standard cubic feet per hour, if applicable;
 - (d) Maintain records of deviations in cases where the pneumatic device was not operated in compliance with the requirements specified in Regulation .04 of this chapter and report annually beginning April 1, 2021;
 - (e) Maintain purchase orders, work orders, or any in-house or third-party reports produced or provided to the affected facility relating to the device for at least 5 years; and
 - (f) Maintain a record of each continuous bleed pneumatic inspection and any corrective or maintenance action taken for at least 5 years.
- (3) For each reciprocating natural gas compressor, owners and operators shall:

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- (a) Maintain a record of each rod packing leak concentration measurement found above the minimum leak threshold and report annually beginning April 1, 2021, for at least 5 years from the date of each leak concentration measurement;
- (b) Maintain a record of each rod packing or seal emission flow rate measurement and report annually beginning April 1, 2021, for at least 5 years from the date of each emissions flow rate measurement;
- (c) Maintain a record that documents the date(s) and hours of operation a compressor is operated in order to demonstrate compliance with the rod packing leak concentration or emission flow rate measurement in the event that the compressor is not operating during a scheduled inspection for at least 1 calendar year;
- (d) Maintain records that provide proof that parts or equipment required to make necessary repairs required by this chapter have been ordered;
- (e) Report annually the cumulative number of hours of operation or the number of months since initial startup or the previous reciprocating compressor rod packing replacement, whichever is later, beginning April 1, 2021;
- (f) If applicable, submit a statement that emissions from the rod packing are being routed to applicable vapor control system under Regulation .06 of this chapter;
- (g) Report records of deviations from this chapter that occurred during the reporting period annually, beginning April 1, 2021; and
- (h) Maintain a record of purchase orders, work orders, or any in-house or third-party reports produced or provided to the affected facility necessary to demonstrate compliance with the delay of repair provisions of this chapter for at least 5 years.

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B. Blowdown Events and Reports.

Note: Transcontinental Gas Pipe Line Company (Transco) – Transco Compressor Station 190, in Howard Count, Maryland, maintains a “**Blowdown Notification Plan**” that was submitted to the Department by Williams on August 7, 2021, for Station 190. The Department reviewed the plan and found that it meets the requirements of COMAR 26.11.41 and was approved (letter dated September 3, 2021).

- (1) Within 90 days of the effective date of this chapter, affected facilities shall submit a blowdown notification plan to the Department for approval of any blowdown event in excess of 1,000,000 standard cubic feet.
- (2) The blowdown notification plan according to §B(1) of this regulation shall include:
 - (a) The notification format (for example, website, email, robocall, text message, social media announcement, etc.) to local authorities, the Department, and interested parties for blowdown emissions in excess of 1,000,000 standard cubic feet;
 - (b) A public outreach plan to inform interested parties of the availability to be notified of blowdown events in excess of 1,000,000 standard cubic feet;
 - (c) The affected facility’s responsible personnel for blowdown notifications; and
 - (d) A sitemap of the facility with clearly marked designated area(s) for blowdown emissions in excess of 1,000,000 standard cubic feet.
- (3) For any blowdown event in excess of 1,000,000 standard cubic feet, affected facilities shall make information publicly available in accordance with the facility’s approved blowdown notification plan, including notification to the Department, at least 7 days prior.
- (4) For any blowdown event in excess of 1,000,000 standard cubic feet that is scheduled less than 7 days prior to the blowdown event, affected facilities shall, as soon as practicable:

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- (a) Make information publicly available in accordance with the facility's approved blowdown notification plan; and
 - (b) Provide an explanation to the Department of the reason for the blowdown event.
- (5) For any emergency or unplanned blowdown event in excess of 1,000,000 standard cubic feet, affected facilities shall make information publicly available in accordance with the facility's approved blowdown notification plan and notify the Department within 1 hour of the emergency or unplanned blowdown event.
- (6) When safety concerns preclude a facility from providing prior notification of an emergency or unplanned blowdown under §B(5) of this regulation, the facility shall send notice to the Department within 24 hours of the blowdown event indicating the reason(s) why prior notice was not possible.
- (7) Affected facilities shall report the following information to the Department of blowdown emissions in excess of 50 cubic feet within the facility's fence line annually by April 1 of each year:
- (a) Date and type (that is, planned or emergency) of each blowdown event;
 - (b) Methane emissions in metric tons released from each blowdown event; and
 - (c) Annual methane emissions in metric tons from all blowdown events.
- (8) Methane emissions shall be calculated according to procedures in 40 CFR Part 98, Subpart W, §98.233.

C. Greenhouse Gas Emissions Reporting.

- (1) Owners and operators of affected facilities shall report methane, carbon dioxide, and nitrous oxide mass emissions to the Department annually by April 1 of each year.
- (2) Owners and operators of affected facilities shall follow the procedures for emission calculation, monitoring, quality assurance, missing data, record keeping, and reporting that are

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specified in 40 CFR Part 98, Subpart C, and 40 CFR Part 98, Subpart W.

- (3) When reporting to the Department, owners and operators of affected facilities shall expand the fugitive emissions reporting requirements of 40 CFR Part 98, Subpart W, to include a Microsoft Excel format list providing calculations summarized by category under 40 CFR §98.232(e)—(h) as applicable.
 - (4) The reporting threshold in 40 CFR §§98.2, 98.31 and 98.231 of 25,000 metric tons of CO₂ equivalent does not exempt an affected facility from following the requirements of this section.
- D. All required reports shall be submitted to the Industrial Compliance Division in written or electronic format and mailed to Maryland Department of the Environment, Air Quality Compliance Program, 1800 Washington Boulevard, 7th Floor, Baltimore, MD 21230, Attention: Industrial Compliance Division.

Via Federal Express, Overnight



November 28, 2022

TRANSCO PIPELINE
99 Farber Road
Princeton, NJ 08540
609-285-2400

Suna Yi Sariscak, Manager
Air Quality Permits Program
Maryland Department of the Environment
Air and Radiation Management Administration
1800 Washington Blvd, Suite 720
Baltimore, MD 21230-1720

Re: Title V Operating Permit Renewal Application
Transcontinental Gas Pipe Line Company, LLC (Transco)
Compressor Station 190 – Ellicott City, Howard County
Title V Permit No. 24-027-00223

Dear Ms. Sariscak:

In accordance with COMAR 26.11.03.02, Transcontinental Gas Pipe Line Company, LLC (Transco) hereby submits two paper copies and one electronic copy of the application to renew its existing Title V Operating Permit referenced above. This application is being submitted by the revised renewal application deadline of December 1, 2022, as stated in the Department's letter dated September 1, 2022. The current Title V Operating Permit will expire on November 30, 2023.

As required, the enclosed document has been certified on behalf of Transco by an Authorized Company Representative. Should you have any questions or require additional information, please do not hesitate to contact me at (609) 285-2407 or Michael.Hahn@williams.com.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael Hahn", with a stylized flourish at the end.

Michael Hahn
Environmental Specialist

Enclosure

1.0 Introduction

Transcontinental Gas Pipe Line Company, LLC (Transco), a wholly owned subsidiary of the Williams Companies, Inc., owns and operates an interstate natural gas pipeline transmission system, with multi-directional flow capability. The Transco system extends from the Gulf of Mexico, through the southern and mid-Atlantic states and into the northeastern United States; serving most major market areas along this path. Transco's system is regulated at the federal level by the Federal Energy Regulatory Commission ("FERC") under the Natural Gas Act, and by the U.S. Department of Transportation ("DOT") under the Natural Gas Pipeline Safety Act.

Compressor Station 190 is a natural gas transmission compressor station located in Ellicott City, Howard County, Maryland (a Location Map is included as **Figure 1**). Station 190 operates under an existing Title V permit (Permit No. 24-027-00223) which was issued on March 1, 2019 (included as **Appendix A**).

As mandated by COMAR 26.11.03.02 and 40 CFR 70, Transco has prepared this application to address all requirements to renew its current Title V Operating Permit. The format for this application was prepared in accordance with the Maryland Department of the Environment Air and Radiation Management Administration (the Department) Part 70 Permit Application for Renewal documentation and forms dated April 29, 2003. Completed application forms are included as **Appendix B** and an application completeness checklist as **Appendix C**.

2.0 Facility Description

Operations at Compressor Station 190 originally commenced in 1951. The facility does not produce any other goods or services beyond natural gas compression/transmission (SIC 4922).

The facility is equipped with twelve internal combustion reciprocating engines that are fueled with natural gas. These engines include seven Clark HBA-8T mainline compressors rated at 2,050 hp each, three Clark TLA-6 mainline compressors rated at 2,100 hp each, one Clark TCV-10 mainline compressor rated at 3,400 hp, and one Clark TCV-16 mainline compressor rated at 5,500 hp. The Clark TCV-10 and TCV-16 engines are equipped with Low Emission Combustion (LEC) technology to satisfy both NO_x Reasonably Available Control Technology (RACT) requirements (ref. COMAR 26.11.09.08I) and NO_x Reduction and Trading Program requirements for Affected Non-Trading Sources (ref. COMAR 26.11.29.15). Inherent combustion control technology systems on units 1-10 include the application of High Pressure Fuel Injection (HPFi) and Pre-Combustion Chambers (PCC). This 'layered' technology reduces nitrogen oxides (NO_x) emissions from the engines while increasing fuel combustion efficiencies. In addition to the equipment above, the facility operates one Solar Titan 250 (30,000 ISO hp) natural gas fired turbine. The turbine is equipped with SoLoNO_xTM emission controls to satisfy 40 CFR 60, Subpart KKKK NO_x and 40 CFR 63, Subpart YYYY formaldehyde emission standards.

The facility also maintains two natural gas fired auxiliary electric power generators including one Waukesha 7042 GL rated at 1,478 hp and one Waukesha L5794LT rated at 1,450 BHP. Finally,

there are two natural gas-fired boilers located on site, which are used for building space heating: a Holmar Vulcan A60 boiler (rated at 2.5 MMBtu/hr) and a H. B. Smith Model G28HE-13S Boiler (rated at 3.98 MMBtu/hr). A Facility Site Plan is included as **Figure 2**. An inventory of all on-site liquid storage tanks has been included in **Appendix E**.

3.0 Process Description

Natural gas enters the facility at approximately 550 pounds per square inch (psi) and compressors boost the pressure of the gas to approximately 770 psi for transmission in the pipeline towards the desired destination. Each gas compressor is driven by a mainline (M/L) natural gas fired reciprocating internal combustion engine. Each of these engine/compressor sets include an exhaust gas stack and a gas blowdown vent system. All yard piping, including the pigging and filtering equipment, and most of the other equipment in natural gas service (e.g. compressors, fuel gas systems, gas meters) must be depressurized during maintenance. The natural gas lines are depressurized through a silencer. Venting activities are intermittent and are only performed during scheduled maintenance-related activities and upset/emergency situations. A Process Flow Diagram is included as **Figure 3**.

4.0 Historical Background

Between 1950 and 1951, Transco installed the interstate natural gas pipeline system compression station starting with seven (7) 2,050 brake horsepower (BHP) mainline natural gas-fired reciprocating internal combustion engines. Other equipment that was installed included a Holmar Vulcan 2.5 MMBtu/hr natural gas-fired boiler, a Cyclotherm 3.3 MMBtu/hr natural gas-fired boiler, all the supporting compression station piping components, and other supporting equipment.

Additional internal combustion engines were installed with sizes ranging between 2,100 up to 5,500 BHP to meet increased demand for pipeline natural gas. These installations occurred during the years of 1960, 1961, 1962, and 1969, with a total of twelve (12) engines installed by the end of 1970. In 1997, the facility installed an auxiliary electric power generator powered by a 1,478 HP lean-burn reciprocating IC engine.

On January 20, 2015, Transco received Permit to Construct No. 027-0223-5-0054M for the modification of the seven (7) Clark HBA-8T 2,050 BHP engines, and three (3) Clark TLA-6 2,100 BHP engines for the installation of pre-combustion chambers and HPFI technology for the purpose of reducing the NO_x emissions of the above-cited 10 engines from a calculated baseline level of 1,196 tons per year to a projected level of at most 294.3 tons per year.

In 2016, Transco received Permit to Construct (PTC) application for the installation of one (1) Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine, and one (1) natural gas-fired emergency generator rated at 1,450 BHP, as well as piping changes to allow multidirectional flow. The permit was issued on March 17, 2016, and the equipment was installed during the year 2017.

The PTC was amended to make a correction in the actual engine power output rating (1,450 BHP) for the emergency generator. The amendment was also aimed at making a clarification with regards to the allowable nitrogen oxide (NO_x) emissions from the Solar Titan 250 combustion turbine which limits nitrogen oxide (NO_x) emissions to 25 ppm at 15 percent oxygen as promulgated under 40 CFR Part 60, Subpart KKKK Table 1 for new natural gas-fired turbines between 50 and 850 MMBtu/hr. Transco requested that NO_x emissions from the Solar Titan 250 combustion turbine be limited to 15 ppm at 15 percent oxygen, which is guaranteed by the manufacturer specification data. Emission stack testing was conducted on the combustion turbine on September 19, 2018 for NO_x, CO, and VOC emissions. Results demonstrated compliance with the permitted emission limits.

In late 2022 Transco received a permit to construct to replace the existing Cyclotherm C2800 natural gas-fired 3.3 MMBtu/hr boiler with a more efficient H.B. Smith Model G28HE-13S Boiler 3.9 MMBtu/hr natural gas-fired boiler for space heat.

5.0 Emission Sources and Regulated Emissions

The facility is classified as a Title V major source due to estimated potential emissions of nitrogen oxides (NO_x), carbon monoxide (CO), and volatile organic compounds (VOC). Compressor Station 190 operates its emission sources in accordance with its current Title V Operating Permit No. 24-027-00223.

Compressor engines are limited to a combined maximum hourly NO_x emission rate of 566 lb/hr. The Clark TCV-10 and TCV-16 engines are each limited to 125 ppmv NO_x (corrected to 15% O₂ dry basis) during the May 1 to September 30 Control Period (i.e., ozone season) each year.

The total NO_x emissions from the seven (7) Clark HBA-8T and three (3) Clark TLA-6 engines are limited to less than 294.3 tons over any period of 12 consecutive months.

Station 190 operates a State/EPA-approved Trapped Air/Fuel Equivalence (TA/FE) Ratio Parametric Emissions Monitoring System (PEMS) on the Clark TCV-10 engine and the TCV-16 engine to verify NO_x emissions below 125 ppmv NO_x (corrected to 15% O₂ dry basis), which applies year-round.

In addition, to comply with NSR and PSD requirements, emissions increase of CO and VOC from the 7 Clark HBA-8T and 3 Clark TLA-6 collectively are limited to less than 100 tpy CO and 25 tpy VOC for any period of 12 consecutive months.

Similarly, both engines the Clark TCV-10 and TCV-16 collectively as a result of the combustion modifications required under COMAR 26.11.29.15 are also limited to less than 100 tpy CO and 25 tpy VOC for any period of 12 consecutive months as well.

The Solar Titan 250 combustion turbine (CT-1) is subject to 40 CFR Part 60, Subpart KKKK, which limits NO_x emissions to 25 ppm at 15 percent oxygen. The turbine is equipped with SoLoNO_xTM emission controls that limits the NO_x emissions to 15 ppm at 15 percent oxygen to satisfy the NSPS standard. In addition, the Turbine NESHAP, Subpart YYYY of 40 CFR, part 63, includes a formaldehyde emission standard, with compliance to be demonstrated via an annual formaldehyde emissions test and continuous parameter monitoring. Natural gas-fired combustion turbines that use SoLoNO_xTM, which is a form of lean premixed (LPM) combustion

technology, provide low emissions of NO_x and products of incomplete combustion (i.e., volatile organic compounds (VOCs), carbon monoxide (CO), and hazardous air pollutants (HAPs) such as formaldehyde which is the bulk of HAP emissions. This combustion technology achieves very low emissions of products of incomplete combustion without a catalyst (e.g., single digit or lower parts per million by volume (ppmv) of CO and VOCs), including formaldehyde emissions that meet the Subpart YYYY standard of 91 parts per billion by volume (ppbv) corrected to 15% excess oxygen (O₂).

Station 190 is subject to the Control of Methane Emission from the Natural Gas Industry requirements in COMAR 26.11.41. The new regulations became effective November 16, 2020. COMAR 26.11.41 establishes requirements for existing, new, modified, or reconstructed natural gas compressor stations, natural gas underground storage facilities, and liquefied natural gas facilities. The regulation results in sources reducing methane emissions from fugitive equipment components such as valves, connectors, pressure relief devices, open-ended lines, flanges, covers, and vapor collection systems through the implementation of work practice standards consisting of periodic leak detection monitoring and executing repairs to eliminate “leaking” components identified.

As required by COMAR 26.11.41 Transco complies with their MDE approved Methane Emissions Monitoring Plan (MEMP) submitted on April 27, 2021. The approved MEMP covers the collection of fugitive emissions components at the facility. The MEMP includes the elements specified in COMAR 26.11.41.03(A), which outlines the processes and procedures used to conduct leak detection monitoring and execute repairs. In addition, the MEMP includes a weekly auditory / visual / olfactory (AVO) inspection program.

No other hourly emission limits are applicable to the facility, pollutant concentration standards, or annual emission limits are applicable to any other individual piece, or group of equipment. However, it should be noted that hours of operation and fuel consumption are also recorded to determine actual annual emission rates for significant combustion units. Due to the presence of turbines along Transco’s pipeline system subject to New Source Performance Standards (NSPS), an EPA-approved system-wide custom fuel sulfur monitoring plan was implemented. On April 12, 1996, Transco received EPA-approval to implement a quarterly fuel sulfur monitoring plan (included as **Appendix D**). Although this regulation is not applicable to any units at this facility, the plan provides the necessary supporting data to document compliance with SO₂ emission standards.

In addition to the emission units noted above, the only other routine emissions at the facility are associated with insignificant emission units (i.e., liquid storage tanks and fugitive emissions from on-site piping). Potential non-routine emissions generated from intermittent activities occurring on site include air compression (via two portable natural gas-fired compressor engines, maintenance-related painting, sandblasting (prior to painting), welding, and occasional venting of high-pressure gas lines during upset/emergency shutdowns and maintenance-related activities.

6.0 Air Emission Calculation Methodology

The maximum potential to emit (PTE) of criteria pollutants for each combustion source was determined using vendor performance data and/or the most recent emission factors from EPA AP-42. PTE for combustion source HAP emissions at the facility were quantified using the most recent emission factors from EPA AP-42.

Facility-wide sources of natural gas losses due to piping component leaks (fugitive emissions) were combined into a single emission source (Unit No. FUG 1). Fugitive emission rates for Station 190 were estimated by conducting component counts for natural gas piping (and any other hydrocarbon-dedicated piping, if applicable) at a similarly-sized compressor station along Transco's pipeline system (i.e., Compressor Station 140). The majority of all on-site piping is welded, although there are a number of flanges and lines that have bolted or threaded connections. Estimations are based on the EPA *Protocol for Equipment Leak Emission Estimates* (EPA-453/R-95-017, November 1995).

Natural gas venting and blowdown activities (Unit No. FUG 2) are intermittent and are only performed during maintenance and upset conditions. The number of occurrences and amount of natural gas released on an annual basis was estimated using historical data plus a contingency factor. The actual number of maintenance venting and upset blowdown activities will vary from year to year. Total actual VOC emissions from these activities are variable, thus justifying inclusion as a fugitive-type potential-to-emit source.

It should be noted that all fugitive emission rates are estimates and are not proposed as enforceable limits, as the facility is not one of the 28 listed PSD source categories. Throughout this application, Transco has provided emissions estimates in both lb/hr and tpy for the purpose of satisfying regulatory requirements for a complete Part 70 renewal application. Emissions estimates are presented in **Appendix E**.

7.0 Exempt and Insignificant Activities and Emissions

Station 190 engages in a variety of activities which are defined as exempt and insignificant by the Department as set forth in COMAR 26.11.03.04. Transco has identified activities and/or emission units exempt from the Part 70 permit renewal application in the *Checkoff List of Emissions Units and Activities Exempt from the Part 70 Permit Application* (included as **Appendix F**). Transco wishes to stress that some of these "named" activities may not routinely occur at the facility but may occur periodically or on an intermittent basis.

8.0 Operational Flexibility

Unless noted to the contrary, any emission levels, physical parameters, or operating parameters referred to in this application should not be interpreted to imply or denote any specific levels of "allowable emissions" or otherwise "applicable requirements". Furthermore, references to annual emission levels should not be interpreted to imply or denote shorter-term emissions such as hourly, daily, monthly, or quarterly emission rates. Also, unless noted to the contrary,

emissions referred to in this application are not intended to reflect emissions during start-ups and/or shut downs.

Transco respectfully reserves the right under the Part 70 Operating Permits Program to maintain operational flexibility at the facility. This includes, but is not necessarily limited to, normal maintenance and repair of equipment, including replacement of parts and engine overhauls. It may also include the replacement of like-kind compressor engines or operation of temporary horsepower during major (or emergency) overhauls of the existing horsepower. Transco recognizes that this flexibility covers only the Part 70 Permit, and that replacement activities or temporary sources may be subject to other state and/or federal regulations (e.g., Non-Attainment NSR, PSD, or NSPS).

9.0 Alternative Operating Scenarios

Transco has evaluated the “potential to emit” for all existing emission sources at Station 190 and has developed emission calculations reflecting maximum design production rates based on the current configuration of the facility, including emissions limitations, standards, and operating hours restrictions. Therefore, no alternative operating scenarios is proposed.

10.0 Applicable Requirements

Station 190 is potentially subject to certain state and federal air quality regulations. Transco has identified all such requirements to accurately determine whether, and to what extent, each potentially applicable state regulation has been formally incorporated into the EPA-approved SIP for Maryland. Subsequently, it may be determined that one (or more) of these determinations was (were) incorrect and that it (they) should have been included/excluded from the application. In such a case, Transco will make appropriate corrections to the application and the Department will incorporate the changes into the Permit. A Section 3B form was completed for each federally enforceable standard applicable to the facility as a whole, to an individual source, or to a group of individual sources (refer to **Appendix B**).

11.0 Inapplicable Requirements

The requirements listed in the following table are being specifically identified as inapplicable to the facility.

Inapplicable Requirements

Citation	Title of Citation	Justification for Inapplicability
40 CFR 60, Subpart OOOO (Effective October 15, 2012)	Standards of Performance for Crude Oil and Natural Gas Production, Transmission, and Distribution	Applies to crude oil, condensate, and produced water storage tanks, installed after August 23, 2011, that emit more than 6 tons of VOC per year. Therefore, 40 CFR 60, Subpart OOOO is not applicable to any emissions unit located at Compressor Station 190.
40 CFR 64	Compliance Assurance Monitoring (CAM)	<u>40 CFR 64.2 (Applicability) – paraphrased:</u> (a) <i>General applicability.</i> Except for specific backup utility units that are exempt from this section, the requirements of this part shall apply to a pollutant-specific emissions unit at a major source that is required to obtain a part 70 or 71 permit if the unit satisfies <u>all</u> of the following criteria: 1. The unit is subject to an emission limitation or standard for the applicable regulated air pollutant (or a surrogate thereof); 2. The unit uses a control device to achieve compliance with any such emission limitation or standard; and 3. The unit has potential pre-control device emissions of the applicable regulated air pollutant that are equal to or greater than 100 percent of the amount, in tons per year, required for a source to be classified as a major source. No source is equipped with a control device as defined under the Rule [i.e., does not satisfy Criterion (2) or (3)]. Therefore, 40 CFR 64 is not applicable to any emissions unit located at Compressor Station 190.

Citation	Title of Citation	Justification for Inapplicability
40 CFR 63, Subpart HH	National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Oil and Natural Gas Production	Applies to major HAP facilities that process, upgrade, or store (1) hydrocarbon liquids and (2) natural gas from the well up to and including the natural gas processing plant. Compressor Station 190 is a natural gas transmission/transportation facility located downstream of any natural gas processing plants. Therefore, the facility is not subject to the requirements of this subpart.
40 CFR 63, Subpart HHH	National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Natural Gas Transmission and Storage	Applies to facilities that process, upgrade, transport or store natural gas prior to delivery to a local distribution company (LDC) or a final end user if no LDC is present. The final standards for natural gas transmission and storage facilities require that the owner or operator of a major source of HAP reduce HAP emissions from glycol dehydration units through the application of air emission control equipment or pollution prevention measures, or a combination of both. 40 CFR 63.1270(b) states that the affected source is each glycol dehydration unit. 40 CFR 63.1270(c) states that the owner or operator of a facility that does not contain an affected source, as specified in paragraph (b) of this section, is not subject to the requirements of this subpart. Compressor Station 190 does not maintain any glycol dehydration units. Therefore, the requirements of this subpart are not applicable.
40 CFR 68	Chemical Accident Prevention Provisions	Applies to a <i>stationary source</i> that has more than a threshold quantity of a regulated substance in a process, as determined under 40 CFR 68.115. Under 40 CFR 68.3 (Definitions), “the term <i>stationary source</i> does not apply to transportation ...”; transportation includes transportation subject to oversight or regulation under 49 CFR Parts 192, 193, or 195, or a state natural gas or hazardous liquid program for which the state has in effect a certification to the Department of Transportation (DOT) under 49 U.S.C. section 60105. Compressor Station 190 is regulated by the DOT pursuant to 49 CFR Part 192. Therefore, 40 CFR 68 does not apply to the facility.

Citation	Title of Citation	Justification for Inapplicability
COMAR 26.11.15	State Toxic Air Pollutants Program	A person may not construct, modify, or operate, or cause to be constructed, modified, or operated, any new installation or source without first demonstrating to the satisfaction of the Department using procedures established in this chapter that total allowable emissions from the premises of each toxic air pollutant discharged by the new installation or source will not unreasonably endanger human health. All sources located at Compressor Station 190 are existing sources. Furthermore, fuel-burning equipment as defined in COMAR 26.11.15B(2)(a) is exempt from the requirements of this Chapter.
Clean Air Act, Section 112(r)	Risk Management Plans	Under Section 112(r) of the Clean Air Act, it is required that applicable facilities develop and register a Risk Management Plan (RMP) for accidental releases. However, Transco has concluded that Department of Transportation (DOT) regulated pipeline activities are excluded from the applicability of Section 112(r). According to the final accidental release provisions, the rule, including its RMP requirements, do not apply to Compressor Station 190, since the facility does not qualify as a "Stationary Source" under the "Definitions" section in 40 CFR 68.3. This section specifically excludes transportation-related activities that are regulated under 49 CFR Parts 192, 193, or 195.

12.0 Missing Information

Throughout the application, Transco has used "N/A" when the information requested was determined to be not applicable.

13.0 Renewal Application and Permit Shield

Station 190 is currently in compliance with all applicable state and federal air quality regulations. Pursuant to COMAR 26.11.03.01D, Transco requests authorization through the Title V permit renewal process to continue operating all emission sources in accordance with all applicable requirements referenced in the current Title V Operating Permit, Permit to Construct, as well as all determinations of the regulatory applicability analysis being submitted in this renewal application. With the submittal of this document, Transco has complied with the requirement to submit a timely and administratively complete renewal application by the December 1, 2022 deadline.

In developing the Title V renewal application, Transco has identified all sources of air contaminants at the facility and has included and specifically identified all requirements applicable to these sources. Station 190 will continue to comply with these requirements during the duration of the Permit. In addition, Station 190 will comply with any applicable requirements scheduled to be promulgated during the term of the permit and will meet these requirements by

the required regulatory dates. Therefore, Transco requests that the Department expressly reflect in the permit that all applicability determinations, as well as facility operations, are in compliance with applicable requirements, and are protected under the Permit Shield.

14.0 Renewal Application Fee

In accordance with COMAR 26.11.02.19, the renewal application fee is included as part of the actual annual emissions fee in support of the Part 70 Operating Permits Program.

15.0 Organization of Renewal Application

This document contains completed applicable MDE ARMA Part 70 application forms, a location map, facility site plan, process flow diagram, sample calculations, as well as copies of the 2021 Emissions Certification Report (**Appendix G**) and 2021 Compliance Certification Report (**Appendix H**) for Compressor Station 190.

16.0 Summary

This document contains all necessary elements for the submittal of a Title V Operating Permit Renewal Application under COMAR 26.11.03.02 and 40 CFR 70. In preparing this application, Transco recognizes that additional information may be requested by the Department to supplement the application.

FIGURES

FIGURE 1
Location Map

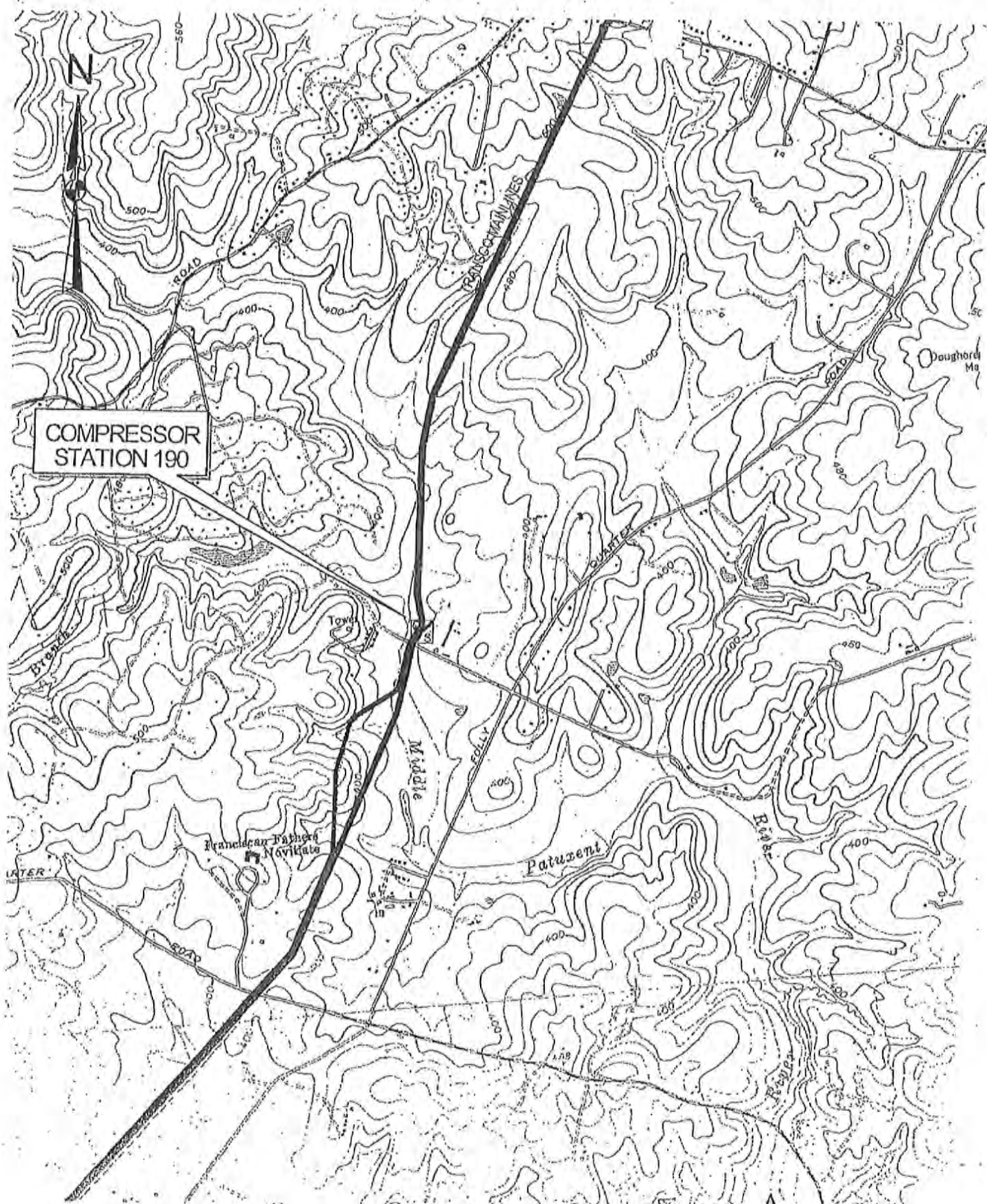


Figure 1
**TRANSCO COMPRESSOR
STATION 190
HOWARD COUNTY, MARYLAND**

Figure 1 **Location Map**

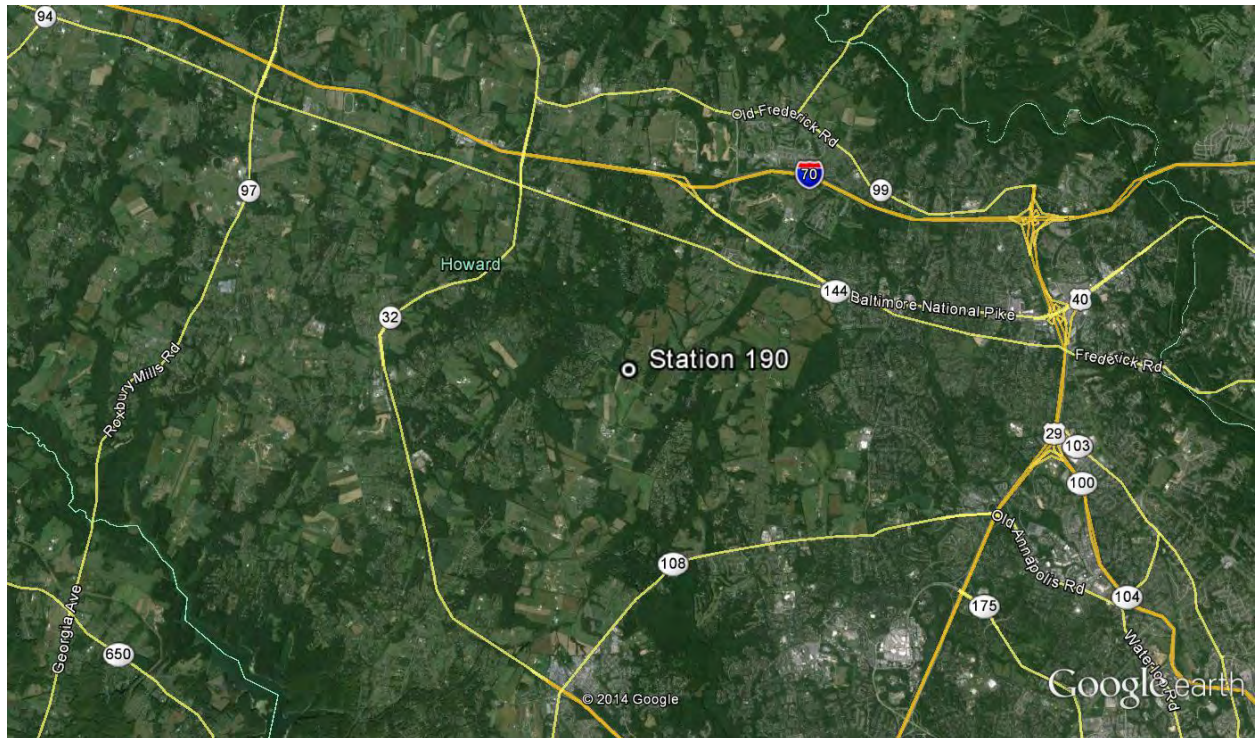
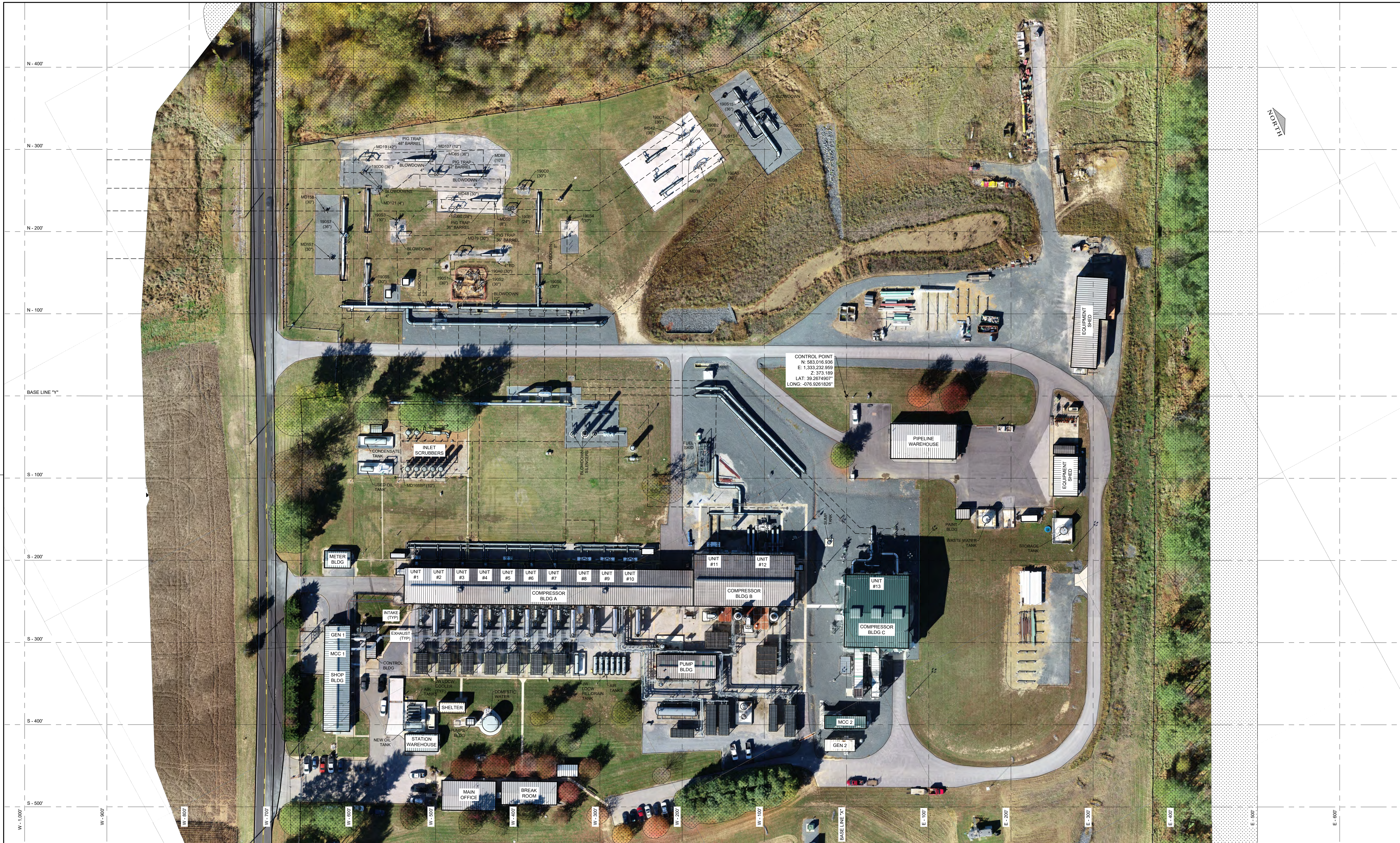


FIGURE 2
Facility Site Plan



- NOTES:
- COORDINATES AND BEARINGS SHOWN ARE REFERENCED TO THE MARYLAND STATE PLANE COORDINATE SYSTEM, N.A.D. 1983 DATUM DERIVED FROM G.P.S. OBSERVATION.
 - UNDERGROUND PIPE LOCATIONS ARE NOT GEOREFERENCED AND, IF SHOWN, ARE ILLUSTRATED FOR SCHEMATIC PURPOSES ONLY.
 - NO EXCAVATIONS WERE MADE DURING THIS ASSIGNMENT. THERE IS EVIDENCE OF ADDITIONAL BURIED PIPING THAT IS NOT DEPICTED ON THIS DRAWING. CALL MARYLAND ONE CALL AT "811" PRIOR TO CONSTRUCTION.
 - THIS DRAWING DOES NOT REPRESENT, OR ATTEMPT TO REPRESENT A PROPERTY BOUNDARY SURVEY.
 - VALVE SIZES ARE NOT TO SCALE.
 - FIELD GPS AND AERIAL DATA WAS COLLECTED DURING THE MONTH OF OCTOBER, 2019.

- LEGEND:
- ABOVE GROUND PIPING
 - - - BURIED PIPING (HP GAS)
 - x FENCE
 - OVERHEAD ELECTRIC
 - ▨ BUILDINGS
 - - - EDGE OF PAD
 - TREE CANOPY

REFERENCE DRAWINGS				REVISIONS			
DRAWING NO.	TITLE	NO.	DATE	BY	DESCRIPTION	W.O. NO.	CHK. APP.
F-1A-5	ELECTRICAL AREA CLASSIFICATION PLAN	0	4-20-2019	CR	CREATED PER 2019 PSM 360 WALKDOWN - ISSUED FOR REVIEW	728730	
				IFR AS-BUILT PENDING D&D FAT D&D Tracking OMP# 11356 07/16/2020			

TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC. COMPRESSOR STATION 190 2019 PSM 360 AS-BUILT PROJECT					
SITE PLAN HOWARD COUNTY, MARYLAND					
DRAWN BY: CR		DATE: 7-11-2019		SCALE: 1" = 40'	
CHECKED BY: CR		DATE: XX-XX-XXXX			
APPROVED BY: XX		DATE: XX-XX-XXXX			
W.O. 728730		DRAWING NUMBER: (66-190) F-1A-04		SHEET 1	
		27 Transco Pipeline Station 190050a PlanDeliverables(06-190) F-1A-04.dwg		OF 1	



FIGURE 3
Process Flow Diagram

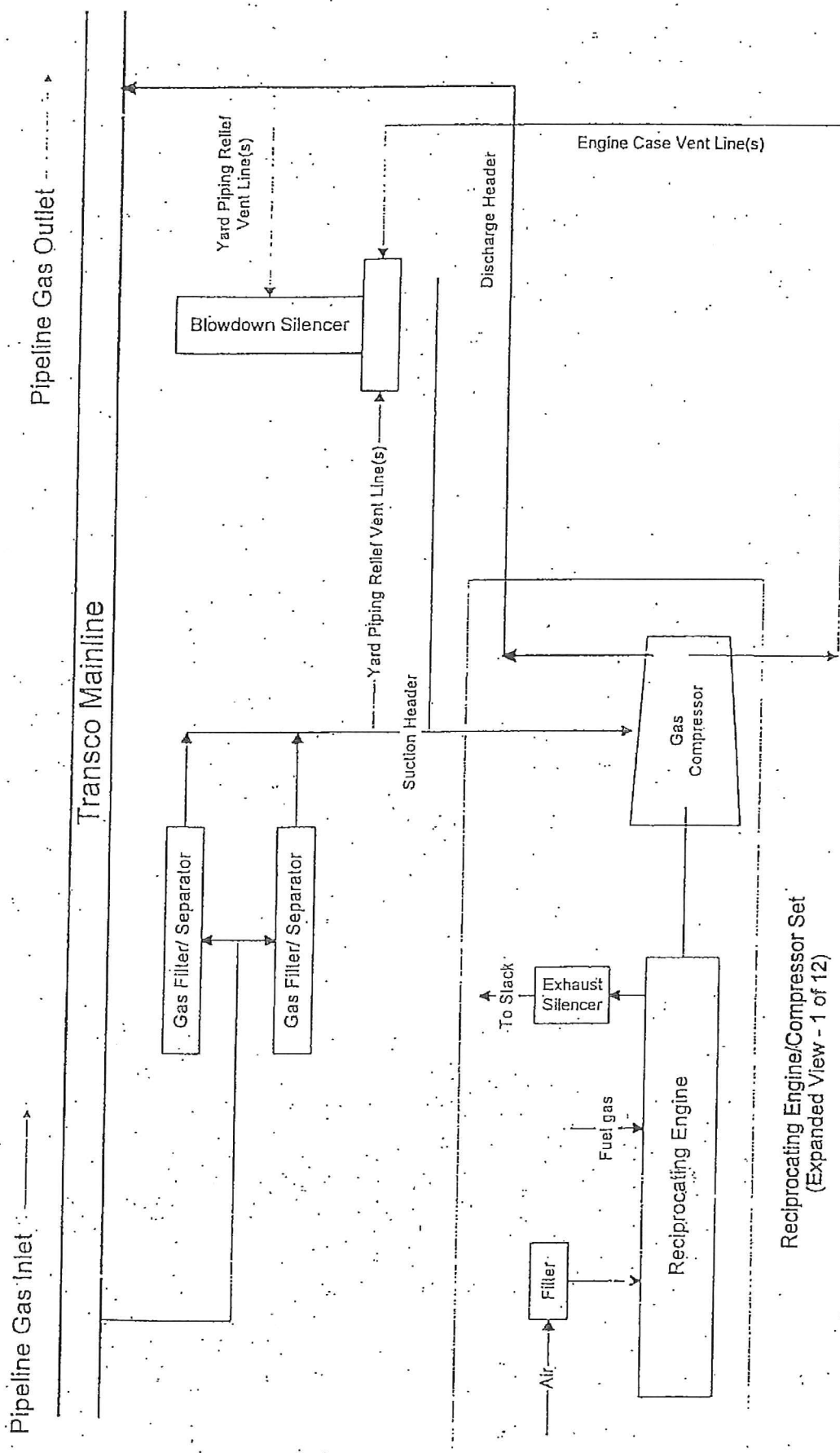


Figure 3
Process Flow Diagram
Compressor Station 190
Transcontinental Gas Pipe Line Corporation
Ellicott City, Maryland

APPENDIX A

Current Title V Operating Permit No. 24-027-00223



Maryland

Department of the Environment

Larry Hogan, Governor
Boyd Rutherford, Lt. Governor

Ben Grumbles, Secretary
Horacio Tablada, Deputy Secretary

FEB 12 2019

RECEIVED
2/19/19

Mr. Albert R. Taylor, VP Ops *ART*
Eastern Interstates, Atlantic Gulf
Transcontinental Gas Pipe Line Company, LLC
P.O. Box 1396
Houston, TX 77251-1396

Re: Part 70 Operating Permit #24-027-00223 Transcontinental Gas Pipeline Company,
LLC Station 190

Dear Mr. Taylor:

Enclosed please find the renewal Title V Operating Permit and Fact Sheet for the Transcontinental Compressor Station 190 located in Ellicott City, MD. The permit will expire on November 30, 2023.

The Code of Maryland Regulations (COMAR) 26.11.03.11 states the following:

If the Department denies a Part 70 permit or issues it with terms and conditions that are objectionable to the applicant, the applicant may request that a contested case hearing be held regarding the permit. This request shall be made to the Department in writing not later than 15 days after the applicant receives notice that the permit has been denied or of the objectionable terms and conditions. The request shall include the basis for the request and refer to any objectionable terms and conditions.

Please note the following revised condition in the Permit under Section II, General Conditions, Number 5, Permit Renewal:

The Permittee shall submit to the Department a completed application for renewal of this Part 70 permit 12 months before the expiration of the permit. Upon submitting a complete application, the Permittee may continue to operate this facility pending final action by the Department on the renewal. *ART*

If you have any questions, please feel free to call Mario Cora, the permit manager for this facility, at (410) 537-3230.

Sincerely,

A handwritten signature in black ink, appearing to read "Karen G. Irons".

Karen G. Irons, Administrator
Air Quality Permits Program
Air & Radiation Administration

KGI/jm

Enclosures

cc: Dave Talley, EPA Region III (w/encl)

**TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC -
COMPRESSOR STATION 190
11910 CARROLL MILL ROAD, ELLICOTT CITY, MD
PART 70 PERMIT NO. 24-027-00223
FACT SHEET**

BACKGROUND

Transcontinental Gas Pipe Line Company, LLC (Transco) owns and operates a multi-directional interstate natural gas pipeline system which extends from the Gulf Coast region to areas in the northeastern United States. Compressor Station 190 is used for compression purposes in order to keep the gas flowing through the system.

Natural gas enters the station at approximately 550 pounds per square inch (psi). Compressors boost the pressure of the gas to approximately 770 psi for transmission in the pipeline downstream of the compressor station. Each gas compressor is driven by a mainline (M/L) natural gas fired reciprocating internal combustion engine. Each of these engine/compressor sets include an exhaust gas stack and a gas blowdown vent system.

Historical Background

Between 1950 and 1951, Transco installed the interstate natural gas pipeline system compression station starting with seven (7) 2,050 brake horse power (BHP) mainline natural gas-fired reciprocating internal combustion engines. Other equipment that was installed included a Holmar Vulcan 2.5 MMBtu/hr natural gas-fired boiler, a Cyclotherm 3.3 MMBtu/hr natural gas-fired boiler, all the supporting compression station piping components, and other supporting equipment.

As demand increased, subsequent internal combustion engines were installed with sizes ranging between 2,100 up to 5,500 BHP. These installations occurred during the years of 1960, 1961, 1962, and 1969, with a total of twelve (12) engines installed by the end of 1970. In 1997, the facility installed an auxiliary electric power generator powered by a 1,478 HP lean-burn reciprocating IC engine.

Current Status

On January 20, 2015, the Department issued to Transco, Permit to Construct No. 027-0223-5-0054M for the modification of the seven (7) Clark HBA-8T 2,050 BHP engines, and three (3) Clark TLA-6 2,100 BHP engines for the installation of pre-combustion chambers and HPFI technology for the purpose of reducing the NOx emissions of the above-cited 10 engines from a calculated baseline level of 1,196 tons per year to a projected level of at most 294.3 tons per year.

**TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC -
COMPRESSOR STATION 190
11910 CARROLL MILL ROAD, ELLICOTT CITY, MD
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FACT SHEET**

Transco is proposing to expand its current interstate natural gas pipeline system connecting producing regions in northeastern Pennsylvania to markets in the Mid-Atlantic and southeastern states as part of the "Atlantic Sunrise Project (ASP)." The ASP is expected to add 1,700,000 dekatherms (approximately 1.7 billion cubic feet) per day of pipeline capacity to the Transco system. To add additional compression capacity at the Transco Compression Station 190, on June 18, 2015, the facility submitted a Permit to Construct (PTC) application for the installation of one (1) Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine, and one (1) natural gas-fired emergency generator rated at 1,450 BHP, as well as piping changes to allow multidirectional flow. The permit was issued on March 17, 2016, and the equipment was installed during the year 2017. The Permittee requested an amended PTC to make a correction in the actual engine power output rating (1,450 BHP) for the emergency generator. The amendment was also aimed at making a clarification with regards to the allowable nitrogen oxide (NOx) emissions from the Solar Titan 250 combustion turbine which limits nitrogen oxide (NOx) emissions to 25 ppm at 15 percent oxygen as promulgated under 40 CFR Part 60, Subpart KKKK Table 1 for new natural gas-fired turbines between 50 and 850 MMBtu/hr. Transco requested that NOx emissions from the Solar Titan 250 combustion turbine be limited to 15 ppm at 15 percent oxygen, which is guaranteed by the manufacturer specification data. Emission stack testing was conducted on the combustion turbine on September 19, 2018 for NOx, CO, and VOC emissions. Results demonstrated compliance with the permitted emission limits.

Air Emissions

Transco major air emissions sources consist of twelve (12) mainline natural-gas fired reciprocating internal combustion engines installed by the end of 1970, an auxiliary electric power generator powered by one (1) 1,478 BHP lean-burn reciprocating IC engine, installed in 1997, two (2) natural gas-fired boilers, a 30,000 HP combustion turbine, and a 1,450 BHP natural gas-fired emergency generator, both installed in 2017.

The combustion turbine is equipped with SoLoNOxTM emission controls designed to limit the NOx, CO, and unburned hydrocarbon (UHC) emissions. The exhaust gas emission concentrations are guaranteed by the manufacturer and apply while operating between 40 to 100% of full load and at ambient air temperatures greater than -20°F.

**TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC -
COMPRESSOR STATION 190
11910 CARROLL MILL ROAD, ELLICOTT CITY, MD
PART 70 PERMIT NO. 24-027-00223
FACT SHEET**

The following Table 1 summarizes the actual emissions from Transco based on its Annual Emission Certification Reports:

Table 1: Actual Emissions⁽¹⁾

Year	NO _x (TPY)	SO _x (TPY)	PM ₁₀ (TPY)	CO (TPY)	VOC (TPY)	HAP ² (TPY)
2017	25.4	0.01	0.5	12.9	4.0	0.67
2016	61.40	0.02	0.94	23.70	9.3	1.16
2015	3.3	0.00	0.10	2.2	1.2	0.06
2014	9.4	0.00	0.18	4.9	1.8	0.22
2013	336.5	0.11	7.4	161.1	57.2	12.08
2012	1,078	0.35	22.74	503	165	36.10

Note 1: The lower emissions in the last four years are due primarily to the idling of the compressor M/L Units 1 thru 10. The compressor M/L Units 1-10 operation dropped off significantly from historical levels in 2013 and continued to be idle through installation of the HPFI/PCC retrofits in 2017. The decreased operation of Transco Compressor Station 190 is a function of supply and demand and implications for that location in the Transco interstate pipeline system that has traditionally brought natural gas from sources in the Gulf region to customers in the northeast region, primarily the major markets of New York, New Jersey and Pennsylvania. In recent years, Marcellus Shale gas has started to be introduced to the system at points north of Maryland. As such, much of the gas needed for delivery to the northeast may be sourced from the northeast.

Furthermore, the abundant supplies provided from the Marcellus region mean that there is enough gas to pressurize the pipeline system to induce flow, with minimal need for supplementary compression along the route. In the case of Station 190, this new supply, combined with natural gas still coming from the Gulf region, has resulted in the station compressors being essentially idle for last 5 years. As noted in the February 8 ERC application, as well as filings submitted in support of licensing for the Atlantic Sunrise pipeline project, future operation of Station 190 is anticipated to be at or near design capacity once ASR is fully placed in service.

Note 2: TRANSCO's certified emissions only include the HAP formaldehyde, which however is expected to be the bulk of the HAP emissions.

The applicable major source threshold for triggering Title V permitting requirements in Howard County is a potential to emit of 25 tons per year for NO_x, 25 tons per year for VOC, 100 tons per year for any other criteria pollutant, and 10 tons per year for any single Hazardous Air Pollutant (HAP) or 25 tons per year for total HAPS. Since the facility-wide actual emissions of NO_x, VOC, and CO are each over the major source threshold, Transco is required to obtain a Part 70

**TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC -
COMPRESSOR STATION 190
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permit under COMAR 26.11.03.01. The facility is a major source for the individual HAP formaldehyde as well as aggregate HAP emissions.

The Part 70 permit renewal application from Transco was received by the Department on May 31, 2018. An administrative completeness review was conducted and the application was deemed to be complete. The completeness determination letter was sent on September 20, 2018 granting the facility an application shield.

GREENHOUSE GAS (GHG) EMISSIONS

Transco emits the following greenhouse gases (GHGs) related to Clean Air Act requirements: carbon dioxide, methane, and nitrous oxide. These GHGs originate from gas fugitives, internal combustion engines, and small boilers contained within the facility premises applicable to Transco. The facility has not triggered Prevention of Significant Deterioration (PSD) requirements for GHG emissions; therefore, there are no applicable GHG Clean Air Act requirements. There may be no applicable requirements as a result of PSD, emission certifications reports for the years 2014, 2015, 2016, and 2017 (see Table 2 shown below). However, during the years 2009, and 2010, emission certification reports showed that Transco is a major source (threshold: 100,000 tpy CO₂e) for GHGs. The Permittee must quantify facility wide GHGs emissions and report them in accordance with Section 3 of the Part 70 permit.

The following table summarizes the actual emissions from Transco based on its Annual Emission Certification Reports:

Table 2: Greenhouse Gases Emissions Summary

GHG	Conversion factor	2014 tpy CO ₂ e	2015 tpy CO ₂ e	2016 tpy CO ₂ e	2017 tpy CO ₂ e
Carbon Dioxide CO ₂	1	505.8	1,800	3,806	2,431
Methane CH ₄	25	6.7	1.9	34.41	17.2
Nitrous Oxide N ₂ O	298	n/r	n/r	n/r	n/r
Total GHG CO ₂ eq		512.5	1,801	3,840	2,448

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Transco did not quantify its emissions of nitrous oxide although some emissions would be expected from fuel burning equipment. AP-42 emission factor data is very limited, but from AP-42 Tables 1.4 and 3.1 - 2a, one would perhaps expect in the order of 500 - 2000 tpy CO_{2eq}.

Compliance Assurance Monitoring

The Compliance Assurance Monitoring (CAM) Rule 40 CFR Subpart 64 is not applicable because Transco Station 190 is subject to an emissions limitation that was proposed by the EPA administrator after November 15, 1990 pursuant to Section 111 or 112 of the Clean Air Act (specifically the facility is subject to the NSPS for 40 CFR 60, Subpart Dc, for Small Industrial-Commercial-Institutional Steam Generating Units, 40 CFR 60, Subpart IIII for Stationary Compression-Ignition Internal Combustion Engines, 40 CFR 60, Subpart JJJJ for Stationary SI Internal Combustion Engines, and 40 CFR 60, Subpart KKKK—NSPS for Stationary Combustion Turbines and HRSGs.

Transco is exempt from CAM requirements since no installation employs an add-on control device within the meaning of the regulation 40 CFR §64.1 to achieve compliance with any emissions regulation.

EMISSION UNIT IDENTIFICATION

Transco has identified the following emission units at the facility as being subject to Title V permitting requirements and having applicable requirements.

Table 3: Emission Unit Identification

Emissions Unit Number	MDE Registration Number	Emissions Unit Name and Description	Date of Installation
M/L Unit 1	027-0223-5-0054	Mainline natural gas-fired reciprocating internal combustion engine, 2-cycle, lean-burn Clark HBA-8T, 2,050 BHP	03/1951
M/L Unit 2	027-0223-5-0054	Mainline natural gas-fired reciprocating internal combustion engine, 2-cycle, lean-burn Clark HBA-8T, 2,050 BHP	03/1951
M/L Unit 3	027-0223-5-0054	Mainline natural gas-fired reciprocating internal combustion engine, 2-cycle, lean-burn Clark	03/1951

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		HBA-8T, 2,050 BHP	
M/L Unit 4	027-0223-5-0054	Mainline natural gas-fired reciprocating internal combustion engine, 2-cycle, lean-burn Clark HBA-8T, 2,050 BHP	03/1951
M/L Unit 5	027-0223-5-0054	Mainline natural gas-fired reciprocating internal combustion engine, 2-cycle, lean-burn Clark HBA-8T, 2,050 BHP	03/1951
M/L Unit 6	027-0223-5-0054	Mainline natural gas-fired reciprocating internal combustion engine, 2-cycle, lean-burn Clark HBA-8T, 2,050 BHP	03/1951
M/L Unit 7	027-0223-5-0054	Mainline natural gas-fired reciprocating internal combustion engine, 2-cycle, lean-burn Clark HBA-8T, 2,050 BHP	03/1951
M/L Unit 8	027-0223-5-0054	Mainline natural gas-fired reciprocating internal combustion engine, 2-cycle, lean-burn Clark TLA-6, 2,100 BHP	12/1960
M/L Unit 9	027-0223-5-0054	Mainline natural gas-fired reciprocating internal combustion engine, 2-cycle, lean-burn Clark TLA-6, 2,100 BHP	09/1961
M/L Unit 10	027-0223-5-0054	Mainline natural gas-fired reciprocating internal combustion engine, 2-cycle, lean-burn Clark TLA-6, 2,100 HP	07/1962
M/L Unit 11	027-0223-5-0054	Mainline natural gas-fired reciprocating internal combustion engine, 2-cycle, lean-burn Clark TCV-10, 3,400 HP	03/1969
M/L Unit 12	027-0223-5-0054	Mainline natural gas-fired reciprocating internal combustion engine, 2-cycle, lean-burn, Clark TCV-16, 5,500 HP	05/1970
AUX 1	027-0223-9-0186	Auxiliary electric power generator; 4-cycle, lean-burn, reciprocating IC engine, Waukesha 7042 GL, 1,478 HP	03/1997
BLR 1	027-0223-5-0063	Holmar Vulcan A60 natural gas-fired 2.5 MMBtu/hr boiler	1950

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BLR 2	027-0223-5-0064	H. B. Smith Model G28HE-13S natural gas-fired 3.5 MMBtu/hr boiler	2022
FUG 1	n/a	Piping component fugitives	1950's
FUG 2	n/a	Venting/blowdown emissions	1950's
CT-1	027-0223-9-0391	One (1) Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine.	2017
EG-1	027-0223-9-0392	One (1) natural gas-fired emergency generator rated at 1,450 BHP.	2017

AN OVERVIEW OF THE PART 70 PERMIT

The Fact Sheet is an informational document. If there are any discrepancies between the Fact Sheet and the Part 70 permit, the Part 70 permit is the enforceable document.

Section I of the Part 70 Permit contains a brief description of the facility and an inventory list of the emissions units for which applicable requirements are identified in Section IV of the permit.

Section II of the Part 70 Permit contains the general requirements that relate to administrative permit actions. This section includes the procedures for renewing, amending, reopening, and transferring permits, the relationship to permits to construct and approvals, and the general duty to provide information and to comply with all applicable requirements.

Section III of the Part 70 Permit contains the general requirements for testing, record keeping and reporting; and requirements that affect the facility as a whole, such as open burning, air pollution episodes, particulate matter from construction and demolition activities, asbestos provisions, ozone depleting substance provisions, general conformity, and acid rain permit. This section includes the requirement to report excess emissions and deviations, to submit an annual emissions certification report and an annual compliance certification report, and results of sampling and testing.

Section IV of the Part 70 Permit identifies the emissions standards, emissions limitations, operational limitations, and work practices applicable to each emissions unit located at the facility. For each standard, limitation, and work practice, the permit identifies the basis upon which the Permittee will demonstrate compliance. The basis will include testing, monitoring, record

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keeping, and reporting requirements. The demonstration may include one or more of these methods.

Section V of the Part 70 Permit contains a list of insignificant activities. These activities emit very small quantities of regulated air pollutants and do not require a permit to construct or registration with the Department. For insignificant activities that are subject to a requirement under the Clean Air Act, the requirement is listed under the activity.

Section VI of the Part 70 Permit contains State-only enforceable requirements. Section VI identifies requirements that are not based on the Clean Air Act, but solely on Maryland air pollution regulations. These requirements generally relate to the prevention of nuisances and implementation of Maryland's Air Toxics Program.

**REGULATORY REVIEW/TECHNICAL REVIEW/COMPLIANCE
METHODOLOGY**

Federal Applicable Regulations

Transco is subject to both federal as well as state regulations that are applicable to the emission sources listed at the facility. Transco is subject to the following federal air regulations from Title 40, Code of Federal Regulations (CFR):

40 CFR 60—New Source Performance Standards (NSPS)

- **40 CFR 60, Subpart A**—NSPS General Provisions, which applies to emissions units subject to a categorical NSPS.

- **40 CFR 60, Subpart JJJJ**—Source Performance Standards (NSPS) for Stationary SI Internal Combustion Engines, including, but not limited to, the following sections:

§60.4231(e) Stationary SI internal combustion engine manufacturers who choose to certify their stationary SI ICE with a maximum engine power greater than or equal to 75 KW (100 HP) ... under the voluntary manufacturer certification program described in this subpart must certify those engines to the emission standards in Table 1 to this subpart...

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§60.4233(e) Owners and operators of stationary SI ICE with a maximum engine power greater than or equal to 75 KW (100 HP) ... must comply with the emission standards in Table 1 to this subpart for their stationary SI ICE.

Table 1 to Subpart JJJJ of Part 60—NO_x, CO, and VOC Emission Standards for ... Stationary Emergency Engines >25 HP

Engine type and fuel	Maximum engine power	Manufacture date	Emission standards					
			g/HP-hr			ppmvd at 15% O ₂		
			NO _x	CO	VOC	NO _x	CO	VOC
Emergency	25<HP<130	1/1/2009	°10	387	N/A	N/A	N/A	N/A
	HP≥130		2.0	4.0	1.0	160	540	86

• **40 CFR 60, Subpart KKKK**—NSPS for Stationary Combustion Turbines, which applies to the Solar Titan 30,000 HP natural gas-fired combustion turbine, including but not limited to the following sections:

§60.4320(a) You must meet the emission limits for NO_x specified in Table 1 to this subpart.

Table 1 to 40 CFR, Subpart KKKK—Nitrogen Oxide Emission Limits for New Stationary Combustion Turbines

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

§60.4330(a)(2) You must not burn in the subject stationary combustion turbine any fuel which contains total potential sulfur emissions in excess of 26 ng SO₂/J (0.060 lb SO₂/MMBtu) heat input....

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**40 CFR 63—National Emissions Standards for Hazardous Air Pollutants
(NESHAP)**

• **40 CFR 63, Subpart A**—NESHAP General Provisions. Traditionally, the facility has been a major source of HAPs. However, during the last five years the facility has decreased its emissions due primarily to the idling of the compressor M/L Units 1 thru 10. The compressor M/L Units 1-10 operation dropped off significantly from historical levels in 2013 and continued to be idle through installation of the HPFI/PCC retrofits in 2017. As natural gas demand increases in future years it is expected that HAP emission will resume to the more traditional levels.

• **40 CFR 63, Subparts YYYY** for Stationary Combustion Turbines. Only the following apply.

§63.6095(c) You must meet the notification requirements in §63.6145 according to the schedule in §63.6145 and in 40 CFR 63, Subpart A.

§63.6095(d) *Stay of standards for gas-fired subcategories.* If you start up a new or reconstructed stationary combustion turbine that is a lean-premix gas-fired stationary combustion turbine or diffusion flame gas-fired stationary combustion turbine as defined by this subpart, you must comply with the Initial Notification requirements set forth in §63.6145 but need not comply with any other requirement of this subpart until EPA takes final action to require compliance and publishes a document in the FEDERAL REGISTER.

• **40 CFR 63, Subpart DDDDD**—NESHAP for Industrial, Commercial, and Institutional Boilers and Process Heaters. There are only two small natural gas fired boilers at the facility, the larger of which is 3.3 million Btu/hr. The facility's boilers fall into 40 CFR Part 63, Subpart DDDDD MACT source category for Industrial, Commercial, and Institutional Boilers and Process Heaters which was initially promulgated on September 13, 2004. Under the rule as promulgated on that date, the boilers were exempt from any requirements under the rule. However, the rule was vacated and remanded by the D.C. Court of Appeals on June 7, 2007. In response to the Court's vacatur and remand, EPA promulgated a revised final rule on March 21, 2011 and on the same day published a notice to reconsider certain provisions to the final rule. In response to comments received, EPA promulgated the current version of the final rule on January 31, 2013, removing the vacatur. The boilers now qualify under the gaseous fuel-1 subcategory and are required to have an initial energy assessment and complete a tune up every 5 years, but are not subject to any emission limits.

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The initial tune-up of the boiler was performed on January 5, 2016. The energy assessment was performed on August 19, 2015.

- **40 CFR 63, Subpart ZZZZ**—NESHAP for Stationary Reciprocating Internal Combustion Engines.

Existing Sources

Since facility is a major source of HAPs, the facility is potentially subject to several NESHAPs. The NESHAP for reciprocating stationary internal combustion engines (RICE), 40 CFR Part 63, Subpart ZZZZ, was first promulgated on June 15, 2004. Regulation amendments were promulgated on January 18, 2008 and January 30, 2013, which, however, did not affect this facility. The engines continue to fall into an exemption provided under §63.6590(b)(3)(i) – (ii), which exempt existing spark ignition 2-stroke and 4-stroke lean burn engines from having to comply with the requirements of Subpart ZZZZ and Subpart A (an existing engine is one manufactured before December 19, 2002). The facility is also exempt from the initial notification requirement.

New Sources

EG-1

[MDE Reg. No. 027-0223-9-0392]

One (1) natural gas-fired emergency generator rated at 1,450 BHP New Emergency Generator installed in 2017.

The new emergency generator internal combustion engine is subject to 40 CFR 63, Subpart ZZZZ, for stationary reciprocating internal combustion engines. Engines subject to regulations under 40 CFR 60 must meet the requirements under Subpart 60. No further requirements apply under 40 CFR 63, Subpart ZZZZ.

State Applicable Regulations

Applicable state regulations include but are not limited to the control of visible emissions, control of nitrogen oxides from natural gas pipeline, and control of sulfur oxides from fuel burning equipment. The facility is also subject to federally enforceable state air quality requirements, including but not limited to:

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COMAR 26.11.09.05A(2), which controls Visible Emissions, originating from the 30,000 HP natural gas-fired combustion turbine only.

COMAR 26.11.09.05E, which limits emissions from internal combustion engines to 10 percent opacity while operating at idle and 40 percent opacity while operating during non-idle condition, originating from the 1,450 HP natural gas-fired emergency generator.

Inapplicable Regulations

The Permittee specifically identified the following requirements as being inapplicable to the facility. The Department concurs with these inapplicability determinations:

- **40 CFR 60, Subparts OOOO**—(NSPS for Crude Oil and Natural Gas Production, Transmission, and Distribution): applies to crude oil, condensate, and produced water storage tanks, installed after August 23, 2011, that emit more than 6 tons of VOC per years. This rule does not apply to Transco Compressor Station 190.

- **40 CFR 60, Subpart OOOOa**—(NSPS for Crude Oil and Natural Gas Production, Transmission, and Distribution):

The EPA amended Subpart OOOO and added a new Subpart, OOOOa. The new Subpart OOOOa will apply to facilities constructed, modified or reconstructed after September 18, 2015. Transco Compressor Station 190 installed a new combustion turbine on March 2017. Under Subpart OOOOa EPA proposed requirements to control methane and VOC emissions from two types of compressors used at natural gas compressor stations: centrifugal compressors and reciprocating compressors. However, the 30,000 HP combustion turbine drives a centrifugal compressor equipped with a dry seal system. Centrifugal compressors using dry seal systems have low methane and VOC emissions and currently do not have emission limits or applicable requirements under Subpart OOOOa.

- **40 CFR 63, Subpart HH**—(Oil and Natural Gas Production): applies to major HAP facilities that process, upgrade, or store, hydrocarbon liquids and natural gas from the well up to and including the natural gas processing plant. The facility is a natural gas transmission/transportation facility located downstream of any natural gas processing plants. Therefore, the facility is not subject to the requirements of this Subpart HH.

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• **40 CFR 63, Subpart HHH**—(Natural Gas Transmission and Storage): applies to facilities that process, upgrade, transport or store natural gas prior to distribution to a local distribution company (LDC) or a final end user if no LDC is present. The final standards require that the owner or operator of a major source of HAPs reduce HAP emissions from glycol dehydration units through the application of air emission control equipment or pollution prevention measures, or a combination of both. Since the facility does not have any glycol dehydration units, there are no applicable requirements from this Subpart.

• **40 CFR 68 and CAA §112(r)**—The facility is exempt as a natural gas pipeline facility subject to regulation by the Department of Transportation.

Emissions Units: M/L Unit 1 through M/L Unit 10

[MDE Reg No. 027-0223-5-0054]

Seven (7) Clark HBA-8T mainline natural gas-fired reciprocating internal combustion engines (2-cycle, lean-burn) each rated at 2,050 BHP; and

Three (3) Clark TLA-6 mainline natural gas-fired reciprocating internal combustion engines (2-cycle, lean-burn) each rated at 2,100 BHP

Permitting History

The engines were installed between 1950 and 1962, prior to the enactment of the Clean Air Act.

The engines are not subject to any emissions limitations associated with New Source Review or to any NSPS or NESHAP standard.

Compliance Status

Transco was issued a Construction Permit (1/20/2015) to modify ten engines at the facility to reduce NOx emissions. The permit requires an initial performance stack test for NOx, CO, and VOC after the engine modifications are completed. Initial testing was conducted in March of 2017 which demonstrated compliance. After some engine adjustments to the High Pressure Fuel Injection and pre-combustion chambers, Transco tested the units again to gain a more accurate demonstration of the emissions of the units. Results show an average NOx rate of 5.20 lb/hr; an average CO rate of 5.06 lb/hr; and an average VOC rate of 0.83 lb/hr. The units also demonstrated compliance with the NOx emission rate of 1.5 g/HP-hr (per unit).

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On April 25, 2018, the Air Compliance Program performed a review of the Permittee's Annual Compliance Certification for the year 2017. The report was found to be complete and no deviations were reported.

Applicable Standards

A. Control of Visible Emissions

[COMAR 26.11.09.05E(2)] – Stationary Internal Combustion Engine Powered Equipment.

COMAR 26.11.09.05E(2) – which limits visible emissions from an internal combustion engine to 10 percent opacity during idle mode.

COMAR 26.11.09.05E(3) – which limits visible emissions from an internal combustion engine to 40 percent opacity during operating mode.

COMAR 26.11.09.05E(4)(a) & (b) – which allows the following exceptions from the requirement of COMAR 26.11.09.05E(2):

The requirement does not apply for a period of 2 consecutive minutes after a period of idling of 15 consecutive minutes for the purpose of clearing the exhaust system.

The requirement does not apply to emissions resulting directly from cold engine start-up and warm-up for a maximum period of 30 minutes for engines that are idled continuously when not in service; or for a maximum period of 15 minutes for all other engines.

COMAR 26.11.09.05E(4)(c) allows the exception from the requirements of COMAR 26.11.09.05E(2)&(3) when maintenance, repair, or testing is being performed by qualified mechanics.

Compliance Demonstration:

The Permittee is required to report incidents of visible emissions in accordance with the requirements to report excess emissions and deviations. See permit Condition 4, of Section III of the permit. The Permittee shall perform Method 9 observation for 30 minutes during the scheduled stack testing to show compliance with the applicable opacity standards.

[Authority: COMAR 26.11.03.06C(3)] The Permittee shall keep record of the Method 9 results and submit to the Department upon request.

[Authority: COMAR 26.11.03.06C]

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Rationale for Periodic Monitoring:

The engines may burn only natural gas, a very clean burning fuel. The engines are designed to operate with little or no visible emissions. The engines would have to undergo a serious malfunction in order to have significant visible emissions. Preventative maintenance as recommended by the engine manufacturer and supplemented with the facility's maintenance experiences will ensure that the engines will continue to operate with little or no visible emissions and minimize the possibility of a malfunction.

B. Control of Nitrogen Oxides from Natural Gas Pipeline Compression Stations – Applicability and General Requirements [COMAR 26.11.29.02B(2)] – NOx Emission Limits.

COMAR 26.11.29.02B(2) – which states that a person who owns or operates an internal combustion engine at a natural gas pipeline station shall perform either parametric optimization or engine rebuild to meet the following NOx emissions standards: facilities with more than five engines shall meet a combined maximum hourly emission rate of 566 pounds per hour.

Note: On January 20, 2015, the Department issued to Transco, Permit to Construct No. 027-0223-5-0054M for the modification of the seven (7) Clark HBA-8T 2,050 BHP engines, and three (3) Clark TLA-6 2,100 BHP engines for the installation of pre-combustion chambers and HPFI technology for the purpose of reducing the NOx emissions of the above-cited 10 engines from a calculated baseline level of 1,196 tons per year to a projected level of at most 294.3 tons per year.

Compliance Demonstration:

During the lifetime of this permit, the Permittee shall schedule and perform a NOx emission test on at least one of the seven Clark HBA-8T units and at least one of the three Clark TLA-6 engines. The Permittee shall also perform a NOx emission test on any engine that operates more than 2,190 hours in a calendar year. The Permittee shall submit a test protocol to the Department for approval at least 30 days prior to the proposed test date.

The Permittee shall perform an annual NOx emissions test using appropriate EPA Reference Methods unless alternative test methods receive prior approval from the Department. The most recent NOx emission test results for each engine model category shall be used to determine compliance with the

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566 pounds per hour NOx emission limit for M/L engines. **[Authority:
COMAR 26.11.03.06C(3)]**

An exemption from the annual testing requirement is provided for an individual engine if such engine's operation does not exceed 2,190 hours during a calendar year (i.e., ¼ of the maximum potential 8760 operating hours).

If the results of the NOx testing indicate that the NOx emission limit for all M/L engines combined may be exceeded, the Permittee is required to determine the cause of the excess NOx emissions, take corrective action, and retest the units that contribute to the excess NOx emissions. The Permittee shall complete the investigation, corrective action, and retest within 60 days after the results of testing indicate possible exceedance of the facility-wide NOx emission rate.

The Permittee is required to maintain records that include at a minimum the results of annual NOx testing to establish and verify compliance with the NOx emission limit of 566 pounds per hour and records of maintenance performed on the engines whenever required in order to avoid a possible exceedance of the NOx emission limit for all M/L engines combined.

The NOx emissions test results that were conducted during the last 6 years is given below. The combined NOx emissions from engines M/L #1 through #12 continues to be well under 566 pounds per hour.

Engine	2017	2012
M/L # 1	5.62	16.0
M/L # 2		29.8
M/L # 3	5.58	27.3
M/L # 4	3.11	42.5
M/L # 5		40.5
M/L # 6		24.1
M/L # 7		44.1
M/L # 8	6.51	40.6
M/L # 9	1.91	59.6
M/L # 10		49.8
M/L # 11		10.6
M/L # 12		11.2
Total	22.73	347

NOTE: Due to changing market demands, there was no demand for the station engines in late April 2013 and they did not operate for the remainder of the year. In 2014, there was

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minimal operation of the engines with the total hours of operation ranging from 0 to 132.8 hours. To address the testing requirements during these periods of reduced operation, the Title V Operating Permit issued on September 1, 2014 included the following language in Section 1.2 B.

In the event an engine's operating time does not exceed 2,190 hours in a calendar year, such engine would be exempt from the testing requirement for that calendar year. The most recent previous NOx emission test results for that engine shall be used to determine compliance with the 566 pounds per hour NOx emission limit for M/L engines.

Since this permit condition became effective, no engine has exceeded 2,190 hours of operation, so there has been no additional testing conducted to demonstrate compliance with the 566 pounds per hour emissions limit for M/L engines. The test results from 2012 are used to demonstrate compliance.

There were two testing events in 2017 that were performed on representative engines to fulfill the requirements of Condition D (1) of the Permit to Construct (Permit Number 027-0223-5-0054 M) for the modification of M/L 1 through M/L 10.

Rationale for Periodic Monitoring:

The Department believes an annual determination of the maximum hourly NOx emission rate of all engines should be sufficient to assure compliance with the regulation. The Permittee has performed NOx emissions tests at near maximum load on at least two of the engines each year since 1997. The accumulated emissions test data indicates that the expected mean value of the maximum hourly emissions from all engines M/L #1 through M/L #12 would be 372 lb/hr, well within the 566 lb/hr regulatory limit. The actual variation of the emissions from year to year and engine to engine indicate that, provided that the engines are well maintained, the potential for an exceedance of this limit is unlikely.¹

C. Operational Limitations

The Permittee shall burn only pipe line quality natural gas unless the Permittee applies for and receives an approval or permit from the Department. **[Authority: COMAR 26.11.02.09]**

¹ the mean hourly emission rate for each Clark HBA-8T engine was 24.5 lb/hr with a standard deviation of 3.9 lb/hr. For each Clark TLA-6 engines the mean hourly emission rate was 45.5 lb/hr with a standard deviation of 13.3 lb/hr.

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Compliance demonstration:

The Permittee is required to maintain a record of the type and quantity of fuel burned in each engine and report the information in the annual emissions certification report.

Rationale:

This operational limit clarifies that the Permittee is limited to burning natural gas. By limiting the fuel to natural gas, little or no visible emissions are expected from the engines. The engines are designed to burn only natural gas. The Permittee is required to seek approval from the Department prior to modifying the engines to burn an alternate fuel. The facility handles only natural gas and it is the only source of fuel on site.

Emissions Units: M/L Unit 11 and M/L Unit 12

[MDE Reg No. 027-0223-5-0054]

One (1) Clark TCV-10 mainline natural gas fired reciprocating internal combustion engine (2-cycle, lean-burn) rated at 3,400 HP;

One (1) Clark TCV-16 mainline natural gas fired reciprocating internal combustion engine (2-cycle, lean-burn), rated at 5,500 HP.

Permitting History

The engines were installed in March 1969 and May 1970, prior to the effective date of the PSD regulations. The engines are not subject to any New Source Performance Standard.

Permit to Construct No. 027-9-0224 M was issued on November 18, 2002 enabling the installation of NOx emissions control to achieve compliance with the new requirements for IC engines located at natural gas pipeline pumping stations now under COMAR 26.11.29.01-.05.

Compliance Status

On April 25, 2018, the Air Compliance Program performed a review of the Permittee's Annual Compliance Certification for the year 2017. The report was found to be complete and no deviations were reported.

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Applicable Standards

A. Control of Visible Emissions

[COMAR 26.11.09.05E(2)] – Stationary Internal Combustion Engine Powered Equipment.

COMAR 26.11.09.05E(2) – which limits visible emissions from an internal combustion engine to 10 percent opacity during idle mode.

COMAR 26.11.09.05E(3) – which limits visible emissions from an internal combustion engine to 40 percent opacity during operating mode.

COMAR 26.11.09.05E(4)(a) & (b) – which allows the following exceptions from the requirement of COMAR 26.11.09.05E(2):

The requirement does not apply for a period of 2 consecutive minutes after a period of idling of 15 consecutive minutes for the purpose of clearing the exhaust system.

The requirement does not apply to emissions resulting directly from cold engine start-up and warm-up for a maximum period of 30 minutes for engines that are idled continuously when not in service; or for a maximum period of 15 minutes for all other engines.

COMAR 26.11.09.05E(4)(c) allows the exception from the requirements of COMAR 26.11.09.05E(2)&(3) when maintenance, repair, or testing is being performed by qualified mechanics.

Compliance Demonstration:

The Permittee is required to report incidents of visible emissions in accordance with the requirements to report excess emissions and deviations. See permit Condition 4, of Section III of the permit. The Permittee shall perform Method 9 observation for 30 minutes during the scheduled stack testing to show compliance with the applicable opacity standards. [Authority: COMAR 26.11.03.06C(3)] The Permittee shall keep record of the Method 9 results and submit them to the Department upon request. [Authority: COMAR 26.11.03.06C]

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Rationale for Periodic Monitoring:

The engines may burn only natural gas, a very clean burning fuel. The engines are designed to operate with little or no visible emissions. The engines would have to undergo a serious malfunction in order to have significant visible emissions. The preventative maintenance performed by the Permittee as recommended by the engine manufacturer and supplemented with the facility's maintenance experiences assures that the engines will continue to operate without significant visible emissions and minimize the possibility of a malfunction. In addition, the parametric monitoring of operating conditions required for the control of nitrogen oxide emissions (NO_x) will provide continuous data on the performance of the engines.

B. Control of Nitrogen Oxides from Natural Gas Pipeline Compression Stations – Applicability and General Requirements

[COMAR 26.11.29.02(A)] – Applicability.

“This chapter applies to stationary internal combustion engines used to compress natural gas located at natural gas pipeline compression stations.”

[COMAR 26.11.29.02(C)(2)] – NO_x Emission Rates.

“A person who owns or operates a stationary internal combustion engine to which this chapter applies shall perform either parametric optimization or engine rebuild to meet the following NO_x emission limits:

(1) *Not applicable*

(2) Facilities with more than five engines shall meet a combined maximum hourly emission limit of 566 pounds per hour or less.”

[COMAR 26.11.29.02(C)] – NO_x Emission Limits.

The NO_x emission rates in §C(2) of this regulation apply to a stationary internal combustion engine used to compress natural gas at a natural gas pipeline compression station if the engine is one of the types and corresponding sizes identified in §C(2) of this regulation.

(2) Emission Rates.

Type Engine	Size (Brake HP)	NO _x Emission Rate (15 Percent Oxygen)
Spark ignited lean burn	2400 HP or greater	125 ppmv

(3) The NO_x emission rates in §C(2) of this regulation shall apply on and after May 1, 2003.

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Note: The Permittee selected engine rebuilds on M/L Unit 11 and Unit 12 as a means of compliance with the standard for all M/L engines combined. The modifications to Units 11 and 12 were completed in 1997. Compliance with the standard has been demonstrated by testing since 1998.

Compliance Demonstration:

During the lifetime of this permit, the Permittee shall schedule and perform a NOx emission test on the Clark TCV-10 and the Clark TCV-16 engines (M/L Units 11 and 12, respectively) in order to demonstrate compliance with the applicable NOx rates listed under Section 2.1.B, and with the applicable NOx emission limit of 125 ppm (at 15% O₂) and as specified under COMAR 26.11.29.02C(2).

The Permittee shall submit a test protocol to the Department for approval at least 30 days prior to the proposed test date.

The Permittee shall perform an annual NOx emissions test on each engine using appropriate EPA Reference Methods unless alternative test methods receive prior approval from the Department. The most recent NOx emission test results for each engine model category shall be used to determine compliance with the 566 pounds per hour NOx emission limit for M/L engines. **[Authority: COMAR 26.11.03.06C(3)]**

To comply with the CEM requirements of COMAR 26.11.29.04, the Permittee elected to install a parametric emissions monitoring system (PEMS) in conjunction with high pressure fuel injection developed by Enginuity, Inc. The PEMS methodology was given general approval by the Department subject to confirmatory testing. In April 2003, a series of initial stack tests for NOx were conducted on both engines. The tests showed the NOx emissions to be well within compliance levels for the anticipated range of engine operating parameters. The PEMS monitoring requirements apply year-around as stated on PTC 027-0223-5-0054M. **[Authority: PTC 027-9-0224 M issued November 18, 2002, condition D(6)]**

In accordance with the requirements of Permit to Construct No. 027-9-0224 M issued on November 18, 2002, the PEMS is required to automatically sample data at fifteen minute intervals or less and automatically record block hourly averages in a manner such that the data is retrievable on demand by inspectors. The following parameters are required to be monitored and recorded by the system:

- the engine speed in revolutions per minute (RPM)
- the engine fuel flow rate in SCFM (FF_{SCFM}).

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- the actual air manifold pressure in inches of mercury (P_M).
- the air manifold temperature in °F (T_M).

After May 1, 2003, during the Control Period of each year, from May 1 through September 30, the PEMS is required to automatically sample data and calculate at 15 minute intervals or less and automatically record a block hourly average of the following additional parameters in a manner that the data is retrievable on demand by inspectors:

- the calculated critical trapped air/fuel equivalence ratio (TER_C) based on a calculated fuel flow per revolution parameter $W = FF_{SCFM}/RPM$ and an equation of the type below:

$$TER_C = A * W^2 + B * W + C$$

Where A, B, and C are constants to be determined from the emissions testing.

- the calculated critical air manifold pressure (gage) in inches of mercury (P_{MC}).

$$P_{MC} = 2.036 * [AF_{ST} * (0.0765 * FSG) * W * (T_M + 460) / (2.699 * TER_C * V_{TRAP}) - 14.73]$$

Where:

V_{TRAP} = the engine trapped volume in cubic feet per revolution
(a constant determined by the geometry of the engine).

AF_{ST} = stoichiometric air/fuel mass ratio

FSG = the fuel gas specific gravity referenced to air.

Note: The above equations may be adjusted or modified upon prior written approval from the Department if test data or other considerations indicate that such a modification or adjustment is warranted.

Operation of either engine during the Control Period beginning May 1 of each year and ending September 30 of each year for any period during which a recorded 1-hr block average engine air manifold pressure (P_M) less than the critical air manifold pressure (P_{MC}) value occurs shall constitute an excursion that must be reported to the Department within 30 days after the end of each calendar quarter. More than two excursions per quarter or three excursions

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during the control period shall constitute a violation of regulation COMAR 26.11.29.05 unless the Permittee can otherwise show that the engine operated in compliance with the regulation during the periods of excursion.

The Permittee is required to maintain the records that demonstrate the performance of parametric optimization to achieve the NO_x emissions limit of 125 ppmv at 15 % oxygen. The records shall include at a minimum the results of NO_x testing to establish and verify the parametric optimization and the readings of operating parameters that demonstrate that the engines are operated in accordance with the parametric optimization.

The Permittee is required to report all excursions where the 1-hour block average P_M is less than the corresponding 1-hour block average P_{MC} to the Department within 30 days after the end of the each calendar quarter. More than two excursions within any calendar quarter or more than three excursions during the control period shall constitute a reportable occurrence of excess emissions, requiring a telephone report within 24 hours and a written report if requested by the Department within 10 days, in accordance with COMAR 26.11.01.07 [**Authority: PTC No. 027-9-0224 M issued November 18, 2002**]

Rationale and Discussion:

The NO_x Reduction Requirement for Non-Electric Generating Units under COMAR 26.11.29.01-.05 apply only during the Control Period, May 1 through September 30. The Department issued a permit to construct to the Permittee to allow for the modification of the engines in order that the engines could achieve the applicable NO_x emissions rate. The permit to construct specified the NO_x monitoring requirements and defined what constitutes a violation of the NO_x standard.

C. Carbon Monoxide and VOC Annual Emissions Limitation

PTC No. 027-9-0224M issued November 18, 2002 - To avoid triggering requirements of nonattainment New Source Review (NNSR) and Prevention of Significant Deterioration (PSD), emissions increases from both affected engines collectively as a result of the modifications performed shall be limited to less than 25 tons per year for VOC and 100 tons per year for CO for any period of 12 consecutive months.

Compliance Demonstration:

Beginning with calendar year 2014, the Permittee shall perform on a biennial basis and contemporaneously with the testing required in paragraph B above confirmatory emissions testing for VOC and CO on each engine using

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appropriate EPA Reference Methods, unless alternative test methods receive prior approval from the Department. The purpose of the testing is to demonstrate compliance with the nonattainment New Source Review emission limit for VOC and CO. In the event an engine's operating time does not exceed 2,190 hours in each calendar year of the biennial period, such engine would be exempt from the emissions testing requirement for VOC and CO for that biennial period. However, the Permittee is required to schedule and perform a CO and VOC emission test on the Clark TCV-10 and the Clark TCV-16 engines, to demonstrate compliance with the nonattainment New Source Review emission limit for VOC and CO as stated in Section 2.1.C. The Permittee will perform visible emission observation during the scheduled stack testing to show compliance with the applicable opacity standards listed in Section 1.1.A. **[Authority: COMAR 26.11.03.06C(3)]**

The Permittee is required to maintain a record of the calculation of emissions of CO and VOC sufficient to demonstrate that the emissions increase from the modification of the engines do not exceed the limitation based on any period of 12 consecutive months. The Permittee is required to report the annual emissions of CO and VOC in the annual emissions certification report. **[Authority: Periodic Monitoring - COMAR 26.11.03.06C and COMAR 26.11.02.19D]**

D. Operational Limitation

The Permittee is required to burn only natural gas unless the Permittee applies for and receives an approval or permit from the Department. **[Authority: COMAR 26.11.02.09]**

Compliance demonstration:

The Permittee is required to maintain a record of the type and quantity of fuel burned in each engine and report the information in the annual emissions certification report.

Rationale:

This operational limit clarifies that the Permittee is limited to burning natural gas. By limiting the fuel to natural gas, little or no visible emissions are expected from the engines. The engines are designed to burn only natural gas. The Permittee is required to seek approval from the Department prior to modifying the engines to burn an alternate fuel. The facility handles only natural gas and it is the only source of fuel on site.

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Emissions Units: AUX 1

[MDE Reg No. 027-0223-9-0186]

One (1) Auxiliary electric power generator; 4-cycle, lean-burn, reciprocating IC engine, Waukesha 7042 GL, rated at 1,478 HP.

Permitting History Installed in March 1997. A Permit to Construct was issued for an emergency generator on March 14, 1997.

Compliance Status

On April 25, 2018, the Air Compliance Program performed a review of the Permittee's Annual Compliance Certification for the year 2017. The report was found to be complete and no deviations were reported.

Applicable Standards

A. Control of Visible Emissions

[COMAR 26.11.09.05E(2)] – Stationary Internal Combustion Engine Powered Equipment.

COMAR 26.11.09.05E(2) – which limits visible emissions from an internal combustion engine to 10 percent opacity during idle mode.

COMAR 26.11.09.05E(3) – which limits visible emissions from an internal combustion engine to 40 percent opacity during operating mode.

COMAR 26.11.09.05E(4)(a) & (b) – which allows the following exceptions from the requirement of COMAR 26.11.09.05E(2):

The requirement does not apply for a period of 2 consecutive minutes after a period of idling of 15 consecutive minutes for the purpose of clearing the exhaust system.

The requirement does not apply to emissions resulting directly from cold engine start-up and warm-up for a maximum period of 30 minutes for engines that are idled continuously when not in service; or for a maximum period of 15 minutes for all other engines.

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COMAR 26.11.09.05E(4)(c) allows the exception from the requirements of COMAR 26.11.09.05E(2)&(3) when maintenance, repair, or testing is being performed by qualified mechanics.

Compliance Demonstration:

The Permittee is required to report incidents of visible emissions in accordance with the requirements to report excess emissions and deviations. See permit condition 4 of Section III of the permit.

Rationale for Periodic Monitoring:

The engine may burn only natural gas, a very clean burning fuel. The engine is designed to operate with little or no visible emissions. The engine would have to undergo a serious malfunction in order to have significant visible emissions. The preventative maintenance performed by the Permittee as recommended by the engine manufacturer and supplemented with the facility's maintenance experiences assures that the engine will continue to operate with little or no visible emissions and minimize the possibility of a malfunction.

B. Control of NOx Emissions for Major Stationary Sources, Demonstration of Compliance – Reasonable Control Technology Requirements (NOx RACT).

[COMAR 26.11.09.08G(1)] – A person who owns or operates fuel-burning equipment with a capacity factor (as defined in 40 CFR Part 72.2) of 15 percent or less shall:

- (1) Provide certification of the capacity factor of the equipment to the Department in writing;
- (2) For fuel-burning equipment that operates more than 500 hours during a calendar year, perform a combustion analysis and optimize combustion at least once annually;
- (3) Maintain the results of the combustion analysis at the site for at least 2 years and make these results available to the Department and the EPA upon request;
- (4) Require each operator of an installation, except combustion turbines, to attend operator training programs at least once every 3 years, on

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combustion optimization that are sponsored by the Department, the EPA, or equipment vendors; and

- (5) Maintain a record of training program attendance for each operator at the site, and make these records available to the Department upon request.

[COMAR 26.11.09.08B(6)] – Operator Training: For the purpose of this regulation, the equipment operator to be trained may be the person who maintains the equipment and makes the necessary adjustments for efficient operation.

Compliance Demonstration:

The Permittee is required to maintain records of hours of operation and the calculated annual capacity factor on a updated on a monthly basis sufficient to demonstrate that the annual capacity factor of the engine is less than 15 percent and to provide certification of the capacity factor of the equipment to the Department in writing as part of the April 1 emission certification report.

[Authority: COMAR 26.11.09.08G(1)(a) and COMAR 26.11.03.06C]

If the hours of operation exceeds 500 hours per year, the Permittee must perform an annual combustion analysis at least once annually **[Authority: COMAR 26.11.09.08G(1)(b)]**

The Permittee is required either to have each operator or person who maintains the equipment and makes the necessary adjustments for efficient operation attend operator training programs at least once every 3 years, on combustion optimization that are sponsored by the Department, the EPA, or equipment vendors and to maintain a record of training program attendance for each operator at the site, and make these records available to the Department upon request. **[Authority: COMAR 26.11.09.08G(1)(c) & (d)]**

Rationale for Periodic Monitoring:

The requirements for a compliance demonstration with the regulation COMAR 26.11.09.08G(1) are largely self contained. Conditions were added, however, to require that the hours of operation and capacity factor be updated monthly and to specify that the capacity factor must be certified annually by a specific date, April 1 of each year. **[Authority: COMAR 26.11.03.06C]**

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C. Operational Limits

- (1) The Permittee shall burn only pipeline quality natural gas unless the Permittee applies for and receives an approval or permit from the Department. **[Authority: COMAR 26.11.02.09]**
- (2) The capacity factor shall be limited to 15 percent or less. **[Authority: COMAR 26.11.09.08G]**

Compliance demonstration:

The Permittee is required to maintain a record of the type and quantity of fuel burned in the engine, and report the information in the annual emissions certification report.

Rationale:

This operational limit clarifies that the Permittee is limited to burning natural gas. The engine is designed to burn only natural gas. The Permittee is required to seek approval from the Department prior to modifying the engines to burn an alternate fuel. The facility handles only natural gas and it is the only source of fuel on site.

Emissions Units: BLR 1 and BLR 2

[MDE Reg No. 027-0223-5-0063 and 5-0064]

One (1) Holmar Vulcan A60 natural gas-fired 2.5 MMBtu/hr boiler;

One(1) Cyclotherm C2800 natural gas-fired 3.3 MMBtu/hr boiler.

Permitting History Installed in 1950, prior to the enactment of the Clean Air Act.

Compliance Status

On April 25, 2018, the Air Compliance Program performed a review of the Permittee's Annual Compliance Certification for the year 2017. The report was found to be complete and no deviations were reported.

The initial tune-up of the boiler was performed on January 5, 2016. The energy assessment was performed on August 19, 2015.

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Applicable Standards

A. Control of Visible Emissions

[COMAR 26.11.09.05A(2)] – Fuel Burning Equipment.

"In Areas III and IV, a person may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is visible to human observers except that, for the purpose of demonstrating compliance using COM data, emissions that are visible to a human observer are those that are equal to or greater than 10 percent opacity.

[COMAR 26.11.09.05A(3)] – Exceptions.

"Section A(1) and (2) of this regulation do not apply to emissions during load changing, soot blowing, startup, or adjustments or occasional cleaning of control equipment if:

- (a) The visible emissions are not greater than 40 percent opacity; and
- (b) The visible emissions do not occur for more than 6 consecutive minutes in any sixty minute period."

Compliance Demonstration:

The Permittee shall report incidences of visible emissions in accordance with the reporting of excess emissions and deviations, Condition 4, Section III of the permit.

Rationale:

These very small boilers that burn only natural gas will never have visible emissions unless they are operating in an extremely unsafe mode. With routine maintenance, these boilers will operate in a normal manner. Therefore, no periodic monitoring will be required. However, under the unlikely scenario of visible emissions occurring, the Permittee is required to report excess emissions and deviations in accordance with Condition 4, Section III of the permit.

B. Control of Nitrogen Oxides

[COMAR 26.11.09.08B(1)(c)] – Emission Standards and Requirements.

"A person who owns or operates an installation that causes NO_x emissions subject to this regulation is in compliance with this regulation if the person establishes compliance with the emissions standards in §B(1)(c) of this regulation."

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Fuel	Tangential-Fired	Wall-Fired
Gas only	0.20	0.20

Compliance demonstration:

The Permittee is required to maintain a record of the type and quantity of fuel burned in the boilers and report the information in the annual emissions certification report.

Rationale:

Limiting the boilers to burning natural gas only will be sufficient to assure compliance with the emission limit of 0.20 lb per million Btu. The current AP-42 emission factor for a natural gas fired boiler sized less than 10 million Btu/hr is 0.10 lb per million Btu. These boilers would therefore ordinarily be expected to be in compliance with this regulation provided they are properly maintained and adjusted. The boilers are used only for space heating and hot water generation. Considering their very limited potential for NO_x air emissions, no further periodic monitoring is warranted.

C. Operational Limits

- (1) The Permittee shall burn only pipeline quality natural gas unless the Permittee applies for and receives an approval or permit from the Department. **[Authority: COMAR 26.11.02.09]**

NESHAP Operating Limits – 40 CFR, Part 63, Subpart DDDDD

- (2) The Permittee must meet each emission limit and work practice standard in 40 CFR, Part 63, Subpart DDDDD, Tables 1 through 3 and 11 through 13, that applies to the boilers. **[Authority: §63.7500(a)(1)]**

Note: The Permittee is subject only to the work practice standard requirements in Table 3, See §63.7540(e).

- (3) The Permittee shall meet the following two applicable work practice standards in 40 CFR, Part 63, Subpart DDDDD, Table 3 applicable to boilers combusting natural gas and rated at less than 5 million Btu per hour **[Authority: 40 CFR §63.7500(a)(1) and (e), §63.7510(e), §63.7515(d), and §63.7540(a)]:**

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- (a) The Permittee must complete an initial tune-up of the boiler on or before the compliance date January 31, 2016 and conduct subsequent tune-ups once every 5 years thereafter as specified in § 63.7540(a)(10)(i)-(vi) and (a)(12)-(13). In accordance with §63.7515(d), each 5-year tune-up must be conducted no more than 61 months after the previous tune-up. Paragraphs §63.7540(a)(10)(i) through (a)(10)(vi) specify the requirements for a boiler tune-up.
- (b) On or before the compliance date, January 31, 2016, each boiler unit must have a one-time energy assessment performed by a qualified energy assessor. An energy assessment completed on or after January 1, 2008, that meets, or is amended to meet, the energy assessment requirements in this table, satisfies the energy assessment requirement. A facility that operates under an energy management program compatible with ISO 50001 that includes the affected units also satisfies the energy assessment requirement. Table 3 specifies the requirements of the energy assessment. The extent of the evaluation as appropriate for the on-site technical hours listed in § 63.7575. **[Authority: §63.7510(e); Table 3 of Subpart DDDDD, item 4]**

Note: In accordance with § 63.7575 eight (8) on-site technical hours will fulfill the energy assessment requirement for natural gas-fired boilers rated at less than 5 million Btu per hour.

Compliance demonstration:

There are no testing or monitoring requirements under Subpart DDDDD to Part 63. However the Permittee must keep records of the results of the initial and subsequent 5-year tune ups and one-time energy assessment required and a responsible official must certify that these requirements were met in a timely manner. The Permittee conducted the most recent boiler tune-up on January 5, 2016.

Emission Units:

FUG 1: Piping Component Fugitives (3.83 tons per year VOC).

FUG 2: Venting/Blow down Emissions (28.73 tons per year VOC).

Both units installed in Installed in 1950's.

Permitting History 1950's, prior to the enactment of the Clean Air Act.

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Applicable Standards

Control of VOC Emissions

[COMAR 26.11.05.06B(1)(a)] – Installations Constructed Before May 12, 1972.

“A person may not cause or permit the discharge of VOC from any installation constructed before May 12, 1972 in excess of 200 pounds (90.7 kilograms) per day unless the discharge is reduced by 85 percent or more overall.”

Compliance demonstration:

Prior to any planned on-site blowdown or venting of natural gas whose uncontrolled VOC emissions would be expected to exceed 200 pounds per day, the Permittee shall submit for approval to the Department Air and Radiation Management Administration's Compliance Program, at least 10 days prior to the scheduled event, an emissions control plan that would lead to at least 85 percent control of the VOC emissions or limit the VOC emissions to less than 200 pounds per day. In the event that that 10 days prior notice is not possible due to the nature of the blowdown or venting activity, the Permittee shall submit an emission control plan as early as practicable. **[Authority: COMAR 26.11.03.06C]**

Rationale:

From time to time, the Permittee is required to vent on-site natural gas to the atmosphere. The Permittee recognizes that the resultant VOC emissions are subject to regulation COMAR 26.11.06.06B(1)(a). This requirement incorporates the existing on-going customary approval process into the Title V permit.

Emissions Units: CT-1

[MDE Reg No. 027-0223-9-0391]

One (1) Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine.

Applicable Standards/Limits

**A. New Source Performance Standards for Stationary Combustion
Turbines 40 CFR, Part 60, Subpart KKKK.**

All applicable terms, provisions, emissions standards, testing, monitoring, record keeping, and reporting requirements included in federal New Source

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Performance Standards (NSPS) under 40 CFR Part 60, Subparts A and KKKK for Stationary Combustion Turbines.

Compliance Demonstration

The Permittee should follow the testing requirements for the combustion engine in 40 CFR Part 60, Subpart KKKK, Sections (§60.4340, §60.4400, §60.4410 and §60.8(a)). The Permittee conducted the most recent stack testing on December 19, 2017.

- (1) Testing Requirements for the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine from 40 CFR Part 60, Subpart KKKK.

§60.8 (a) ... within 60 days after achieving the maximum operating rate, but not later than 180 days after initial startup, ... conduct an initial performance test and furnish the [Department] a written report of the results of such performance test....

§60.8(f) ... each performance test shall consist of three separate runs using the applicable test methods.

§60.4340 (a) "If you are not using water or steam injection to control NO_x emissions, you must perform annual performance tests in accordance with §60.4400 to demonstrate continuous compliance. If the NO_x emission result from the performance test is less than or equal to 75 percent of the NO_x emission limit for the turbine, you may reduce the frequency of subsequent performance tests to once every 2 years (no more than 26 calendar months following the previous performance test). If the results of any subsequent performance test exceed 75 percent of the NO_x emission limit for the turbine, you must resume annual performance tests."

§60.4400(a) you must conduct an initial performance test, as required in §60.8. Subsequent NO_x performance tests shall be conducted on an annual basis (no more than 14 calendar months following the previous performance test). **Note:** An annual performance test is not required if a parameter monitoring plan is submitted meeting the requirements of §60.4340(b), §60.4355, and §60.4410. Note that §60.4410 requires:

§60.4410 If you have chosen to monitor combustion parameters or parameters indicative of proper operation of NO_x emission controls in accordance with §60.4340, the appropriate parameters must be

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continuously monitored and recorded during each run of the initial performance test, to establish acceptable operating ranges, for purposes of the parameter monitoring plan for the affected unit, as specified in §60.4355.

§60.4400(a)(1) – (3) and §60.4400(b) specify in detail the procedures from 40 CFR Part 60, appendix A, that must be used to conduct the performance tests. See regulation for full text. Use the procedures specified in §60.4400(a)(1)(ii) to calculate the NO_x emission rate in lb/MMBtu as well as NO_x ppmvd adjusted to 15% O₂.

- (2) Within 180 days after initial startup of the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine, the Permittee shall perform initial performance tests for CO and VOC using approved 40 CFR part 60 appendix A methods or equivalent alternative methods if approved by the Department. Unless otherwise approved by the Department, Method 10 shall be used for CO and Methods 18 and 25 shall be used for VOC. Emission rates for CO and VOC shall be computed in terms of lb/MMBtu input in accordance with methodologies approved by the Department.
- (3) A stack test protocol addressing the testing requirements in conditions (1) - (3) above and a NO_x parameter monitoring protocol addressing §60.4340(b) and §60.4355(a) shall be submitted to the Department for review and approval at least 30 days prior to the anticipated stack test date.
- (4) The Permittee shall notify the Department of the date of the stack test at least 14 days prior to the actual date of the stack tests.

Note: Emission stack testing was conducted on the combustion turbine on September 19, 2018 for NO_x, CO, and VOC emissions. Results demonstrated compliance with the permitted emission limits.

The Permittee should follow the monitoring requirements for the combustion engine in 40 CFR Part 60, Subpart KKKK, Sections (§60.4340, §60.4355, §60.4400, and §60.4410).

- (1) Monitoring Requirements for the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine from 40 CFR, Part 60, Subpart KKKK:
 - (a) Except as provided in §60.4340(b) below, §60.4340(a) provides that the Permittee must perform **annual performance tests** in accordance with §60.4400 to demonstrate continuous compliance.

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- (b) In lieu of an annual performance test for NO_x, the Permittee may submit to the Department for approval a **parameter monitoring plan** for the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine. The parameter monitoring plan must meet the requirements of 40 CFR part 60, Subpart KKKK, §60.4340(b), §60.4355(a)(1) through (6) and §60.4410, as applicable.

§60.4340(b) As an alternative [to conducting annual performance tests] you may install, calibrate, maintain and operate one of the following continuous monitoring systems:

...

§60.4340(b)(2) Continuous parameter monitoring system as follows:

§60.4340(b)(2)(ii) For any lean premix stationary combustion turbine, you must continuously monitor the appropriate parameters to determine whether the unit is operating in low-NO_x mode.

§60.4355(a) The parameters that are continuously monitored as described in §60.4340 must be monitored during the performance test required under §60.8, to establish acceptable values and ranges. You may supplement the performance test data with engineering analyses, design specifications, manufacturer's recommendations and other relevant information to define the acceptable parametric ranges more precisely. You must develop and keep on-site a parameter monitoring plan which explains the procedures used to document proper operation of the NO_x emission controls....

Note: §60.4355(a)(1) through §60.4355(a)(6) describes in detail the further regulatory requirements of the parametric monitoring plan. See regulation for complete text.

The Permittee should follow the Record Keeping requirements for the combustion engine in 40 CFR Part 60, Subpart KKKK, Sections (§60.4340, §60.4355, and §60.4380).

- (1) The following records shall be kept on site for at least five (5) years and shall be made available to the Department upon request:
- (a) Monthly records of fuel usage for the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine, and the Waukesha 1,450 BHP natural gas-fired emergency generator;

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- (b) Continuous records of 1-hour averages and 4-hour rolling averages, based on values recorded at least at 15 minute intervals, of the monitored NO_x parameters for the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine in keeping with §60.4340(b)(2)(ii) and §60.4355(a);
 - (c) A copy of the initial performance test report(s) for NO_x, CO, and VOC for the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine;
 - (d) A copy of approved parametric monitoring plan for NO_x, on site in accordance with §60.4355(a); and
 - (e) Copies of annual performance tests for NO_x if an approved NO_x parametric monitoring plan is not submitted.
- (2) The Permittee shall keep records of all monitoring downtime and all periods of excess emissions as defined in §60.4380(c):

§60.4380(c) For turbines required to monitor combustion parameters or parameters that document proper operation of the NO_x emission controls:

§60.4380(c)(1) An excess emission is a 4-hour rolling unit operating hour average in which any monitored parameter does not achieve the target value or is outside the acceptable range defined in the parameter monitoring plan for the unit.

§60.4380(c)(2) A period of monitor downtime is a unit operating hour in which any of the required parametric data are either not recorded or are invalid.

The Permittee should follow the Reporting requirements shown below:

- (1) Prior to the date that the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine commences operation the Permittee shall submit a stack test report reporting the results of the initial stack tests on the HBA-8T and Clark TLA-6 engines in accordance with condition D(4), **Permit to Construct number 027-0223-5-0054M** issued on January 20, 2015.
- (2) The following semiannual monitoring reports covering the 6-month periods ending each December 31 and June 30 are required under 40 CFR part 60,

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subpart KKKK, §60.4375(a) for the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine:

§60.4375(a) For each affected unit required to continuously monitor parameters ..., you must submit reports of excess emissions and monitor downtime, in accordance with §60.7(c). Excess emissions must be reported for all periods of unit operation, including start-up, shutdown, and malfunction.

§60.7(c) (4) When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report.

§60.4395 All reports required under §60.7(c) must be postmarked by the 30th day following the end of each 6-month period.

- (3) Reports of performance tests for NO_x are required under COMAR 26.11.09.08K(2) and 40 CFR part 60, subpart KKKK, §60.4375(b) for the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine. In order to comply with both requirements, the results of the NO_x performance (stack) tests shall be submitted to the Department within 45 days after the completion of the test.
- (3) Prior to the date that the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine commences operation the Permittee shall submit a stack test report reporting the results of the initial stack tests on the HBA-8T and Clark TLA-6 engines in accordance with condition D(4), **Permit to Construct number 027-0223-5-0054M** issued on January 20, 2015.
- (4) The following semiannual monitoring reports covering the 6-month periods ending each December 31 and June 30 are required under 40 CFR Part 60, Subpart KKKK, §60.4375(a) for the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine:

§60.4375(a) For each affected unit required to continuously monitor parameters ..., you must submit reports of excess emissions and monitor downtime, in accordance with §60.7(c). Excess emissions must be reported for all periods of unit operation, including start-up, shutdown, and malfunction.

§60.7(c) (4) When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report.

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§60.4395 All reports required under §60.7(c) must be postmarked by the 30th day following the end of each 6-month period.

- (5) Reports of performance tests for NO_x are required under COMAR 26.11.09.08K(2) and 40 CFR part 60, subpart KKKK, §60.4375(b) for the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine. In order to comply with both requirements, the results of the NO_x performance (stack) tests shall be submitted to the Department within 45 days after the completion of the test.

B. National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Stationary Combustion Turbines 40 CFR, Part 63, Subpart YYYY

National Emissions Standards for Hazardous Air Pollutants (NESHAP) promulgated under 40 CFR Part 63, Subparts A and YYYY for Stationary Combustion Turbines. Only the following apply:

§63.6095(c) You must meet the notification requirements in §63.6145 according to the schedule in §63.6145 and in 40 CFR part 63, subpart A.

§63.6095(d) *Stay of standards for gas-fired subcategories.* If you start up a new or reconstructed stationary combustion turbine that is a lean-premix gas-fired stationary combustion turbine or diffusion flame gas-fired stationary combustion turbine as defined by this subpart, you must comply with the Initial Notification requirements set forth in §63.6145 but need not comply with any other requirement of this subpart until EPA takes final action to require compliance and publishes a document in the FEDERAL REGISTER.

Compliance Demonstration:

Compliance demonstration should be accomplished by following the requirements listed under 40 CFR, Part 60, Subpart KKKK.

C. Visible Emissions Limitations

[COMAR 26.11.09.05A(2)] – Fuel Burning Equipment.

"In Areas III and IV, a person may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is visible to human observers except that, for the purpose of demonstrating compliance using COM data, emissions that are

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visible to a human observer are those that are equal to or greater than 10 percent opacity.

[COMAR 26.11.09.05A(2)] – Exceptions.

"Section A(1) and (2) of this regulation do not apply to emissions during load changing, soot blowing, startup, or adjustments or occasional cleaning of control equipment if:

- (a) The visible emissions are not greater than 40 percent opacity; and
- (b) The visible emissions do not occur for more than 6 consecutive minutes in any sixty minute period."

Compliance Demonstration:

The Permittee is required to report incidents of visible emissions in accordance with the requirements to report excess emissions and deviations. See permit Condition 4, of Section III of the permit.

D. Control of NOx Emissions for Major Stationary Sources, Requirements for Fuel Burning Equipment with a Capacity Factor of 15 Percent or Less, and Combustion Turbines with a Capacity Factor Greater than 15 Percent – [COMAR 26.11.09.08G(2)]

"A person who owns or operates a combustion turbine with a capacity factor greater than 15 percent shall meet an hourly average NOx emission rate of not more than 42 ppm when burning gas or 65 ppm when burning fuel oil (dry volume at 15 percent oxygen) or meet applicable Prevention of Significant Deterioration limits, whichever is more restrictive."

Compliance Demonstration:

Compliance demonstration should be accomplished by following the requirements listed under 40 CFR, Part 60, Subpart KKKK.

E. Operational Limitations

- (1) The Permittee shall maintain and operate the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine, and any associated air pollution control equipment, in such a manner as to ensure full and continuous compliance with all applicable regulations.
- (2) The Permittee shall properly maintain and keep in good working condition all control panel instrumentation and monitoring devices that the Permittee

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uses to determine if the air pollution control equipment is operating as designed.

- (3) The Permittee must operate and maintain the stationary combustion turbine, air pollution control equipment, and monitoring equipment in a manner consistent with good air pollution control practices for minimizing emissions at all times including during startup, shutdown, and malfunction. **[Reference: 40 CFR Part 60, Subpart KKKK, §60.4333]**

- (4) The Permittee is subject to the following emission limits for the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine from 40 CFR part 60, subpart KKKK:

§60.4320(a) requires the Permittee to meet the emission limits for NO_x specified in Table 1 to subpart KKKK (see below).

From Table 1 to Subpart KKKK of Part 60—Nitrogen Oxide Emission Limits for New Stationary Combustion Turbines

Combustion turbine type	Combustion turbine heat input at peak load (HHV)	NO _x emission standard
New turbine firing natural gas	>50 MMBtu/hr and ≤ 850 MMBtu/hr	25 ppm at 15 percent O ₂

§60.4330(a)(2) requires the Permittee not to burn in the stationary turbine any fuel which contains total potential sulfur emission in excess of 0.060 lb SO₂ /MMBtu heat input.

- (5) In accordance with the manufacturer's guarantee, the Permittee shall operate the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine and emission controls in a manner that complies with a NO_x emission limit of 15 ppm at 15 percent oxygen. Compliance with this limit shall serve to demonstrate compliance with NO_x limit under 40 CFR part 60, subpart KKKK and COMAR 26.11.09.08G(2).

Compliance Demonstration:

Compliance demonstration should be accomplished by following the requirements listed under 40 CFR, Part 60, Subpart KKKK. Within 45 days after the performance testing, the Permittee shall submit a stack test report to the Department. **[Reference: COMAR 26.11.09.08K(2)]**

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Emissions Units: EG-1

[MDE Reg No. 027-0223-9-0392]

One (1) natural gas-fired emergency generator rated at 1,450 BHP.

NOTE: The design rating of the engine is 1,450 BHP, but the nameplate on the engine indicates a service rating of 1,325 HP and an overload rating of 1,391 HP.

A. New Source Performance Standards (NSPS) under 40 CFR Part 60, Subpart JJJJ for Stationary Spark Ignition Internal Combustion Engines – [40 CFR, Part 63, Subpart ZZZZ]

All applicable terms, provisions, emissions standards, testing, monitoring, record keeping, and reporting requirements included in federal New Source Performance Standards (NSPS) under 40 CFR Part 60, Subpart JJJJ for Stationary Spark Ignition Internal Combustion Engines.

Compliance Demonstration:

The Permittee shall demonstrate compliance with the testing requirements following the procedures listed under 40 CFR, Part 60, §60.4333. The Permittee shall demonstrate compliance with the record keeping requirements by keeping records of the monthly records of fuel usage, a copy of the initial performance test report(s) for NO_x, CO, and VOC emissions, copies of each subsequent performance test reports, and a copy of the approved parametric monitoring plan for NO_x, on site in accordance with §60.4355(a).

B. National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Reciprocating Internal Combustion Engines – [40 CFR, Part 63, Subpart ZZZZ]

The Permittee shall meet the requirements included in the National Emissions Standards for Hazardous Air Pollutants (NESHAP) promulgated under 40 CFR, Part 63, Subparts A and ZZZZ for Reciprocating Internal Combustion Engines by meeting the requirements of 40 CFR, Part 60, Subpart JJJJ for the emergency generator. No further requirements apply to the emergency generator under 40 CFR, Part 63, Subpart ZZZZ. **[Reference: 40 CFR §63.6590(c)(1)]**

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Compliance Demonstration:

To comply with the testing requirements, the Permittee shall follow the requirements listed under 40 CFR, Part 60, Subpart JJJJ for the emergency generators.

C. Control of Visible Emissions

Visible Emissions Stationary Internal Combustion Engines Powered Equipment – [COMAR 26.11.09.05E(2) through (4)]

(2) Emissions During Idle Mode.

“A person may not cause or permit the discharge of emissions from any engine, operating at idle, greater than 10 percent opacity.”

(3) Emissions During Operating Mode.

“A person may not cause or permit the discharge of emissions from any engine, operating at other than idle conditions, greater than 40 percent opacity.”

(4) Exceptions.

(a) “Section E(2) of this regulation does not apply for a period of 2 consecutive minutes after a period of idling of 15 consecutive minutes for the purpose of clearing the exhaust system.”

(b) “Section E(2) of this regulation does not apply to emissions resulting directly from cold engine start-up and warm-up for the following maximum periods:

(i) Engines that are idled continuously when not in service: 30 minutes;

(ii) All other engines: 15 minutes.”

(c) “Section E(2) and (3) of this regulation do not apply while maintenance, repair, or testing is being performed by qualified mechanics.”

Compliance Demonstration:

The Permittee is required to report incidents of visible emissions in accordance with the requirements to report excess emissions and deviations. See permit Condition 4, of Section III of the permit.

D. Operational Limits

- (1) Operating requirements for the Waukesha 1,450 BHP natural gas-fired emergency generator from 40 CFR Part 60, Subpart JJJJ.

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§60.4243(d) ... any operation other than emergency operation, [and] maintenance and testing, ... as described in paragraphs (d)(1) through (3) of this section, is prohibited. ...

§60.4243(d)(1) There is no time limit on the use of emergency generator in emergency situations.

§60.4243(d)(2) Allows the Permittee to operate the emergency generator the purposes specified in (d)(2)(i) for a maximum of 100 hours per calendar year.

§60.4243(d)(2)(i) Allows the emergency generator to be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, or the insurance company associated with the engine.

- (2) The Permittee shall maintain and operate the 1,450 BHP natural gas-fired emergency generator, and any associated air pollution control equipment, in such a manner as to ensure full and continuous compliance with all applicable regulations.

Compliance Demonstration:

To comply with the operational limits, the Permittee shall follow the requirements listed under 40 CFR, Part 60, Subpart JJJJ for the emergency generators.

COMPLIANCE SCHEDULE

Transco is currently in compliance with all applicable air quality regulations. It is not currently under any compliance schedule

TITLE IV – ACID RAIN

The Permittee is not subject to the requirements of Title IV.

TITLE VI – OZONE DEPLETING SUBSTANCES

The Permittee is not subject to Title VI requirements.

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SECTION 112(r) – ACCIDENTAL RELEASE

The Permittee no longer uses anhydrous ammonia and is no longer required to submit a Risk Management Plan (RMP).

PERMIT SHIELD

The Transco requested that a permit shield be expressly included in the Permittee's Part 70 permit. Permit shields are granted on an emission unit by emission unit basis. If an emission unit is covered by a permit shield, a permit shield statement will follow the emission unit table for that unit in Section IV – Plant Specific Conditions of the permit. In this case, a permit shield was granted for each emission unit covered by the permit.

INSIGNIFICANT ACTIVITIES

This section provides a list of insignificant emissions units that were reported in the Title V permit application. The applicable Clean Air Act requirements, if any, are listed below the insignificant activity.

- (1) ✓ Space heaters utilizing direct heat transfer and used solely for comfort heat;
- (2) No. 1 Unheated VOC dispensing containers or unheated VOC rinsing containers of 60 gallons (227 liters) capacity or less;

The containers are subject to COMAR 26.11.19.09D, which requires that the Permittee control emissions of volatile organic compounds (VOC) from cold degreasing operations by meeting the following requirements:

- (a) COMAR 26.11.19.09D(2)(b), which establishes that the Permittee shall not use any VOC degreasing material that exceeds a vapor pressure of 1 mm Hg at 20 ° C;
- (b) COMAR 26.11.19.09D(3)(a—d), which requires that the Permittee implement good operating practices designed to minimize spills and evaporation of VOC degreasing material. These practices, which shall be established in writing and displayed such that they are clearly visible to

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operators, shall include covers (including water covers), lids, or other methods of minimizing evaporative losses, and reducing the time and frequency during which parts are cleaned;

- (c) COMAR 26.11.19.09D(4), which prohibits the use of any halogenated VOC for cold degreasing.

The Permittee shall maintain on site for at least five (5) years, and shall make available to the Department upon request, the following records of operating data:

- (a) Monthly records of the total VOC degreasing materials used; and
- (b) Written descriptions of good operating practices designed to minimize spills and evaporation of VOC degreasing materials.
- (3) ✓ Equipment for drilling, carving, cutting, routing, turning, sawing, planing, spindle sanding, or disc sanding of wood or wood products;
- (4) ✓ Brazing, soldering, or welding equipment, and cutting torches related to manufacturing and construction activities that emit HAP metals and not directly related to plant maintenance, upkeep and repair or maintenance shop activities;
- (5) ✓ Equipment for washing or drying products fabricated from metal or glass, provided that no VOC is used in the process and that no oil or solid fuel is burned;
- (6) Containers, reservoirs, or tanks used exclusively for:
- (d) No. 4 Storage of lubricating oils;
- (e) No. 4 Unheated storage of VOC with an initial boiling point of 300 °F (149 °C) or greater;
- (f) No. 1 Storage of Numbers 1, 2, 4, 5, and 6 fuel oil and aviation jet engine fuel;

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- (7) ✓ First aid and emergency medical care provided at the facility, including related activities such as sterilization and medicine preparation used in support of a manufacturing or production process;
- (8) ✓ Certain recreational equipment and activities, such as fireplaces, barbecue pits and cookers, fireworks displays, and kerosene fuel use;
- (9) ✓ Comfort air conditioning subject to requirements of Title VI of the Clean Air Act;
- (10) ✓ Natural draft hoods or natural draft ventilators that exhaust air pollutants into the ambient air from manufacturing/industrial or commercial processes;

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STATE ONLY ENFORCEABLE REQUIREMENTS

This section of the permit contains state-only enforceable requirements. The requirements in this section will not be enforced by the U.S. Environmental Protection Agency. The requirements in this section are not subject to COMAR 26.11.03 10 - Public Petitions for Review to EPA Regarding Part 70 Permits.

The Permittee is subject to the following State-only enforceable requirements:

Applicable Regulations:

- (a) COMAR 26.11.06.08 and 26.11.06.09, which generally prohibit the discharge of emissions beyond the property line in such a manner that a nuisance or air pollution is created.
- (b) COMAR 26.11.15.05, which requires that the Permittee implement "Best Available Control Technology for Toxics" (T – BACT) to control emissions of toxic air pollutants.

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COMAR 26.11.41 – Control of Methane Emissions from the Natural Gas Industry Authority.

COMAR 26.11.41.02 - Applicability.

The provisions of this chapter apply to an affected facility as that term is defined in Regulation .01B of this chapter.

COMAR 26.11.41.03 - Leak Detection and Repair Requirements.

A. *Not Applicable.*

B. *Not Applicable.*

C. Station 190 Liquefied Natural Gas facility shall comply with:

(1) The leak detection and repair requirements as specified by the Climate Action Plan, which is defined, prepared, and approved under COMAR 26.09.02.06.B—E; and

(2) The leak detection and repair plan defined and approved under the Certificate of Public Convenience and Necessity, issued by the Maryland Public Service Commission on May 30, 2014, Order No. 86372, Case No. 9318, as amended on February 6, 2018, with Order No. 88565, and Errata on February 23, 2018, Order No. 88565, as amended.

D. *Not Applicable.*

E. If an owner requests approval, the Department may approve a new technology or alternative practice to identify leaking fugitive emissions components as an equivalent substitution for the requirements in §A or B of this regulation.

COMAR 26.11.41.04 - Natural Gas-Powered Pneumatic Devices Methane Emission Control Requirements.

A. Beginning January 1, 2021, each continuous and intermittent bleed natural gas-powered pneumatic device shall comply with the leak detection and repair requirements specified in Regulation .03 of this chapter, as applicable, when the device is idle and not controlling.

Note: Station 190 does not have any continuous bleed natural gas-powered pneumatic devices on site.

COMAR 26.11.41.05 - Reciprocating Natural Gas Compressor Methane Emission Control Requirements.

A. All reciprocating natural gas compressor components at an affected facility shall comply with the leak detection and repair requirements in Regulation .03 of this chapter where applicable.

B. Control Measures for Reciprocating Natural Gas Compressor.

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- (1) By January 1, 2021, compressor vent stacks used to vent rod packing/seal emissions shall be controlled with the use of a vapor collection system as specified in Regulation .06 of this chapter; or
- (2) By April 1, the reciprocating natural gas compressor rod packing/seal emission flow rate through the rod packing/seal vent stack shall be measured annually through direct measurement (high volume sampling, bagging, calibrated flow measuring instrument, etc.) while the compressor is operating at normal operating temperature.
 - (a) Direct measurements shall use one of the following methods:
 - (i) Vent stacks shall be equipped with a meter or instrumentation to measure the rod packing or seal emissions flow rate; or
 - (ii) Vent stacks shall be equipped with a clearly identified access port to measure individual or combined rod packing or seal emission flow rates.
 - (b) If the measurement is not obtained because the compressor is not operating for the scheduled test date, testing shall be conducted within 7 calendar days of resumed operation.
- (3) A reciprocating natural gas compressor with a rod packing/seal with a measured emission flow rate that exceeds 1 standard cubic foot per minute, or a combined rod packing or seal emission flow rate that exceeds the number of compression cylinders multiplied by 1 standard cubic foot per minute shall:
 - (a) Be successfully repaired or replaced within 30 calendar days from the date of the exceedance; or
 - (b) Conduct natural gas compressor rod packing/seal emission flow rate measurements every 6 months or when the compressor resumes operation, whichever is later.
- (4) A reciprocating natural gas compressor with a measured emission flow rate that exceeds 2 standard cubic feet per minute, or a combined rod packing or seal emission flow rate that exceeds the number of compression cylinders multiplied by 2 standard cubic feet per minute, shall be successfully repaired or replaced within 30 calendar days from the date of the exceedance.

C. Delay of Repair for Reciprocating Natural Gas Compressor.

- (1) A delay of repair may occur provided the owner or operator provides documentation, upon request from the Department, that the delivery of parts or equipment required to make necessary repairs will take more than 30 days from the last emission flow rate measurement and that the parts have been ordered.
- (2) A delay of repair to obtain parts or equipment may not exceed 60 days from the date of the last emission flow rate measurement unless the owner or operator notifies the Department, in writing, of the extended delay and provides an estimated time by which the repairs will be completed.
- (3) A reciprocating natural gas compressor with a rod packing/seal emission flow rate measured above the standard specified in §B(4) of this regulation, and which has leaking parts deemed unsafe to monitor or requiring a facility shutdown, shall be successfully repaired by the end of the next planned process shutdown or within 12 months from the date of the flow rate measurement, whichever is sooner.

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COMAR 26.11.41.06 - Vapor Collection System and Vapor Control Devices.

Note: Station 190 does not utilize any Vapor Collection systems or Vapor Control Devices to show compliance with this regulation.

COMAR 26.11.41.07 - Record-Keeping and Reporting Requirements.

A. Owners or operators of affected facilities shall maintain, submit as described in this section, and make available upon request by the Department a copy of records necessary to verify compliance with the provisions of this chapter, as follows:

(1) For each leak monitoring survey and audio, visual, and olfactory inspection conducted according to Regulation .03 of this chapter, owners and operators shall:

(a) Submit a report to the Department within **60 days of each leak monitoring survey** with the following information: ***(For Station 190 it's impractical, therefore: 30 days of the end of each reporting quarter according to the approved LDAR Plan)***

(i) Date of the survey;

(ii) A list of each fugitive emission and repair;

(iii) Any deviations from the initial methane monitoring plan or a statement that there were no deviations from the initial methane monitoring plan;

(iv) Number and type of components for which fugitive emissions were detected;

(v) Number and type of difficult-to-monitor fugitive emission components monitored;

(vi) Instrument reading of each fugitive emissions component that requires repair when EPA Method 21 (40 CFR 60, Appendix A-7) is used for monitoring;

(vii) Number and type of fugitive emissions components that were not repaired;

(viii) Number and type of fugitive emission components placed on delay of repair and explanation for each delay of repair;

(ix) The date of successful repair of the fugitive emissions component; and

(x) Instrumentation used to resurvey a repaired fugitive emissions component that could not be repaired during the initial fugitive emissions finding;

(b) Maintain, for a minimum of **5 years**, record of each leak monitoring survey along with the following information:

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- (i) Reports submitted according to §A(1)(a) of this regulation;
 - (ii) Beginning and end time of the survey;
 - (iii) Name of operator(s) performing survey;
 - (iv) Monitoring instrument used, including the manufacturer, model number, serial number, and calibration documentation;
 - (v) When optical gas imaging is used to perform the survey, one or more digital photographs or videos, captured from the optical gas imaging instrument used for conduct of monitoring, of each required monitoring survey being performed;
 - (vi) Fugitive emissions component identification when EPA Method 21 (40 CFR 60, Appendix A-7) is used to perform the monitoring survey;
 - (vii) Ambient temperature, sky conditions, and maximum wind speed at the time of the survey;
 - (viii) Any deviations from the initial methane monitoring plan or a statement that there were no deviations from the initial methane monitoring plan;
 - (ix) Proof that parts or equipment required to make necessary repairs, as required by this chapter, have been ordered;
 - (x) If a fugitive emissions component is not tagged, a digital photograph or video of each fugitive emissions component that could not be repaired during the leak monitoring survey at the time the fugitive emissions were initially found; and
 - (xi) Repair methods applied in each attempt to repair the fugitive emissions components;
- (c) Post a quarterly report summary to a publicly available website of each leak monitoring survey, including the information required in §A(1)(a) of this regulation, **60 days after the leak monitoring survey; and (*For Station 190 it's impractical, therefore: 30 days of the end of each reporting quarter according to the approved LDAR Plan*)**
- (d) Maintain records of audio, visual, and olfactory inspections for at least 5 years from the date of inspection.
- (2) *Not Applicable.* **Note: Station 190 does not have any continuous bleed natural gas-powered pneumatic devices on site.**
- (3) For each reciprocating natural gas compressor, owners and operators shall:

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- (a) Maintain a record of each rod packing leak concentration measurement found above the minimum leak threshold and report annually beginning **April 1, 2021**, for at least **5 years** from the date of each leak concentration measurement;
- (b) Maintain a record of each rod packing or seal emission flow rate measurement and report annually beginning April 1, 2021, for at least 5 years from the date of each emissions flow rate measurement;
- (c) Maintain a record that documents the date(s) and hours of operation a compressor is operated in order to demonstrate compliance with the rod packing leak concentration or emission flow rate measurement in the event that the compressor is not operating during a scheduled inspection for at least 1 calendar year;
- (d) Maintain records that provide proof that parts or equipment required to make necessary repairs required by this chapter have been ordered;
- (e) Report annually the cumulative number of hours of operation or the number of months since initial startup or the previous reciprocating compressor rod packing replacement, whichever is later, beginning **April 1, 2021**;
- (f) If applicable, submit a statement that emissions from the rod packing are being routed to applicable vapor control system under Regulation .06 of this chapter;
- (g) Report records of deviations from this chapter that occurred during the reporting period annually, beginning **April 1, 2021**; and
- (h) Maintain a record of purchase orders, work orders, or any in-house or third-party reports produced or provided to the affected facility necessary to demonstrate compliance with the delay of repair provisions of this chapter for at least 5 years.

B. Blowdown Events and Reports.

- (1) Within 90 days of the effective date of this chapter, affected facilities shall submit a blowdown notification plan to the Department for approval of any blowdown event in excess of 1,000,000 standard cubic feet.
- (2) The blowdown notification plan according to §B(1) of this regulation shall include:
 - (a) The notification format (for example, website, email, robocall, text message, social media announcement, etc.) to local authorities, the Department, and interested parties for blowdown emissions in excess of 1,000,000 standard cubic feet;
 - (b) A public outreach plan to inform interested parties of the availability to be notified of blowdown events in excess of 1,000,000 standard cubic feet;
 - (c) The affected facility's responsible personnel for blowdown notifications; and
 - (d) A sitemap of the facility with clearly marked designated area(s) for blowdown emissions in excess of 1,000,000 standard cubic feet.

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(3) For any blowdown event in excess of 1,000,000 standard cubic feet, affected facilities shall make information publicly available in accordance with the facility's approved blowdown notification plan, including notification to the Department, at least 7 days prior.

(4) For any blowdown event in excess of 1,000,000 standard cubic feet that is scheduled less than 7 days prior to the blowdown event, affected facilities shall, as soon as practicable:

(a) Make information publicly available in accordance with the facility's approved blowdown notification plan; and

(b) Provide an explanation to the Department of the reason for the blowdown event.

(5) For any emergency or unplanned blowdown event in excess of 1,000,000 standard cubic feet, affected facilities shall make information publicly available in accordance with the facility's approved blowdown notification plan and notify the Department within 1 hour of the emergency or unplanned blowdown event.

(6) When safety concerns preclude a facility from providing prior notification of an emergency or unplanned blowdown under §B(5) of this regulation, the facility shall send notice to the Department within 24 hours of the blowdown event indicating the reason(s) why prior notice was not possible.

(7) Affected facilities shall report the following information to the Department of blowdown emissions in excess of 50 cubic feet within the facility's fence line annually by April 1 of each year:

(a) Date and type (that is, planned or emergency) of each blowdown event;

(b) Methane emissions in metric tons released from each blowdown event; and

(c) Annual methane emissions in metric tons from all blowdown events.

(8) Methane emissions shall be calculated according to procedures in 40 CFR Part 98, Subpart W, §98.233.

C. Greenhouse Gas Emissions Reporting.

(1) Owners and operators of affected facilities shall report methane, carbon dioxide, and nitrous oxide mass emissions to the Department annually by April 1 of each year.

(2) Owners and operators of affected facilities shall follow the procedures for emission calculation, monitoring, quality assurance, missing data, record

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keeping, and reporting that are specified in 40 CFR Part 98, Subpart C, and 40 CFR Part 98, Subpart W.

(3) When reporting to the Department, owners and operators of affected facilities shall expand the fugitive emissions reporting requirements of 40 CFR Part 98, Subpart W, to include a Microsoft Excel format list providing calculations summarized by category under 40 CFR §§98.232(e)—(h) as applicable.

(4) The reporting threshold in 40 CFR §§98.2, 98.31 and 98.231 of 25,000 metric tons of CO₂ equivalent does not exempt an affected facility from following the requirements of this section.

D. All required reports shall be submitted to the Industrial Compliance Division in written or electronic format.

2. **Record Keeping and Reporting:**

The Permittee shall submit to the Department, by April 1 of each year during the term of this permit, a written certification of the results of an analysis of emissions of toxic air pollutants from the Permittee's facility during the previous calendar year. The analysis shall include either:

- (a) a statement that previously submitted compliance demonstrations for emissions of toxic air pollutants remain valid; or
- (b) a revised compliance demonstration, developed in accordance with requirements included under COMAR 26.11.15 & 16, that accounts for changes in operations, analytical methods, emissions determinations, or other factors that have invalidated previous demonstrations.

KEEP PERMIT AT SITE

CONTROL NO. B- 05676



Lawrence J. Hogan
Governor

Ben Grumbles
Secretary

DEPARTMENT OF THE ENVIRONMENT

Air and Radiation Administration
1800 Washington Boulevard, Suite 720
Baltimore, MD 21230

☐ Construction Permit

☒ Part 70 Operating Permit

PERMIT NO. 24-027-00223

DATE ISSUED March 1, 2019

PERMIT FEE To be paid in accordance
with COMAR
26.11.02.19B(b)

EXPIRATION DATE November 30, 2023

LEGAL OWNER & ADDRESS

Transcontinental Gas Pipe Line Co., LLC
P.O. Box 1396
Houston, TX 77251-1396
Attn: Albert R. Taylor, VP Ops
Eastern Interstates, Atlantic-Gulf

SITE

Transcontinental Gas Pipe Line Co., LLC -
Compressor Station 190.
11910 Carroll Mill Road
Ellicott City MD 21042
Howard County
AI #5546

SOURCE DESCRIPTION

A natural gas compressor station.

This source is subject to the conditions described on the attached pages.

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Program Manager

Director, Air and Radiation Administration

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SECTION I SOURCE IDENTIFICATION

1. DESCRIPTION OF FACILITY

Transcontinental Gas Pipe Line Company, LLC (Transco) owns and operates a multi-directional interstate natural gas pipeline system which extends from the Gulf Coast region to areas in the northeastern United States. Compressor Station 190 is used for compression purposes in order to keep the gas flowing through the system.

Natural gas enters the station at approximately 550 pounds per square inch (psi). Compressors boost the pressure of the gas to approximately 770 psi for transmission in the pipeline downstream of the compressor station. Each gas compressor is driven by a mainline (M/L) natural gas fired reciprocating internal combustion engine. Each of these engine/compressor set include an exhaust gas stack and a gas blowdown vent system.

2. FACILITY INVENTORY LIST

Emissions Unit Number	MDE Registration Number	Emissions Unit Name and Description	Date of Installation
M/L Unit 1	027-0223-5-0054	Mainline natural gas-fired reciprocating internal combustion engine, 2-cycle, lean-burn Clark HBA-8T, 2,050 BHP.	03/1951
M/L Unit 2	027-0223-5-0054	Mainline natural gas-fired reciprocating internal combustion engine, 2-cycle, lean-burn Clark HBA-8T, 2,050 BHP.	03/1951
M/L Unit 3	027-0223-5-0054	Mainline natural gas-fired reciprocating internal combustion engine, 2-cycle, lean-burn Clark HBA-8T, 2,050 BHP.	03/1951
M/L Unit 4	027-0223-5-0054	Mainline natural gas-fired reciprocating internal combustion engine, 2-cycle, lean-burn Clark HBA-8T, 2,050 BHP.	03/1951
M/L Unit 5	027-0223-5-0054	Mainline natural gas-fired reciprocating internal combustion engine, 2-cycle, lean-burn Clark HBA-8T, 2,050 BHP.	03/1951

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M/L Unit 6	027-0223-5-0054	Mainline natural gas-fired reciprocating internal combustion engine, 2-cycle, lean-burn Clark HBA-8T, 2,050 BHP.	03/1951
M/L Unit 7	027-0223-5-0054	Mainline natural gas-fired reciprocating internal combustion engine, 2-cycle, lean-burn Clark HBA-8T, 2,050 BHP.	03/1951
M/L Unit 8	027-0223-5-0054	Mainline natural gas-fired reciprocating internal combustion engine, 2-cycle, lean-burn Clark TLA-6, 2,100 BHP.	12/1960
M/L Unit 9	027-0223-5-0054	Mainline natural gas-fired reciprocating internal combustion engine, 2-cycle, lean-burn Clark TLA-6, 2,100 BHP.	09/1961
M/L Unit 10	027-0223-5-0054	Mainline natural gas-fired reciprocating internal combustion engine, 2-cycle, lean-burn Clark TLA-6, 2,100 HP.	07/1962
M/L Unit 11	027-0223-5-0054	Mainline natural gas-fired reciprocating internal combustion engine, 2-cycle, lean-burn Clark TCV-10, 3,400 HP.	03/1969
M/L Unit 12	027-0223-5-0054	Mainline natural gas-fired reciprocating internal combustion engine, 2-cycle, lean-burn, Clark TCV-16, 5,500 HP.	05/1970
AUX 1	027-0223-9-0186	Auxiliary electric power generator; 4-cycle, lean-burn, reciprocating IC engine, Waukesha 7042 GL, 1,478 HP.	03/1997
BLR 1	027-0223-5-0063	Holmar Vulcan A60 natural gas-fired 2.5 MMBtu/hr boiler.	1950
BLR 2	027-0223-5-0064	H. B. Smith Model G28HE-13S natural gas-fired 3.5 MMBtu/hr boiler.	2022
FUG 1	n/a	Piping component fugitives.	1950's
FUG 2	n/a	Venting/blowdown emissions.	1950's
CT-1	027-0223-9-0391	One (1) Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine.	2017
EG-1	027-0223-9-0392	One (1) natural gas-fired emergency generator rated at 1,450 BHP.	2017

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SECTION II GENERAL CONDITIONS

1. DEFINITIONS

[COMAR 26.11.01.01] and [COMAR 26.11.02.01]

The words or terms in this Part 70 permit shall have the meanings established under COMAR 26.11.01 and .02 unless otherwise stated in this permit.

2. ACRONYMS

ARA	Air and Radiation Administration
BACT	Best Available Control Technology
Btu	British thermal unit
CAA	Clean Air Act
CAM	Compliance Assurance Monitoring
CEM	Continuous Emissions Monitor
CFR	Code of Federal Regulations
CO	Carbon Monoxide
COMAR	Code of Maryland Regulations
EPA	United States Environmental Protection Agency
FR	Federal Register
gr	grains
HAP	Hazardous Air Pollutant
MACT	Maximum Achievable Control Technology
MDE	Maryland Department of the Environment
MVAC	Motor Vehicle Air Conditioner
NESHAPS	National Emission Standards for Hazardous Air Pollutants
NO _x	Nitrogen Oxides
NSPS	New Source Performance Standards
NSR	New Source Review
OTR	Ozone Transport Region
PM	Particulate Matter
PM10	Particulate Matter with Nominal Aerodynamic Diameter of 10 micrometers or less
ppm	parts per million
ppb	parts per billion
PSD	Prevention of Significant Deterioration
PTC	Permit to construct
PTO	Permit to operate (State)
SIC	Standard Industrial Classification
SO ₂	Sulfur Dioxide

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TAP	Toxic Air Pollutant
tpy	tons per year
VE	Visible Emissions
VOC	Volatile Organic Compounds

3. EFFECTIVE DATE

The effective date of the conditions in this Part 70 permit is the date of permit issuance, unless otherwise stated in the permit.

4. PERMIT EXPIRATION

[COMAR 26.11.03.13B(2)]

Upon expiration of this permit, the terms of the permit will automatically continue to remain in effect until a new Part 70 permit is issued for this facility provided that the Permittee has submitted a timely and complete application and has paid applicable fees under COMAR 26.11.02.16.

Otherwise, upon expiration of this permit the right of the Permittee to operate this facility is terminated.

5. PERMIT RENEWAL

[COMAR 26.11.03.02B(3)] and [COMAR 26.11.03.02E]

The Permittee shall submit to the Department a completed application for renewal of this Part 70 permit at least 12 months before the expiration of the permit. Upon submitting a completed application, the Permittee may continue to operate this facility pending final action by the Department on the renewal.

The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall submit such supplementary facts or corrected information no later than 10 days after becoming aware that this occurred. The Permittee shall also provide additional information as necessary to address any requirements that become applicable to the facility after the date a completed application was submitted, but prior to the release of a draft permit. This information shall be submitted to the Department no later than 20 days after a new requirement has been adopted.

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6. CONFIDENTIAL INFORMATION

[COMAR 26.11.02.02G]

In accordance with the provisions of the State Government Article, Sec. 10-611 et seq., Annotated Code of Maryland, all information submitted in an application shall be considered part of the public record and available for inspection and copying, unless the Permittee claims that the information is confidential when it is submitted to the Department. At the time of the request for inspection or copying, the Department will make a determination with regard to the confidentiality of the information. The Permittee, when requesting confidentiality, shall identify the information in a manner specified by the Department and, when requested by the Department, promptly provide specific reasons supporting the claim of confidentiality. Information submitted to the Department without a request that the information be deemed confidential may be made available to the public. Subject to approval of the Department, the Permittee may provide a summary of confidential information that is suitable for public review. The content of this Part 70 permit is not subject to confidential treatment.

7. PERMIT ACTIONS

[COMAR 26.11.03.06E(3)] and [COMAR 26.11.03.20(A)]

This Part 70 permit may be revoked or reopened and revised for cause. The filing of an application by the Permittee for a permit revision or renewal; or a notification of termination, planned changes or anticipated noncompliance by the facility, does not stay a term or condition of this permit.

The Department shall reopen and revise, or revoke the Permittee's Part 70 permit under the following circumstances:

- a. Additional requirements of the Clean Air Act become applicable to this facility and the remaining permit term is 3 years or more;
- b. The Department or the EPA determines that this Part 70 permit contains a material mistake, or is based on false or inaccurate information supplied by or on behalf of the Permittee;

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- c. The Department or the EPA determines that this Part 70 permit must be revised or revoked to assure compliance with applicable requirements of the Clean Air Act; or
- d. Additional requirements become applicable to an affected source under the Federal Acid Rain Program.

8. PERMIT AVAILABILITY

[COMAR 26.11.02.13G]

The Permittee shall maintain this Part 70 permit in the vicinity of the facility for which it was issued, unless it is not practical to do so, and make this permit immediately available to officials of the Department upon request.

9. REOPENING THE PART 70 PERMIT FOR CAUSE BY THE EPA

[COMAR 26.11.03.20B]

The EPA may terminate, modify, or revoke and reissue a permit for cause as prescribed in 40 CFR §70.7(g)

10. TRANSFER OF PERMIT

[COMAR 26.11.02.02E]

The Permittee shall not transfer this Part 70 permit except as provided in COMAR 26.11.03.15.

11. REVISION OF PART 70 PERMITS – GENERAL CONDITIONS

[COMAR 26.11.03.14] and [COMAR 26.11.03.06A(8)]

- a. The Permittee shall submit an application to the Department to revise this Part 70 permit when required under COMAR 26.11.03.15 -.17.
- b. When applying for a revision to a Part 70 permit, the Permittee shall comply with the requirements of COMAR 26.11.03.02 and .03 except that the application for a revision need include only information listed that is related to the proposed change to the source and revision to

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the permit. This information shall be sufficient to evaluate the proposed change and to determine whether it will comply with all applicable requirements of the Clean Air Act.

- c. The Permittee may not change any provision of a compliance plan or schedule in a Part 70 permit as an administrative permit amendment or as a minor permit modification unless the change has been approved by the Department in writing.
- d. A permit revision is not required for a change that is provided for in this permit relating to approved economic incentives, marketable permits, emissions trading, and other similar programs.

12. SIGNIFICANT PART 70 OPERATING PERMIT MODIFICATIONS

[COMAR 26.11.03.17]

The Permittee may apply to the Department to make a significant modification to its Part 70 Permit as provided in COMAR 26.11.03.17 and in accordance with the following conditions:

- a. A significant modification is a revision to the federally enforceable provisions in the permit that does not qualify as an administrative permit amendment under COMAR 26.11.03.15 or a minor permit modification as defined under COMAR 26.11.03.16.
- b. This permit does not preclude the Permittee from making changes, consistent with the provisions of COMAR 26.11.03, that would make the permit or particular terms and conditions of the permit irrelevant, such as by shutting down or reducing the level of operation of a source or of an emissions unit within the source. Air pollution control equipment shall not be shut down or its level of operation reduced if doing so would violate any term of this permit.
- c. Significant permit modifications are subject to all requirements of COMAR 26.11.03 as they apply to permit issuance and renewal, including the requirements for applications, public participation, and review by affected states and EPA, except:
 - (1) An application need include only information pertaining to the proposed change to the source and modification of this permit, including a description of the change and modification, and any

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new applicable requirements of the Clean Air Act that will apply if the change occurs;

- (2) Public participation, and review by affected states and EPA, is limited to only the application and those federally enforceable terms and conditions of the Part 70 permit that are affected by the significant permit modification.
- d. As provided in COMAR 26.11.03.15B(5), an administrative permit amendment may be used to make a change that would otherwise require a significant permit modification if procedures for enhanced preconstruction review of the change are followed that satisfy the requirements of 40 CFR 70.7(d)(1)(v).
- e. Before making a change that qualifies as a significant permit modification, the Permittee shall obtain all permits-to-construct and approvals required by COMAR 26.11.02.
- f. The Permittee shall not make a significant permit modification that results in a violation of any applicable requirement of the Clean Air Act.
- g. The permit shield in COMAR 26.11.03.23 applies to a final significant permit modification that has been issued by the Department, to the extent applicable under COMAR 26.11.03.23.

13. MINOR PERMIT MODIFICATIONS

[COMAR 26.11.03.16]

The Permittee may apply to the Department to make a minor modification to the federally enforceable provisions of this Part 70 permit as provided in COMAR 26.11.03.16 and in accordance with the following conditions:

- a. A minor permit modification is a Part 70 permit revision that:
 - (1) Does not result in a violation of any applicable requirement of the Clean Air Act;
 - (2) Does not significantly revise existing federally enforceable monitoring, including test methods, reporting, record keeping, or compliance certification requirements except by:

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- (a) Adding new requirements,
 - (b) Eliminating the requirements if they are rendered meaningless because the emissions to which the requirements apply will no longer occur, or
 - (c) Changing from one approved test method for a pollutant and source category to another;
- (3) Does not require or modify a:
- (a) Case-by-case determination of a federally enforceable emissions standard,
 - (b) Source specific determination for temporary sources of ambient impacts, or
 - (c) Visibility or increment analysis;
- (4) Does not seek to establish or modify a federally enforceable permit term or condition for which there is no corresponding underlying applicable requirement of the Clean Air Act, but that the Permittee has assumed to avoid an applicable requirement to which the source would otherwise be subject, including:
- (a) A federally enforceable emissions standard applied to the source pursuant to COMAR 26.11.02.03 to avoid classification as a Title I modification; and
 - (b) An alternative emissions standard applied to an emissions unit pursuant to regulations promulgated under Section 112(i)(5) of the Clean Air Act
- (5) Is not a Title I modification; and
- (6) Is not required under COMAR 26.11.03.17 to be processed as a significant modification to this Part 70 permit.
- b. Application for a Minor Permit Modification

The Permittee shall submit to the Department an application for a minor permit modification that satisfies the requirements of COMAR 26.11.03.03 which includes the following:

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- (1) A description of the proposed change, the emissions resulting from the change, and any new applicable requirements that will apply if the change is made;
 - (2) The proposed minor permit modification;
 - (3) Certification by a responsible official, in accordance with COMAR 26.11.02.02F, that:
 - (a) The proposed change meets the criteria for a minor permit modification, and
 - (b) The Permittee has obtained or applied for all required permits-to-construct required by COMAR 26.11.03.16 with respect to the proposed change;
 - (4) Completed forms for the Department to use to notify the EPA and affected states, as required by COMAR 26.11.03.07-.12.
- c. Permittee's Ability to Make Change
- (1) For changes proposed as minor permit modifications to this permit that will require the applicant to obtain a permit to construct, the permit to construct must be issued prior to the new change.
 - (2) During the period of time after the Permittee applies for a minor modification but before the Department acts in accordance with COMAR 26.11.03.16F(2):
 - (a) The Permittee shall comply with applicable requirements of the Clean Air Act related to the change and the permit terms and conditions described in the application for the minor modification.
 - (b) The Permittee is not required to comply with the terms and conditions in the permit it seeks to modify. If the Permittee fails to comply with the terms and conditions in the application during this time, the terms and conditions of both this permit and the application for modification may be enforced against it.

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- d. The Permittee is subject to enforcement action if it is determined at any time that a change made under COMAR 26.11.03.16 is not within the scope of this regulation.
- e. Minor permit modification procedures may be used for Part 70 permit modifications involving the use of economic incentives, marketable permits, emissions trading, and other similar approaches, but only to the extent that the minor permit modification procedures are explicitly provided for in regulations approved by the EPA as part of the Maryland SIP or in other applicable requirements of the Clean Air Act.

14. ADMINISTRATIVE PART 70 OPERATING PERMIT AMENDMENTS

[COMAR 26.11.03.15]

The Permittee may apply to the department to make an administrative permit amendment as provided in COMAR 26.11.03.15 and in accordance with the following conditions:

- a. An application for an administrative permit amendment shall:
 - (1) Be in writing;
 - (2) Include a statement certified by a responsible official that the proposed amendment meets the criteria in COMAR 26.11.03.15 for an administrative permit amendment, and
 - (3) Identify those provisions of this part 70 permit for which the amendment is requested, including the basis for the request.
- b. An administrative permit amendment:
 - (1) Is a correction of a typographical error;
 - (2) Identifies a change in the name, address, or phone number of a person identified in this permit, or a similar administrative change involving the Permittee or other matters which are not directly related to the control of air pollution;
 - (3) requires more frequent monitoring or reporting by the Permittee;

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- (4) Allows for a change in ownership or operational control of a source for which the Department determines that no other revision to the permit is necessary and is documented as per COMAR 26.11.03.15B(4);
 - (5) Incorporates into this permit the requirements from preconstruction review permits or approvals issued by the Department in accordance with COMAR 26.11.03.15B(5), but only if it satisfies 40 CFR 70.7(d)(1)(v);
 - (6) Incorporates any other type of change, as approved by the EPA, which is similar to those in COMAR 26.11.03.15B(1)—(4);
 - (7) Notwithstanding COMAR 26.11.03.15B(1)—(6), all modifications to acid rain control provisions included in this Part 70 permit are governed by applicable requirements promulgated under Title IV of the Clean Air Act; or
 - (8) Incorporates any change to a term or condition specified as State-only enforceable, if the Permittee has obtained all necessary permits-to-construct and approvals that apply to the change.
- c. The Permittee may make the change addressed in the application for an administrative amendment upon receipt by the Department of the application, if all permits-to-construct or approvals otherwise required by COMAR 26.11.02 prior to making the change have first been obtained from the Department.
 - d. The permit shield in COMAR 26.11.03.23 applies to administrative permit amendments made under Section B(5) of COMAR 26.11.03.15 , but only after the Department takes final action to revise the permit.
 - e. The Permittee is subject to enforcement action if it is determined at any time that a change made under COMAR 26.11.03.15 is not within the scope of this regulation.

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15. OFF-PERMIT CHANGES TO THIS SOURCE

[COMAR 26.11.03.19]

The Permittee may make off-permit changes to this facility as provided in COMAR 26.11.03.19 and in accordance with the following conditions:

- a. The Permittee may make a change to this permitted facility that is not addressed or prohibited by the federally enforceable conditions of this Part 70 permit without obtaining a Part 70 permit revision if:
 - (1) The Permittee has obtained all permits and approvals required by COMAR 26.11.02 and .03;
 - (2) The change is not subject to any requirements under Title IV of the Clean Air Act;
 - (3) The change is not a Title I modification; and
 - (4) The change does not violate an applicable requirement of the Clean Air Act or a federally enforceable term or condition of the permit.
- b. For a change that qualifies under COMAR 26.11.03.19, the Permittee shall provide contemporaneous written notice to the Department and the EPA, except for a change to an emissions unit or activity that is exempt from the Part 70 permit application, as provided in COMAR 26.11.03.04. This written notice shall describe the change, including the date it was made, any change in emissions, including the pollutants emitted, and any new applicable requirements of the Clean Air Act that apply as a result of the change.
- c. Upon satisfying the requirements of COMAR 26.11.03.19, the Permittee may make the proposed change.
- d. The Permittee shall keep a record describing:
 - (1) Changes made at the facility that result in emissions of a regulated air pollutant subject to an applicable requirement of the Clean Air Act , but not otherwise regulated under this permit; and
 - (2) The emissions resulting from those changes.

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- e. Changes that qualify under COMAR 26.11.03.19 are not subject to the requirements for Part 70 revisions.
- f. The Permittee shall include each off-permit change under COMAR 26.11.03.19 in the application for renewal of the part 70 permit.
- g. The permit shield in COMAR 26.11.03.23 does not apply to off-permit changes made under COMAR 26.11.03.19.
- h. The Permittee is subject to enforcement action if it is determined that an off-permit change made under COMAR 26.11.03.19 is not within the scope of this regulation.

16. ON-PERMIT CHANGES TO SOURCES

[COMAR 26.11.03.18]

The Permittee may make on-permit changes that are allowed under Section 502(b)(10) of the Clean Air Act as provided in COMAR 26.11.03.18 and in accordance with the following conditions:

- a. The Permittee may make a change to this facility without obtaining a revision to this Part 70 permit if:
 - (1) The change is not a Title I modification;
 - (2) The change does not result in emissions in excess of those expressly allowed under the federally enforceable provisions of the Part 70 permit for the permitted facility or for an emissions unit within the facility, whether expressed as a rate of emissions or in terms of total emissions;
 - (3) The Permittee has obtained all permits and approvals required by COMAR 26.11.02 and .03;
 - (4) The change does not violate an applicable requirement of the Clean Air Act;
 - (5) The change does not violate a federally enforceable permit term or condition related to monitoring, including test methods, record keeping, reporting, or compliance certification requirements;

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- (6) The change does not violate a federally enforceable permit term or condition limiting hours of operation, work practices, fuel usage, raw material usage, or production levels if the term or condition has been established to limit emissions allowable under this permit;
 - (7) If applicable, the change does not modify a federally enforceable provision of a compliance plan or schedule in this Part 70 permit unless the Department has approved the change in writing; and
 - (8) This permit does not expressly prohibit the change under COMAR 26.11.03.18.
- b. The Permittee shall notify the Department and the EPA in writing of a proposed on-permit change under COMAR 26.11.03.18 not later than 7 days before the change is made. The written information shall include the following information:
- (1) A description of the proposed change;
 - (2) The date on which the change is proposed to be made;
 - (3) Any change in emissions resulting from the change, including the pollutants emitted;
 - (4) Any new applicable requirement of the Clean Air Act; and
 - (5) Any permit term or condition that would no longer apply.
- c. The responsible official of this facility shall certify in accordance with COMAR 26.11.02.02F that the proposed change meets the criteria for the use of on-permit changes under COMAR 26.11.03.18.
- d. The Permittee shall attach a copy of each notice required by condition b. above to this Part 70 permit.
- e. On-permit changes that qualify under COMAR 26.11.03.18 are not subject to the requirements for part 70 permit revisions.
- f. Upon satisfying the requirements under COMAR 26.11.03.18, the Permittee may make the proposed change.

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- g. The permit shield in COMAR 26.11.03.23 does not apply to on-permit changes under COMAR 26.11.03.18.
- h. The Permittee is subject to enforcement action if it is determined that an on-permit change made under COMAR 26.11.03.18 is not within the scope of the regulation or violates any requirement of the State air pollution control law.

17. FEE PAYMENT

[COMAR 26.11.02.16A(2) & (5)(b)]

- a. The fee for this Part 70 permit is as prescribed in Regulation .19 of COMAR 26.11.02.
- b. The fee is due on and shall be paid on or before each 12-month anniversary date of the permit.
- c. Failure to pay the annual permit fee constitutes cause for revocation of the permit by the Department.

18. REQUIREMENTS FOR PERMITS-TO-CONSTRUCT AND APPROVALS

[COMAR 26.11.02.09.]

The Permittee may not construct or modify or cause to be constructed or modified any of the following sources without first obtaining, and having in current effect, the specified permits-to-construct and approvals:

- a. New Source Review source, as defined in COMAR 26.11.01.01, approval required, except for generating stations constructed by electric companies;
- b. Prevention of Significant Deterioration source, as defined in COMAR 26.11.01.01, approval required, except for generating stations constructed by electric companies;
- c. New Source Performance Standard source, as defined in COMAR 26.11.01.01, permit to construct required, except for generating stations constructed by electric companies;

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- d. National Emission Standards for Hazardous Air Pollutants source, as defined in COMAR 26.11.01.01, permit to construct required, except for generating stations constructed by electric companies;
- e. A stationary source of lead that discharges one ton per year or more of lead or lead compounds measured as elemental lead, permit to construct required, except for generating stations constructed by electric companies;
- f. All stationary sources of air pollution, including installations and air pollution control equipment, except as listed in COMAR 26.11.02.10, permit to construct required;
- g. In the event of a conflict between the applicability of (a.— e.) above and an exemption listed in COMAR 26.11.02.10, the provision that requires a permit applies.
- h. Approval of a PSD or NSR source by the Department does not relieve the Permittee obtaining an approval from also obtaining all permits-to-construct required by (c.— g.) above.

19. CONSOLIDATION OF PROCEDURES FOR PUBLIC PARTICIPATION

[COMAR 26.11.02.11C] and [COMAR 26.11.03.01K]

The Permittee may request the Department to authorize special procedures for the Permittee to apply simultaneously, to the extent possible, for a permit to construct and a revision to this permit.

These procedures may provide for combined public notices, informational meetings, and public hearings for both permits but shall not adversely affect the rights of a person, including EPA and affected states, to obtain information about the application for a permit, to comment on an application, or to challenge a permit that is issued.

These procedures shall not alter any existing permit procedures or time frames.

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20. PROPERTY RIGHTS

[COMAR 26.11.03.06E(4)]

This Part 70 permit does not convey any property rights of any sort, or any exclusive privileges.

21. SEVERABILITY

[COMAR 26.11.03.06A(5)]

If any portion of this Part 70 permit is challenged, or any term or condition deemed unenforceable, the remainder of the requirements of the permit continues to be valid.

22. INSPECTION AND ENTRY

[COMAR 26.11.03.06G(3)]

The Permittee shall allow employees and authorized representatives of the Department, the EPA, and local environmental health agencies, upon presentation of credentials or other documents as may be required by law, to:

- a. Enter at a reasonable time without delay and without prior notification the Permittee's property where a Part 70 source is located, emissions-related activity is conducted, or records required by this permit are kept;
- b. Have access to and make copies of records required by the permit;
- c. Inspect all emissions units within the facility subject to the permit and all related monitoring systems, air pollution control equipment, and practices or operations regulated or required by the permit; and
- d. Sample or monitor any substances or parameters at or related to the emissions units at the facility for the purpose of determining compliance with the permit.

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23. DUTY TO PROVIDE INFORMATION

[COMAR 26.11.03.06E(5)]

The Permittee shall furnish to the Department, within a reasonable time specified by the Department, information requested in writing by the Department in order to determine whether the Permittee is in compliance with the federally enforceable conditions of this Part 70 permit, or whether cause exists for revising or revoking the permit. Upon request, the Permittee shall also furnish to the Department records required to be kept under the permit.

For information claimed by the Permittee to be confidential and therefore potentially not discloseable to the public, the Department may require the Permittee to provide a copy of the records directly to the EPA along with a claim of confidentiality.

The Permittee shall also furnish to the Department, within a reasonable time specified by the Department, information or records requested in writing by the Department in order to determine if the Permittee is in compliance with the State-only enforceable conditions of this permit.

24. COMPLIANCE REQUIREMENTS

**[COMAR 26.11.03.06E(1)] and [COMAR 26.11.03.06A(11)] and
[COMAR 26.11.02.05]**

The Permittee shall comply with the conditions of this Part 70 permit. Noncompliance with the permit constitutes a violation of the Clean Air Act, and/or the Environment Article Title 2 of the Annotated Code of Maryland and may subject the Permittee to:

- a. Enforcement action,
- b. Permit revocation or revision,
- c. Denial of the renewal of a Part 70 permit, or
- d. Any combination of these actions.

The conditions in this Part 70 permit are enforceable by EPA and citizens under the Clean Air Act except for the State-only enforceable conditions.

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Under Environment Article Section 2-609, Annotated Code of Maryland, the Department may seek immediate injunctive relief against a person who violates this permit in such a manner as to cause a threat to human health or the environment.

25. CREDIBLE EVIDENCE

Nothing in this permit shall be interpreted to preclude the use of credible evidence to demonstrate noncompliance with any term of this permit.

26. NEED TO HALT OR REDUCE ACTIVITY NOT A DEFENSE

[COMAR 26.11.03.06E(2)]

The need to halt or reduce activity in order to comply with the conditions of this permit may not be used as a defense in an enforcement action.

27. CIRCUMVENTION

[COMAR 26.11.01.06]

The Permittee may not install or use any article, machine, equipment or other contrivance, the use of which, without resulting in a reduction in the total weight of emissions, conceals or dilutes emissions which would otherwise constitute a violation of any applicable air pollution control regulation.

28. PERMIT SHIELD

[COMAR 26.11.03.23]

A permit shield as described in COMAR 26.11.03.23 shall apply only to terms and conditions in this Part 70 permit that have been specifically identified as covered by the permit shield. Neither this permit nor COMAR 26.11.03.23 alters the following:

- a. The emergency order provisions in Section 303 of the Clean Air Act, including the authority of EPA under that section;

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- b. The liability of the Permittee for a violation of an applicable requirement of the Clean Air Act before or when this permit is issued or for a violation that continues after issuance;
- c. The requirements of the Acid Rain Program, consistent with Section 408(a) of the Clean Air Act;
- d. The ability of the Department or EPA to obtain information from a source pursuant to Maryland law and Section 114 of the Clean Air Act; or
- e. The authority of the Department to enforce an applicable requirement of the State air pollution control law that is not an applicable requirement of the Clean Air Act.

29. ALTERNATE OPERATING SCENARIOS

[COMAR 26.11.03.06A(9)]

For all alternate operating scenarios approved by the Department and contained within this permit, the Permittee, while changing from one approved scenario to another, shall contemporaneously record in a log maintained at the facility each scenario under which the emissions unit is operating and the date and time the scenario started and ended.

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SECTION III PLANT WIDE CONDITIONS

1. PARTICULATE MATTER FROM CONSTRUCTION AND DEMOLITION

[COMAR 26.11.06.03D]

The Permittee shall not cause or permit any building, its appurtenances, or a road to be used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne.

2. OPEN BURNING

[COMAR 26.11.07]

Except as provided in COMAR 26.11.07.04, the Permittee shall not cause or permit an open fire from June 1 through August 31 of any calendar year. Prior to any open burning, the Permittee shall request and receive approval from the Department.

3. AIR POLLUTION EPISODE

[COMAR 26.11.05.04]

When requested by the Department, the Permittee shall prepare in writing standby emissions reduction plans, consistent with good industrial practice and safe operating procedures, for reducing emissions creating air pollution during periods of Alert, Warning, and Emergency of an air pollution episode.

4. REPORT OF EXCESS EMISSIONS AND DEVIATIONS

[COMAR 26.11.01.07] and [COMAR 26.11.03.06C(7)]

The Permittee shall comply with the following conditions for occurrences of excess emissions and deviations from requirements of this permit, including those in Section VI – State-only Enforceable Conditions:

- a. Report any deviation from permit requirements that could endanger human health or the environment, by orally notifying the Department immediately upon discovery of the deviation;

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- b. Promptly report all occurrences of excess emissions that are expected to last for one hour or longer by orally notifying the Department of the onset and termination of the occurrence;
- c. When requested by the Department the Permittee shall report all deviations from permit conditions, including those attributed to malfunctions as defined in COMAR 26.11.01.07A, within 5 days of the request by submitting a written description of the deviation to the Department. The written report shall include the cause, dates and times of the onset and termination of the deviation, and an account of all actions planned or taken to reduce, eliminate, and prevent recurrence of the deviation;
- d. The Permittee shall submit to the Department semi-annual monitoring reports that confirm that all required monitoring was performed, and that provide accounts of all deviations from permit requirements that occurred during the reporting periods. Reporting periods shall be January 1 through June 30 and July 1 through December 31, and reports shall be submitted within 30 days of the end of each reporting period. Each account of deviation shall include a description of the deviation, the dates and times of onset and termination, identification of the person who observed or discovered the deviation, causes and corrective actions taken, and actions taken to prevent recurrence. If no deviations from permit conditions occurred during a reporting period, the Permittee shall submit a written report that so states.
- e. When requested by the Department, the Permittee shall submit a written report to the Department within 10 days of receiving the request concerning an occurrence of excess emissions. The report shall contain the information required in COMAR 26.11.01.07D(2).

5. ACCIDENTAL RELEASE PROVISIONS

[COMAR 26.11.03.03B(23)] and [40 CFR 68]

[1]. The Permittee shall submit risk management plans by the date specified in 40 CFR 68.150.

The Permittee shall certify compliance with the requirements of 40 CFR 68 as part of the annual compliance certification as required by 40 CFR 70.

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or

[2]. Should the Permittee become subject to 40 CFR 68 during the term of this permit, the Permittee shall submit risk management plans by the date specified in 40 CFR 68.150 and shall certify compliance with the requirements of 40 CFR 68 as part of the annual compliance certification as required by 40 CFR 70.

The Permittee shall initiate a permit revision or reopening according to the procedures of 40 CFR 70.7 to incorporate appropriate permit conditions into the Permittee's Part 70 permit.

6. GENERAL TESTING REQUIREMENTS

[COMAR 26.11.01.04]

The Department may require the Permittee to conduct, or have conducted, testing to determine compliance with this Part 70 permit. The Department, at its option, may witness or conduct these tests. This testing shall be done at a reasonable time, and all information gathered during a testing operation shall be provided to the Department.

7. EMISSIONS TEST METHODS

[COMAR 26.11.01.04]

Compliance with the emissions standards and limitations in this Part 70 permit shall be determined by the test methods designated and described below or other test methods submitted to and approved by the Department.

Reference documents of the test methods approved by the Department include the following:

- a. 40 CFR 60, appendix A
- b. 40 CFR 51, appendix M
- c. The Department's Technical Memorandum 91-01 "Test Methods and Equipment Specifications for Stationary Sources", (January 1991), as amended through Supplement 3, (October 1, 1997)

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8. EMISSIONS CERTIFICATION REPORT

**[COMAR 26.11.01.05-1] and [COMAR 26.11.02.19C] and
[COMAR 26.11.02.19D]**

The Permittee shall certify actual annual emissions of regulated pollutants from the facility on a calendar year basis.

- a. The certification shall be on forms obtained from the Department and submitted to the Department not later than April 1 of the year following the year for which the certification is required;
- b. The individual making the certification shall certify that the information is accurate to the individual's best knowledge. The individual shall be:
 - (1) Familiar with each source for which the certifications forms are submitted, and
 - (2) Responsible for the accuracy of the emissions information;
- c. The Permittee shall maintain records necessary to support the emissions certification including the following information if applicable:
 - (1) The total amount of actual emissions of each regulated pollutant and the total of all regulated pollutants;
 - (2) An explanation of the methods used to quantify the emissions and the operating schedules and production data that were used to determine emissions, including significant assumptions made;
 - (3) Amounts, types and analyses of all fuels used;
 - (4) Emissions data from continuous emissions monitors that are required by this permit, including monitor calibration and malfunction information;
 - (5) Identification, description, and use records of all air pollution control equipment and compliance monitoring equipment including:

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- (a) Significant maintenance performed,
 - (b) Malfunctions and downtime, and
 - (c) Episodes of reduced efficiency of all equipment;
- (6) Limitations on source operation or any work practice standards that significantly affect emissions; and
- (7) Other relevant information as required by the Department.

9. COMPLIANCE CERTIFICATION REPORT

[COMAR 26.11.03.06G(6) and (7)]

The Permittee shall submit to the Department and EPA Region III a report certifying compliance with each term of this Part 70 permit including each applicable standard, emissions limitation, and work practice for the previous calendar year by April 1 of each year.

- a. The compliance certification shall include:
- (1) The identification of each term or condition of this permit which is the basis of the certification;
 - (2) The compliance status;
 - (3) Whether the compliance was continuous or intermittent;
 - (4) The methods used for determining the compliance status of each source, currently and over the reporting period; and
 - (5) Any other information required to be reported to the Department that is necessary to determine the compliance status of the Permittee with this permit.
- b. The Permittee shall submit the compliance certification reports to the Department and EPA simultaneously.

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10. CERTIFICATION BY RESPONSIBLE OFFICIAL

[COMAR 26.11.02.02F]

All application forms, reports, and compliance certifications submitted pursuant to this permit shall be certified by a responsible official as to truth, accuracy, and completeness. The Permittee shall expeditiously notify the Department of an appointment of a new responsible official.

The certification shall be in the following form:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

11. SAMPLING AND EMISSIONS TESTING RECORD KEEPING

[COMAR 26.11.03.06C(5)]

The Permittee shall gather and retain the following information when sampling and testing for compliance demonstrations:

- a. The location as specified in this permit, and the date and time that samples and measurements are taken;
- b. All pertinent operating conditions existing at the time that samples and measurements are taken;
- c. The date that each analysis of a sample or emissions test is performed and the name of the person taking the sample or performing the emissions test;
- d. The identity of the Permittee, individual, or other entity that performed the analysis;
- e. The analytical techniques and methods used; and

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- f. The results of each analysis.

12. GENERAL RECORDKEEPING

[COMAR 26.11.03.06C(6)]

The Permittee shall retain records of all monitoring data and information that support the compliance certification for a period of five (5) years from the date that the monitoring, sample measurement, application, report or emissions test was completed or submitted to the Department.

These records and support information shall include:

- a. All calibration and maintenance records;
- b. All original data collected from continuous monitoring instrumentation;
- c. Records which support the annual emissions certification; and
- d. Copies of all reports required by this permit.

13. GENERAL CONFORMITY

[COMAR 26.11.26.09]

The Permittee shall comply with the general conformity requirements of 40 CFR 93, Subpart B and COMAR 26.11.26.09.

14. ASBESTOS PROVISIONS

[40 CFR 61, Subpart M]

The Permittee shall comply with 40 CFR 61, Subpart M when conducting any renovation or demolition activities at the facility.

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15. OZONE DEPLETING REGULATIONS

[40 CFR 82, Subpart F]

The Permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR 82, Subpart F, except as provided for MVACs in subpart B:

- a. Persons opening appliances for maintenance, service, repair, or disposal shall comply with the prohibitions and required practices pursuant to 40 CFR 82.154 and 82.156.
- b. Equipment used during the maintenance, service, repair or disposal of appliances shall comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.
- c. Persons performing maintenance, service, repairs or disposal of appliances shall be certified by an approved technician certification program pursuant to 40 CFR 82.161.
- d. Persons disposing of small appliances, MVACS, and MVAC-like appliances as defined in 40 CFR 82.152, shall comply with record keeping requirements pursuant to 40 CFR 82.155.
- e. Persons owning commercial or industrial process refrigeration equipment shall comply with the leak repair requirements pursuant to 40 CFR 82.156.
- f. Owners/operators of appliances normally containing 50 or more pounds of refrigerant shall keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR 82.166.

16. ACID RAIN PERMIT

The renewal Phase II Acid Rain Permit is attached as Appendix A. The Permittee shall comply with all applicable requirements contained in the Phase II Acid Rain Permit. The combustion turbines/HRSGs are subject to provisions under 40 CFR 72, Acid Rain Provisions.

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SECTION IV PLANT SPECIFIC CONDITIONS

This section provides tables that include the emissions standards, emissions limitations, and work practices applicable to each emissions unit located at this facility. The Permittee shall comply with all applicable emissions standards, emissions limitations and work practices included herein.

The tables also include testing, monitoring, record keeping and reporting requirements specific to each emissions unit. In addition to the requirements included here in **Section IV**, the Permittee is also subject to the general testing, monitoring, record keeping and reporting requirements included in **Section III – Plant Wide Conditions** of this permit.

Unless otherwise provided in the specific requirements for an emissions unit, the Permittee shall maintain at the facility for at least five (5) years, and shall make available to the Department upon request, all records that the Permittee is required under this section to establish. [Authority: COMAR 26.11.03.06C(5)(g)]

Table IV-1	
1.0	<u>Emissions Unit Number(s): M/L Unit 1 through M/L Unit 10</u> [MDE Reg No. 027-0223-5-0054] Seven (7) Mainline natural gas-fired reciprocating internal combustion engines, 2-cycle, lean-burn Clark HBA-8T, each rated at 2,050 BHP. Three (3) Mainline natural gas-fired reciprocating internal combustion engines, 2-cycle, lean-burn Clark TLA-6, each rated at 2,100 BHP.
1.1	<u>Applicable Standards/Limits:</u> A. <u>Control of Visible Emissions</u> [COMAR 26.11.09.05E(2)] – <u>Stationary Internal Combustion Engine Powered Equipment.</u> “(2) <u>Emissions During Idle Mode.</u> A person may not cause or permit the discharge of emissions from any engine, operating at idle, greater than 10 percent opacity.” “(3) <u>Emissions During Operating Mode.</u> A person may not cause or permit the discharge of emissions from any engine, operating at other than idle conditions, greater than 40 percent opacity.” “(4) <u>Exceptions.</u> (i) Section E(2) of this regulation does not apply for a period of 2 consecutive minutes after a period of idling of 15 consecutive minutes for the purpose of clearing the exhaust system.

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	(ii) Section E(2) of this regulation does not apply to emissions resulting directly from cold engine start-up and warm-up for the following maximum periods: (i) Engines that are idled continuously when not in service: 30 minutes; (ii) All other engines: 15 minutes. (iii) Section E(2) and (3) of this regulation do not apply while maintenance, repair, or testing is being performed by qualified mechanics." B. <u>Control of Nitrogen Oxides from Natural Gas Pipeline Compression Stations – Applicability and General Requirements</u> [COMAR 26.11.29.02B(2)] – NOx Emission Limits. "A person who owns or operates a stationary internal combustion engine to which this chapter applies shall perform either parametric optimization or engine rebuild to meet the following NOx emission limits: (1) <i>Not applicable</i> (2) Facilities with more than five engines shall meet a combined maximum hourly emission limit of 566 pounds per hour or less." C. <u>Operational Limitations</u> The Permittee shall burn only pipe line quality natural gas unless the Permittee applies for and receives an approval or permit from the Department. [Authority: COMAR 26.11.02.09]
1.2	<u>Testing Requirements:</u> A. <u>Control of Visible Emissions – Stationary Internal Combustion Engine Powered Equipment.</u> The Permittee shall perform a Method 9 observation for a minimum of 30 minutes during any scheduled stack testing to show compliance with the applicable opacity standards. [Authority: COMAR 26.11.03.06C(3)] B. <u>Control of Nitrogen Oxides from Natural Gas Pipeline Compression Stations – NOx Emission Limits.</u> During the lifetime of this permit, the Permittee shall schedule and perform a NOx emission test on at least one of the seven Clark HBA-8T units and at least one of the three Clark TLA-6 engines.

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	The Permittee shall also perform a NOx emission test on any engine that operates more than 2,190 hours in a calendar year. The Permittee shall submit a test protocol to the Department for approval at least 30 days prior to the proposed test date. The Permittee shall perform an annual NOx emissions test using appropriate EPA Reference Methods unless alternative test methods receive prior approval from the Department. The most recent NOx emission test results for each engine model category shall be used to determine compliance with the 566 pounds per hour NOx emission limit for M/L engines. [Authority: COMAR 26.11.03.06C(3)] C. <u>Operational Limitations</u> See Record Keeping and Reporting Requirements.
1.3	<u>Monitoring Requirements:</u> A. <u>Control of Visible Emissions</u> – <u>Stationary Internal Combustion Engine Powered Equipment.</u> See Record Keeping Requirements. B. <u>Control of Nitrogen Oxides from Natural Gas Pipeline Compression Stations</u> – <u>NOx Emission Limits.</u> If the results of the NOx testing indicate that the NOx emission limit for all M/L engines combined may be exceeded, the Permittee shall determine the cause of the excess NOx emissions, take corrective action, and retest the units that contribute to the excess NOx emissions. The Permittee shall complete the investigation, corrective action, and retest within 60 days after the results of testing indicate possible exceedance of the NOx emission rate for all M/L engines combined. [Authority: COMAR 26.11.03.06C] Note: "In order to demonstrate compliance with the maximum facility-wide NOx emissions limit of 566 pounds per hour, the Permittee shall calculate and aggregate the total hourly NOx emissions resulting from the daily operation of each engine. The calculated hourly emissions shall be based on the representative NOx emission rate established during stack tests for each engine model category.

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	C. <u>Operational Limitations</u> See Record Keeping and Reporting Requirements.
1.4	<u>Record Keeping Requirements:</u> Unless otherwise specified, all records required by the permit shall be kept for a period of at least five (5) years and shall be made available to the Department upon request A. <u>Control of Visible Emissions</u> – <u>Stationary Internal Combustion Engine Powered Equipment.</u> The Permittee shall keep records of the Method 9 results and submit them to the Department upon request. [Authority: COMAR 26.11.03.06C] B. <u>Control of Nitrogen Oxides from Natural Gas Pipeline Compression Stations</u> – <u>NOx Emission Limits.</u> The Permittee shall maintain the records that shall include at a minimum: (1) The results of NOx testing to verify compliance with the NOx emission limit of 566 pounds per hour for all M/L engines combined; (2) Records of maintenance performed to the engines whenever such maintenance is required in order to avoid or remedy a possible exceedance of the NOx emission limit. [Authority: COMAR 26.11.03.06C] C. <u>Operational Limitations</u> The Permittee shall maintain a record of the type and quantity of fuel burned in each engine. [Authority: COMAR 26.11.02.19C(1)(c)]
1.5	<u>Reporting Requirements:</u> A. <u>Control of Visible Emissions</u> – <u>Stationary Internal Combustion Engine Powered Equipment.</u> The Permittee shall report incidents of visible emissions in accordance with Condition 4, Section III, (Report of Excess Emissions and Deviations).

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	<u>B. Control of Nitrogen Oxides from Natural Gas Pipeline Compression Stations – NOx Emission Limits.</u> The Permittee shall submit to the Department the results of the annual NOx emissions testing including the Method 9 results within 45 days of the completion of the tests. The supporting data that is the basis for the compliance demonstration with the combined maximum hourly emission rate of 566 pounds per hour shall also be included. [Authority: COMAR 26.11.03.06C] <u>C. Operational Limitations</u> The Permittee shall report the quantity of natural gas burned in each engine in the annual emissions certification report. [Authority: COMAR 26.11.02.19C(2) and 26.11.02.19D]

Table IV-2	
2.0	<u>Emissions Unit Number(s):</u> M/L Unit 11 and M/L Unit 12 [MDE Reg No. 027-0223-5-0054] One (1) mainline natural gas-fired reciprocating internal combustion engine, 2-cycle, lean-burn Clark TCV-10, rated at 3,400 HP. One (1) mainline natural gas-fired reciprocating internal combustion engine, 2-cycle, lean-burn, Clark TCV-16, rated at 5,500 HP.
2.1	<u>Applicable Standards/Limits:</u> <u>A. Control of Visible Emissions</u> [COMAR 26.11.09.05E(2)] – <u>Stationary Internal Combustion Engine Powered Equipment.</u> “(2) <u>Emissions During Idle Mode.</u> A person may not cause or permit the discharge of emissions from any engine, operating at idle, greater than 10 percent opacity. (3) <u>Emissions During Operating Mode.</u> A person may not cause or permit the discharge of emissions from any engine, operating at other than idle conditions, greater than 40 percent opacity. (4) <u>Exceptions.</u>

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- (i) Section E(2) of this regulation does not apply for a period of 2 consecutive minutes after a period of idling of 15 consecutive minutes for the purpose of clearing the exhaust system.
- (ii) Section E(2) of this regulation does not apply to emissions resulting directly from cold engine start-up and warm-up for the following maximum periods:
 - (i) Engines that are idled continuously when not in service: 30 minutes;
 - (ii) All other engines: 15 minutes.
- (iii) Section E(2) and (3) of this regulation do not apply while maintenance, repair, or testing is being performed by qualified mechanics."

B. Control of Nitrogen Oxides from Natural Gas Pipeline Compression Stations – Applicability and General Requirements

[COMAR 26.11.29.02(A)] – Applicability.

"This chapter applies to stationary internal combustion engines used to compress natural gas located at natural gas pipeline compression stations."

[COMAR 26.11.29.02(C)(2)] – NOx Emission Rates.

"A person who owns or operates a stationary internal combustion engine to which this chapter applies shall perform either parametric optimization or engine rebuild to meet the following NOx emission limits:

(1) *Not applicable*

(2) Facilities with more than five engines shall meet a combined maximum hourly emission limit of 566 pounds per hour or less."

[COMAR 26.11.29.02(C)] – NOx Emission Limits.

The NOx emission rates in §C(2) of this regulation apply to a stationary internal combustion engine used to compress natural gas at a natural gas pipeline compression station if the engine is one of the types and corresponding sizes identified in §C(2) of this regulation.

(2) Emission Rates.

Type Engine	Size (Brake HP)	NO _x Emission Rate (15 Percent Oxygen)
Spark ignited lean burn	2400 HP or greater	125 ppmv

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	(3) The NOx emission rates in §C(2) of this regulation shall apply on and after May 1, 2003. C. <u>Carbon Monoxide and VOC Annual Emissions Limitation</u> PTC No. 027-9-0224M issued November 18, 2002 - To avoid triggering requirements of nonattainment New Source Review (NNSR) and Prevention of Significant Deterioration (PSD), emissions increases from both affected engines collectively as a result of the modifications performed shall be limited to less than 25 tons per year for VOC and 100 tons per year for CO for any period of 12 consecutive months. D. <u>Operational Limitations</u> The Permittee shall burn only pipe line quality natural gas unless the Permittee applies for and receives an approval or permit from the Department. [Authority: COMAR 26.11.02.09]
2.2	<u>Testing Requirements:</u> A. <u>Control of Visible Emissions</u> – <u>Stationary Internal Combustion Engine Powered Equipment.</u> The Permittee shall perform a Method 9 observation for a minimum of 30 minutes during any scheduled stack testing to show compliance with the applicable opacity standards. [Authority: COMAR 26.11.03.06C(3)] B. <u>Control of Nitrogen Oxides from Natural Gas Pipeline Compression Stations</u> During the lifetime of this permit, the Permittee shall schedule and perform a NOx emission test on the Clark TCV-10 and the Clark TCV-16 engines (M/L Units 11 and 12, respectively) in order to demonstrate compliance with the applicable NOx rates listed under Section 2.1.B, and with the applicable NOx emission limit of 125 ppm (at 15% O₂) and as specified under COMAR 26.11.29.02C(2). The Permittee shall submit a test protocol to the Department for approval at least 30 days prior to the proposed test date. The Permittee shall perform an annual NOx emissions test on each engine using appropriate EPA Reference Methods unless alternative test methods receive prior approval from the Department. The most recent NOx emission test results for each engine model category shall be used

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	to determine compliance with the 566 pounds per hour NO_x emission limit for M/L engines. [Authority: COMAR 26.11.03.06C(3)] <u>C. Carbon Monoxide and VOC Annual Emissions Limitation</u> Beginning with calendar year 2014, the Permittee shall perform on a biennial basis and contemporaneously with the testing required in paragraph B above confirmatory emissions testing for VOC and CO on each engine using appropriate EPA Reference Methods, unless alternative test methods receive prior approval from the Department. The purpose of the testing is to demonstrate compliance with the nonattainment New Source Review emission limit for VOC and CO. In the event an engine's operating time does not exceed 2,190 hours in each calendar year of the biennial period, such engine would be exempt from the emissions testing requirement for VOC and CO for that biennial period. However, the Permittee shall schedule and perform a CO and VOC emission test on both units as listed, to demonstrate the maintenance of synthetic minor status with respect to CO and VOC. [Authority: COMAR 26.11.03.06C(3)] <u>D. Operational Limitations</u> See Record Keeping and Reporting Requirements.
2.3	<u>Monitoring Requirements:</u> <u>A. Control of Visible Emissions – Stationary Internal Combustion Engine Powered Equipment.</u> See Reporting Requirements. <u>B. Control of Nitrogen Oxides from Natural Gas Pipeline Compression Stations</u> (1) If the results of the NO_x testing indicate that the NO_x emission limit for all M/L engines combined may be exceeded, the Permittee shall determine the cause of the excess NO_x emissions, take corrective action, and retest the units that contribute to the excess NO_x emissions. The Permittee shall complete the investigation, corrective action, and retest within 60 days after the results of testing indicate possible exceedance of the NO_x emission rate. [Authority: COMAR 26.11.03.06C]

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(2) The engines shall be equipped with a parametric emissions monitoring system (PEMS) that shall automatically sample data at fifteen-minute intervals or less and automatically record block hourly averages in a manner such that the data is retrievable on demand by inspectors. The following parameters shall be monitored and recorded by the system:

- (a) the engine speed in revolutions per minute (RPM);
- (b) the engine fuel flow rate in SCFM (FF_{SCFM});
- (c) the actual air manifold pressure (gage) in inches of mercury (P_M); and
- (d) the air manifold temperature in °F (T_M).

[Authority: PTC no. 027-9-0224 M issued November 18, 2002]

(3) The PEMS shall automatically sample data and calculate at 15 minute intervals or less and automatically record a block hourly average of the following parameters in a manner that the data is retrievable on demand by inspectors:

- (a) the calculated critical trapped air/fuel equivalence ratio (TER_C) based on a calculated fuel flow per revolution parameter $W = FF_{SCFM}/RPM$ and an equation of the type below:

$$TER_C = A * W^2 + B * W + C$$

Where: A, B, and C are constants to be determined from the emissions testing.

- (b) the calculated critical air manifold pressure (gage) in inches of mercury (P_{MC}).

$$P_{MC} = 2.036 * [AF_{ST} * (0.0765 * FSG) * W * (T_M + 460) / (2.699 * TER_C * V_{TRAP}) - 14.73]$$

Where:

V_{TRAP} = the engine trapped volume in cubic feet per revolution (a constant determined by the geometry of the engine).

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	T_M = air manifold temperature in °F. AF_{ST} = stoichiometric air/fuel mass ratio. FSG = the fuel gas specific gravity referenced to air. Note: The above equations may be adjusted or modified upon prior written approval from the Department if test data or other considerations indicate that such a modification or adjustment is warranted. [Authority: PTC No. 027-9-0224 M issued November 18, 2002 and COMAR 26.11.03.06C(3)] (4) The Permittee shall operate the Clark TCV-10 and Clark TCV-16 engines in compliance with the emissions standard stated in COMAR 26.11.29.05C for spark ignited lean burn engines (125 ppm NOx corrected to 15 percent O2 dry gas). In accordance with the permit to construct, the Permittee shall comply with the standard on a year-around basis. [Authority: PTC No. 027-9-0224 M issued November 18, 2002] Note: "In order to demonstrate compliance with the maximum facility-wide NOx emissions limit of 566 pounds per hour, the Permittee shall calculate and aggregate the total hourly NOx emissions resulting from the daily operation of each engine. The calculated hourly emissions shall be based on the NOx emission rate established during stack tests for each engine. C. <u>Carbon Monoxide and VOC Annual Emissions Limitation</u> The Permittee should monitor the hours of operation for each engine to demonstrate compliance with the nonattainment New Source Review emission limits for VOC and CO, as stated in Section 2.1.C. D. <u>Operational Limitations</u> See Record Keeping and Reporting Requirements.
2.4	<u>Record Keeping Requirements:</u> Unless otherwise specified all records required by the permit shall be kept for a period of at least five (5) years and shall be made available to the Department upon request.

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Table IV-2

	<u>A. Control of Visible Emissions</u> – <u>Stationary Internal Combustion Engine Powered Equipment.</u> The Permittee shall keep records of the Method 9 results and submit them to the Department upon request. [Authority: COMAR 26.11.03.06C] <u>B. Control of Nitrogen Oxides from Natural Gas Pipeline Compression Stations</u> (1) The Permittee shall keep the supporting data that is the basis for the compliance demonstration with the combined maximum hourly emission rate of 566 pounds per hour. (2) The Permittee shall keep the results of the annual NOx testing done to confirm the PEMS. [Authority: PTC No. 027-9-0224 M issued November 18, 2002] <u>C. Carbon Monoxide and VOC Annual Emissions Limitation</u> The Permittee shall maintain records of the calculation of emissions of CO and VOC sufficient to demonstrate that the emissions increase from the modification of the engines do not exceed the limitation based on any period of 12 consecutive months. [Authority: COMAR 26.11.03.06C] <u>D. Operational Limitations</u> The Permittee shall maintain a record of the type and quantity of fuel burned. [Authority: COMAR 26.11.02.19C(1)(c)]
2.5	<u>Reporting Requirements:</u> <u>A. Control of Visible Emissions</u> – <u>Stationary Internal Combustion Engine Powered Equipment.</u> The Permittee shall report incidents of visible emissions in accordance with Condition 4, Section III, (Report of Excess Emissions and Deviations). <u>B. Control of Nitrogen Oxides from Natural Gas Pipeline Compression Stations</u> – <u>Nitrogen Oxides Reasonably Available Control Technology Requirements (NOx RACT)</u>

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- (1) The Permittee shall submit the results of the annual NOx emissions testing for compliance with the hourly NOx emissions limit within 45 days of the completion of the testing. The supporting data that is the basis for the compliance demonstration with the combined maximum hourly emission rate of 566 pounds per hour and the emission limit of 125 ppm shall also be included. **[Authority: COMAR 26.11.03.06C]**
- (2) By November 30 of each year, the Permittee shall submit to the Department a stack test results report on the annual confirmatory emissions testing. **[Authority: COMAR 26.11.03.06C(3)]**
- (3) The Permittee shall report all excursions where the 1-hour block average P_M is less than the corresponding 1-hour block average P_{MC} to the Department within 30 days after the end of the each calendar quarter. More than two excursions within any calendar quarter or more than three excursions during the control period shall constitute a reportable occurrence of excess emissions, requiring a telephone report within 24 hours and a written report if requested by the Department within 10 days, in accordance with COMAR 26.11.01.07. **[Authority: PTC No. 027-9-0224 M issued on November 18, 2002]**

C. Carbon Monoxide and VOC Annual Emissions Limitation

The Permittee shall report the annual emissions of CO and VOC in the annual emissions certification report. **[Authority: COMAR 26.11.02.19D]**

D. Operational Limitations

The Permittee shall report the type and quantity of fuel burned in the annual emissions certification report. **[Authority: COMAR 26.11.02.19D]**

Table IV-3

3.0 Emissions Unit Number(s): AUX 1

[MDE Reg. No. 027-0223-9-0186]

One (1) auxiliary electric power generator; 4-cycle, lean-burn, reciprocating IC engine, Waukesha 7042 GL, rated at 1,478 HP.

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3.1	<u>Applicable Standards/Limits:</u> <u>A. Control of Visible Emissions</u> <u>[COMAR 26.11.09.05E(2)] – Stationary Internal Combustion Engine Powered Equipment.</u> “(2) <u>Emissions During Idle Mode.</u> A person may not cause or permit the discharge of emissions from any engine, operating at idle, greater than 10 percent opacity. (3) <u>Emissions During Operating Mode.</u> A person may not cause or permit the discharge of emissions from any engine, operating at other than idle conditions, greater than 40 percent opacity. (4) <u>Exceptions.</u> (i) Section E(2) of this regulation does not apply for a period of 2 consecutive minutes after a period of idling of 15 consecutive minutes for the purpose of clearing the exhaust system. (ii) Section E(2) of this regulation does not apply to emissions resulting directly from cold engine start-up and warm-up for the following maximum periods: (i) Engines that are idled continuously when not in service: 30 minutes; (ii) All other engines: 15 minutes. (iii) Section E(2) and (3) of this regulation do not apply while maintenance, repair, or testing is being performed by qualified mechanics.” <u>B. Control of NOx Emissions for Major Stationary Sources.</u> <u>Demonstration of Compliance – Reasonable Control Technology Requirements (NOx RACT).</u> <u>[COMAR 26.11.09.08G(1)] –</u> A person who owns or operates fuel-burning equipment with a capacity factor (as defined in 40 CFR Part 72.2) of 15 percent or less shall: (1) Provide certification of the capacity factor of the equipment to the Department in writing; (2) For fuel-burning equipment that operates more than 500 hours during a calendar year, perform a combustion analysis and optimize combustion at least once annually; (3) Maintain the results of the combustion analysis at the site for at least 2 years and make these results available to the Department and the
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	EPA upon request; (4) Require each operator of an installation, except combustion turbines, to attend operator training programs at least once every 3 years, on combustion optimization that are sponsored by the Department, the EPA, or equipment vendors; and (5) Maintain a record of training program attendance for each operator at the site, and make these records available to the Department upon request. [COMAR 26.11.09.08B(6)] – Operator Training: For the purpose of this regulation, the equipment operator to be trained may be the person who maintains the equipment and makes the necessary adjustments for efficient operation. <u>C. Operational Limits</u> (1) The Permittee shall burn only pipeline quality natural gas unless the Permittee applies for and receives an approval or permit from the Department. [Authority: COMAR 26.11.02.09] (2) The capacity factor shall be limited to 15 percent or less. [Authority: COMAR 26.11.09.08G]
3.2	<u>Testing Requirements:</u> <u>A. Control of Visible Emissions</u> [COMAR 26.11.09.05E(2)] – <u>Stationary Internal Combustion Engine Powered Equipment.</u> See Reporting Requirements. <u>B. Control of NOx Emissions for Major Stationary Sources, Demonstration of Compliance – Reasonable Control Technology Requirements (NOx RACT).</u> Anytime the hours of operation of this engine exceed 500 hours in a calendar year, the Permittee shall perform a combustion analysis. [Authority: COMAR 26.11.09.08G(1)(b)]

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Table IV-3	
	C. <u>Operational Limits</u> See Record Keeping and Reporting Requirements.
3.3	<u>Monitoring Requirements:</u> A. <u>Control of Visible Emissions</u> [COMAR 26.11.09.05E(2)] – <u>Stationary Internal Combustion Engine Powered Equipment.</u> See Reporting Requirements. B. <u>Control of NOx Emissions for Major Stationary Sources, Demonstration of Compliance – Reasonable Control Technology Requirements (NOx RACT).</u> The Permittee shall calculate the capacity factor of the engine at the end of each month. [Authority: COMAR 26.11.03.06C] C. <u>Operational Limits</u> See Record Keeping and Reporting Requirements.
3.4	<u>Record Keeping Requirements:</u> Unless otherwise specified all records required by the permit shall be kept for a period of at least five (5) years and shall be made available to the Department upon request A. <u>Control of Visible Emissions</u> [COMAR 26.11.09.05E(2)] – <u>Stationary Internal Combustion Engine Powered Equipment.</u> See Reporting Requirements. B. <u>Control of NOx Emissions for Major Stationary Sources, Demonstration of Compliance – Reasonable Control Technology Requirements (NOx RACT).</u> The Permittee shall maintain: (1) Monthly records of the calculated capacity factors. [Authority: COMAR 26.11.03.06C]

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	(2) Monthly records of the hours of operation. [Authority: COMAR 26.11.02.19.C(1)(b)] (3) Records of combustion analysis performed if the hours of operation exceed 500. [Authority: COMAR 26.11.09.08G(1)(c)] (4) Record of training program attendance for each operator. [Authority: COMAR 26.11.09.08G(1)(e)] C. <u>Operational Limits</u> The Permittee shall maintain a record of the type and quantity of fuel burned. [Authority: COMAR 26.11.02.19C(1)(c)]
3.5	<u>Reporting Requirements:</u> A. <u>Control of Visible Emissions</u> [COMAR 26.11.09.05E(2)] – <u>Stationary Internal Combustion Engine Powered Equipment.</u> The Permittee shall report incidents of visible emissions in accordance with Condition 4, Section III, (Report of Excess Emissions and Deviations). B. <u>Control of NOx Emissions for Major Stationary Sources, Demonstration of Compliance.</u> – <u>Reasonable Control Technology Requirements (NOx RACT)</u> The Permittee shall provide certification of the capacity factor of the equipment to the Department in writing as part of the April 1 emission certification report. [Authority: COMAR 26.11.09.08G(1)(a) & COMAR 26.11.03.06C] The Permittee shall submit: a record of training program attendance for each operator to the Department upon request. [Authority: COMAR 26.11.09.08G(1)(e)] C. <u>Operational Limits</u> The Permittee shall report the type and quantity of fuel burned in the annual emissions certification report. [Authority: COMAR 26.11.02.11C(2) and 26.11.02.19D]

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4.0	<u>Emissions Unit Number(s): BLR 1 & BLR 2</u> [MDE Reg No. 027-0223-5-0063] One (1) Holmar Vulcan A60 natural gas-fired 2.5 MMBtu/hr boiler. [MDE Reg No. 027-0223-5-0064] One (1) Cyclotherm C2800 natural gas-fired 3.3 MMBtu/hr boiler.
4.1	<u>Applicable Standards/Limits:</u> A. <u>Control of Visible Emissions</u> <u>[COMAR 26.11.09.05A(2)] – Fuel Burning Equipment.</u> “In Areas III and IV, a person may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is visible to human observers except that, for the purpose of demonstrating compliance using COM data, emissions that are visible to a human observer are those that are equal to or greater than 10 percent opacity. <u>[COMAR 26.11.09.05A(3)] – Exceptions.</u> “Section A(1) and (2) of this regulation do not apply to emissions during load changing, soot blowing, startup, or adjustments or occasional cleaning of control equipment if: (a) The visible emissions are not greater than 40 percent opacity; and (b) The visible emissions do not occur for more than 6 consecutive minutes in any sixty minute period.” B. <u>Control of Nitrogen Oxides</u> <u>[COMAR 26.11.09.08B(1)(c)] – Emission Standards and Requirements.</u> “A person who owns or operates an installation that causes NOx emissions subject to this regulation is in compliance with this regulation if the person establishes compliance with the emissions standards in §B(1)(c) of this regulation.”

Fuel	Tangential-Fired	Wall-Fired
Gas only	0.20	0.20

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C. Operational Limits

- (1) The Permittee shall burn only pipeline quality natural gas unless the Permittee applies for and receives an approval or permit from the Department. **[Authority: COMAR 26.11.02.09]**

NESHAP Operating Limits – 40 CFR, Part 63, Subpart DDDDD

- (2) The Permittee must meet each emission limit and work practice standard in 40 CFR, Part 63, Subpart DDDDD, Tables 1 through 3 and 11 through 13, that applies to the boilers. **[Authority: §63.7500(a)(1)]**

Note: The Permittee is subject only to the work practice standard requirements in Table 3, See §63.7540(e).

- (3) The Permittee shall meet the following two applicable work practice standards in 40 CFR, Part 63, Subpart DDDDD, Table 3 applicable to boilers combusting natural gas and rated at less than 5 million Btu per hour **[Authority: 40 CFR §63.7500(a)(1) and (e), §63.7510(e), §63.7515(d), and §63.7540(a)]:**

- (a) The Permittee must complete an initial tune-up of the boiler on or before the compliance date January 31, 2016 and conduct subsequent tune-ups once every 5 years thereafter as specified in § 63.7540(a)(10)(i)-(vi) and (a)(12)-(13). In accordance with §63.7515(d), each 5-year tune-up must be conducted no more than 61 months after the previous tune-up. Paragraphs §63.7540(a)(10)(i) through (a)(10)(vi) specify the requirements for a boiler tune-up.

Note: Initial tune-up of the boiler was performed on January 5, 2016.

- (b) On or before the compliance date, January 31, 2016, each boiler unit must have a one-time energy assessment performed by a qualified energy assessor. An energy assessment completed on or after January 1, 2008, that meets, or is amended to meet, the energy assessment requirements in this table, satisfies the energy assessment requirement. A facility that operates under an energy management program compatible with ISO 50001 that includes the affected units also satisfies the energy assessment requirement. Table 3 specifies the requirements of the energy

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	assessment. The extent of the evaluation as appropriate for the on-site technical hours listed in § 63.7575. [Authority: §63.7510(e); Table 3 of Subpart DDDDD, item 4] Note: Energy assessment was performed on August 19, 2015. <i>Note: In accordance with § 63.7575 eight (8) on-site technical hours will fulfill the energy assessment requirement for natural gas-fired boilers rated at less than 5 million Btu per hour.</i>
4.2	<u>Testing Requirements:</u> A. <u>Control of Visible Emissions</u> The Permittee shall follow the procedures in the Monitoring Section. B. <u>Control of Nitrogen Oxides</u> See Record Keeping and Reporting Requirements. C. <u>Operational Limits</u> There are no testing requirements under Subpart DDDDD, §63.7520. See Record Keeping and Reporting Requirements.
4.3	<u>Monitoring Requirements:</u> A. <u>Control of Visible Emissions</u> The Permittee shall properly operate and maintain the boilers in a manner to prevent visible emissions. [Reference: COMAR 26.11.03.06C] B. <u>Control of Nitrogen Oxides</u> See Record Keeping and Reporting Requirements. C. <u>Operational Limits</u> See Record Keeping and Reporting Requirements.
4.4	<u>Record Keeping Requirements:</u> A. <u>Control of Visible Emissions</u> The Permittee shall maintain an operations manual and preventative maintenance plan. The Permittee shall maintain a log of maintenance performed that relates to combustion performance. [Reference: COMAR 26.11.03.06C]

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	<u>B. Control of Nitrogen Oxides</u> The Permittee shall maintain a record of the type and quantity of fuel burned. [Authority: COMAR 26.11.02.19C(1)(c)] <u>C. Operational Limits</u> The Permittee shall keep a copy of each notification and report submitted to comply with Subpart DDDDD, including all documentation supporting any initial Notification or Notification of Compliance Status or semiannual compliance report the Permittee submitted according to the requirements in §63.10(b)(2)(xiv). [Authority: §63.7555(a)(1)]
4.5	<u>Reporting Requirements:</u> <u>A. Control of Visible Emissions</u> The Permittee shall report incidents of visible emissions in accordance with Permit Condition 4, Section III, "Report of Excess Emissions and Deviations." <u>B. Control of Nitrogen Oxides</u> The Permittee shall report the type and quantity of fuel burned in the annual emissions certification report. [Authority: COMAR 26.11.02.19C(2) and .19D] <u>C. Operational Limits</u> The following reporting requirements under 40 CFR Part 63, Subpart DDDDD apply: (1) The Permittee shall submit a Notification of Compliance Status report, which is limited to the following information specified in § 63.7545(e)(1) and (e)(8) below. The report shall be postmarked or submitted no later than January 31, 2016. [Authority: §63.7545(e)]: (a) A description of the affected unit(s) including identification of which subcategories the unit is in, the design heat input capacity of the unit, a statement that no add-on controls were used on the unit to comply with 40 CFR Part 63, Subpart DDDDD, a statement that no fuels other than natural gas were burned in the units. [Authority: §63.7545(e)(1)] (b) In addition to the information required in § 63.9(h)(2), the Permittee's Notification of Compliance Status must include the following certification(s) of compliance, as applicable, and signed by a responsible official. [Authority: §63.7530(d);

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§63.7545(e)(8)]:

(i) "This facility complies with the required initial tune-up according to the procedures in § 63.7540(a)(10)(i) through (vi)"

(ii) "This facility has had an energy assessment performed according to § 63.7530(e)"

- (2) The Permittee must submit each report in Table 9 to Subpart DDDDD of Part 63 that applies. The applicable portions of Table 9 are **[Authority: § 63.7550(a)]**:

You must submit	The report must contain . . .	You must submit the report . . .
1. Compliance report	a. Information required in §63.7550(c)(1) through (5); (Note: only (c)(1) and (c)(5)(i) through (iv), (xiv), and (xvii) apply) and	Semiannually, annually, biennially, or every 5 years according to the requirements in §63.7550(b).
	b. If ... there are no deviations from the requirements for work practice standards in Table 3 to this subpart that apply to you, a statement that there were no deviations from the ...work practice standards during the reporting period....	

- (3) The first Subpart DDDDD Compliance Report must cover the 59-month period from January 1, 2016 through December 31, 2020 and must be postmarked or submitted to the delegated authority by January 31, 2021. **[Authority: §63.7550(b)]** (See fact sheet discussion under Rationale, paragraph §63.7550, page 29).

- (4) The Subpart DDDDD Compliance Report must contain the necessary information in accordance with **40CFR, §63.7550(c)**.

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5.0	<u>Emissions Unit Number(s)</u> FUG 1: Piping Component Fugitives FUG 2: Blow down/Venting Fugitives
5.1	<u>Applicable Standards/Limits:</u> <u>Control of VOC Emissions</u> [COMAR 26.11.05.06B(1)(a)] – <u>Installations Constructed Before May 12, 1972.</u> “A person may not cause or permit the discharge of VOC from any installation constructed before May 12, 1972 in excess of 200 pounds (90.7 kilograms) per day unless the discharge is reduced by 85 percent or more overall.”
5.2	<u>Testing Requirements:</u> See Monitoring Requirements.
5.3	<u>Monitoring Requirements:</u> Prior to any planned on-site blowdown or venting of natural gas whose uncontrolled emissions would be expected to exceed 200 pounds per day of VOC, the Permittee shall submit for approval to the Air and Radiation Management Administration’s Compliance Program, at least 10 days prior to the scheduled event, an emissions control plan that would lead to at least 85 percent control of the VOC emissions or limit the VOC emissions to less than 200 pounds per day. In the event that 10 days prior notice is not possible due to the nature of the blowdown or venting activity, the Permittee shall submit an emissions control plan as early as practicable. [Authority: COMAR 26.11.03.06C]
5.4	<u>Record Keeping Requirements:</u> For each scheduled blowdown event the Permittee shall keep the following records for at least five years and make them available to the Department the following information [Authority: COMAR 26.11.03.06C]: (1) The date, time and duration of the each event; (2) The quantity of natural gas (DSCF) to be released before control and the resultant amount of VOC emissions, including supporting calculations;

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	(3) The quantity of natural gas actually released to the atmosphere and the resultant amount of VOC, after control during each day including supporting calculations; (4) Methods of emissions control (e.g. flare; capture, recompression, and storage); and Copies of all requests for approval and copies approval letters from the department.
5.5	<u>Reporting Requirements:</u> (1) The records required to be kept shall be made available to the Department upon request. [Authority: COMAR 26.11.03.06C] (2) The total emissions from blowdown events shall be included as a separate line item on the Permittee's annual Emissions Certification Report required by Condition 8, Section III.

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6.0	<u>Emissions Unit Number(s) CT-1</u> [MDE Reg No. 027-0223-9-0391] One (1) Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine.
6.1	<u>Applicable Standards/Limits:</u> <u>A. New Source Performance Standards for Stationary Combustion Turbines 40 CFR, Part 60, Subpart KKKK</u> All applicable terms, provisions, emissions standards, testing, monitoring, record keeping, and reporting requirements included in federal New Source Performance Standards (NSPS) under 40 CFR Part 60, Subparts A and KKKK for Stationary Combustion Turbines. <u>B. National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Stationary Combustion Turbines 40 CFR, Part 63, Subpart YYYY</u>

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National Emissions Standards for Hazardous Air Pollutants (NESHAP) promulgated under 40 CFR Part 63, Subparts A and YYYY for Stationary Combustion Turbines. Only the following apply:

§63.6095(c) You must meet the notification requirements in §63.6145 according to the schedule in §63.6145 and in 40 CFR part 63, subpart A.

§63.6095(d) *Stay of standards for gas-fired subcategories.* If you start up a new or reconstructed stationary combustion turbine that is a lean-premix gas-fired stationary combustion turbine or diffusion flame gas-fired stationary combustion turbine as defined by this subpart, you must comply with the Initial Notification requirements set forth in §63.6145 but need not comply with any other requirement of this subpart until EPA takes final action to require compliance and publishes a document in the FEDERAL REGISTER.

C. Visible Emissions Limitations

[COMAR 26.11.09.05A(2)] – Fuel Burning Equipment.

"In Areas III and IV, a person may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is visible to human observers except that, for the purpose of demonstrating compliance using COM data, emissions that are visible to a human observer are those that are equal to or greater than 10 percent opacity.

[COMAR 26.11.09.05A(2)] – Exceptions.

"Section A(1) and (2) of this regulation do not apply to emissions during load changing, soot blowing, startup, or adjustments or occasional cleaning of control equipment if:

- (a) The visible emissions are not greater than 40 percent opacity; and
- (b) The visible emissions do not occur for more than 6 consecutive minutes in any sixty minute period."

**D. Control of NOx Emissions for Major Stationary Sources.
Requirements for Fuel Burning Equipment with a Capacity Factor of 15 Percent or Less, and Combustion Turbines with a Capacity Factor Greater than 15 Percent – [COMAR 26.11.09.08G(2)]**

"A person who owns or operates a combustion turbine with a capacity factor greater than 15 percent shall meet an hourly average NOx emission rate of not more than 42 ppm when

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burning gas or 65 ppm when burning fuel oil (dry volume at 15 percent oxygen) or meet applicable Prevention of Significant Deterioration limits, whichever is more restrictive.”

E. Operational Limitations

- (1) The Permittee shall maintain and operate the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine, and any associated air pollution control equipment, in such a manner as to ensure full and continuous compliance with all applicable regulations.
- (2) The Permittee shall properly maintain and keep in good working condition all control panel instrumentation and monitoring devices that the Permittee uses to determine if the air pollution control equipment is operating as designed.
- (3) The Permittee must operate and maintain the stationary combustion turbine, air pollution control equipment, and monitoring equipment in a manner consistent with good air pollution control practices for minimizing emissions at all times including during startup, shutdown, and malfunction. **[Reference: 40 CFR part 60, subpart KKKK, §60.4333]**
- (4) The Permittee is subject to the following emission limits for the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine from 40 CFR part 60, subpart KKKK:

§60.4320(a) requires the Permittee to meet the emission limits for NO_x specified in Table 1 to subpart KKKK (see below).

From Table 1 to Subpart KKKK of Part 60—Nitrogen Oxide Emission Limits for New Stationary Combustion Turbines

Combustion turbine type	Combustion turbine heat input at peak load (HHV)	NO _x emission standard
New turbine firing natural gas	>50 MMBtu/hr and ≤ 850 MMBtu/hr	25 ppm at 15 percent O ₂

§60.4330(a)(2) requires the Permittee not to burn in the stationary turbine any fuel which contains total potential sulfur emission in excess of 0.060 lb SO₂ /MMBtu heat input.

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	(5) In accordance with the manufacturer's guarantee, the Permittee shall operate the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine and emission controls in a manner that complies with a NOx emission limit of 15 ppm at 15 percent oxygen. Compliance with this limit shall serve to demonstrate compliance with NOx limit under 40 CFR part 60, subpart KKKK and COMAR 26.11.09.08G(2).
6.2	<u>Testing Requirements:</u> <u>A. New Source Performance Standards for Stationary Combustion Turbines 40 CFR, Part 60, Subpart KKKK</u> (1) Testing Requirements for the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine from 40 CFR Part 60, Subpart KKKK. §60.8 (a) ... within 60 days after achieving the maximum operating rate, but not later than 180 days after initial startup, ... conduct an initial performance test and furnish the [Department] a written report of the results of such performance test.... §60.8(f) ... each performance test shall consist of three separate runs using the applicable test methods. §60.4340 (a) "If you are not using water or steam injection to control NOx emissions, you must perform annual performance tests in accordance with §60.4400 to demonstrate continuous compliance. If the NOx emission result from the performance test is less than or equal to 75 percent of the NOx emission limit for the turbine, you may reduce the frequency of subsequent performance tests to once every 2 years (no more than 26 calendar months following the previous performance test). If the results of any subsequent performance test exceed 75 percent of the NOx emission limit for the turbine, you must resume annual performance tests." §60.4400(a) you must conduct an initial performance test, as required in §60.8. Subsequent NOx performance tests shall be conducted on an annual basis (no more than 14 calendar months following the previous performance test). Note: An annual performance test is not required if a parameter monitoring plan is submitted meeting the requirements of §60.4340(b), §60.4355, and §60.4410. Note that §60.4410

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requires:

§60.4410 If you have chosen to monitor combustion parameters or parameters indicative of proper operation of NOx emission controls in accordance with §60.4340, the appropriate parameters must be continuously monitored and recorded during each run of the initial performance test, to establish acceptable operating ranges, for purposes of the parameter monitoring plan for the affected unit, as specified in §60.4355.

§60.4400(a)(1) – (3) and §60.4400(b) specify in detail the procedures from 40 CFR Part 60, appendix A, that must be used to conduct the performance tests. See regulation for full text. Use the procedures specified in §60.4400(a)(1)(ii) to calculate the NOx emission rate in lb/MMBtu as well as NOx ppmvd adjusted to 15% O₂.

- (2) Within 180 days after initial startup of the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine, the Permittee shall perform initial performance tests for CO and VOC using approved 40 CFR part 60 appendix A methods or equivalent alternative methods if approved by the Department. Unless otherwise approved by the Department, Method 10 shall be used for CO and Methods 18 and 25 shall be used for VOC. Emission rates for CO and VOC shall be computed in terms of lb/MMBtu input in accordance with methodologies approved by the Department.
- (3) A stack test protocol addressing the testing requirements in conditions (1) - (3) above and a NOx parameter monitoring protocol addressing §60.4340(b) and §60.4355(a) shall be submitted to the Department for review and approval at least 30 days prior to the anticipated stack test date.
- (4) The Permittee shall notify the Department of the date of the stack test at least 14 days prior to the actual date of the stack tests.

B. National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Stationary Combustion Turbines 40 CFR, Part 63, Subpart YYYY

See Record Keeping Requirements.

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	C. <u>Visible Emissions Limitations</u> [COMAR 26.11.09.05A(2)] – <u>Fuel Burning Equipment</u>. See Record Keeping Requirements. D. <u>Control of NOx Emissions for Major Stationary Sources, Requirements for Fuel Burning Equipment with a Capacity Factor of 15 Percent or Less, and Combustion Turbines with a Capacity Factor Greater than 15 Percent</u> – [COMAR 26.11.09.08G(2)] “A person who owns or operates a combustion turbine with a capacity factor greater than 15 percent shall meet an hourly average NOx emission rate of not more than 42 ppm when burning gas or 65 ppm when burning fuel oil (dry volume at 15 percent oxygen) or meet applicable Prevention of Significant Deterioration limits, whichever is more restrictive.” E. <u>Operational Limitations</u> See Record Keeping Requirements.
6.3	<u>Monitoring Requirements:</u> A. <u>New Source Performance Standards for Stationary Combustion Turbines 40 CFR, Part 60, Subpart KKKK</u> (1) Monitoring Requirements for the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine from 40 CFR, Part 60, Subpart KKKK: (a) Except as provided in §60.4340(b) below, §60.4340(a) provides that the Permittee must perform annual performance tests in accordance with §60.4400 to demonstrate continuous compliance. (b) In lieu of an annual performance test for NOx, the Permittee may submit to the Department for approval a parameter monitoring plan for the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine. The parameter monitoring plan must meet the requirements of 40 CFR part 60, Subpart KKKK, §60.4340(b), §60.4355(a)(1) through (6) and §60.4410, as applicable.

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§60.4340(b) As an alternative [to conducting annual performance tests] you may install, calibrate, maintain and operate one of the following continuous monitoring systems:

§60.4340(b)(2) Continuous parameter monitoring system as follows:

§60.4340(b)(2)(ii) For any lean premix stationary combustion turbine, you must continuously monitor the appropriate parameters to determine whether the unit is operating in low-NOx mode.

§60.4355(a) The parameters that are continuously monitored as described in §60.4340 must be monitored during the performance test required under §60.8, to establish acceptable values and ranges. You may supplement the performance test data with engineering analyses, design specifications, manufacturer's recommendations and other relevant information to define the acceptable parametric ranges more precisely. You must develop and keep on-site a parameter monitoring plan which explains the procedures used to document proper operation of the NOx emission controls....

Note: §60.4355(a)(1) through §60.4355(a)(6) describes in detail the further regulatory requirements of the parametric monitoring plan. See regulation for complete text.

B. National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Stationary Combustion Turbines 40 CFR, Part 63, Subpart YYYYY

See Record Keeping Requirements.

C. Visible Emissions Limitations [COMAR 26.11.09.05A(2)] – Fuel Burning Equipment.

See Record Keeping Requirements.

D. Control of NOx Emissions for Major Stationary Sources, Requirements for Fuel Burning Equipment with a Capacity Factor of 15 Percent or Less, and Combustion Turbines with a Capacity Factor Greater than 15 Percent – [COMAR 26.11.09.08G(2)]

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	See Record Keeping Requirements. E. <u>Operational Limitations</u> See Record Keeping Requirements.
6.4	<u>Record Keeping Requirements:</u> A. <u>New Source Performance Standards for Stationary Combustion Turbines 40 CFR, Part 60, Subpart KKKK</u> (1) The following records shall be kept on site for at least five (5) years and shall be made available to the Department upon request: (a) Monthly records of fuel usage for the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine, and the Waukesha 1,450 BHP natural gas-fired emergency generator; (b) Continuous records of 1-hour averages and 4-hour rolling averages, based on values recorded at least at 15 minute intervals, of the monitored NO_x parameters for the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine in keeping with §60.4340(b)(2)(ii) and §60.4355(a); (c) A copy of the initial performance test report(s) for NO_x, CO, and VOC for the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine; (d) A copy of approved parametric monitoring plan for NO_x, on site in accordance with §60.4355(a); and (e) Copies of annual performance tests for NO_x if an approved NO_x parametric monitoring plan is not submitted. (2) The Permittee shall keep records of all monitoring downtime and all periods of excess emissions as defined in §60.4380(c): §60.4380(c) For turbines required to monitor combustion parameters or parameters that document proper operation of the NO_x emission controls:

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	§60.4380(c)(1) An excess emission is a 4-hour rolling unit operating hour average in which any monitored parameter does not achieve the target value or is outside the acceptable range defined in the parameter monitoring plan for the unit. §60.4380(c)(2) A period of monitor downtime is a unit operating hour in which any of the required parametric data are either not recorded or are invalid. B. <u>National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Stationary Combustion Turbines 40 CFR, Part 63, Subpart YYYY</u> See Record Keeping Requirements. C. <u>Visible Emissions Limitations</u> <u>[COMAR 26.11.09.05A(2)] – Fuel Burning Equipment.</u> See Record Keeping Requirements. D. <u>Control of NOx Emissions for Major Stationary Sources, Requirements for Fuel Burning Equipment with a Capacity Factor of 15 Percent or Less, and Combustion Turbines with a Capacity Factor Greater than 15 Percent.</u> – [COMAR 26.11.09.08G(2)] See Record Keeping Requirements. E. <u>Operational Limitations</u> See Record Keeping Requirements.
6.5	<u>Reporting Requirements:</u> A. <u>New Source Performance Standards for Stationary Combustion Turbines 40 CFR, Part 60, Subpart KKKK</u> (1) Prior to the date that the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine commences operation the Permittee shall submit a stack test report reporting the results of the initial stack tests on the HBA-8T and Clark TLA-6 engines in accordance with condition D(4), Permit to Construct number 027-0223-5-0054M issued on January 20, 2015.

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- (2) The following semiannual monitoring reports covering the 6-month periods ending each December 31 and June 30 are required under 40 CFR part 60, subpart KKKK, §60.4375(a) for the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine:

§60.4375(a) For each affected unit required to continuously monitor parameters ..., you must submit reports of excess emissions and monitor downtime, in accordance with §60.7(c). Excess emissions must be reported for all periods of unit operation, including start-up, shutdown, and malfunction.

§60.7(c) (4) When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report.

§60.4395 All reports required under §60.7(c) must be postmarked by the 30th day following the end of each 6-month period.

- (3) Reports of performance tests for NO_x are required under COMAR 26.11.09.08K(2) and 40 CFR part 60, subpart KKKK, §60.4375(b) for the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine. In order to comply with both requirements, the results of the NO_x performance (stack) tests shall be submitted to the Department within 45 days after the completion of the test.

- (4) Prior to the date that the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine commences operation the Permittee shall submit a stack test report reporting the results of the initial stack tests on the HBA-8T and Clark TLA-6 engines in accordance with condition D(4), **Permit to Construct number 027-0223-5-0054M** issued on January 20, 2015.

- (5) The following semiannual monitoring reports covering the 6-month periods ending each December 31 and June 30 are required under 40 CFR Part 60, Subpart KKKK, §60.4375(a) for the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine:

§60.4375(a) For each affected unit required to continuously monitor parameters ..., you must submit reports of excess emissions and monitor downtime, in accordance with §60.7(c). Excess emissions must be reported for all periods of unit operation, including start-up, shutdown, and malfunction.

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§60.7(c) (4) When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report.

§60.4395 All reports required under §60.7(c) must be postmarked by the 30th day following the end of each 6-month period.

- (6) Reports of performance tests for NO_x are required under COMAR 26.11.09.08K(2) and 40 CFR part 60, subpart KKKK, §60.4375(b) for the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine. In order to comply with both requirements, the results of the NO_x performance (stack) tests shall be submitted to the Department within 45 days after the completion of the test.

B. National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Stationary Combustion Turbines 40 CFR, Part 63, Subpart YYYY

See Record Keeping Requirements.

C. Visible Emissions Limitations
[COMAR 26.11.09.05A(2)] – Fuel Burning Equipment.

See Record Keeping Requirements.

D. Control of NO_x Emissions for Major Stationary Sources, Requirements for Fuel Burning Equipment with a Capacity Factor of 15 Percent or Less, and Combustion Turbines with a Capacity Factor Greater than 15 Percent. – [COMAR 26.11.09.08G(2)]

See Record Keeping Requirements.

E. Operational Limitations

Within 45 days after the testing required in Section 4.6.1 above, the Permittee shall submit a stack test report to the Department. [Reference: COMAR 26.11.09.08K(2)]

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7.0	<u>Emissions Unit Number(s)</u> EG-1 [MDE Reg. No. 027-0223-9-0392] One (1) natural gas-fired emergency generator rated at 1,450 BHP. NOTE: <i>The design rating of the engine is 1,450 BHP, but the nameplate on the engine indicates a service rating of 1,325 HP and an overload rating of 1,391 HP.</i>
7.1	<u>Applicable Standards/Limits:</u> A. <u>New Source Performance Standards (NSPS) under 40 CFR Part 60, Subpart JJJJ for Stationary Spark Ignition Internal Combustion Engines</u> – [40 CFR, Part 60, Subpart JJJJ] All applicable terms, provisions, emissions standards, testing, monitoring, record keeping, and reporting requirements included in federal New Source Performance Standards (NSPS) under 40 CFR Part 60, Subpart JJJJ for Stationary Spark Ignition Internal Combustion Engines. B. <u>National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Reciprocating Internal Combustion Engines</u> – [40 CFR, Part 63, Subpart ZZZZ] The Permittee shall meet the requirements included in the National Emissions Standards for Hazardous Air Pollutants (NESHAP) promulgated under 40 CFR part 63, Subparts A and ZZZZ for Reciprocating Internal Combustion Engines by meeting the requirements of 40 CFR part 60, Subpart JJJJ for the emergency generator. No further requirements apply to the emergency generator under 40 CFR, Part 63, Subpart ZZZZ. [Reference: 40 CFR §63.6590(c)(1)] C. <u>Control of Visible Emissions</u> <u>Visible Emissions Stationary Internal Combustion Engines Powered Equipment</u> – [COMAR 26.11.09.05E(2) through (4)] (2) <u>Emissions During Idle Mode.</u> “A person may not cause or permit the discharge of emissions from any engine, operating at idle, greater than 10 percent opacity.” (3) <u>Emissions During Operating Mode.</u> “A person may not cause or permit the discharge of emissions from any engine, operating at other than idle conditions,

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greater than 40 percent opacity.”

(4) Exceptions.

- (a) “Section E(2) of this regulation does not apply for a period of 2 consecutive minutes after a period of idling of 15 consecutive minutes for the purpose of clearing the exhaust system.”
- (b) “Section E(2) of this regulation does not apply to emissions resulting directly from cold engine start-up and warm-up for the following maximum periods:
 - (i) Engines that are idled continuously when not in service: 30 minutes;
 - (ii) All other engines: 15 minutes.”
- (c) “Section E(2) and (3) of this regulation do not apply while maintenance, repair, or testing is being performed by qualified mechanics.”

D. Operational Limits

- (1) Operating requirements for the Waukesha 1,450 BHP natural gas-fired emergency generator from 40 CFR Part 60, Subpart JJJJ.

§60.4243(d) ... any operation other than emergency operation, [and] maintenance and testing, ... as described in paragraphs (d)(1) through (3) of this section, is prohibited. ...

§60.4243(d)(1) There is no time limit on the use of emergency generator in emergency situations.

§60.4243(d)(2) Allows the Permittee to operate the emergency generator the purposes specified in (d)(2)(i) for a maximum of 100 hours per calendar year.

§60.4243(d)(2)(i) Allows the emergency generator to be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, or the insurance company associated with the engine.

- (2) The Permittee shall maintain and operate the 1,450 BHP natural gas-fired emergency generator, and any associated air pollution control equipment, in such a manner as to ensure full and continuous compliance with all applicable regulations.

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7.2 Testing Requirements:

A. New Source Performance Standards (NSPS) under 40 CFR Part 60, Subpart JJJJ for Stationary Spark Ignition Internal Combustion Engines – [40 CFR, Part 60, Subpart JJJJ]

(1) The Permittee must comply with all applicable federal requirements. In accordance with 40 CFR § 60.4243(b), "if you are an owner or operator of a stationary SI internal combustion engine and must comply with the emission standards specified in § 60.4233(d) or (e), you must demonstrate compliance according to one of the methods specified in paragraphs (b)(1) and (2) of this section:

b(1) Purchasing an engine certified according to procedures specified in this subpart, for the same model year and demonstrating compliance according to one of the methods specified in paragraph (a) of this section.
Note: This condition is not applicable as the engine is non-certified.

b(2) Purchasing a non-certified engine and demonstrating compliance with the emission standards specified in § 60.4233(d) or (e) and according to the requirements specified in § 60.4244, as applicable, and according to paragraphs (b)(2)(i) and (ii) of this section.

(i) If you are an owner or operator of a stationary SI internal combustion engine greater than 25 HP and less than or equal to 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 to demonstrate compliance.
Note: This condition is not applicable as the engine is greater than 500 HP.

(ii) If you are an owner or operator of a stationary SI internal combustion engine greater than 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you

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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.”

- (2) Compliance stack testing of the engine for NO_x, CO, VOCs shall be conducted within 180 days of initial start-up to quantify pollutant emissions and demonstrate compliance with the emission limits specified in the permit to construct. The Permittee shall simultaneously monitor electrical output from the engine/generator set during the stack test.

Note: Subsequent testing may be required in accordance to Part E, Condition 8.

- (3) At least 30 days prior to conducting any compliance stack test, the Permittee shall submit a test protocol to ARA for review. Compliance stack testing shall be conducted in accordance with ARA Technical Memorandum™ 91-01, “Test Methods and Equipment Specifications for Stationary Sources” (January, 1991), as amended by Supplement 1 (July 1, 1991), 40 CFR 51, 40 CFR 60, or subsequent test protocols approved by ARA. Test ports shall be located in accordance with the TM 91-01 (January 1991), or subsequent or alternative measures approved by ARA.
- (4) The Permittee must comply with the applicable federal requirements. In accordance with 40 CFR § 60.4244, “owners and operators of stationary SI ICE who conduct performance tests must follow the procedures in paragraphs (a) through (f) of this section.
- (a) Each performance test must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and according to the requirements in Sec. 60.8 and under the specific conditions that are specified by **Table 2** to this subpart.
- (b) You may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in Sec. 60.8(c). If your stationary SI internal combustion engine is non-operational, you do not need to startup the engine solely to conduct a performance test; however, you must conduct the performance test immediately upon startup of the engine.

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(c) You must conduct three separate test runs for each performance test required in this section, as specified in § 60.8(f). Each test run must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and last at least 1 hour.

(d) To determine compliance with the NO_x mass per unit output emission limitation, convert the concentration of NO_x in the engine exhaust using Equation 1 of this section:

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

Where:

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

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

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

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

T = Time of test run, in hours.

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

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

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

Where:

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

C_d = Measured CO concentration in ppmv.

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

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

T = Time of test run, in hours.

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

- (f) To determine compliance with the VOC mass per unit output emission limitation, convert the concentration of VOC in the engine exhaust using Equation 3 of this section:

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

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.

Note: For purposes of this subpart, when calculating emissions of VOC, emissions of formaldehyde should not be included [Reference: 40 CFR Section 60.4244(f)].

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

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

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.

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

Where:

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

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

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

Where:

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

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	<u>B. National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Reciprocating Internal Combustion Engines – [40 CFR, Part 63, Subpart ZZZZ]</u> The Permittee shall meet the requirements included in the National Emissions Standards for Hazardous Air Pollutants (NESHAP) promulgated under 40 CFR part 63, Subparts A and ZZZZ for Reciprocating Internal Combustion Engines by meeting the requirements of 40 CFR part 60, Subpart JJJJ for the emergency generator. No further requirements apply to the emergency generator under 40 CFR, Part 63, Subpart ZZZZ. [Reference: 40 CFR §63.6590(c)(1)] <u>C. Control of Visible Emissions</u> <u>Visible Emissions Stationary Internal Combustion Engines Powered Equipment – [COMAR 26.11.09.05E(2) through (4)]</u> See Reporting Requirements. <u>D. Operational Limits</u> See Record Keeping and Reporting Requirements.
7.3	<u>Monitoring Requirements:</u> <u>A. New Source Performance Standards (NSPS) under 40 CFR Part 60, Subpart JJJJ for Stationary Spark Ignition Internal Combustion Engines – [40 CFR, Part 60, Subpart JJJJ]</u> The Permittee is subject to the emission standards specified in 40 CFR Part 60, Subpart JJJJ, §60.4233(e). <u>B. National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Reciprocating Internal Combustion Engines – [40 CFR, Part 63, Subpart ZZZZ]</u> See Reporting Requirements. <u>C. Control of Visible Emissions</u> <u>Visible Emissions Stationary Internal Combustion Engines Powered Equipment – [COMAR 26.11.09.05E(2) through (4)]</u> See Record Keeping and Reporting Requirements.

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	D. <u>Operational Limits</u> See Record Keeping and Reporting Requirements.
7.4	<u>Record Keeping Requirements:</u> A. <u>New Source Performance Standards (NSPS) under 40 CFR Part 60, Subpart JJJJ for Stationary Spark Ignition Internal Combustion Engines – [40 CFR, Part 60, Subpart JJJJ]</u> (1) The following records shall be kept on site and shall be made available to the Department upon request: (a) Monthly records of fuel usage for the 1,450 BHP natural gas-fired emergency generator; (b) A copy of the initial performance test report(s) for NO_x, CO, and VOC for the Waukesha 1,450 BHP natural gas-fired emergency generator; (c) A copy of each subsequent performance test report (s) for NO_x, CO, and VOC for the Waukesha 1,450 BHP natural gas-fired emergency generator; (2) The following records for the 1,450 HP natural gas-fired emergency generator must be kept on site for at least five (5) years and shall be made available to the Department upon request: §60.4245(a) Owners or operators of stationary SI ICE must keep records of the information in paragraphs (a)(1) through (4) of this section: §60.4245(a)(1) All notifications required to comply with this subpart. §60.4245(a)(2) Maintenance conducted on the engine. §60.4245(a)(3) <i>This condition is not applicable as the engine is non-certified.</i> §60.4245(b) For all stationary SI emergency ICE ... 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

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	emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. B. <u>National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Reciprocating Internal Combustion Engines</u> – [40 CFR, Part 63, Subpart ZZZZ] See Record Keeping Requirements. C. <u>Control of Visible Emissions</u> <u>Visible Emissions Stationary Internal Combustion Engines Powered Equipment</u> – [COMAR 26.11.09.05E(2) through (4)] See Record Keeping Requirements. D. <u>Operational Limits</u> See Record Keeping Requirements.
7.5	<u>Reporting Requirements:</u> A. <u>New Source Performance Standards (NSPS) under 40 CFR Part 60, Subpart JJJJ for Stationary Spark Ignition Internal Combustion Engines</u> – [40 CFR, Part 60, Subpart JJJJ] The records required to be kept shall be made available to the Department upon request. [Authority: COMAR 26.11.03.06C] B. <u>National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Reciprocating Internal Combustion Engines</u> – [40 CFR, Part 63, Subpart ZZZZ] See Reporting Requirements. C. <u>Control of Visible Emissions</u> <u>Visible Emissions Stationary Internal Combustion Engines Powered Equipment</u> – [COMAR 26.11.09.05E(2) through (4)] See Reporting Requirements. D. <u>Operational Limits</u> See Reporting Requirements.

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SECTION V INSIGNIFICANT ACTIVITIES

This section provides a list of insignificant emissions units that were reported in the Title V permit application. The applicable Clean Air Act requirements, if any, are listed below the insignificant activity.

- (1) ✓ Space heaters utilizing direct heat transfer and used solely for comfort heat;

- (2) No. 1 Unheated VOC dispensing containers or unheated VOC rinsing containers of 60 gallons (227 liters) capacity or less;

The containers are subject to COMAR 26.11.19.09D, which requires that the Permittee control emissions of volatile organic compounds (VOC) from cold degreasing operations by meeting the following requirements:

- (a) COMAR 26.11.19.09D(2)(b), which establishes that the Permittee shall not use any VOC degreasing material that exceeds a vapor pressure of 1 mm Hg at 20 ° C;

- (b) COMAR 26.11.19.09D(3)(a—d), which requires that the Permittee implement good operating practices designed to minimize spills and evaporation of VOC degreasing material. These practices, which shall be established in writing and displayed such that they are clearly visible to operators, shall include covers (including water covers), lids, or other methods of minimizing evaporative losses, and reducing the time and frequency during which parts are cleaned;

- (c) COMAR 26.11.19.09D(4), which prohibits the use of any halogenated VOC for cold degreasing.

The Permittee shall maintain on site for at least five (5) years, and shall make available to the Department upon request, the following records of operating data:

- (a) Monthly records of the total VOC degreasing materials used; and

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- (b) Written descriptions of good operating practices designed to minimize spills and evaporation of VOC degreasing materials.
- (3) ✓ Equipment for drilling, carving, cutting, routing, turning, sawing, planing, spindle sanding, or disc sanding of wood or wood products;
- (4) ✓ Brazing, soldering, or welding equipment, and cutting torches related to manufacturing and construction activities that emit HAP metals and not directly related to plant maintenance, upkeep and repair or maintenance shop activities;
- (5) ✓ Equipment for washing or drying products fabricated from metal or glass, provided that no VOC is used in the process and that no oil or solid fuel is burned;
- (6) Containers, reservoirs, or tanks used exclusively for:
- (d) No. 4 Storage of lubricating oils;
- (e) No. 4 Unheated storage of VOC with an initial boiling point of 300 °F (149 °C) or greater;
- (f) No. 1 Storage of Numbers 1, 2, 4, 5, and 6 fuel oil and aviation jet engine fuel;
- (7) ✓ First aid and emergency medical care provided at the facility, including related activities such as sterilization and medicine preparation used in support of a manufacturing or production process;
- (8) ✓ Certain recreational equipment and activities, such as fireplaces, barbecue pits and cookers, fireworks displays, and kerosene fuel use;
- (9) ✓ Comfort air conditioning subject to requirements of Title VI of the Clean Air Act;
- (10) ✓ Natural draft hoods or natural draft ventilators that exhaust air pollutants into the ambient air from manufacturing/industrial or commercial processes;

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SECTION VI STATE-ONLY ENFORCEABLE CONDITIONS

The Permittee is subject to the following State-only enforceable requirements:

Applicable Regulations:

- (a) COMAR 26.11.06.08 and 26.11.06.09, which generally prohibit the discharge of emissions beyond the property line in such a manner that a nuisance or air pollution is created.
- (b) COMAR 26.11.15.05, which requires that the Permittee implement "Best Available Control Technology for Toxics" (T – BACT) to control emissions of toxic air pollutants.

APPENDIX B

Part 70 Air Operating Permit Application Forms

PART 70 PERMIT APPLICATION FOR RENEWAL
AIR AND RADIATION MANAGEMENT ADMINISTRATION

Facilities required to obtain a Part 70 permit under COMAR 26.11.03.01 must complete and return this form. Applications are incomplete unless all applicable information required by COMAR 26.11.03.03 and 26.11.03.13 is supplied. Failure to supply additional information required by the Department to enable it to act on the application may result in loss of the application shield and denial of this application.

Owner and Operator:

Name of Owner or Operator: Transcontinental Gas Pipe Line Company, LLC (Transco)		
Street Address: 2800 Post Oak Boulevard		
City: Houston	State: Texas	Zip Code: 77056-6100
Telephone Number (713) 215-2964		Fax Number (713) 215-3905

Facility Information:

Name of Facility: Transcontinental Gas Pipe Line Company, LLC - Compressor Station 190		
Street Address: 11910 Carroll Mill Road		
City: Ellicott City	State: Maryland	Zip Code: 21043
Plant Manager: Kenny Scott	Telephone Number: (405) 831-9939	Fax Number: NA
24-Hour Emergency Telephone Number for Air Pollution Matters: (713) 215-2000		

List, on a separate page, the names and telephone numbers of other facility owners and persons with titles.



PART 70 PERMIT APPLICATION FOR RENEWAL
AIR AND RADIATION MANAGEMENT ADMINISTRATION

Names and telephone numbers of other persons with titles:

- **Mr. Michael Hahn**
Environmental Specialist
Transcontinental Gas Pipe Line Company, LLC (Transco)
99 Farber Road
Princeton, New Jersey
Bus: (609) 285-2407
- **Mr. Bill Scarpinato**
Environmental Specialist
Transcontinental Gas Pipe Line Company, LLC (Transco)
345 Greenbrier Drive
Charlottesville, Virginia 22901
Bus: (434) 964-2120
- **Ms. Kristi Evans**
Director-Field SETTGOM
Transcontinental Gas Pipe Line Company, LLC (Transco)
P.O. Box 1396
Houston, Texas 77056
Bus: (412) 419-4153
- **Mr. Anibal Pico**
Operations Manager
Transcontinental Gas Pipe Line Company, LLC (Transco)
10201 Balls Ford Rd
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- **Mr. Glen Jasek**
VP GM Eastern Interstates
Transcontinental Gas Pipe Line Company, LLC (Transco)
P.O. Box 1396
Houston, Texas 77056
Bus: (713) 215-2134



SECTION 1. CERTIFICATION STATEMENTS

1. Compliance Status with Applicable Enhanced Monitoring and Compliance Certification Requirements

The emissions units identified in this application are in compliance with applicable enhanced monitoring and compliance certification requirements.

2. Certification of Current Compliance with All Applicable Federally Enforceable Requirements

Except for the requirements identified in Section 7 of this application, for which compliance is not achieved, I hereby certify, based on information and belief formed after reasonable inquiry, that the facility is currently in compliance with all applicable federally enforceable requirements and agree that the facility will continue to comply with those requirements during the permit term.

You must complete a Section 7 form for each non-complying emissions unit.

3. Statement of Compliance with Respect to All New Applicable Requirements Effective During the Permit Term

I hereby state, based on information and belief formed after reasonable inquiry, that the facility agrees to meet, in a timely manner, all applicable federally enforceable requirements that become effective during the permit term, unless a more detailed schedule is expressly required by the applicable requirement.

4. Risk Management Plan Compliance

I hereby certify that, based on information and belief formed after reasonable inquiry, that a Risk Management Plan as required under § 112(r) of the Clean Air Act:

☐ has been submitted;

☐ will be submitted at a future date; or

☒ does not need to be submitted.



MARYLAND DEPARTMENT OF THE ENVIRONMENT

5. Statement of Truth, Accuracy, and Completeness

"I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision and in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person(s) who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

RESPONSIBLE OFFICIAL:

X

Glen Jasick

11/10/22

SIGNATURE

DATE

Glen Jasick

PRINTED NAME

VP GM - Eastern Interstates

TITLE



SECTION 2. FACILITY DESCRIPTION SUMMARY

1. Major Activities of Facility

Briefly describe the major activities, including the applicable SIC Code(s) and end product(s).

Transco Station 190 is a mainline natural gas transmission station (SIC Code 4922) that is used to compress natural gas, thereby sustaining flow of natural gas through the pipeline system. Each gas compressor is driven by the Station's reciprocating internal combustion engines and/or a combustion turbine. Each of these compressor sets include an exhaust gas stack and a gas blowdown vent system. Emissions from the exhaust stacks have been identified and quantified as point sources, while emissions associated with compressor gas venting activities are identified and quantified as fugitives (FUG 2). Venting activities are intermittent and are only performed during maintenance and emergency situations, which are included in FUG 2. Piping component fugitive emissions are identified and quantified as FUG 1. The yard piping, including pigging and separator vessels, and most other equipment in natural gas service (e.g., compressors, engine fuel gas systems, gas meters) must be depressurized during maintenance. The natural gas lines are depressurized through a silencer located in the yard.

2. Facility-Wide Emissions

A. This facility is required to obtain a Part 70 Operating Permit because it is:
Check appropriate box:

- ☒ Actual Major
- ☒ Potential Major
- ☐ Solid Waste Incineration Unit Requiring Permit Under § 129(e) of CAA

B. List the actual facility-wide emissions below (Calendar Year 2021 in TPY):

PM10 9.2 NOx 61.5 VOC 69.8 SOx 0.12 CO 195.9 HAPs 43.24

3. Include With the Application:

Flow Diagrams showing all emissions units, emission points, and control devices;
Emissions Certification Report (copy of the most recent submitted to the Department.)



SECTION 3A-1. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: M/L 1 1a. Date of installation (month/year): March 1951	2. MDE Registration No.:(if applicable) 13-5-0054												
3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s): <u>Description: Mainline Reciprocating Internal Combustion Engine #1 (2-Cycle, Lean-Burn)</u> <u>Manufacturer & Model No.: Clark HBA-8T</u> <u>Horsepower Rating: 2,050 HP</u> <u>Heat Rate: 15.38 MMBtu/hr</u> <u>Emission Point: Stack #1</u> <u>Control Equipment:</u> 													
4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: General Reference: _____ Continuous Processes: <u>24</u> hours/day <u>365</u> days/year Batch Processes: _____ hours/batch _____ batches/day _____ days/year													
5. Fuel Consumption: <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Type(s) of Fuel</th> <th style="text-align: left;">% Sulfur</th> <th style="text-align: left;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td>1. <u>Pipeline-Quality Natural Gas</u></td> <td><u>0.001</u></td> <td><u>144.9 MMscf/yr</u></td> </tr> <tr> <td>2. _____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>3. _____</td> <td>_____</td> <td>_____</td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. <u>Pipeline-Quality Natural Gas</u>	<u>0.001</u>	<u>144.9 MMscf/yr</u>	2. _____	_____	_____	3. _____	_____	_____
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. <u>Pipeline-Quality Natural Gas</u>	<u>0.001</u>	<u>144.9 MMscf/yr</u>											
2. _____	_____	_____											
3. _____	_____	_____											
6. Emissions in Tons: (Actual TPY Emissions from Calendar Year 2021 Emission Certification Report, for Maximum Potential Emissions See Appendix E) A. Actual Major: <u>X</u> Potential Major: <u>X</u> (note: before control device) B. Actual Emissions: NOx <u>4.3</u> SOx <u>0.01</u> VOC <u>0.7</u> PM10 <u>0.57</u> HAPs <u>0.76</u>													



SECTION 3A-2. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: M/L 2 1a. Date of installation (month/year): March 1951	2. MDE Registration No.:(if applicable) 13-5-0054												
3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s): <u>Description: Mainline Reciprocating Internal Combustion Engine #2 (2-Cycle, Lean-Burn)</u> <u>Manufacturer & Model No.: Clark HBA-8T</u> <u>Horsepower Rating: 2,050 HP</u> <u>Heat Rate: 15.38 MMBtu/hr</u> <u>Emission Point: Stack #2</u> <u>Control Equipment:</u> 													
4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: General Reference: _____ Continuous Processes: <u>24</u> hours/day <u>365</u> days/year Batch Processes: _____ hours/batch _____ batches/day _____ days/year													
5. Fuel Consumption: <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Type(s) of Fuel</th> <th style="text-align: left;">% Sulfur</th> <th style="text-align: left;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td>1. <u>Pipeline-Quality Natural Gas</u></td> <td><u>0.001</u></td> <td><u>144.9 MMscf/yr</u></td> </tr> <tr> <td>2. _____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>3. _____</td> <td>_____</td> <td>_____</td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. <u>Pipeline-Quality Natural Gas</u>	<u>0.001</u>	<u>144.9 MMscf/yr</u>	2. _____	_____	_____	3. _____	_____	_____
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. <u>Pipeline-Quality Natural Gas</u>	<u>0.001</u>	<u>144.9 MMscf/yr</u>											
2. _____	_____	_____											
3. _____	_____	_____											
6. Emissions in Tons: (Actual TPY Emissions from Calendar Year 2021 Emission Certification Report, for Maximum Potential Emissions See Appendix E) A. Actual Major: <u>X</u> Potential Major: <u>X</u> (note: before control device) B. Actual Emissions: NOx <u>6.8</u> SOx <u>0.02</u> VOC <u>5.0</u> PM10 <u>1.24</u> HAPs <u>1.67</u>													



SECTION 3A-3. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: M/L 3 1a. Date of installation (month/year): March 1951	2. MDE Registration No.:(if applicable) 13-5-0054												
3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s): <u>Description: Mainline Reciprocating Internal Combustion Engine #3 (2-Cycle, Lean-Burn)</u> <u>Manufacturer & Model No.: Clark HBA-8T</u> <u>Horsepower Rating: 2,050 HP</u> <u>Heat Rate: 15.38 MMBtu/hr</u> <u>Emission Point: Stack #3</u> <u>Control Equipment:</u> 													
4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: General Reference: _____ Continuous Processes: <u>24</u> hours/day <u>365</u> days/year Batch Processes: _____ hours/batch _____ batches/day _____ days/year													
5. Fuel Consumption: <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Type(s) of Fuel</th> <th style="text-align: left;">% Sulfur</th> <th style="text-align: left;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td>1. <u>Pipeline-Quality Natural Gas</u></td> <td><u>0.001</u></td> <td><u>144.9 MMscf/yr</u></td> </tr> <tr> <td>2. _____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>3. _____</td> <td>_____</td> <td>_____</td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. <u>Pipeline-Quality Natural Gas</u>	<u>0.001</u>	<u>144.9 MMscf/yr</u>	2. _____	_____	_____	3. _____	_____	_____
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. <u>Pipeline-Quality Natural Gas</u>	<u>0.001</u>	<u>144.9 MMscf/yr</u>											
2. _____	_____	_____											
3. _____	_____	_____											
6. Emissions in Tons: (Actual TPY Emissions from Calendar Year 2021 Emission Certification Report, for Maximum Potential Emissions See Appendix E) A. Actual Major: <u> X </u> Potential Major: <u> X </u> (note: before control device) B. Actual Emissions: NOx <u>7.4</u> SOx <u>0.01</u> VOC <u>0.7</u> PM10 <u>1.01</u> HAPs <u>1.35</u>													



SECTION 3A-4. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: M/L 4 1a. Date of installation (month/year): March 1951	2. MDE Registration No.:(if applicable) 13-5-0054												
3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s): <u>Description: Mainline Reciprocating Internal Combustion Engine #4 (2-Cycle, Lean-Burn)</u> <u>Manufacturer & Model No.: Clark HBA-8T</u> <u>Horsepower Rating: 2,050 HP</u> <u>Heat Rate: 15.38 MMBtu/hr</u> <u>Emission Point: Stack #4</u> <u>Control Equipment:</u> 													
4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: General Reference: _____ Continuous Processes: <u>24</u> hours/day <u>365</u> days/year Batch Processes: _____ hours/batch _____ batches/day _____ days/year													
5. Fuel Consumption: <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Type(s) of Fuel</th> <th style="text-align: left;">% Sulfur</th> <th style="text-align: left;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td>1. <u>Pipeline-Quality Natural Gas</u></td> <td><u>0.001</u></td> <td><u>144.9 MMscf/yr</u></td> </tr> <tr> <td>2. _____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>3. _____</td> <td>_____</td> <td>_____</td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. <u>Pipeline-Quality Natural Gas</u>	<u>0.001</u>	<u>144.9 MMscf/yr</u>	2. _____	_____	_____	3. _____	_____	_____
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. <u>Pipeline-Quality Natural Gas</u>	<u>0.001</u>	<u>144.9 MMscf/yr</u>											
2. _____	_____	_____											
3. _____	_____	_____											
6. Emissions in Tons: (Actual TPY Emissions from Calendar Year 2021 Emission Certification Report, for Maximum Potential Emissions See Appendix E) A. Actual Major: <u>X</u> Potential Major: <u>X</u> (note: before control device) B. Actual Emissions: NOx <u>6.5</u> SOx <u>0.01</u> VOC <u>1.0</u> PM10 <u>0.82</u> HAPs <u>1.10</u>													



SECTION 3A-5. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: M/L 5 1a. Date of installation (month/year): March 1951	2. MDE Registration No.:(if applicable) 13-5-0054												
3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s): <u>Description: Mainline Reciprocating Internal Combustion Engine #5 (2-Cycle, Lean-Burn)</u> <u>Manufacturer & Model No.: Clark HBA-8T</u> <u>Horsepower Rating: 2,050 HP</u> <u>Heat Rate: 15.38 MMBtu/hr</u> <u>Emission Point: Stack #5</u> <u>Control Equipment:</u> 													
4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: General Reference: _____ Continuous Processes: <u>24</u> hours/day <u>365</u> days/year Batch Processes: _____ hours/batch _____ batches/day _____ days/year													
5. Fuel Consumption: <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Type(s) of Fuel</th> <th style="text-align: left;">% Sulfur</th> <th style="text-align: left;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td>1. <u>Pipeline-Quality Natural Gas</u></td> <td><u>0.001</u></td> <td><u>144.9 MMscf/yr</u></td> </tr> <tr> <td>2. _____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>3. _____</td> <td>_____</td> <td>_____</td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. <u>Pipeline-Quality Natural Gas</u>	<u>0.001</u>	<u>144.9 MMscf/yr</u>	2. _____	_____	_____	3. _____	_____	_____
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. <u>Pipeline-Quality Natural Gas</u>	<u>0.001</u>	<u>144.9 MMscf/yr</u>											
2. _____	_____	_____											
3. _____	_____	_____											
6. Emissions in Tons: (Actual TPY Emissions from Calendar Year 2021 Emission Certification Report, for Maximum Potential Emissions See Appendix E) A. Actual Major: <u>X</u> Potential Major: <u>X</u> (note: before control device) B. Actual Emissions: NOx <u>5.9</u> SOx <u>0.01</u> VOC <u>4.7</u> PM10 <u>1.18</u> HAPs <u>1.57</u>													



SECTION 3A-6. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: M/L 6 1a. Date of installation (month/year): March 1951	2. MDE Registration No.:(if applicable) 13-5-0054												
3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s): <u>Description: Mainline Reciprocating Internal Combustion Engine #6 (2-Cycle, Lean-Burn)</u> <u>Manufacturer & Model No.: Clark HBA-8T</u> <u>Horsepower Rating: 2,050 HP</u> <u>Heat Rate: 15.38 MMBtu/hr</u> <u>Emission Point: Stack #6</u> <u>Control Equipment: None</u> 													
4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: General Reference: _____ Continuous Processes: <u>24</u> hours/day <u>365</u> days/year Batch Processes: _____ hours/batch _____ batches/day _____ days/year													
5. Fuel Consumption: <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Type(s) of Fuel</th> <th style="text-align: left;">% Sulfur</th> <th style="text-align: left;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td>1. <u>Pipeline-Quality Natural Gas</u></td> <td><u>0.001</u></td> <td><u>144.9 MMscf/yr</u></td> </tr> <tr> <td>2. _____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>3. _____</td> <td>_____</td> <td>_____</td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. <u>Pipeline-Quality Natural Gas</u>	<u>0.001</u>	<u>144.9 MMscf/yr</u>	2. _____	_____	_____	3. _____	_____	_____
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. <u>Pipeline-Quality Natural Gas</u>	<u>0.001</u>	<u>144.9 MMscf/yr</u>											
2. _____	_____	_____											
3. _____	_____	_____											
6. Emissions in Tons: (Actual TPY Emissions from Calendar Year 2021 Emission Certification Report, for Maximum Potential Emissions See Appendix E) A. Actual Major: <u>X</u> Potential Major: <u>X</u> (note: before control device) B. Actual Emissions: NOx <u>0.0</u> SOx <u>0.0</u> VOC <u>0.0</u> PM10 <u>0.0</u> HAPs <u>0.0</u>													



SECTION 3A-7. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: M/L 7 1a. Date of installation (month/year): March 1951	2. MDE Registration No.:(if applicable) 13-5-0054												
3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s): <u>Description: Mainline Reciprocating Internal Combustion Engine #7 (2-Cycle, Lean-Burn)</u> <u>Manufacturer & Model No.: Clark HBA-8T</u> <u>Horsepower Rating: 2,050 HP</u> <u>Heat Rate: 15.38 MMBtu/hr</u> <u>Emission Point: Stack #7</u> <u>Control Equipment: None</u> 													
4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: General Reference: _____ Continuous Processes: <u>24</u> hours/day <u>365</u> days/year Batch Processes: _____ hours/batch _____ batches/day _____ days/year													
5. Fuel Consumption: <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Type(s) of Fuel</th> <th style="text-align: left;">% Sulfur</th> <th style="text-align: left;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td>1. <u>Pipeline-Quality Natural Gas</u></td> <td><u>0.001</u></td> <td><u>144.9 MMscf/yr</u></td> </tr> <tr> <td>2. _____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>3. _____</td> <td>_____</td> <td>_____</td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. <u>Pipeline-Quality Natural Gas</u>	<u>0.001</u>	<u>144.9 MMscf/yr</u>	2. _____	_____	_____	3. _____	_____	_____
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. <u>Pipeline-Quality Natural Gas</u>	<u>0.001</u>	<u>144.9 MMscf/yr</u>											
2. _____	_____	_____											
3. _____	_____	_____											
6. Emissions in Tons: (Actual TPY Emissions from Calendar Year 2021 Emission Certification Report, for Maximum Potential Emissions See Appendix E) A. Actual Major: <u>X</u> Potential Major: <u>X</u> (note: before control device) B. Actual Emissions: NOx <u>0.4</u> SOx <u>0.01</u> VOC <u>4.2</u> PM10 <u>1.05</u> HAPs <u>1.4</u>													



SECTION 3A-8. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: M/L 8 1a. Date of installation (month/year): December 1960	2. MDE Registration No.:(if applicable) 13-5-0054												
3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s): <u>Description: Mainline Reciprocating Internal Combustion Engine #8 (2-Cycle, Lean-Burn)</u> <u>Manufacturer & Model No.: Clark TLA-6</u> <u>Horsepower Rating: 2,100 HP</u> <u>Heat Rate: 15.75 MMBtu/hr</u> <u>Emission Point: Stack #8</u> <u>Control Equipment: None</u> 													
4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: General Reference: _____ Continuous Processes: <u>24</u> hours/day <u>365</u> days/year Batch Processes: _____ hours/batch _____ batches/day _____ days/year													
5. Fuel Consumption: <table style="width:100%; border: none;"> <thead> <tr> <th style="text-align: left;">Type(s) of Fuel</th> <th style="text-align: left;">% Sulfur</th> <th style="text-align: left;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td>1. <u>Pipeline-Quality Natural Gas</u></td> <td><u>0.001</u></td> <td><u>148.4 MMscf/yr</u></td> </tr> <tr> <td>2. _____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>3. _____</td> <td>_____</td> <td>_____</td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. <u>Pipeline-Quality Natural Gas</u>	<u>0.001</u>	<u>148.4 MMscf/yr</u>	2. _____	_____	_____	3. _____	_____	_____
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. <u>Pipeline-Quality Natural Gas</u>	<u>0.001</u>	<u>148.4 MMscf/yr</u>											
2. _____	_____	_____											
3. _____	_____	_____											
6. Emissions in Tons: (Actual TPY Emissions from Calendar Year 2021 Emission Certification Report, for Maximum Potential Emissions See Appendix E) A. Actual Major: <u>X</u> Potential Major: <u>X</u> (note: before control device) B. Actual Emissions: NOx <u>4.3</u> SOx <u>0.01</u> VOC <u>0.7</u> PM10 <u>0.54</u> HAPs <u>0.72</u>													



SECTION 3A-9. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: M/L 9 1a. Date of installation (month/year): September 1961	2. MDE Registration No.:(if applicable) 13-5-0054												
3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s): <u>Description: Mainline Reciprocating Internal Combustion Engine #9 (2-Cycle, Lean-Burn)</u> <u>Manufacturer & Model No.: Clark TLA-6</u> <u>Horsepower Rating: 2,100 HP</u> <u>Heat Rate: 15.75 MMBtu/hr</u> <u>Emission Point: Stack #9</u> <u>Control Equipment: None</u> 													
4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: General Reference: _____ Continuous Processes: <u>24</u> hours/day <u>365</u> days/year Batch Processes: _____ hours/batch _____ batches/day _____ days/year													
5. Fuel Consumption: <table style="width:100%; border: none;"> <thead> <tr> <th style="text-align: left;">Type(s) of Fuel</th> <th style="text-align: left;">% Sulfur</th> <th style="text-align: left;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td>1. <u>Pipeline-Quality Natural Gas</u></td> <td><u>0.001</u></td> <td><u>148.4 MMscf/yr</u></td> </tr> <tr> <td>2. _____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>3. _____</td> <td>_____</td> <td>_____</td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. <u>Pipeline-Quality Natural Gas</u>	<u>0.001</u>	<u>148.4 MMscf/yr</u>	2. _____	_____	_____	3. _____	_____	_____
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. <u>Pipeline-Quality Natural Gas</u>	<u>0.001</u>	<u>148.4 MMscf/yr</u>											
2. _____	_____	_____											
3. _____	_____	_____											
6. Emissions in Tons: (Actual TPY Emissions from Calendar Year 2021 Emission Certification Report, for Maximum Potential Emissions See Appendix E) A. Actual Major: <u>X</u> Potential Major: <u>X</u> (note: before control device) B. Actual Emissions: NOx <u>3.9</u> SOx <u>0.01</u> VOC <u>9.7</u> PM10 <u>1.10</u> HAPs <u>1.46</u>													



SECTION 3A-10. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: M/L 10 1a. Date of installation (month/year): July 1962	2. MDE Registration No.:(if applicable) 13-5-0054												
3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s): <u>Description: Mainline Reciprocating Internal Combustion Engine #10 (2-Cycle, Lean-Burn)</u> <u>Manufacturer & Model No.: Clark TLA-6</u> <u>Horsepower Rating: 2,100 HP</u> <u>Heat Rate: 15.75 MMBtu/hr</u> <u>Emission Point: Stack #10</u> <u>Control Equipment: None</u> 													
4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: General Reference: _____ Continuous Processes: <u>24</u> hours/day <u>365</u> days/year Batch Processes: _____ hours/batch _____ batches/day _____ days/year													
5. Fuel Consumption: <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Type(s) of Fuel</th> <th style="text-align: left;">% Sulfur</th> <th style="text-align: left;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td>1. <u>Pipeline-Quality Natural Gas</u></td> <td><u>0.001</u></td> <td><u>148.4 MMscf/yr</u></td> </tr> <tr> <td>2. _____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>3. _____</td> <td>_____</td> <td>_____</td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. <u>Pipeline-Quality Natural Gas</u>	<u>0.001</u>	<u>148.4 MMscf/yr</u>	2. _____	_____	_____	3. _____	_____	_____
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. <u>Pipeline-Quality Natural Gas</u>	<u>0.001</u>	<u>148.4 MMscf/yr</u>											
2. _____	_____	_____											
3. _____	_____	_____											
6. Emissions in Tons: (Actual TPY Emissions from Calendar Year 2021 Emission Certification Report, for Maximum Potential Emissions See Appendix E) A. Actual Major: <u>X</u> Potential Major: <u>X</u> (note: before control device) B. Actual Emissions: NOx <u>4.9</u> SOx <u>0.02</u> VOC <u>11.6</u> PM10 <u>1.32</u> HAPs <u>1.75</u>													



SECTION 3A-11. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: M/L 11 1a. Date of installation (month/year): March 1969	2. MDE Registration No.:(if applicable) 13-5-0054												
3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s): <u>Description: Mainline Reciprocating Internal Combustion Engine #11 (2-Cycle, Lean-Burn)</u> <u>Manufacturer & Model No.: Clark TCV-10</u> <u>Horsepower Rating: 3,400 HP</u> <u>Heat Rate: 25.50 MMBtu/hr</u> <u>Emission Point: Stack #11</u> <u>Control Equipment: None</u> 													
4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: General Reference: _____ Continuous Processes: <u>24</u> hours/day <u>365</u> days/year Batch Processes: _____ hours/batch _____ batches/day _____ days/year													
5. Fuel Consumption: <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Type(s) of Fuel</th> <th style="text-align: left;">% Sulfur</th> <th style="text-align: left;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td>1. <u>Pipeline-Quality Natural Gas</u></td> <td><u>0.001</u></td> <td><u>240.2 MMscf/yr</u></td> </tr> <tr> <td>2. _____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>3. _____</td> <td>_____</td> <td>_____</td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. <u>Pipeline-Quality Natural Gas</u>	<u>0.001</u>	<u>240.2 MMscf/yr</u>	2. _____	_____	_____	3. _____	_____	_____
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. <u>Pipeline-Quality Natural Gas</u>	<u>0.001</u>	<u>240.2 MMscf/yr</u>											
2. _____	_____	_____											
3. _____	_____	_____											
6. Emissions in Tons: (Actual TPY Emissions from Calendar Year 2021 Emission Certification Report, for Maximum Potential Emissions See Appendix E) A. Actual Major: <u>X</u> Potential Major: <u>X</u> (note: before control device) B. Actual Emissions: NOx <u>0.1</u> SOx <u>0.0</u> VOC <u>0.1</u> PM10 <u>0.07</u> HAPs <u>0.09</u>													



SECTION 3A-12. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: M/L 12 1a. Date of installation (month/year): May 1970	2. MDE Registration No.:(if applicable) 13-5-0054												
3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s): <u>Description: Mainline Reciprocating Internal Combustion Engine #12 (2-Cycle, Lean-Burn)</u> <u>Manufacturer & Model No.: Clark TCV-16</u> <u>Horsepower Rating: 5,500 HP</u> <u>Heat Rate: 41.25 MMBtu/hr</u> <u>Emission Point: Stack #12</u> <u>Control Equipment: None</u> 													
4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: General Reference: _____ Continuous Processes: <u>24</u> hours/day <u>365</u> days/year Batch Processes: _____ hours/batch _____ batches/day _____ days/year													
5. Fuel Consumption: <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; width: 40%;">Type(s) of Fuel</th> <th style="text-align: left; width: 20%;">% Sulfur</th> <th style="text-align: left; width: 40%;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td>1. <u>Pipeline-Quality Natural Gas</u></td> <td><u>0.001</u></td> <td><u>388.5 MMscf/yr</u></td> </tr> <tr> <td>2. _____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>3. _____</td> <td>_____</td> <td>_____</td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. <u>Pipeline-Quality Natural Gas</u>	<u>0.001</u>	<u>388.5 MMscf/yr</u>	2. _____	_____	_____	3. _____	_____	_____
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. <u>Pipeline-Quality Natural Gas</u>	<u>0.001</u>	<u>388.5 MMscf/yr</u>											
2. _____	_____	_____											
3. _____	_____	_____											
6. Emissions in Tons: (Actual TPY Emissions from Calendar Year 2021 Emission Certification Report, for Maximum Potential Emissions See Appendix E) A. Actual Major: <u>X</u> Potential Major: <u>X</u> (note: before control device) B. Actual Emissions: NOx <u>0.3</u> SOx <u>0.0</u> VOC <u>0.0</u> PM10 <u>0.2</u> HAPs <u>0.05</u>													



1. Emissions Unit No.: AUX 1 1a. Date of installation (month/year): March 1997	2. MDE Registration No.:(if applicable) 13-9-0186
3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s): <u>Description: Auxiliary Electric Power Generator (4-Cycle, Lean-Burn Reciprocating IC Engine)</u> <u>Manufacturer & Model No.: Waukesha 7042 GL</u> <u>Horsepower Rating: 1,478 HP</u> <u>Heat Rate: 11.1 MMBtu/hr</u> <u>Emission Point: Stack #13</u> <u>Control Equipment: None</u>	
4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: General Reference: <u>Permit to Construct 13-9-0186N (issued March 14, 1997) and April 2, 1999 correspondence</u> Continuous Processes: <u>24</u> hours/day <u>208.3</u> days/year Batch Processes: _____ hours/batch _____ batches/day _____ days/year	
5. Fuel Consumption: Type(s) of Fuel % Sulfur Annual Usage (specify units) 1. <u>Pipeline-Quality Natural Gas</u> <u>0.001</u> <u>59.7 MMscf/yr</u> 2. _____ 3. _____	
6. Emissions in Tons: (Actual TPY Emissions from Calendar Year 2021 Emission Certification Report, for Maximum Potential Emissions See Appendix E) A. Actual Major: _____ Potential Major: _____ (note: before control device) B. Actual Emissions: NOx <u>0.2</u> SOx <u>0.00</u> VOC <u>0.1</u> PM10 <u>0.01</u> HAPs <u>0.01</u>	



SECTION 3A-14. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: BLR 1 1a. Date of installation (month/year): 1950	2. MDE Registration No.:(if applicable) 13-5-0063												
3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s): <u>Description: Indirect-Fired Boiler (used for building space heating)</u> <u>Manufacturer & Model No.: Holmar Vulcan A60</u> <u>Heat Rate: 2.5 MMBtu/hr</u> <u>Emission Point: Stack #14</u> <u>Control Equipment: None</u> 													
4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: General Reference: _____ Continuous Processes: <u>24</u> hours/day <u>365</u> days/year Batch Processes: _____ hours/batch _____ batches/day _____ days/year													
5. Fuel Consumption: <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Type(s) of Fuel</th> <th style="text-align: left;">% Sulfur</th> <th style="text-align: left;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td>1. <u>Pipeline-Quality Natural Gas</u></td> <td><u>0.001</u></td> <td><u>23.5 MMscf/yr</u></td> </tr> <tr> <td>2. _____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>3. _____</td> <td>_____</td> <td>_____</td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. <u>Pipeline-Quality Natural Gas</u>	<u>0.001</u>	<u>23.5 MMscf/yr</u>	2. _____	_____	_____	3. _____	_____	_____
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. <u>Pipeline-Quality Natural Gas</u>	<u>0.001</u>	<u>23.5 MMscf/yr</u>											
2. _____	_____	_____											
3. _____	_____	_____											
6. Emissions in Tons: (Actual TPY Emissions from Calendar Year 2021 Emission Certification Report, for Maximum Potential Emissions See Appendix E) A. Actual Major: _____ Potential Major: _____ (note: before control device) B. Actual Emissions: NOx <u>0.4</u> SOx <u>0.00</u> VOC <u>0.03</u> PM10 <u>0.04</u> HAPs <u>0.00</u>													



SECTION 3A-15. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: BLR 2 1a. Date of installation (month/year): 1960	2. MDE Registration No.:(if applicable) 13-5-0064												
3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s): <u>Description: Indirect-Fired Boiler (used for building space heating)</u> <u>Manufacturer & Model No.: H. B. Smith Model G28HE-13S Boiler</u> <u>Heat Rate: 3.98 MMBtu/hr</u> <u>Emission Point: Stack #15</u> <u>Control Equipment: None</u> 													
4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: General Reference: _____ Continuous Processes: <u>24</u> hours/day <u>365</u> days/year Batch Processes: _____ hours/batch _____ batches/day _____ days/year													
5. Fuel Consumption: <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Type(s) of Fuel</th> <th style="text-align: left;">% Sulfur</th> <th style="text-align: left;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td>1. <u>Pipeline-Quality Natural Gas</u></td> <td><u>0.001</u></td> <td><u>31.1 MMscf/yr</u></td> </tr> <tr> <td>2. _____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>3. _____</td> <td>_____</td> <td>_____</td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. <u>Pipeline-Quality Natural Gas</u>	<u>0.001</u>	<u>31.1 MMscf/yr</u>	2. _____	_____	_____	3. _____	_____	_____
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. <u>Pipeline-Quality Natural Gas</u>	<u>0.001</u>	<u>31.1 MMscf/yr</u>											
2. _____	_____	_____											
3. _____	_____	_____											
6. Emissions in Tons: (Actual TPY Emissions from Calendar Year 2021 Emission Certification Report, for Maximum Potential Emissions See Appendix E) A. Actual Major: _____ Potential Major: _____ (note: before control device) B. Actual Emissions: NOx <u>0.3</u> SOx <u>0.00</u> VOC <u>0.00</u> PM10 <u>0.03</u> HAPs <u>0.00</u>													



SECTION 3A-15. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: CT-1 (M/L 13) 1a. Date of installation (month/year): 2017	2. MDE Registration No.:(if applicable) 027-0223-9-0391												
3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s): <u>Description: Combustion Turbine</u> <u>Manufacturer & Model No.: Solar Titan 250</u> <u>Heat Rate: 234.04 MMBtu/hr</u> <u>Horsepower Rating: 30,000 hp</u> <u>Emission Point: Stack #</u> <u>Control Equipment: None</u> 													
4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: General Reference: _____ Continuous Processes: <u>24</u> hours/day <u>365</u> days/year Batch Processes: _____ hours/batch _____ batches/day _____ days/year													
5. Fuel Consumption: <table style="width:100%; border: none;"> <thead> <tr> <th style="text-align: left;">Type(s) of Fuel</th> <th style="text-align: left;">% Sulfur</th> <th style="text-align: left;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td>1. <u>Pipeline-Quality Natural Gas</u></td> <td><u>0.001</u></td> <td><u>2,010 MMSCF/yr</u></td> </tr> <tr> <td>2. _____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>3. _____</td> <td>_____</td> <td>_____</td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. <u>Pipeline-Quality Natural Gas</u>	<u>0.001</u>	<u>2,010 MMSCF/yr</u>	2. _____	_____	_____	3. _____	_____	_____
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. <u>Pipeline-Quality Natural Gas</u>	<u>0.001</u>	<u>2,010 MMSCF/yr</u>											
2. _____	_____	_____											
3. _____	_____	_____											
6. Emissions in Tons: (Actual TPY Emissions from Calendar Year 2021 Emission Certification Report, for Maximum Potential Emissions See Appendix E) A. Actual Major: <u>X</u> Potential Major: <u>X</u> (note: before control device) B. Actual Emissions: NOx <u>15.7</u> SOx <u>0.00</u> VOC <u>29.6</u> PM10 <u>0.00</u> HAPs <u>31.3</u>													



SECTION 3A-15. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: EG-1 (Aux 2) 1a. Date of installation (month/year): 2017	2. MDE Registration No.:(if applicable) 027-0223-9-0392												
3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s): <u>Description: Auxiliary Electric Power Generator (4-Cycle, Lean-Burn</u> <u>RICE)</u> <u>Manufacturer & Model No.: Waukesha L5794LT</u> <u>Horsepower Rating: 1,450 HP</u> <u>Heat Rate: 10.9 MMBtu/hr</u> <u>Control Equipment: None</u> 													
4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: General Reference: <u>40 CFR 60 Subpart JJJJ / 40 CFR 63 Subpart ZZZZ</u> Continuous Processes: _____ hours/day _____ days/year Batch Processes: _____ hours/batch _____ batches/day _____ days/year													
5. Fuel Consumption: <table style="width:100%; border: none;"> <thead> <tr> <th style="text-align: left;">Type(s) of Fuel</th> <th style="text-align: left;">% Sulfur</th> <th style="text-align: left;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td>1. <u>Pipeline-Quality Natural Gas</u></td> <td><u>0.001</u></td> <td><u>MMscf/yr</u></td> </tr> <tr> <td>2. _____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>3. _____</td> <td>_____</td> <td>_____</td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. <u>Pipeline-Quality Natural Gas</u>	<u>0.001</u>	<u>MMscf/yr</u>	2. _____	_____	_____	3. _____	_____	_____
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. <u>Pipeline-Quality Natural Gas</u>	<u>0.001</u>	<u>MMscf/yr</u>											
2. _____	_____	_____											
3. _____	_____	_____											
6. Emissions in Tons: (Actual TPY Emissions from Calendar Year 2021 Emission Certification Report, for Maximum Potential Emissions See Appendix E) A. Actual Major: _____ Potential Major: _____ (note: before control device) B. Actual Emissions: NOx <u>0.1</u> SOx <u>0.00</u> VOC <u>0.00</u> PM10 <u>0.01</u> HAPs <u>0.008</u>													



SECTION 3A-16. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: FUG 1 1a. Date of installation (month/year): 1950s	2. MDE Registration No.:(if applicable) N/A												
3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s): <u>Description: Piping Component Fugitives</u> <u>Manufacturer & Model No. : N/A</u> <u>Design Capacity: N/A</u> 													
4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: General Reference: _____ Continuous Processes: <u>24</u> hours/day <u>365</u> days/year Batch Processes: _____ hours/batch _____ batches/day _____ days/year													
5. Fuel Consumption: <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; width: 40%;">Type(s) of Fuel</th> <th style="text-align: left; width: 20%;">% Sulfur</th> <th style="text-align: left; width: 40%;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td>1. <u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>2. _____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>3. _____</td> <td>_____</td> <td>_____</td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. <u>N/A</u>	<u>N/A</u>	<u>N/A</u>	2. _____	_____	_____	3. _____	_____	_____
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. <u>N/A</u>	<u>N/A</u>	<u>N/A</u>											
2. _____	_____	_____											
3. _____	_____	_____											
6. Emissions in Tons: (Actual TPY Emissions from Calendar Year 2021 Emission Certification Report, for Maximum Potential Emissions See Appendix E) A. Actual Major: _____ Potential Major: _____ (note: before control device) B. Actual Emissions: NOx <u>N/A</u> SOx <u>N/A</u> VOC <u>0.8</u> PM10 <u>N/A</u> HAPs <u>N/A</u>													



SECTION 3A-19. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: FUG 2 1a. Date of installation (month/year): 1950s	2. MDE Registration No.:(if applicable) N/A												
3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s): <u>Description: Blowdown/Venting Fugitives</u> <u>Manufacturer & Model No. : N/A</u> <u>Design Capacity: N/A</u> 													
4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: General Reference: _____ Continuous Processes: <u>24</u> hours/day <u>365</u> days/year Batch Processes: _____ hours/batch _____ batches/day _____ days/year													
5. Fuel Consumption: <table style="width:100%; border: none;"> <thead> <tr> <th style="text-align: left;">Type(s) of Fuel</th> <th style="text-align: left;">% Sulfur</th> <th style="text-align: left;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td>1. <u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>2. _____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>3. _____</td> <td>_____</td> <td>_____</td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. <u>N/A</u>	<u>N/A</u>	<u>N/A</u>	2. _____	_____	_____	3. _____	_____	_____
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. <u>N/A</u>	<u>N/A</u>	<u>N/A</u>											
2. _____	_____	_____											
3. _____	_____	_____											
6. Emissions in Tons: (Actual TPY Emissions from Calendar Year 2021 Emission Certification Report, for Maximum Potential Emissions See Appendix E) A. Actual Major: _____ Potential Major: _____ (note: before control device) B. Actual Emissions: NOx <u>N/A</u> SOx <u>N/A</u> VOC <u>0.7</u> PM10 <u>N/A</u> HAPs <u>N/A</u>													



SECTION 3B-1. CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: Facility-Wide General Ref: COMAR 26.11.03.02B(3) & .03.02E

Briefly describe the Emission Standard/Limit or Operational Limitation:

Submittal of a timely and complete permit renewal application to the Department

Compliance Demonstration:

Check appropriate reports required to be submitted:

Quarterly Monitoring Report: _____

Annual Compliance Certification: X

Semi-Annual Monitoring Report: _____

Methods used to demonstrate compliance:

Monitoring: Reference N/A Describe: N/A

Testing: Reference N/A Describe: N/A

Record Keeping: Reference N/A Describe: N/A

Reporting: Reference N/A Describe: At least 6 months, but not more than 12
months, before expiration of the permit.

Frequency of submittal of the compliance demonstration: N/A



MARYLAND DEPARTMENT OF THE ENVIRONMENT

SECTION 3B-2. CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: Facility-Wide General Ref: COMAR 26.11.02.16A(2) & .16.A(5)(b)

Briefly describe the Emission Standard/Limit or Operational Limitation:

Part 70 permit fee payment

Compliance Demonstration:

Check appropriate reports required to be submitted:

Quarterly Monitoring Report: _____

Annual Compliance Certification: X

Semi-Annual Monitoring Report: _____

Methods used to demonstrate compliance:

Monitoring: Reference N/A Describe: N/A

Testing: Reference N/A Describe: N/A

Record Keeping: Reference N/A Describe: Accounts Payable

Reporting: Reference N/A Describe: Payment on or before each 12-month anniversary date of the permit.

Frequency of submittal of the compliance demonstration: Annual



SECTION 3B-3. CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: Facility-Wide General Reference: COMAR 26.11.01.06

Briefly describe the Emission Standard/Limit or Operational Limitation:

Circumvention

Compliance Demonstration:

Check appropriate reports required to be submitted:

Quarterly Monitoring Report: _____

Annual Compliance Certification: X

Semi-Annual Monitoring Report: _____

Methods used to demonstrate compliance:

Monitoring: Reference N/A Describe: Company-Wide Management of Change Policies & Procedures

Testing: Reference N/A Describe: N/A

Record Keeping: Reference N/A Describe: Company-Wide Management of Change Policies and Procedures

Reporting: Reference N/A Describe: N/A

Frequency of submittal of the compliance demonstration: N/A



SECTION 3B-4. CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: Facility-Wide General Reference: COMAR 26.11.06.03D

Briefly describe the Emission Standard/Limit or Operational Limitation:

Reasonable precautions shall be taken to prevent particulate matter from becoming airborne during
construction, reparation, or demolition projects.

Compliance Demonstration:

Check appropriate reports required to be submitted:

Quarterly Monitoring Report: _____

Annual Compliance Certification: X

Semi-Annual Monitoring Report: _____

Methods used to demonstrate compliance:

Monitoring: Reference N/A Describe: Visual observation and project oversight

Testing: Reference N/A Describe: N/A

Record Keeping: Reference N/A Describe: N/A

Reporting: Reference N/A Describe: N/A

Frequency of submittal of the compliance demonstration: N/A



MARYLAND DEPARTMENT OF THE ENVIRONMENT

SECTION 3B-5. CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: Facility-Wide General Reference: COMAR 26.11.07

Briefly describe the Emission Standard/Limit or Operational Limitation:

Excluding authorization by Public Officers (COMAR 26.11.07.04), open fires not permitted from June 1
- August 31 of any calendar year.

Compliance Demonstration:

Check appropriate reports required to be submitted:

Quarterly Monitoring Report: _____

Annual Compliance Certification: X

Semi-Annual Monitoring Report: _____

Methods used to demonstrate compliance:

Monitoring: Reference N/A Describe: Project oversight

Testing: Reference N/A Describe: N/A

Record Keeping: Reference N/A Describe: N/A

Reporting: Reference N/A Describe: Submit request for approval to the Department
prior to any proposed open burning.

Frequency of submittal of the compliance demonstration: N/A



SECTION 3B-6. CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: Facility-Wide General Reference: COMAR 26.11.05.04

Briefly describe the Emission Standard/Limit or Operational Limitation:

Air Pollution Episodes

Compliance Demonstration:

Check appropriate reports required to be submitted:

Quarterly Monitoring Report: _____

Annual Compliance Certification: X

Semi-Annual Monitoring Report: _____

Methods used to demonstrate compliance:

Monitoring: Reference N/A Describe: Maintain 24-hour accessibility

Testing: Reference N/A Describe: N/A

Record Keeping: Reference N/A Describe: N/A

Reporting: Reference N/A Describe: When requested by the Department, prepare written standby emissions reduction plans during periods of alert, warning, and emergency episodes.

Frequency of submittal of the compliance demonstration: N/A



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SECTION 3B-7. CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: Facility-Wide General Ref: COMAR 26.11.01.07 & 26.11.03.06C(7)

Briefly describe the Emission Standard/Limit or Operational Limitation:

Excess emissions and deviations from permit requirements.

Compliance Demonstration:

Check appropriate reports required to be submitted:

Quarterly Monitoring Report: _____

Annual Compliance Certification: X

Semi-Annual Monitoring Report: _____

Methods used to demonstrate compliance:

Monitoring: Reference N/A Describe: _____

(a) Orally notify Department immediately for deviations that could endanger human health & environment;

(b) Orally notify Department promptly for excess emissions expected to last one hour or longer.

Testing: Reference N/A Describe: N/A

Record Keeping: Reference N/A Describe: N/A

Reporting: Reference N/A Describe: _____

(a) When requested by Dept, prepare written report of deviations/malfunctions within 5 days of request;

(b) When requested by Dept, prepare written report of excess emissions within 10 days of request;

(c) Prepare quarterly deviation report no later than 30 days after end of relevant 3-month period;

(d) Prepare semi-annual monitoring report no later than 30 days after end of relevant 6-month period.

Frequency of submittal of the compliance demonstration: N/A



**SECTION 3B-8. CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS**

Emissions Unit No: Facility-Wide **General Ref:** COMAR 26.11.02.19C & D and 26.11.01.05-1

Briefly describe the Emission Standard/Limit or Operational Limitation:

Certification of actual annual emissions

Compliance Demonstration:

Check appropriate reports required to be submitted:

Quarterly Monitoring Report: _____

Annual Compliance Certification: X

Semi-Annual Monitoring Report: _____

Methods used to demonstrate compliance:

Monitoring: Reference N/A Describe: N/A

Testing: Reference N/A Describe: N/A

Record Keeping: Reference N/A Describe: N/A

Reporting: Reference N/A Describe: Submit emissions Certification Report no later than April 1 of the year following year requiring certification.

Frequency of submittal of the compliance demonstration: Annual



SECTION 3B-9. CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: Facility-Wide General Ref: COMAR 26.11.03.06G(6) & (7)

Briefly describe the Emission Standard/Limit or Operational Limitation:

Certification of compliance

Compliance Demonstration:

Check appropriate reports required to be submitted:

Quarterly Monitoring Report: _____

Annual Compliance Certification: X

Semi-Annual Monitoring Report: _____

Methods used to demonstrate compliance:

Monitoring: Reference N/A Describe: N/A

Testing: Reference N/A Describe: N/A

Record Keeping: Reference N/A Describe: N/A

Reporting: Reference N/A Describe: Submit Compliance Certification Report no
later than April 1 of each year.

Frequency of submittal of the compliance demonstration: Annual



SECTION 3B-10. CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: Facility-Wide General Reference: COMAR 26.11.03.06C(5) & (6)

Briefly describe the Emission Standard/Limit or Operational Limitation:

Sampling/emissions testing, monitoring/operating data and support information

Compliance Demonstration:

Check appropriate reports required to be submitted:

Quarterly Monitoring Report: _____

Annual Compliance Certification: X

Semi-Annual Monitoring Report: _____

Methods used to demonstrate compliance:

Monitoring: Reference N/A Describe: N/A

Testing: Reference N/A Describe: N/A

Record Keeping: Reference N/A Describe: Records to be retained for a period of 5
years from the sampling/testing/monitoring events.

Reporting: Reference N/A Describe: N/A

Frequency of submittal of the compliance demonstration: N/A



SECTION 3B-11. CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emiss. Unit No.: Facility-Wide Gen. Ref: COMAR 26.11.21 & 40 CFR 61, Subpart M

Briefly describe the Emission Standard/Limit or Operational Limitation:

Compliance with notification, control, and waste disposal requirements prior to, during, and after
any asbestos renovation or demolition activities.

Compliance Demonstration:

Check appropriate reports required to be submitted:

Quarterly Monitoring Report: _____

Annual Compliance Certification: X

Semi-Annual Monitoring Report: _____

Methods used to demonstrate compliance:

Monitoring: Reference N/A Describe: Project oversight. Air monitoring may be required.

Testing: Reference N/A Describe: N/A

Record Keeping: Reference N/A Describe: Retain licensed contractor and waste
disposal documentation for the life of the facility.

Reporting: Reference N/A Describe: Notify appropriate state and/or federal agencies
prior to any proposed asbestos renovation or demolition activities. Provide copy of waste disposal
receipt as required.

Frequency of submittal of the compliance demonstration: N/A



SECTION 3B-12. CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: Facility-Wide General Reference: 40 CFR 82, Subpart F

Briefly describe the Emission Standard/Limit or Operational Limitation:

Recycling and emissions reduction for substances containing CFCs

Compliance Demonstration:

Check appropriate reports required to be submitted:

Quarterly Monitoring Report: _____

Annual Compliance Certification: X

Semi-Annual Monitoring Report: _____

Methods used to demonstrate compliance:

Monitoring: Reference N/A Describe: Verify contractor certification pursuant to 40 CFR 82.161 and 82.162 before contractor commences any maintenance, service, or repair of appliances and systems that contain CFCs.

Testing: Reference N/A Describe: N/A

Record Keeping: Reference N/A Describe: Retain proper documentation confirming that only appropriately-certified contractors are retained to maintain, service, or repair appliances and systems that contain CFCs.

Reporting: Reference N/A Describe: N/A

Frequency of submittal of the compliance demonstration: N/A



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SECTION 3B-13. CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit Nos.: M/L 1 – M/L 13, AUX 1 – AUX 2 General Reference: COMAR
26.11.09.05B(2)

Briefly describe the Emission Standard/Limit or Operational Limitation:

Visible emissions from each IC engine limited to 10% opacity or less during idle mode, except:

For 2 consecutive min. after idling 15 consecutive min. for purpose of clearing exhaust system

[COMAR 26.11.09.05B(4)(a)];

For 30 minutes due to emissions resulting from cold engine start-ups/warm-ups on engines that are

idled continuously when not in service [COMAR 26.11.09.05B(4)(b)];

For 15 min. on all other engines [COMAR 26.11.09.05B(4)(b)];

When maintenance, repair, or testing is being performed by qualified mechanics

[COMAR 26.11.09.05B(4)(c)].

Compliance Demonstration:

Check appropriate reports required to be submitted:

Quarterly Monitoring Report: _____

Annual Compliance Certification: X

Semi-Annual Monitoring Report: X

Methods used to demonstrate compliance:

Monitoring: Reference N/A Describe: Visual observation. Engineering judgment -
Natural gas-fired equipment results in nominal visible emissions per EPA guidance

Testing: Reference N/A Describe: N/A

Record Keeping: Reference N/A Describe: Fuel use records documenting equipment
fired exclusively with natural gas.

Reporting: Reference N/A Describe: Incidents of excess visible emissions shall be
reported under "Report of Excess Emissions & Deviations" under COMAR 26.11.01.07 & 26.11.03.06C(7)

Frequency of submittal of the compliance demonstration: Annual



MARYLAND DEPARTMENT OF THE ENVIRONMENT

SECTION 3B-14. CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit Nos.: M/L 1 – M/L 13, AUX 1 – AUX 2 General Reference: COMAR
26.11.09.05B(3)

Briefly describe the Emission Standard/Limit or Operational Limitation:

Visible emissions from each IC engine limited to 40% opacity or less during operating mode, except:

When maintenance, repair, or testing is being performed by qualified mechanics

[COMAR 26.11.09.05B(4)(c)].

Compliance Demonstration:

Check appropriate reports required to be submitted:

Quarterly Monitoring Report: _____

Annual Compliance Certification: X

Semi-Annual Monitoring Report: X

Methods used to demonstrate compliance:

Monitoring: Reference N/A Describe: Visual observation. Engineering judgment -
Natural gas-fired equipment results in nominal visible emissions per EPA guidance

Testing: Reference N/A Describe: N/A

Record Keeping: Reference N/A Describe: Fuel use records documenting equipment
fired exclusively with natural gas.

Reporting: Reference N/A Describe: Incidents of excess visible emissions shall be
reported under "Report of Excess Emissions & Deviations" under COMAR 26.11.01.07 & 26.11.03.06C(7)

Frequency of submittal of the compliance demonstration: Annual



SECTION 3B-15. CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit Nos.: M/L 1 – M/L 13

General Reference: COMAR 26.11.09.08I(3)(b)

Briefly describe the Emission Standard/Limit or Operational Limitation:

Nitrogen Oxides Reasonably Available Control Technology Requirements (NOx RACT)

Facilities with more than five engines shall meet a combined maximum hourly NOx emission rate

of 566 pounds per hour.

Compliance Demonstration:

Check appropriate reports required to be submitted:

Quarterly Monitoring Report: _____

Annual Compliance Certification: X

Semi-Annual Monitoring Report: X

Methods used to demonstrate compliance:

Monitoring: Reference COMAR26.11.03.06C Describe: If the results of the NOx testing indicate that the facility-wide NOx emission limit may be exceeded; within 60 days determine the cause of the excess NOx emissions, take corrective action, and retest the units that contribute to the facility-wide excess NOx emissions.

Testing: Reference COMAR26.11.03.06C(3) Describe: Perform annual NOx emissions test on each engine using appropriate EPA Reference Methods unless alternative test methods received prior approval from the Department. Submit a test protocol to the Department for approval at least 30 days prior to the proposed test date.

Record Keeping: Reference COMAR26.11.03.06C Describe: _____
(1) Results of NOx testing to verify compliance with the facility-wide NOx emissions limit of 566 pounds per year
(2) Record of maintenance performed to the engines whenever such maintenance is required in order avoid or remedy a possible exceedance of the facility-wide emission limit.

Reporting: Reference COMAR26.11.03.06C Describe: Submit to the Department the results of the annual NOx emissions testing within 45 days of the completion of the tests. The supporting data that is the basis for the compliance with the combined maximum hourly emission rate of 566 pounds per hour shall also be included.

Frequency of submittal of the compliance demonstration: Annual



SECTION 3B-16. CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit Nos.: M/L 1 – M/L 13, AUX 1-AUX 2 General Reference: COMAR
26.11.02.09

Briefly describe the Emission Standard/Limit or Operational Limitation:

Burn only pipeline quality natural gas

Compliance Demonstration:

Check appropriate reports required to be submitted:

Quarterly Monitoring Report: _____

Annual Compliance Certification: X

Semi-Annual Monitoring Report: X

Methods used to demonstrate compliance:

Monitoring: Reference N/A Describe: N/A

Testing: Reference N/A Describe: N/A

Record Keeping: Reference COMAR26.11.02.19C(1)(c) Describe: Maintain a record of the type and quantity of fuel burned in each engine.

Reporting: Reference COMAR26.11.02.19C(2) and .19D Describe: Report the type and quantity of fuel burned in each engine in the annual emissions certification

Frequency of submittal of the compliance demonstration: Annual



SECTION 3B-17. CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit Nos.: M/L 1 – M/L 13, AUX 1- AUX 2

General Reference: 40 CFR part 63, Subpart ZZZZ (RICE MACT)

Briefly describe the Emission Standard/Limit or Operational Limitation:

Reduction of HAP emissions from subject sources

Compliance Demonstration:

Check appropriate reports required to be submitted:

Quarterly Monitoring Report: _____

Annual Compliance Certification: _____

Semi-Annual Monitoring Report: _____

Methods used to demonstrate compliance:

Monitoring: Reference N/A Describe: N/A

Testing: Reference N/A Describe: N/A

Record Keeping: Reference 40 CFR part 63, Subpart ZZZZ Describe: Maintain a copy of the
determination of applicability onsite.

Reporting: Reference N/A Describe: N/A

Frequency of submittal of the compliance demonstration: N/A



**SECTION 3B-18. CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS**

Emissions Unit Nos.: M/L 11 – M/L 12 General Reference: COMAR 26.11.29.15D(1)

Briefly describe the Emission Standard/Limit or Operational Limitation:

NOx Reduction and Trading Program – Emissions Reduction Requirements for Stationary Internal
Combustion Engines. Meet the NOx emission standards for internal combustion engines in COMAR
26.11.29.15D(2).

Compliance Demonstration:

Check appropriate reports required to be submitted:

Quarterly Monitoring Report: X

Annual Compliance Certification: X

Semi-Annual Monitoring Report: X

Methods used to demonstrate compliance:

Monitoring: Reference COMAR 26.11.29.15B and PTC No. 027-9-0224M issued November 18, 2002

Describe: (1) Monitor NOx emissions with a CEM or use an alternative method approved by the Department and the
EPA. Submit emissions data to the Department for each Control Period by November 30 each year. (2) The engines
shall be equipped with a parametric emissions monitoring system (PEMS) that shall automatically sample data at fifteen-
minute intervals or less and automatically record block hourly averages for the required parameters. (3) During the
Control Period of each year the PEMS shall automatically sample data and calculate at 15 minute intervals or less and
automatically record a block hourly average of the required parameters.

Testing: Reference PTC 027-9-0224M issued November 18, 2002 Describe: Perform annual confirmatory
emissions testing for NOx during the Control Period on each engine using appropriate EPA Reference Methods unless
alternative test methods receive prior approval from the Department.

Record Keeping: Reference COMAR 26.11.29.15B(1) and PTC No. 027-9-0224M issued November 18, 2002

Describe: (1) Keep the NOx emissions monitoring records and submit PEMS records to the Department for each
Control Period demonstrating that the engines are operated in accordance with the parametric optimization during the
Control Period. (2) Keep the results of the annual NOx testing done to confirm the PEMS

Reporting: Reference Multiple (see description) Describe: (1) Submit PEMS emissions data to the Department for
each Control Period by November 30 each year [Reference: COMAR 26.11.29.15B(1)(c)]. (2) Submit the results report
of the confirmatory emissions testing for NOx by November 30 each year [Reference: COMAR 26.11.03.06C]. (3)
Report all excursions to the Department within 30 days after the end of each calendar quarter [Reference: PTC No. 027-
9-0224M issued on November 18, 2002].

Frequency of submittal of the compliance demonstration: quarterly



SECTION 3B-19. CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit Nos.: M/L 1 – M/L 10

General Reference: PTC No. 027-0223-5-0054 M issued January 20, 2015

Briefly describe the Emission Standard/Limit or Operational Limitation:

Carbon Monoxide and VOC Annual Emissions Limitation – To avoid triggering requirements of New Source Review (NSR) and Prevention of Significant Deterioration (PSD), emissions increases from both affected engines collectively as a result of the modifications performed shall be limited to less than 25 tons per year for VOC and 100 tons per year for CO for any period of 12 months

Compliance Demonstration:

Check appropriate reports required to be submitted:

Quarterly Monitoring Report: _____

Annual Compliance Certification: X

Semi-Annual Monitoring Report: X

Methods used to demonstrate compliance:

Monitoring: Reference N/A Describe: N/A

Testing: Reference N/A Describe: N/A

Record Keeping: Reference COMAR 26.11.03.06C Describe: Maintain records of emissions of CO and VOC sufficient to demonstrate that the emissions increase from the modification

Reporting: Reference COMAR 26.11.02.19D Describe: Report the annual emissions of CO and VOC in the annual emissions certification report

Frequency of submittal of the compliance demonstration: N/A



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SECTION 3B-20. CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit Nos.: M/L 1 – M/L 10

General Reference: PTC No. 027-0223-5-0054 M issued January 20, 2015

Briefly describe the Emission Standard/Limit or Operational Limitation:

NOx Annual Emissions Limitation – The total NOx emissions from the seven (7) Clark HBA-8T and three
(3) Clark TLA-6 engines shall be limited to less than 294.3 tons. The limit shall apply over any period of 12
consecutive months and shall be federally enforceable

Compliance Demonstration:

Check appropriate reports required to be submitted:

Quarterly Monitoring Report: _____

Annual Compliance Certification: X

Semi-Annual Monitoring Report: X

Methods used to demonstrate compliance:

Monitoring: Reference N/A Describe: N/A

Testing: Reference N/A Describe: N/A

Record Keeping: Reference COMAR 26.11.03.06C Describe: Maintain records of NOx emissions

Reporting: Reference COMAR 26.11.02.19D Describe: Report NOx annual emissions in the annual emissions certification report

Frequency of submittal of the compliance demonstration: N/A



SECTION 3B-21. CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit Nos.: M/L 11 – M/L 12

General Reference: PTC No. 027-9-0224M issued November 18, 2002

Briefly describe the Emission Standard/Limit or Operational Limitation:

Carbon Monoxide and VOC Annual Emissions Limitation – To avoid triggering requirements of New Source Review (NSR) and Prevention of Significant Deterioration (PSD), emissions increases from both affected engines collectively as a result of the modifications performed shall be limited to less than 25 tons per year for VOC and 100 tons per year for CO for any period of 12 months

Compliance Demonstration:

Check appropriate reports required to be submitted:

Quarterly Monitoring Report: _____

Annual Compliance Certification: X

Semi-Annual Monitoring Report: X

Methods used to demonstrate compliance:

Monitoring: Reference N/A Describe: N/A

Testing: Reference N/A Describe: N/A

Record Keeping: Reference COMAR 26.11.03.06C Describe: Maintain records of emissions of CO and VOC sufficient to demonstrate that the emissions increase from the modification

Reporting: Reference COMAR 26.11.02.19D Describe: Report the annual emissions of CO and VOC in the annual emissions certification report

Frequency of submittal of the compliance demonstration: N/A



SECTION 3B-22. CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit Nos.: AUX 1, AUX 2

General Reference: COMAR 26.11.09.08G(1)

Briefly describe the Emission Standard/Limit or Operational Limitation:

Nitrogen Oxides Reasonably Available Control Technology Requirements: Capacity Factor

(1) Provide certification of the capacity factor to the Department in writing. (2) For a unit that operates more than 500 hours per calendar year, perform a combustion analysis and optimize combustion at least annual. (3) Maintain results of any combustion analysis at the site. (4) Require operator to attend operator training programs at least once every 3 years. (5) Maintain record of training program attendance.

Compliance Demonstration:

Check appropriate reports required to be submitted:

Quarterly Monitoring Report: _____

Annual Compliance Certification: X

Semi-Annual Monitoring Report: X

Methods used to demonstrate compliance:

Monitoring: Reference COMAR 26.11.03.06C Describe: Capacity Factor

The Permittee shall calculate the capacity factor of the engine at the end of each month

Testing: Reference COMAR 26.11.09.08G(1)(b) Describe: Combustion Analysis

Anytime the hours of operation exceed 500 hours in a calendar year, the Permittee shall perform a combustion analysis

Record Keeping: Reference COMAR 26.11.03.06 Describe: Records Maintenance

(1) Monthly records of the calculated capacity factors

(2) Monthly records of the hours of operation

(3) Records of combustion analysis performed if the hours of operation exceeded 500

(4) Record of training program attendance for each operator

Reporting: Reference COMAR 26.11.09.08G(1)(a) & COMAR 26.11.03.06C

Describe: The Permittee shall provide certification of the capacity factor of the equipment to the Department in writing as part of the April 1 emission certification report.

The Permittee shall submit a record of training program attendance for each operator to the Department upon request.

Frequency of submittal of the compliance demonstration: N/A



SECTION 3B-23. CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit Nos.: AUX 1, AUX 2 General Reference: COMAR 26.11.09.08G

Briefly describe the Emission Standard/Limit or Operational Limitation:

The capacity factor shall be limited to 15 percent of less

Compliance Demonstration:

Check appropriate reports required to be submitted:

Quarterly Monitoring Report: _____

Annual Compliance Certification: X

Semi-Annual Monitoring Report: X

Methods used to demonstrate compliance:

Monitoring: Reference N/A Describe: N/A

Testing: Reference N/A Describe: N/A

Record Keeping: Reference COMAR 26.11.02.19.C(1)(c) Describe: Maintain a record of the type and quantity of fuel burned

Reporting: Reference COMAR 26.11.02.11.C(2) and .19D Describe: Report the type and quantity of fuel burned in the annual emissions certification report

Frequency of submittal of the compliance demonstration: N/A



SECTION 3B-24. CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit Nos.: BLR1 & BLR2 General Reference: COMAR 26.11.09.05A(2)

Briefly describe the Emission Standard/Limit or Operational Limitation:

Visible emissions limitation – a person may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is visible to human observers.

Exceptions: Section A(1) and (2) of this regulation do not apply to emissions during load changing, soot blowing, start-up, or adjustments or occasional cleaning of control equipment if: (a) the visible emissions are not greater than 40 percent opacity; and (b) the visible emissions do not occur for more than sixty consecutive minute period.

Compliance Demonstration:

Check appropriate reports required to be submitted:

Quarterly Monitoring Report: _____

Annual Compliance Certification: X

Semi-Annual Monitoring Report: X

Methods used to demonstrate compliance:

Monitoring: Reference N/A Describe: Visual observation. Engineering judgment -
 Natural gas-fired equipment results in nominal visible emissions per EPA guidance

Testing: Reference N/A Describe: N/A

Record Keeping: Reference N/A Describe: Fuel use records documenting equipment
 fired exclusively with natural gas.

Reporting: Reference N/A Describe: N/A

Frequency of submittal of the compliance demonstration: N/A



SECTION 3B-25. CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit Nos.: BLR1 & BLR2 General Reference: COMAR 26.11.09.08B(1)(a)

Briefly describe the Emission Standard/Limit or Operational Limitation:

Control of Nitrogen Oxides – The owner or operator of an installation that causes NOx emissions is in compliance with COMAR 26.11.09.08 if the person establishes compliance with permit requirements.

Compliance Demonstration:

Check appropriate reports required to be submitted:

Quarterly Monitoring Report: _____

Annual Compliance Certification: X

Semi-Annual Monitoring Report: X

Methods used to demonstrate compliance:

Monitoring: Reference N/A Describe: N/A

Testing: Reference N/A Describe: N/A

Record Keeping: Reference N/A Describe: Fuel use records documenting equipment fired exclusively with natural gas.

Reporting: Reference N/A Describe: N/A

Frequency of submittal of the compliance demonstration: N/A



SECTION 3B-26. CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit Nos.: BLR1 & BLR2 General Reference: COMAR 26.11.02.09

Briefly describe the Emission Standard/Limit or Operational Limitation:

Burn only pipeline quality natural gas

Compliance Demonstration:

Check appropriate reports required to be submitted:

Quarterly Monitoring Report: _____

Annual Compliance Certification: X

Semi-Annual Monitoring Report: X

Methods used to demonstrate compliance:

Monitoring: Reference N/A Describe: N/A

Testing: Reference N/A Describe: N/A

Record Keeping: Reference COMAR 26.11.02.19.C(1)(c) Describe: Maintain a record of the type and quantity of fuel burned

Reporting: Reference N/A Describe: Report the type and quantity of fuel burned in the annual emissions certification report

Frequency of submittal of the compliance demonstration: N/A



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SECTION 3B-27. CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: AUX 1

General Reference: Title V Permit No. 24-027-00223

Briefly describe the Emission Standard/Limit or Operational Limitation: Auxiliary generator shall not be operated more than 5,000 hours in any consecutive 12-month period.

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: _____
☐ Annual Compliance Certification: X
☐ Semi-Annual Monitoring Report: X

Methods used to demonstrate compliance:

Monitoring: Reference N/A Describe: N/A

Testing: Reference N/A Describe: N/A

Record Keeping: Reference Title V Permit No. 24-027-00223 Describe: Log hours of operation and fuel use. Maintain records on site for at least 5 years.

Reporting: Reference N/A Describe: N/A

Frequency of submittal of the compliance demonstration: Semi-Annual

SECTION 3B-28. CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS



Emissions Unit No.: All Units

General Reference: COMAR 26.11.41.02

Briefly describe the Emission Standard/Limit or Operational Limitation:

The provisions of this chapter apply to an affected facility as that term is defined in Regulation .01B of this chapter.

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: _____
- ☐ Annual Compliance Certification: X
- ☐ Semi-Annual Monitoring Report: _____

Methods used to demonstrate compliance:

Monitoring: Reference N/A Describe: _____

Testing: Reference N/A Describe: _____

Record Keeping: N/A Describe: _____

Reporting: Reference N/A Describe: _____

Frequency of submittal of the compliance demonstration: N/A

**SECTION 3B-29. CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS**



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Emissions Unit No.: FUG 1 & FUG 2

General Reference: COMAR 26.11.41.03A

Briefly describe the Emission Standard/Limit or Operational Limitation:

Station 190 shall develop and submit to the Department an initial methane emissions monitoring plan that includes a technique for determining fugitive emissions

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: _____
☐ Annual Compliance Certification: _____
☐ Semi-Annual Monitoring Report: _____

Methods used to demonstrate compliance:

Monitoring: Reference COMAR 26.11.41.03(A)(8)(a) Describe: Owners and operators of affected facilities shall follow the initial monitoring methane plan and shall inspect all fugitive emission components, except for unsafe-to-monitor components, for leaks using OGI or EPA Method 21 within 180 days of the adoption of this chapter and quarterly thereafter.

Testing: Reference N/A Describe:

Record Keeping: COMAR 26.11.41.07A(1) Describe: COMAR 26.11.41.07A(1) (a), (b), (c), and (d) list all recordkeeping requirements for leak monitoring

Reporting: Reference N/A Describe:

Frequency of submittal of the compliance demonstration: Monitoring plan submitted April 27, 2021

**SECTION 3B-30. CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS**



MARYLAND DEPARTMENT OF THE ENVIRONMENT

Emissions Unit No.: FUG 1 & FUG 2

General Reference: COMAR 26.11.41.03E

Briefly describe the Emission Standard/Limit or Operational Limitation:

If an owner requests approval, the Department may approve a new technology or alternative practice to identify leaking fugitive emissions components as an equivalent substitution for the requirements in §A or B of this regulation.

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: _____
☐ Annual Compliance Certification: _____
☐ Semi-Annual Monitoring Report: _____

Methods used to demonstrate compliance:

Monitoring: Reference N/A Describe: _____

Testing: Reference N/A Describe: _____

Record Keeping: N/A Describe: _____

Reporting: Reference N/A Describe: _____

Frequency of submittal of the compliance demonstration: N/A

**SECTION 3B-31. CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS**



MARYLAND DEPARTMENT OF THE ENVIRONMENT

Emissions Unit No.: M/L 1 – M/L 13

General Reference: COMAR 26.11.41.05A

Briefly describe the Emission Standard/Limit or Operational Limitation:

All reciprocating natural gas compressor components at an affected facility shall comply with the leak detection and repair requirements in Regulation .03 of this chapter where applicable.

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: _____
☐ Annual Compliance Certification: X _____
☐ Semi-Annual Monitoring Report: X _____

Methods used to demonstrate compliance:

Monitoring: Reference N/A Describe: _____

Testing: Reference N/A Describe: _____

Record Keeping: COMAR 26.11.41.07C Describe: This rule lists all recordkeeping requirements for reciprocating natural gas compressors

Reporting: Reference N/A Describe: _____

Frequency of submittal of the compliance demonstration: 60 day LDAR report & Annual

**SECTION 3B-32. CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS**



Emissions Unit No.: M/L 1 – M/L 13

General Reference: COMAR 26.11.41.05B

Briefly describe the Emission Standard/Limit or Operational Limitation:

By January 1, 2021, compressor vent stacks used to vent rod packing/seal emissions shall be controlled with the use of a vapor collection system as specified in Regulation .06 of this chapter; or by April 1, the reciprocating natural gas compressor rod packing/seal emission flow rate through the rod packing/seal vent stack shall be measured annually through direct measurement (high volume sampling, bagging, calibrated flow measuring instrument, etc.) while the compressor is operating at normal operating temperature.

A reciprocating natural gas compressor with a rod packing/seal with a measured emission flow rate that exceeds 1 standard cubic foot per minute, or a combined rod packing or seal emission flow rate that exceeds the number of compression cylinders multiplied by 1 standard cubic foot per minute shall:

(a) Be successfully repaired or replaced within 30 calendar days from the date of the exceedance; or

(b) Conduct natural gas compressor rod packing/seal emission flow rate measurements every 6 months or when the compressor resumes operation, whichever is later.

A reciprocating natural gas compressor with a measured emission flow rate that exceeds 2 standard cubic feet per minute, or a combined rod packing or seal emission flow rate that exceeds the number of compression cylinders multiplied by 2 standard cubic feet per minute, shall be successfully repaired or replaced within 30 calendar days from the date of the exceedance.

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: _____
- ☐ Annual Compliance Certification: X
- ☐ Semi-Annual Monitoring Report: _____

Methods used to demonstrate compliance:



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Monitoring: Reference COMAR 26.11.41B(a) Describe: Direct measurements shall use one of the following methods: vent stacks shall be equipped with a meter or instrumentation to measure the rod packing or seal emissions flowrate; or vent stacks shall be equipped with a clearly identified access port to measure individual or combined rod packing or seal emission flow rates

Testing: Reference COMAR 26.11.41B(b) Describe: If the measurement is not obtained because the compressor is not operating for the scheduled test date, testing shall be conducted within 7 calendar days of resumed operation.

Record Keeping: N/A Describe: _____

Reporting: Reference N/A Describe: _____

Frequency of submittal of the compliance demonstration: Annual



SECTION 3B-33. CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: M/L 1 – M/L 13

General Reference: COMAR 26.11.41.05C

Briefly describe the Emission Standard/Limit or Operational Limitation:

A delay of repair may occur provided the owner or operator provides documentation, upon request from the Department, that the delivery of parts or equipment required to make necessary repairs will take more than 30 days from the last emission flow rate measurement and that the parts have been ordered.

A delay of repair to obtain parts or equipment may not exceed 60 days from the date of the last emission flow rate measurement unless the owner or operator notifies the Department, in writing, of the extended delay and provides an estimated time by which the repairs will be completed.

A reciprocating natural gas compressor with a rod packing/seal emission flow rate measured above the standard specified in §B(4) of this regulation, and which has leaking parts deemed unsafe to monitor or requiring a facility shutdown, shall be successfully repaired by the end of the next planned process shutdown or within 12 months from the date of the flow rate measurement, whichever is sooner.

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: _____
- ☐ Annual Compliance Certification: X _____
- ☐ Semi-Annual Monitoring Report: _____

Monitoring: Reference N/A Describe: _____

Testing: Reference N/A Describe: _____

Record Keeping: N/A Describe: _____

Reporting: Reference N/A Describe: _____

Frequency of submittal of the compliance demonstration: Annual



**SECTION 3B-34. CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS**

Emissions Unit No.: All Units

General Reference: COMAR 26.11.41.07A

Briefly describe the Emission Standard/Limit or Operational Limitation:
Owners or operators of affected facilities shall maintain, submit as described in this section, and make
available upon request by the Department a copy of records necessary to verify compliance with the
provisions of this chapter

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: __X__
- ☐ Annual Compliance Certification: _____
- ☐ Semi-Annual Monitoring Report: _____

Methods used to demonstrate compliance:

Monitoring: COMAR 26.11.41.07(A) Describe: Monitoring surveys must be conducted at least as
frequently as required by COMAR 26.11.41.03(A)(8).

Testing: Reference Describe: _____

Record Keeping: Describe: _____

Reporting: COMAR 26.11.41.07(A)(1)(a) Describe: Submit a report to the Department within 60 days of
each leak monitoring survey with the following information:

- (i) Date of the survey;
- (ii) A list of each fugitive emission and repair;
- (iii) Any deviations from the initial methane monitoring plan or a statement that there were no deviations from
the initial methane monitoring plan;
- (iv) Number and type of components for which fugitive emissions were detected;
- (v) Number and type of difficult-to-monitor fugitive emission components monitored;



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- (vi) Instrument reading of each fugitive emissions component that requires repair when EPA Method 21 (40 CFR 60, Appendix A-7) is used for monitoring;
- (vii) Number and type of fugitive emissions components that were not repaired;
- (viii) Number and type of fugitive emission components placed on delay of repair and explanation for each delay of repair;
- (ix) The date of successful repair of the fugitive emissions component; and
- (x) Instrumentation used to resurvey a repaired fugitive emissions component that could not be repaired during the initial fugitive emissions finding;

- (b) Maintain, for a minimum of 5 years, record of each leak monitoring survey along with the following information:
 - (i) Reports submitted according to §A(1)(a) of this regulation;
 - (ii) Beginning and end time of the survey;
 - (iii) Name of operator(s) performing survey;
 - (iv) Monitoring instrument used, including the manufacturer, model number, serial number, and calibration documentation;
 - (v) When optical gas imaging is used to perform the survey, one or more digital photographs or videos, captured from the optical gas imaging instrument used for conduct of monitoring, of each required monitoring survey being performed;
 - (vi) Fugitive emissions component identification when EPA Method 21 (40 CFR 60, Appendix A-7) is used to perform the monitoring survey;
 - (vii) Ambient temperature, sky conditions, and maximum wind speed at the time of the survey;
 - (viii) Any deviations from the initial methane monitoring plan or a statement that there were no deviations from the initial methane monitoring plan;
 - (ix) Proof that parts or equipment required to make necessary repairs, as required by this chapter, have been ordered;
 - (x) If a fugitive emissions component is not tagged, a digital photograph or video of each fugitive emissions component that could not be repaired during the leak monitoring survey at the time the fugitive emissions were initially found; and
 - (xi) Repair methods applied in each attempt to repair the fugitive emissions components

Frequency of submittal of the compliance demonstration: Quarterly



SECTION 3B-35. CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: M/L1-M/L13

General Reference: COMAR 26.11.41.07(A)(3)

Briefly describe the Emission Standard/Limit or Operational Limitation: Reporting requirements for each reciprocating natural gas compressor

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: _____
- ☐ Annual Compliance Certification: X _____
- ☐ Semi-Annual Monitoring Report: _____

Methods used to demonstrate compliance:

Monitoring: Reference _____ Describe: _____

Testing: Reference _____ Describe: _____

Record Keeping and Reporting: COMAR 26.11.41.07(A)(3) Describe: For each reciprocating natural gas compressor, owners and operators shall:

- (a) Maintain a record of each rod packing leak concentration measurement found above the minimum leak threshold and report annually beginning April 1, 2021, for at least 5 years from the date of each leak concentration measurement;
- (b) Maintain a record of each rod packing or seal emission flow rate measurement and report annually beginning April 1, 2021, for at least 5 years from the date of each emissions flow rate measurement;
- (c) Maintain a record that documents the date(s) and hours of operation a compressor is operated in order to demonstrate compliance with the rod packing leak concentration or emission flow rate measurement in the event that the compressor is not operating during a scheduled inspection for at least 1 calendar year;
- (d) Maintain records that provide proof that parts or equipment required to make necessary repairs required by this chapter have been ordered;
- (e) Report annually the cumulative number of hours of operation or the number of months since initial startup or the previous reciprocating compressor rod packing replacement, whichever is later, beginning April 1, 2021;
- (f) If applicable, submit a statement that emissions from the rod packing are being routed to applicable vapor control system under Regulation .06 of this chapter;
- (g) Report records of deviations from this chapter that occurred during the reporting period annually, beginning April 1, 2021; and
- (h) Maintain a record of purchase orders, work orders, or any in-house or third-party reports produced or provided to the affected facility necessary to demonstrate compliance with the delay of repair provisions of this chapter for at least 5 years.

Frequency of submittal of the compliance demonstration: Annually _____



**SECTION 3B-36. CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS**

Emissions Unit No.: Facility-wide

General Reference: COMAR 26.11.41B

Briefly describe the Emission Standard/Limit or Operational Limitation: Blowdown Events and Reporting Requirements per the MDE approved Blowdown Notification Plan

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: _____
- ☐ Annual Compliance Certification: X _____
- ☐ Semi-Annual Monitoring Report: _____

Methods used to demonstrate compliance:

Monitoring: Reference N/A _____ Describe: _____

Testing: Reference N/A _____ Describe: _____

Record Keeping: COMAR 26.11.41.07B Describe: For any blowdown event in excess of 1,000,000 standard cubic feet, affected facilities shall make information publicly available in accordance with the facility's approved blowdown notification plan, including notification to the Department, at least 7 days prior.

For any blowdown event in excess of 1,000,000 standard cubic feet that is scheduled less than 7 days prior to the blowdown event, affected facilities shall, as soon as practicable:

(a) Make information publicly available in accordance with the facility's approved blowdown notification plan; and

(b) Provide an explanation to the Department of the reason for the blowdown event.

For any emergency or unplanned blowdown event in excess of 1,000,000 standard cubic feet, affected facilities shall make information publicly available in accordance with the facility's approved blowdown notification plan and notify the Department within 1 hour of the emergency or unplanned blowdown event.



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When safety concerns preclude a facility from providing prior notification of an emergency or unplanned blowdown under §B(5) of this regulation, the facility shall send notice to the Department within 24 hours of the blowdown event indicating the reason(s) why prior notice was not possible.

Reporting: Reference _COMAR 26.11.41.07B(7)_ Describe: Affected facilities shall report the following information to the Department of blowdown emissions in excess of 50 cubic feet within the facility's fence line annually by April 1 of each year:

- (a) Date and type (that is, planned or emergency) of each blowdown event;
- (b) Methane emissions in metric tons released from each blowdown event; and
- (c) Annual methane emissions in metric tons from all blowdown events calculated according to procedures in 40 CFR Part 98, Subpart W, § 98.233.

Frequency of submittal of the compliance demonstration: Annual



SECTION 3B-37. CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: All Units

General Reference: COMAR 26.11.41.07C

Briefly describe the Emission Standard/Limit or Operational Limitation:

Owners and operators of affected facilities shall report methane, carbon dioxide, and nitrous oxide mass emissions to the Department annually by April 1 of each year. Owners and operators of affected facilities shall follow the procedures for emission calculation, monitoring, quality assurance, missing data, record keeping, and reporting that are specified in 40 CFR Part 98, Subpart C, and 40 CFR Part 98, Subpart W. When reporting to the Department, owners and operators of affected facilities shall expand the fugitive emissions reporting requirements of 40 CFR Part 98, Subpart W, to include a Microsoft Excel format list providing calculations summarized by category under 40 CFR § 98.232(e) - (h) as applicable. The reporting threshold in 40 CFR §§ 98.2, 98.31 and 98.231 of 25,000 metric tons of CO2 equivalent does not exempt an affected facility from following the requirements of this section.

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: _____
- ☒ Annual Compliance Certification: X _____
- ☐ Semi-Annual Monitoring Report: _____

Methods used to demonstrate compliance:

Monitoring: Reference _____ Describe: _____

Testing: Reference _____ Describe: _____

Record Keeping: _____ Describe: _____

Reporting: Reference _____ Describe: _____

Frequency of submittal of the compliance demonstration: Annual



SECTION 3B-38. CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: All Units

General Reference: COMAR 26.11.41.07D

Briefly describe the Emission Standard/Limit or Operational Limitation:

All required reports shall be submitted to the Industrial Compliance Division in written or electronic format and mailed to Maryland Department of the Environment, Air Quality Compliance Program, 1800 Washington Boulevard, 7th Floor, Baltimore, MD 21230, Attention: Industrial Compliance Division.

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: _____
☐ Annual Compliance Certification: X _____
☐ Semi-Annual Monitoring Report: _____

Methods used to demonstrate compliance:

Monitoring: Reference _____ Describe: _____

Testing: Reference _____ Describe: _____

Record Keeping: _____ Describe: _____

Reporting: Reference _____ Describe: _____

Frequency of submittal of the compliance demonstration: N/A



SECTION 3C. OBSOLETE, EXTRANEEOUS, OR INSIGNIFICANT PERMIT CONDITIONS

List permit to construct conditions which should be considered to be obsolete, extraneous, or environmentally insignificant.

Emissions Unit No.: N/A Permit to Construct No. N/A

Emissions Point No.	Date Permit Issued	Condition No.	Brief Description of Condition and Reason for Exclusion
N/A	N/A	N/A	N/A

SECTION 3D. ALTERNATE OPERATING SCENARIOS

Emissions Unit No.: N/A



**SECTION 3E. CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS FOR AN
ALTERNATE OPERATING SCENARIO**

Scenario No.: N/A

Emissions Unit No.: N/A **General Reference:** N/A

Briefly describe any applicable Emissions Standard/Limits/Operational Limitations:

N/A

Compliance Demonstration

Methods used to demonstrate compliance:

Monitoring: Reference N/A Describe: N/A

Testing: Reference N/A Describe: N/A

Record Keeping: Reference N/A Describe: N/A

Reporting: Reference N/A Describe: N/A

Frequency of submittal of the compliance demonstration: N/A



SECTION 4. CONTROL EQUIPMENT

1. <u>Associated Emissions Units No.</u> : N/A	2. <u>Emissions Point No.:</u> N/A
3. <u>Type and Description of Control Equipment:</u>	
N/A	
4. Pollutants Controlled:	Control Efficiency:
N/A	N/A
5. Capture Efficiency:	
N/A	



SECTION 5a. SUMMARY SHEET OF POTENTIAL EMISSIONS

List all applicable pollutants in tons per year (tpy) pertaining to this facility. The Emissions Unit No. should be consistent with numbers used in Section 3. Attach a copy of all calculations.

Pollutant	NO _x	CO	VOC	SO _x	PM ₁₀
CAS Number	N/A	N/A	N/A	N/A	N/A
M/L 1	20.9	21.3	3.4	0.04	3.3
M/L 2	20.9	21.3	3.4	0.04	3.3
M/L 3	20.9	21.3	3.4	0.04	3.3
M/L 4	20.9	21.3	3.4	0.04	3.3
M/L 5	20.9	21.3	3.4	0.04	3.3
M/L 6	20.9	21.3	3.4	0.04	3.3
M/L 7	20.9	21.3	3.4	0.04	3.3
M/L 8	28.5	24.7	4.4	0.04	3.3
M/L 9	28.5	24.7	4.4	0.04	3.3
M/L 10	28.5	24.7	4.4	0.04	3.3
M/L 11	52.6	33.7	29.9	0.07	5.4
M/L 12	85.0	54.2	48.0	0.11	8.7
M/L 13	56.1	59.9	6.5	1.2	6.8
AUX 1 ¹	24.5	40.7	12.2	0.02	1.3
AUX 2	0.32	0.639	0.16	0.0003	0.005
BLR 1	0.9	0.4	0.1	0.01	0.1
BLR 2	1.2	0.4	0.02	0.01	0.1
FUG1	N/A	N/A	3.87	N/A	N/A
FUG2	N/A	N/A	25.15	N/A	N/A
TOTAL	452.3	413.3	137.4	1.8	55.2

¹Potential annual emissions based on 5,000 hr/yr operating limit.



SECTION 5b. SUMMARY SHEET OF POTENTIAL EMISSIONS

List all applicable pollutants in tons per year (tpy) pertaining to this facility. The Emissions Unit No. should be consistent with numbers used in Section 3. Attach a copy of all calculations.

Pollutant	Formaldehyde	Acetaldehyde	Acrolein	Benzene	Methanol	Toluene	Ethylbenzene	Xylenes	n-Hexane
CAS Number	50-00-0	75-07-0	107-02-8	71-43-2	67-56-1	108-88-3	100-41-4	108-38-3 ¹	110-54-3
M/L 1	3.72	0.52	0.52	0.13	0.17	0.06	0.01	0.02	0.03
M/L 2	3.72	0.52	0.52	0.13	0.17	0.06	0.01	0.02	0.03
M/L 3	3.72	0.52	0.52	0.13	0.17	0.06	0.01	0.02	0.03
M/L 4	3.72	0.52	0.52	0.13	0.17	0.06	0.01	0.02	0.03
M/L 5	3.72	0.52	0.52	0.13	0.17	0.06	0.01	0.02	0.03
M/L 6	3.72	0.52	0.52	0.13	0.17	0.06	0.01	0.02	0.03
M/L 7	3.72	0.52	0.52	0.13	0.17	0.06	0.01	0.02	0.03
M/L 8	3.81	0.54	0.54	0.13	0.17	0.07	0.01	0.02	0.03
M/L 9	3.81	0.54	0.54	0.13	0.17	0.07	0.01	0.02	0.03
M/L 10	3.81	0.54	0.54	0.13	0.17	0.07	0.01	0.02	0.03
M/L 11	6.17	0.87	0.87	0.22	0.28	0.11	0.01	0.03	0.05
M/L 12	9.97	1.40	1.41	0.35	0.45	0.17	0.02	0.05	0.08
M/L 13	2.9	0.04	0.01	0.01	N/A	0.1	0.03	0.1	N/A
AUX 1 ²	1.47	0.23	0.14	0.01	0.07	0.01	0.00	0.01	0.03
AUX 2	2.68E-02	4.24E-03	2.61E-03	2.23E-04	1.27E-03	2.83E-04	2.01E-05	9.90E-05	5.63E-04
BLR 1	0.82	N/A	N/A	0.02	N/A	0.04	N/A	N/A	N/A
BLR 2	1.08	N/A	N/A	0.03	N/A	0.05	N/A	N/A	N/A
FUG1	N/A	N/A	N/A	0.01	N/A	0.02	0.00	0.02	0.05
FUG2	N/A	N/A	N/A	0.04	N/A	0.03	0.00	0.02	0.71
TOTAL	59.89	7.81	7.71	2.01	2.48	1.18	0.14	0.41	1.23

¹ CAS Number for m-Xylene is used, however Xylenes is a mixture of M-Xylene, o-Xylene, and p-Xylene.

² Annual emissions based on 5,000 hr/yr operating limit.



SECTION 6.

EXPLANATION OF PROPOSED EXEMPTIONS FROM
OTHERWISE APPLICABLE FEDERALLY ENFORCEABLE
REQUIREMENTS

Describe and cite the applicable requirements to be exempted. Complete this Section only if the facility is claiming exemptions from or the non-applicability of any federally enforceable requirements.

1. Applicable Requirement:

N/A

2. Brief Description:

N/A

3. Reasons for Proposed Exemption or Justification of Non-applicability:

N/A



**SECTION 7. COMPLIANCE SCHEDULE FOR NONCOMPLYING EMISSIONS
UNITS**

1. Emissions Unit #	Anticipated Compliance Date
N/A	N/A
Applicable Federally Enforceable Requirement being Violated:	
N/A	

2. Description of Plan to Achieve Compliance:
N/A

Certified Progress Reports for sources in noncompliance shall be submitted at least quarterly to the Department.



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STATE-ONLY ENFORCEABLE REQUIREMENTS

Facility Information:

Name of Facility: Transcontinental Gas Pipe Line Company, LLC (Transco) Compressor Station 190 County: Howard
Premises Number: 0223
Street Address: 11910 Carroll Mill Road Ellicott City, MD 21043
24-hour Emergency Telephone Number for Air Pollution Matters: (713) 215-2000
Type of Equipment (List Significant Units):
(7) Clark HBA-8T Mainline Reciprocating IC Engines (2-Cycle, Lean-Burn rated at 2,050 HP each),
(3) Clark TLA-6 Mainline Reciprocating IC Engines (2-Cycle, Lean-Burn rated at 2,100 HP each),
(1) Clark TCV-10 Mainline Reciprocating IC Engine (2-Cycle, Lean-Burn rated at 3,400 HP),
(1) Clark TCV-16 Mainline Reciprocating IC Engine (2-Cycle, Lean-Burn rated at 5,500 HP),
(1) Solar Titan 250 Mainline Reciprocating IC Engine (2-Cycle, Lean-Burn rated at 33,442 HP),
(1) Waukesha 7042 GL Aux. Electric Generator (4-Cycle, Lean-Burn rated at 1,478 HP & 1,200 RPM),
(1) Waukesha P48 GL Aux. Electric Generator (4-Cycle, Lean-Burn rated at 1,065 HP & 1,800 RPM),
(1) Holmar Vulcan A60 Indirect-Fired Boiler rated at 2.5 MMBtu/hr (used for process and space heating),
(1) H. B. Smith Model G28HE-13S Boiler rated at 3.98 MMBtu/hr (used for process and space heating).



CITATION TO AND DESCRIPTION OF APPLICABLE STATE-
ONLY ENFORCEABLE REQUIREMENTS (Page 1)

Registration No.: N/A

Emissions Unit No.: Facility-Wide General Ref: COMAR 26.11.06.08 & .09

Briefly describe the requirement and the emissions limit (if applicable):

Installation or premises may not be operated or maintained in such a manner that a nuisance or air pollution is created. In addition, Owner/Operator may not cause or permit the discharge into the atmosphere gases, vapors, or odors beyond the property line in such a manner that a nuisance or air pollution is created.

Methods used to demonstrate compliance: Operations oversight



APPENDIX C

Application Completeness Checklist

**MARYLAND DEPARTMENT OF THE ENVIRONMENT
AIR AND RADIATION ADMINISTRATION
RENEWAL TITLE V APPLICATION CHECKLIST**

VI .Application Completeness Checklist

The purpose of this part is to list the information required to achieve a Part 70 application shield.

Cover Page

- (x) Name and address of owner or operator, including telephone number.
- (x) Name and address of facility, including the plant manager's name and telephone number.
- (x) A 24-hour emergency telephone number for air pollution matters.

Section 1 CERTIFICATION STATEMENTS

- (x) The certification statement completed and signed by a responsible official.

Section 2 FACILITY DESCRIPTION SUMMARY

- (x) A brief description of each of the source's process(es), including all applicable SIC codes and end products.
- (x) Flow diagrams indicating all emissions units, emission points, and control devices.
- (x) A plot plan of the entire facility.
- (x) Emission Certification Report.
- (x) General Emissions Information.

Section 3 EMISSIONS UNIT DESCRIPTIONS –

This section must be completed for each emissions unit.

Part A

- (x) Emissions unit number.
- (x) Detailed description of unit, including all emission points.
- (x) Federally enforceable limit(s) on the operating schedule.

**MARYLAND DEPARTMENT OF THE ENVIRONMENT
AIR AND RADIATION ADMINISTRATION
RENEWAL TITLE V APPLICATION CHECKLIST**

- (x) Fuel consumption information for any emissions unit that consumes fuel including the type of fuel, percent sulfur, and annual usage of fuel.

Part B

- (x) A citation and description of each federally enforceable requirement, including all emission standards, for each emissions unit.
- (x) A statement of compliance demonstration techniques for each requirement, including a description of monitoring, record keeping, reporting requirements, and test methods.
- (x) The frequency of submittal of the compliance demonstration during the permit term.

Part C

- N/A () Emissions unit number.
- N/A () Permit to construct number.
- N/A () Emissions point number(s).
- N/A () Date(s) the permit to construct was issued.
- N/A () Condition number(s) as indicated on the permit to construct.
- N/A () Description of the permit condition(s) and the reason(s) why they are believed to be obsolete, extraneous, or insignificant.

Part D

- N/A () Description of all alternate operating scenarios that apply to an emissions unit.
- N/A () Number assigned to each scenario.
- N/A () Emissions unit number.

**MARYLAND DEPARTMENT OF THE ENVIRONMENT
AIR AND RADIATION ADMINISTRATION
RENEWAL TITLE V APPLICATION CHECKLIST**

- N/A () Description of the operating parameters for the emissions unit and other information which describes the how the operation of the unit will change under the different scenario.

Part E

- N/A () A citation and description of each federally enforceable requirement triggered by an operating scenario, including all emission standards, for each emissions unit.
- N/A () As an attachment, the date and results of the most recent compliance demonstration for each emission standard and/or emissions certification report with relevant supporting documentation.
- N/A () A statement of compliance demonstration techniques for each requirement, including a description of monitoring, record keeping, reporting requirements, and test methods.
- N/A () The frequency of submittal of the compliance demonstration during the permit term.

Section 4 CONTROL EQUIPMENT

- N/A () The type of each piece of air pollution control equipment
- N/A () The capture and control efficiencies of the control equipment.

Section 5 SUMMARY SHEET OF POTENTIAL EMISSIONS

- (x) Quantity of potential emissions for criteria pollutants and HAPs emitted in tons per year for each emissions unit.
- (x) Fugitive emission estimations for the entire facility for criteria pollutants and HAPs emitted in tons per year.
- (x) Basis for all emission calculations.

**Section 6 AN EXPLANATION OF PROPOSED EXEMPTIONS
FROM OTHERWISE APPLICABLE FEDERALLY
ENFORCEABLE REQUIREMENTS**

- N/A () An explanation of the proposed exemption.

**MARYLAND DEPARTMENT OF THE ENVIRONMENT
AIR AND RADIATION ADMINISTRATION
RENEWAL TITLE V APPLICATION CHECKLIST**

**Section 7 COMPLIANCE SCHEDULE FOR NONCOMPLYING
EMISSIONS UNITS**

N/A () Identification of emissions unit(s) not in compliance, including the requirement being violated and the effective compliance date.

N/A () Detailed description of methods to be used to achieve compliance.

N/A () A schedule of remedial measures, including an enforceable sequence of actions with milestones.

Attachment

(x) Checklist of Insignificant Activities

N/A () CAM Plan (If Applicable)

APPENDIX D

**EPA-Approved Quarterly Fuel Sulfur Monitoring
Plan**

Transcontinental Gas Pipe Line Company, LLC
Custom Fuel Sulfur Monitoring Plan Results ¹

Test Method	Sampling Frequency	Station 35		Station 44		Station 60		Station 82		Station 120		Station 515	
		Date Sampled	Conc (ppm _w)	Date Sampled	Conc (ppm _w)	Date Sampled	Conc (ppm _w)	Date Sampled	Conc (ppm _w)	Date Sampled	Conc (ppm _w)	Date Sampled	Conc (ppm _w)
ASTM-D-6667	Quarterly	1/22/19	1.9	1/11/19	1	2/6/19	2.7	1/16/19	1	2/28/19	1	3/11/19	3.7
ASTM-D-6667	Quarterly	4/30/19	1.2	5/17/19	1	6/11/19	1.2	4/15/19	1	6/7/19	1	6/17/19	3.6
ASTM-D-6667	Quarterly	7/15/19	1	7/22/19	1	8/20/19	1	7/8/19	1.5	9/4/19	1.5	9/9/19	4.3
ASTM-D-6667	Quarterly	10/14/19	1	10/2/19	1	11/6/19	1	10/2/19	1.7	12/9/19	1.3	12/10/19	3.7
ASTM-D-6668	Quarterly	1/21/20	3.3	1/21/20	1	1/30/20	1	1/29/20	1	3/4/20	1.9	3/4/20	3.9
ASTM-D-6667	Quarterly	4/23/20	1	4/14/20	1	5/28/20	1	4/14/20	1.3	6/4/20	1	6/1/20	2.8
ASTM-D-6667	Quarterly	7/22/20	1*	7/22/20	*1.3	7/29/20	*1	8/3/20	1.7	9/2/20	1	9/9/20	2.6
ASTM-D-6667	Quarterly	10/21/20	1*	10/13/20	1*	11/24/20	1*	11/21/20	1	11/1/20	1	11/23/20	3.5
ASTM-D-6667	Quarterly	1/18/21	1*	1/12/21	1*	2/22/21	1*	3/9/21	1	2/23/21	1	3/9/21	2.6
ASTM-D-6667	Quarterly	4/27/21	1.8*	4/12/21	1*	5/25/21	1*	6/23/21	1	6/1/21	1*	6/8/21	3.3
ASTM-D-6667	Quarterly	7/19/21	1.3*	7/17/21	1*	8/25/21	1*	9/23/21	1	9/13/21	1	9/22/21	4.0
ASTM-D-6667	Quarterly	10/18/21	2.7*	10/27/21	1.1*	11/23/21	2.1	11/4/21	1	12/7/21	1	12/7/21	4.3
ASTM-D-6667	Quarterly	1/20/22	3.4*	1/10/22	2.1*	2/21/22	1.5	1/6/22	1	2/16/22	1	3/21/22	1.3
ASTM-D-6667	Quarterly	4/18/22	4.4*	4/13/22	1*	5/24/22	1*	5/2/22	1	5/4/22	1	6/17/22	2.8
ASTM-D-6667	Quarterly												

¹ Sample results of < 1ppm_w sulfur are represented as 1 ppm_w in *italics* above.

*ASTM 5504

Transcontinental Gas Pipe Line Company, LLC
Custom Fuel Sulfur Monitoring Plan Results ¹

Test Method	Sampling Frequency	Station 35		Station 44		Station 60		Station 82		Station 120		Station 515	
		Date Sampled	Conc (%/Wt)	Date Sampled	Conc (%/Wt)	Date Sampled	Conc (%/Wt)	Date Sampled	Conc (%/Wt)	Date Sampled	Conc (%/Wt)	Date Sampled	Conc (%/Wt)
ASTM-D-6667	Quarterly	1/22/2019	0.0002%	1/11/2019	0.0001%	2/6/2019	0.0003%	1/16/2019	0.0001%	2/28/19	0.0001%	3/11/2019	0.0004%
ASTM-D-6667	Quarterly	4/30/2019	0.0001%	5/17/2019	0.0001%	6/11/2019	0.0001%	4/15/2019	0.0001%	6/7/19	0.0001%	6/17/2019	0.0004%
ASTM-D-6667	Quarterly	7/15/19	0.0001%	7/22/19	0.0001%	8/20/19	0.0001%	7/8/19	0.0002%	9/4/19	0.0002%	9/9/19	0.0040%
ASTM-D-6667	Quarterly	10/14/19	0.0001%	10/2/19	0.0001%	11/6/19	0.0001%	10/2/19	0.0002%	12/9/19	0.0002%	12/10/19	0.0004%
ASTM-D-6668	Quarterly	1/21/20	0.0003%	1/21/20	0.0001%	1/30/20	0.0001%	1/29/20	0.0001%	3/4/20	0.0002%	3/4/20	0.0004%
ASTM-D-6667	Quarterly	4/23/20	0.0001%	4/14/20	0.0001%	5/28/20	0.0001%	4/14/20	0.0001%	6/4/20	0.0001%	6/1/20	0.0003%
ASTM-D-6667	Quarterly	7/22/20	*0.0001%	7/22/20	*0.0001%	7/29/20	*0.0001%	8/3/20	0.0002%	9/2/20	0.0001%	9/9/20	0.0003%
ASTM-D-6667	Quarterly	10/21/20	*0.0001%	10/13/20	*0.0001%	11/24/20	*0.0001%	11/21/20	0.0001%	11/1/20	0.0001%	11/23/30	0.0004%
ASTM-D-6667	Quarterly	1/18/21	*0.0001%	1/12/21	*0.0001%	2/22/21	*0.0001%	3/9/21	0.0001%	2/23/21	0.0001%	3/9/21	0.0003%
ASTM-D-6667	Quarterly	4/27/21	*0.0002%	4/12/21	*0.0001%	5/25/21	*0.0001%	6/23/21	0.0001%	6/1/21	0.0001%	6/8/21	0.0003%
ASTM-D-6667	Quarterly	7/19/21	*0.0001%	7/17/21	*0.0001%	8/25/21	*0.0001%	9/23/21	0.0001%	9/13/21	0.0001%	9/22/21	0.0004%
ASTM-D-6667	Quarterly	10/18/21	*0.0003%	10/27/21	*0.0001%	11/23/21	0.0002%	11/4/21	0.0001%	12/7/21	0.0001%	12/7/21	0.0004%
ASTM-D-6667	Quarterly	1/20/22	*0.0003%	1/10/22	*0.0002%	2/21/22	0.0002%	1/6/22	0.0001%	2/16/22	0.0001%	3/21/22	0.0001%
ASTM-D-6667	Quarterly	4/18/22	*0.00044%	4/13/22	0.0001%	5/24/22	*0.0001%	5/2/22	0.0001%	5/4/22	0.0001%	6/17/22	0.0003%
ASTM-D-6667	Quarterly												

¹ Sample results of less than 0.0001%Wt sulfur are represented as 0.0001% in italics above.

*ASTM 5504



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

APR 18 1996

ENVIRONMENTAL,
HEALTH AND SAFETY

APR 12 1996

OFFICE OF
ENFORCEMENT AND
COMPLIANCE ASSURANCE

Bill Von Drehle
Staff Scientist
Transcontinental Gas Pipe Line Corporation
2800 Post Oak Boulevard
P.O. Box 1396
Houston, TX 77251-1396

Re: Request for Quarterly Schedule Implementation for
System-wide Fuel Sulfur Monitoring Plan

Dear Mr. Von Drehle:

This is in response to your March 22, 1996, letter requesting approval to implement a quarterly system-wide fuel sulfur monitoring schedule for Transcontinental's pipeline. This reduction in monitoring frequency is in accordance with the plan approved for Transcontinental by the Environmental Protection Agency (EPA) in April 24, 1995, letter to you. According to the plan, a quarterly testing schedule could be implemented after demonstrating low fuel sulfur content at each sampling location along the pipeline.

We have reviewed the results of those sampling efforts and determined that compliance with the Standard (40 CFR Part 60, Subpart GG) was demonstrated for that time period. Your request to implement a quarterly monitoring schedule is approved in accordance with the provisions of the custom plan.

If you have any questions, please contact me at
(202) 564- 7058.

Sincerely,

A handwritten signature in cursive script, appearing to read "Ted Coopwood".

Ted Coopwood, Team Leader
Power Generation Sector



March 22, 1996

bcc: Craig Chester
Carol Murin
Jerry Paul Smith
Gene Watkins

Mr. Ted Coopwood
Air, Pesticides, and Toxics
United States Environmental Protection Agency
401 M Street, SW
Washington, DC 20460

Re: Transcontinental Gas Pipe Line Corporation (Transco)
Systemwide Custom Fuel Sulfur Monitoring Plan
Request for Quarterly Schedule Implementation

Dear Mr. Coopwood:

In May 1995 you forwarded an approval of Transco's custom fuel sulfur monitoring plan, which was developed to satisfy the requirements of the New Source Performance Standards for Stationary Gas Turbines. The approved plan provided an initial weekly testing schedule for four weeks at each location, which was completed. EPA subsequently granted authorization for sampling on a monthly schedule based upon your review of that data. Transco herewith submits the results of that six month sampling data set (through December 1995).

Review of the results verifies that the fuel sulfur level in Transco's pipeline is far less than 1% of the allowable limit (8000 ppm by weight). The highest level measured was 32.9 ppm which confirms that the gas produced from the Mobile Bay area of Alabama has a sulfur content somewhat higher than elsewhere on the Transco system. (Mobile Bay was known to produce gas with a somewhat higher sulfur content and it was for that reason that Transco Station 82 was selected as a sample site.) All other locations have far lower concentrations, typically below 5 ppm. Transco regrets that the December sample results for Station 120 and 515 were mishandled and unaccounted for, however Transco wishes to emphasize that these locations are downstream of the gathering area and based upon sample data from upstream locations (gathering areas) it can readily be inferred that concentrations are low. In addition, incorporating the June samples for these locations provides a six month data set demonstrating that the standard is not exceeded.

Transco therefore requests that EPA grant written approval to implement the third phase of the custom fuel sulfur monitoring program for its pipeline, which provides for sampling quarterly for six quarters at Compressor Stations 35, 44, 60, 82, 120 and 515.

Your efforts in reviewing and approving Transco's plan have been greatly appreciated. Please feel free to contact me at (713) 439-4562 with any questions.

Sincerely,

Bill Von Drehle
Staff Scientist, Compliance Group Leader

1995 TRANSCONTINENTAL GAS PIPE LINE CUSTOM FUEL SULFUR MONITORING RESULTS

Station 35

Date	Result
6/1/95	1
6/7/95	1
6/15/95	2.8
6/25/95	1
7/11/95	1.1
8/11/95	1
9/9/95	1
10/11/95	5.7
11/16/95	1
12/12/95	1

Station 44

Date	Result
6/8/95	1
6/15/95	1
6/22/95	1
7/18/95	1
8/22/95	1
9/18/95	1
10/16/95	1
11/20/95	1
12/18/95	1

Station 60

Date	Result
6/9/95	1
6/15/95	1
6/16/95	1
6/22/95	1
6/29/95	1
7/7/95	2.7
8/2/95	1.9
9/5/95	1
10/6/95	4.6
11/13/95	1
12/7/95	1
12/18/95	1

Station 82

Date	Result
5/25/95	19.5
6/5/95	24.7
6/12/95	18.9
6/20/95	9.2
7/7/95	30.0
8/1/95	21.2
9/7/95	18.8
10/6/95	19.7
11/6/95	19.4
12/18/95	32.9

Station 120

Date	Result
6/1/95	1
6/8/95	1
6/29/95	2.7
7/95	3.9
8/22/95	2.5
9/30/95	2.7
10/11/95	5.5
11/3/95	1.4

Station 515

Date	Result
6/5/95	8.5
6/19/95	9.8
6/26/95	1.2
7/11/95	7.6
8/21/95	7.5
9/12/95	5.0
10/16/95	11.1
11/3/95	5.2



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

NOV 10 1995

ENVIRONMENTAL,
HEALTH AND SAFETY

OFFICE OF
ENFORCEMENT AND
COMPLIANCE ASSURANCE

Bill Von Drehle, Environmental Scientist
Transcontinental Gas Pipe Line Corporation
2800 Post Oak Boulevard
P.O. Box 1396
Houston, Texas 77251-1396

Subject: Request for Monthly Schedule Implementation
for System-Wide Fuel Sulfur Monitoring Plan

Dear Mr. Von Drehle:

This is in response to your August 9, 1995, letter requesting approval to implement a monthly fuel sulfur monitoring schedule for Transcontinental's system-wide pipe line. This reduction in monitoring is in accordance with the plan approved for Transcontinental by the Environmental Protection Agency (EPA) in an April 24, 1995, letter to you. According to the plan, a monthly testing schedule could be implemented after demonstrating low fuel sulfur content at each sampling location along the pipe line.

We have reviewed the results of those sampling efforts, and based on the information provided, your request is approved. Also, EPA confirms that fuel bound nitrogen monitoring is not required in your system-wide monitoring plan to comply with 40 CFR 60, Subpart GG.

If you have any question, please contact me at
(202) 564-7058.

Sincerely,

A handwritten signature in black ink, appearing to read "Ted Coopwood", written over a horizontal line.

Ted Coopwood, Team Leader
Power Generation Sector

Transco

TRANSCONTINENTAL GAS PIPE LINE CORPORATION
ONE OF THE BELL AND HOWELL COMPANIES, INC.

2900 Post Oak Boulevard
P.O. Box 1294
Houston, Tx 77251-1294
713-425-2000

August 9, 1995

Mr. Ted Coopwood
Air, Pesticides and Toxics
United States Environmental Protection Agency
401 M Street, SW
Washington, DC 20460

Re: Transcontinental Gas Pipe Line Corporation (TGPL)
Systemwide Custom Fuel Sulfur Monitoring Plan
Request For Monthly Schedule Implementation

Dear Mr. Coopwood:

In May of 1995 you forwarded an approval of TGPL's custom fuel sulfur monitoring plan, which was designed to satisfy the requirements of the New Source Performance Standards for Stationary Gas Turbines. In accordance with the plan approval TGPL requests authorization to implement a monthly testing schedule based upon 4 successive samples at each location demonstrating suitably low fuel sulfur content. Attached is a spreadsheet detailing the results of that sampling program.

SUMMARY OF SULFUR MONITORING RESULTS

Review of the results verifies that the fuel sulfur level in TGPL's pipeline is far less than 1 % of the allowable limit (8000 ppm by weight). The highest level measured was 24.7 ppm which confirms that gas produced from the Mobile Bay area of Alabama has a sulfur content somewhat higher than elsewhere on the TGPL system. (Mobile Bay was known to produce gas with a somewhat higher sulfur content and it was for that reason that TGPL Station 82 was selected as a sample site.) As you will note, the level at Station 82 is also far less than 1 % of the allowable NSPS standard.

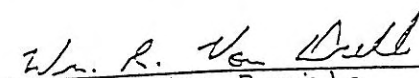
FUEL BOUND NITROGEN

As previously detailed in earlier submittals, the provisions of 40 CFR 60.330 provide the motivation for TGPL's custom monitoring plan. TGPL's prior submittals focused on sulfur monitoring as this is the mechanism utilized to demonstrate compliance with allowable emission limits. There are provisions detailed in 40 CFR 60.334 (b) for monitoring of fuel-bound nitrogen, however TGPL takes no credit for fuel-bound nitrogen in demonstrating compliance with section 60.332 (a)(2), an equation calculating the standard for NOx emissions where F is an allowance for fuel-bound nitrogen. For that reason TGPL did not specifically request a waiver for monitoring of fuel-bound nitrogen. TGPL requests a confirmation that nitrogen monitoring is waived as a

part of the custom fuel monitoring plan for the TGPL system.

Your efforts in reviewing and approving TGPL's plan have been greatly appreciated. Please feel free to contact me at (713) 439-2113 with any questions.

Sincerely,



Wm. R. Von Drehle
Group Leader
Transcontinental Gas Pipeline Corp.

1995

TRANS-CONTINENTAL GAS PIPE LINE CUSTOM FUEL SULFUR MONITORING RESULTS

Station 35	June 1	1 ppm	June 7	1 ppm	June 15	2.0 ppm	June 25	1 ppm	avg. 14.6 ppm
Station 44	June 1	1 ppm	June 8	1 ppm	June 15	1 ppm	June 22	1 ppm	avg. 1 ppm
Station 60	June 9	1 ppm	June 16	1 ppm	June 22	1 ppm	June 29	1 ppm	avg. 1 ppm
Station 82	May 25	19.5 ppm	June 5	24.7 ppm	June 12	10.9 ppm	June 20	9.2 ppm	avg. 18 ppm
Sta. 120	June 1	1 ppm	June 8	1 ppm	June 15	1 ppm	June 29	2.7 ppm	avg. 1.4 ppm
Station 315	June 5	0.5 ppm	June 12	5.1 ppm	June 19	9.0 ppm	June 26	1.2 ppm	avg. 0 ppm

Note: All fuel sulfur analysis was conducted by Southern Petroleum Labs (SPL Houston) using ASTM-3246. Results < 1 ppm are indicated as 1 ppm.
 Note 2: The allowable fuel sulfur content per 40 CFR 60.333 (b) is 0.0 percent by weight, equivalent to 8000 ppm.



3000 West Oak Boulevard
P.O. Box 1200
Houston, Texas 77261-1100

May 17, 1995

Mr. Ted Coopwood
United States Environmental Protection Agency
Manufacturing, Energy, and Transportation Division
Office of Compliance
Washington, D. C. 20460

Facsimile: (202) 864-0080

Re: Transcontinental Gas Pipe Line Corporation
Addendum to EPA Approved Custom Fuel Sulfur Monitoring Plan Document

Dear Mr. Coopwood:

As discussed by phone on 5/17/95, I am in receipt of EPA's letter dated 4/24/95 authorizing implementation of a custom fuel monitoring plan. TGPL is agreeable to initiating fuel sulfur analysis beginning with a weekly testing schedule at each location for the first month, and subsequently adopting the schedule detailed in EPA's August 14, 1997 memo which was attached. As requested, this memo is submitted for your signature to serve as an addendum to the 4/24/95 approval letter, and will authorize a weekly sampling schedule in lieu of daily sampling during the first month (detailed under provision 1. of page 2). Accordingly:

1. TGPL will submit one month of data from weekly fuel monitoring to verify the sulfur content of the fuel prior to initiating the reduced monitoring schedule.

Approved:

Ted Coopwood 5/18/95
Ted Coopwood
United States Environmental Protection Agency
Manufacturing, Energy, and Transportation Division
Office of Compliance
Washington, D.C.
Phone: (202) 864-7088

Approved:

Wm. R. Von Drehle
Wm. R. Von Drehle
Transcontinental Gas Pipe Line Corporation
Houston, Texas
Phone: (713) 439-2113

TGPL greatly appreciates your review and issuance of the custom fuel monitoring plan, and the coordination of issues with various Regional EPA offices. If you require any additional information please don't hesitate to call me at the above number.

Sincerely,

Wm. R. Von Drehle
Wm. R. Von Drehle

Attachment - Recent Fuel Sulfur Analysis



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

APR 24 1995

OFFICE OF
ENFORCEMENT AND
COMPLIANCE ASSURANCE

Bill Von Drehle, Environmental Scientist
Transcontinental Gas Pipe Line Corporation
2800 Post Oak Boulevard
P.O. Box 1396
Houston, Texas 77251-1396

SUBJECT: Transcontinental Gas Pipe Line:
Request for approval of a custom fuel monitoring plan
for sulfur, and approval of the ITT Barton Analytical
Method M286 as an alternative to American Society for
Testing and Materials (ASTM) approved methods specified
in 60.335 (d).

Dear Mr. Von Drehle:

This is in response to your letter to Steve Herman on
September 19, 1994, requesting approval of a system-wide custom
fuel sulfur monitoring plan for your transcontinental gas pipe
line. The pipe line is a 1900 mile interstate natural gas system
which transports gas from production areas along the eastern
seaboard of the United States. The pipe line operates in four
Environmental Protection Agency Regions (II, III, IV, and VI) and
in 11 States within these Regions. According to your letter, the
sulfur content of the natural gas being transported typically has
a sulfur content less than one ppm and is regulated by the
Federal Energy Regulatory Commission. Transcontinental Gas Pipe
Line (TGPL) provides natural gas to stationary gas turbines
subject to Subpart GG that requires the owner/operator to monitor
the fuel sulfur content and fuel nitrogen daily and using an
approved American Society for Testing and Materials (ASTM)
method.

We understand that TGPL owns all but one of the turbines
served by the pipeline. Compressor Station 82 is owned primarily
by Florida Gas Transmission with 82% and TGPL owning 8%; however,
TGPL is responsible for all environmental regulations required.

The New Source Performance Standards (NSPS) for Stationary
Gas Turbine allows for custom fuel monitoring plans for sulfur

APR 27 1995

ENVIRONMENTAL
ENGINEERING



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contains at least 75% recycled fiber

and nitrogen content as an alternative to daily monitoring. In order to minimize the burden and duplication of sampling the fuel sulfur content from sources burning natural gas along the pipe line, you propose an alternative monitoring plan that reduces the sampling frequency from daily to semi-annually in five locations. You also state that your company is willing to initiate a custom schedule consisting of six monthly samples, followed by six quarterly samples, and then semi-annually assuming no violations occur.

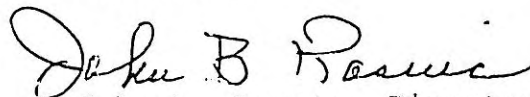
We have reviewed your proposed alternative in conjunction with those Regions effected by the pipe line, and have determined that your plan is approved under the following conditions:

1. Prior to initiating the reduced monitoring schedule submit one month of data from daily fuel monitoring to verify the sulfur content of the fuel.
2. The custom schedule for monitoring sulfur in the natural gas shall be based on guidelines contained in the August 14, 1987, memo (attached) that requires monitoring frequency to be no less stringent than two monthly sampling for six months, followed by quarterly, then semiannually. Before semiannual monitoring can be initiated, at least six months of data from twice monthly and quarterly monitoring must demonstrate little variability in sulfur content and compliance with 60.333 for each monitoring event. The sulfur monitoring schedule and guidelines are outlined in the enclosure of the August 14, memo.

In addition to your September 19, request, you also requested on November 9, 1984, approval to use the ITT Parton Method M286 to analyze the percent sulfur content by weight in oil samples as an alternative to the ASTM methods specified in 60.335 (d). This method has already been approved by Region IV and confirmed by the participating Regions to be used in this effort. In the future, requests to use this method as an alternative to the ASTM methods should be directed to the Region.

If you have any questions concerning this matter, you can contact Ted Coopwood of my staff at 202-564-7059

Sincerely,



John B. Rasnic, Director
Manufacturing, Energy, and Transportation Division
Office of Compliance

attachment

cc: Mirza P. Baig, Region IV
Jim Hagadorn, Region III
Terry Harrison, OAQPS (RTP)
Zofia Kosim
Jehuda Menczel, Region II
Byron Nagel, State of Louisiana
Jonathan E. York (6T-EC)



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

AUG 14 1987

OFFICE OF
AIR AND RADIATION

MEMORANDUM

SUBJECT: Authority for Approval of Custom Fuel Monitoring
Schedules Under NSPS Subpart GG

FROM: John B. Rasnic, Chief *John B. Rasnic*
Compliance Monitoring Branch

TO: Air Compliance Branch Chiefs
Regions II, III, IV, V, VI and IX

Air Programs Branch Chiefs
Regions I-X

The NSPS for Stationary Gas Turbines (Subpart GG) at 40 CFR 60.334(b)(2) allows for the development of custom fuel monitoring schedules as an alternative to daily monitoring of the sulfur and nitrogen content of fuel fired in the turbines. Regional Offices have been forwarding custom fuel monitoring schedules to the Stationary Source Compliance Division (SSCD) for consideration since it was understood that authority for approval of these schedules was not delegated to the Regions. However, in consultation with the Emission Standards and Engineering Division, it has been determined that the Regional Offices do have the authority to approve Subpart GG custom fuel monitoring schedules. Therefore it is no longer necessary to forward these requests to Headquarters for approval.

Over the past few years, SSCD has issued over twenty custom schedules for sources using pipeline quality natural gas. In order to maintain national consistency, we recommend that any schedules Regional Offices issue for natural gas be no less stringent than the following: sulfur monitoring should

be bimonthly, followed by quarterly, then semiannual, given at least six months of data demonstrating little variability in sulfur content and compliance with §60.333 at each monitoring frequency; nitrogen monitoring can be waived for pipeline quality natural gas, since there is no fuel-bound nitrogen and since the free nitrogen does not contribute appreciably to NO_x emissions. Please see the attached sample custom schedule for details. Given the increasing trend in the use of pipeline quality natural gas, we are investigating the possibility of amending Subpart GG to allow for less frequent sulfur monitoring and a waiver of nitrogen monitoring requirements where natural gas is used.

Where sources using oil request custom fuel monitoring schedules, Regional Offices are encouraged to contact SSCD for consultation on the appropriate fuel monitoring schedule. However, Regions are not required to send the request itself to SSCD for approval.

If you have any questions, please contact Sally M. Farrell at FTS 382-2875.

Attachment

cc: John Crenshaw
George Walsh
Robert Ajax
Earl Salo

Enclosure

Conditions for Custom Fuel Sampling Schedule for Stationary Gas Turbines

1. Monitoring of fuel nitrogen content shall not be required while natural gas is the only fuel fired in the gas turbine.
2. Sulfur Monitoring
 - a. Analysis for fuel sulfur content of the natural gas shall be conducted using one of the approved ASTM reference methods for the measurement of sulfur in gaseous fuels, or an approved alternative method. The reference methods are: ASTM D1072-80; ASTM D3031-81; ASTM D3246-81; and ASTM D4084-82 as referenced in 40 CFR 60.335(b)(2).
 - b. Effective the date of this custom schedule, sulfur monitoring shall be conducted twice monthly for six months. If this monitoring shows little variability in the fuel sulfur content, and indicates consistent compliance with 40 CFR 60.333, then sulfur monitoring shall be conducted once per quarter for six quarters.
 - c. If after the monitoring required in item 2(b) above, or herein, the sulfur content of the fuel shows little variability and, calculated as sulfur dioxide, represents consistent compliance with the sulfur dioxide emission limits specified under 40 CFR 60.333, sample analysis shall be conducted twice per annum. This monitoring shall be conducted during the first and third quarters of each calendar year.
 - d. Should any sulfur analysis as required in items 2(b) or 2(c) above indicate noncompliance with 40 CFR 60.333, the owner or operator shall notify the State Air Control Board of such excess emissions and the custom schedule shall be re-examined by the Environmental Protection Agency. Sulfur monitoring shall be conducted weekly during the interim period when this custom schedule is being re-examined.
3. If there is a change in fuel supply, the owner or operator must notify the State of such change for re-examination of this custom schedule. A substantial change in fuel quality shall be considered as a change in fuel supply. Sulfur monitoring shall be conducted weekly during the interim period when this custom schedule is being re-examined.
4. Records of sample analysis and fuel supply pertinent to this custom schedule shall be retained for a period of three years, and be available for inspection by personnel of federal, state, and local air pollution control agencies.

 **Transcontinental Gas
Pipe Line Corporation**
A Transco Energy company

2800 Post Oak Boulevard
P.O. Box 1336
Houston, Texas 77251-1336
713-433-2000

November 9, 1994

Mr. Brian Beals
Attn: Mr. Mairja Baig
Air, Pesticides and Toxics
United States Environmental Protection Agency
Region IV
345 Courtland Street, NE
Atlanta, GA 30365

Re: Transcontinental Gas Pipe Line Corporation (TGPL)
Custom Fuel Sulfur Monitoring Plan Supplement

Dear Mr. Beals and Mr. Baig,

I have previously spoken with Mr. Baig of your office regarding the above natural gas sulfur monitoring plan for TGPL's pipeline system.

As requested, this submittal provides additional information regarding estimated average daily gas flow at various points on the TGPL system. Mr. Baig had expressed interest in this information feeling that it might facilitate his evaluation. I acquired these estimates from TGPL gas marketing and wish to emphasize that this information should be treated as a confidential trade secret. Recognizing the agencies need to consider all relevant technical information, I would only ask that the map or numbers not be reproduced and distributed without further discussion with TGPL.

Labels attached to the system map at various points indicate estimated daily gas flow in million standard cubic feet on a typical day. The indicated flow at the eastern edge of the map (Station 90) is 2.8 BCF/day, and because Station 90 is downstream of the Mobile Bay line the sulfur monitoring proposed for Station 150 in Stockbridge, Georgia is representative of the gas from Station 90 to all downstream points.

I am also providing information on individuals I have previously contacted at various state or EPA offices, prior to a formal submittal of this plan. Individuals who might assist in coordinating consideration and approval of this plan are as follows:

Mr. Raymond Magiar
Phone: (214) 655-7288
U.S.E.P.A. Region VI
1445 Ross Avenue
Dallas, Texas 75202

Mr. Carl Richardson
(919) 733-3340
South Carolina Dept. of Health and Env. Control
Chief of Permits
Dept. of Environment, Health, and Natural Resources
Division of Environmental Management
P.O. Box 29535

I spoke with Mr. Richardson on 11/9/94 and he indicated that he had a voice mail forwarded to him regarding this matter, which was presumably Mr. Baig's inquiry. Mr. Richardson confirmed that he had previously delegated review and a scheduled response to an engineering manager, but he wasn't sure who. I gave him my name and number so if I hear anything I'll let you know. He may well contact you instead.

Fuel Sulfur Analysis Techniques

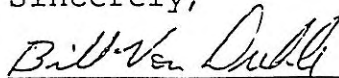
For your information I've enclosed some information on the ITT Barton sulfur analyzer as was recently discussed. I submitted a request to Mr. Don Gunter at Alabama Department of Environmental Management, seeking approval of this alternate measurement technique, and I remain optimistic that it will be approved. I did not make a request for approval for the entire pipeline system in my initial submittal because I did not want to risk delaying consideration of the alternate schedule, and additionally because TGPL has not sufficiently budgeted for five or six instruments at this time.

Perhaps the final plan approval could authorize use of the ASTM method, or alternatively the ITT Barton at TGPL's discretion. I will let you know if the ITT Barton review and approval is finalized prior to final approval of the custom schedule.

Conclusion

As advised, I will wait an additional two weeks before attempting to contact Mr. Steven Herman's office in an attempt to identify the individual assigned review of my request. I will advise as soon as I hear anything. In the interim, feel free to contact me at (713) 439-2113 with any questions.

Sincerely,



Bill Von Drehle
Staff Environmental Scientist
Transcontinental Gas Pipe Line Corp.

OPERATING PROCEDURES
ITT BARTON ANALYZER

3-2. START-UP INSTRUCTIONS

A. Start-up procedures are as follows:

1. The cells are shipped dry. Fill a cell to the normal level line with electrolyte. See Figure 2-1.

WARNING: THE ELECTROLYTE IS A STRONG ACID. AVOID CONTACT WITH EYES AND SKIN.

2. Remove cell compartment cover panel in the lower left hand corner of the analyzer by loosening the two screws. Remove the plastic stopper plugs from the cell ports. Pull out the polypropylene tubing connections marked IN and OUT from the cell compartment, and attach to the corresponding connections on the cell (see Figure 2-1). The titration cell assembly and the outlet assembly lock in position with a quarter turn, lining up with index marks on the cell reservoir. Connect the electrical plug to the cell plug. Push the cell back into the compartment, making sure the lines and cable are clear and free from kinks. Replace the cell compartment cover panel.
3. Turn function knob to MANUAL BLANK.
4. Turn range knob to OFF.
5. Make sure the analyzer outlet (1/8-inch polypropylene connection) is connected to a vent and is clear. See Figure 3-1. The outlet gas should be vented to a safe area.

CAUTION: NEVER APPLY PRESSURE TO THE OUTLET (1/8-INCH TUBE CONNECTION).

Chart A. Conversion of Flow Tube⁽¹⁾ Reading to ML/MIN.
Natural Gas 60°F

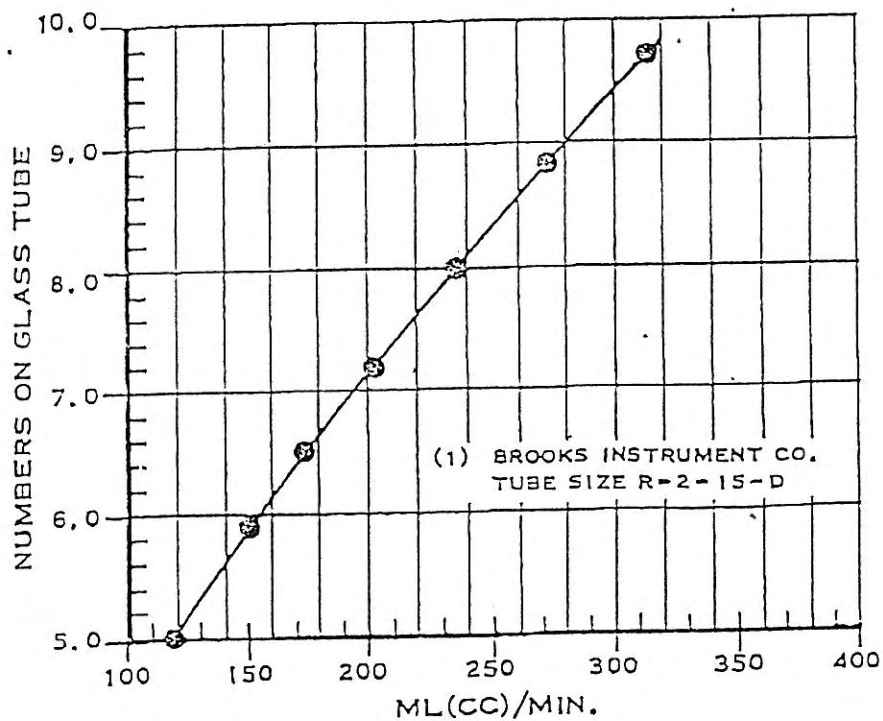


Table 3-1. Blank Bromine Level Recorder Reading at
Nominal Flow of 250 ML/MIN. (Percent of
Full Scale

RANGE, MA		BLANK	RANGE, MA		BLANK
Satur. Anal. —	.1	20 ± 8	10	2 ± .5	
	.3	12 ± 4	30	1.5 ± .8	
Std. —	1.0	6 ± 3	100	.7 ± .4	
	3.0	3 ± 1.5			

6. Plug the access connector (female, 19-pin) the instrument. This is an integral part of the circuitry and the instrument will not operate without it.
7. Inspect the orifice holder. Make sure the orifice is in place (see detail, Figure 2-3). Insert the orifice holder into the inlet assembly.

CAUTION: NEVER APPLY PRESSURE TO THE INLET UNLESS THE ORIFICE IS IN PLACE. THE SAME PRECAUTION APPLIES TO ANY ACCESSORY USED UPSTREAM OF THE ANALYZER, SUCH AS THE MODEL 302 ANALYTICAL FILTER.

8. Purge the sample line for ten minutes. If there is any question of entrapped moisture or sediment getting into the cell, a trap should be installed. See Figure 3-1.
9. Connect the sample line from the source to the analyzer inlet (1/4-inch polypropylene connection).
10. Connect the power cord to 105 to 125 volt 50/60 cycle source.
11. Adjust the sample line pressure regulator to 12 psig. This is approximately the pressure required to produce 250 ml/min. flow through the cell.
12. Open the sample valve, allowing flow to the instrument.
13. Observe the flow rator, which should indicate the proper sample flow. Nominal flow should be 250 ml/min. (flow reading of 8.5 plus or minus 0.5) on natural gas of 0.65 specific gravity. (Chart A converts the flow rator reading to ml/min. for natural gas). The front panel pressure gage should read 1/2 to 1 psig. Agitation of the cell electrolyte should be observable through the window in the cell compartment cover.
14. Push RECORDER CHECK button. Recorder needle should swing up scale to a reading of 50 plus or minus 10. Release the button.
15. Turn the range knob to a range higher than expected concentration would require. If concentration is unknown turn to 10 mA range; this prevents over saturation of the cell solution with sulfur if the concentration is high.
16. Watch the recorder needle which should up scale and after a few minutes return to the blank level on the scale. Allow fifteen minutes for the blank to stabilize. Normal blank level meter readings are given for all ranges in Table 3-1.
17. Should the recorder fail to show upscale response or should blank level be substantially higher than the level shown in Table 3-1, the BLANK LEVEL ADJUST potentiometer may have been moved from the setting made at the factory. Check adjustment by removing the cap

in upper right corner of the front panel. She could be approximately $1/4$ turn clockwise from the left stop. Set to this position and continue blank operation until stable level is recorded. Make minor adjustment to bring blank reading to the value shown in Table 3-1 for the selected range.

Blank reading is not critical. Operation with blank level in the ranges shown in Table 3-1 is satisfactory. This allows proper operation over the widest ambient temperature range.

Once set, the titration module will operate after the first few hours with very little drift in the blank.

A drift to lower blank reading after the initial run-in period indicates contamination of the titration cell. See Cell Maintenance, Chapter 4.

18. Turn the function knob to MANUAL SAMPLE position and observe analyzer response.
19. If the recorder needle swings off scale for more than a few minutes, turn the knob to higher ranges until the needle is on scale.
20. When stable titration is achieved, set the range as desired to provide for recording the highest expected concentration on scale.
21. Allow analyzer to run twenty minutes until a stable reading is obtained.
22. Turn function knob to AUTOMATIC BLANK.
23. Observe periodically for four hours to be sure function is normal. Blank level should record automatically for ten minutes every two hours.

NOTE: The analyzer should operate with a recorder trace not wider than two percent of full scale.

NOTE: Flow rate may be checked at any time by switching to manual blank. If any foreign matter collects in the cell bubbler, the flow rate will fall and the pressure across the cell will increase. This will cause an error in calculations. In this event the titration cell should be removed and cleaned. See Cell Cleaning Instructions, Chapter 4.

NOTE: If dirt collects in the regulating orifice, the flow will fall and the cell pressure will fall. The orifice and the inlet fitting should be removed and cleaned. See Orifice Cleaning Instructions, Chapter 4. In normal operation, cleaning should not be required except as a routine maintenance operation every two or three months.

3-3. CALCULATION OF TOTAL SULFUR EQUIVALENT

This cannot be a precise figure as it assumes an average mixture of hydrogen sulfide, mercaptans, disulfides and other sulfur compounds normally found in natural gas transmission pipe lines. This can be checked against a specifically selective sulfur compound analysis, as covered in this manual using a Model 302 Manual Analytic Filter System.

Formula for total sulfur equivalent in grains per 100 std cu ft is:

$$(T - B) \times F_s = \text{Grains total sulfur equivalent per 100 std cu ft}$$

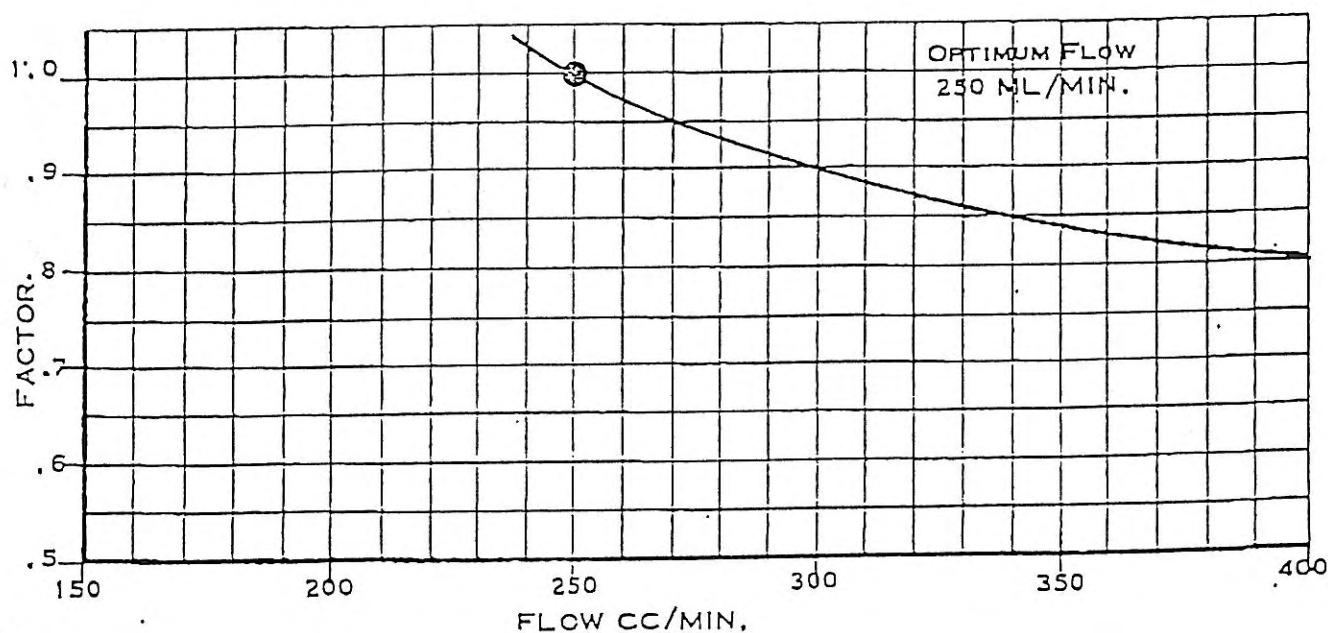
$$F_s = f_s \times R \times K$$

T :: Total titration current, percent of full scale
 B :: Blank current, percent of full scale
 F_s :: Conversion factor (see Table 3-2)
 R :: Flow rate correction factor (see Charts A and B)
 K = Calibration Factor for cell (see tag on cell electrolyzer)

Table 3-2. Conversion Factors

RANGE (MA)	F _s
.1	.0008
.3	.0024 ✓
1.0	.0085
3.0	.0240
10.0	.0850
30.0	.2400
100.0	.8500

Chart B. Flow Rate Correction Factor for Total Sulfur Equivalent



3-4. OPERATING PROCEDURE WITH MODEL 302 SELECTIVE FILTER INS. ~~AND~~
AHEAD OF MODEL 286 ANALYZER

Separate measurement of the concentration of hydrogen sulfide, mercaptans, sulfides and disulfides, may be made by using filters in the sample inlet system ahead of the Model 286 Analyzer. Such measurements of separate sulfur compounds may be made with the Model 286 Analyzer by using the Model 302 Manual Analytic Filter System installed ahead of the inlet to the Model 286 Analyzer.

Operation of the 302/286 Filter-Analyzer System is as follows: The gas sample is passed through filters that absorb certain sulfur compounds only. With no filtering, the Model 286 Analyzer records the total (T) amount of current necessary to oxidize all the sulfur compounds present, plus the current required to operate the cell (i.e., the blank level)(B).

By using the Model 302 Filter with the filter solutions in the sequence shown in Table 3-3, one can use the formulae given in paragraph 3-5 to determine the classes and amounts of sulfur compounds present in the gas sample. It is not necessary to determine the blank level for these calculations. However, the blank level should be observed periodically to make sure it has not drifted.

To operate the Model 286 Analyzer with the selective filter, proceed as follows:

- A. Make sure the sample flow to the analyzer is shut off.
- B. Remove the orifice from the analyzer inlet filter. The Model 302 filter contains its own orifice in the 1/4-inch inlet fitting.
- C. Make sure the orifice is in place in the inlet fitting of the Model 302 Filter. The presence of the orifice can be verified by inspection or by blowing into the Model 302 inlet. The orifice will restrict flow.
- D. Turn the valve on the Model 302 to THRU.
- E. Set the FUNCTION switch on the Model 286 to MANUAL BLANK.
- F. Connect the outlet line from the Model 302 to the inlet on the Model 286.
- G. Connect the sample line to the 1/4-inch inlet fitting on the Model 302.
- H. Start the sample flow to the Model 302.
- I. Adjust the sample pressure to approximately 12 psig to provide a flow of 250 ml/min. Check this flow each time a new or different filter bottle is used.
- J. Allow the blank recording to stabilize.

- K. Fill each filter bottle with 5 cc of appropriate filter solution, as indicated in Table 3-3.
- L. Follow the analysis cycle given in Table 3-3 operating the control as indicated. When installing a filter bottle, make sure it is firmly seated against the O-rings under the valve on the Model 302. Allow 5 to 10 minutes for each recording level to stabilize. A sample recording is shown in Chart G to illustrate the readings taken on a run with the Model 302 Manual Analytic Filter System in line with the Model 286 Analyzer.
- M. Be sure to replace the orifice in the Model 286 inlet filter before again operating the instrument directly connected to the sample line.

3-5. CALCULATIONS WITH MODEL 302 FILTER IN LINE WITH MODEL 286 ANALYZER

The formulae for determining the type and quantity of sulfur compounds present in the gas sampled in grains per 100 std cu ft are:

COMPOUND	FACTORS				
	(1)	(2)	(3)	(4)	(5)
HYDROGEN SULFIDE	=	(T - [H ₂ S])	x F _{H₂S}	x K x	C _{H₂S}
MERCAPTAN SULFUR	=	([H ₂ S] - [RSH])	x F _{RSH}	x K x	C _{RSH}
SULFIDE SULFUR	=	([RSH] - [RSR])	x F _{RSR}	x K x	C _{RSR}
RESIDUAL SULFUR	=	([RSR] - B)	x F _{RES}	x K x	C _{RES}

NOTE: Symbols given in columns (1) and (2) represent the recorder readings (in percent of full scale) obtained during the analysis cycle outlined in Table 3-3. Values for factors in column (3) are shown in Charts C, D, E and F.

The symbol K in column (4) stands for the cell calibration factor. The value is shown stamped on a plastic tag hung on the Model 286 Titration Cell.

Values for factors in column (5) are shown in Table 3-4, for the Model 286 operating ranges (mA).

The factors in columns (3), (4) and (5) are relatively fixed. Column (3) is a correction factor for the actual flow rate through the filter system and Model 286 Analyzer related to 250 ml/ min. as standard (1.000). As long as the flow rate is unchanged, this factor remains constant.

Column (4) is the titration cell calibration factor and remains constant as long as the bubbler is clean and open, the platinum electrodes are undamaged, and the electrolyte is at level, uncontaminated, and mixed in the proper proportions.

Column (5) is the factor for converting the current used to oxidize the sulfur compounds into grains per 100 std cu ft. It is a constant unless

unusual compounds exist in the chemistry of the gas sample itself.

With this understanding, the factors in columns (3), (4) and (5) may be multiplied and the product used as one factor to simplify daily work sheet calculations.

Table 3-3. Operation of Model 302 Filtering System with Model 286 Analyzer for Selective Sulfur Determination

STEP	SULFUR COMPOUND	SYMBOL	FILTER MATERIAL	FUNCTION SWITCH SETTING	MODEL 302 VALVE SETTING
1.	BLANK	B	MOLECULAR SIEVE AND CHARCOAL REMOVES ALL SULFUR COMPOUNDS	MANUAL BLANK	THRU
2.	TOTAL TITRATION	T	NONE. ALL SULFUR COMPOUNDS TITRATED.	MANUAL SAMPLE	THRU
3.	HYDROGEN SULFIDE	[H ₂ S]	1% CdSO ₄ 2% H ₃ BO ₃ DISTILLED H ₂ O REMOVES H ₂ S	MANUAL SAMPLE	SCRUB
4.	MERCAPTAN	[RSH]	10% NaOH DISTILLED H ₂ O REMOVES H ₂ S, RSH	MANUAL SAMPLE	SCRUB
5.	SULFIDES	[RSR]	1/2% AgNO ₃ DISTILLED H ₂ O REMOVES H ₂ S, RSH, RSR	MANUAL SAMPLE	SCRUB

Table 3-4. Conversion Factors for RANGE Switch Settings

.0048 for R.P. Mercaptan

RANGE SWITCH SETTING	C _{H₂S}	C _{RSH}	C _{RSR}	C _{RES}
.1	0.0008	0.00085	0.0022	0.001
.3	0.0022	0.0024	0.006	0.0027
1	0.0075	0.008	0.02	0.009
3	0.022	0.024	0.06	0.027
10	0.075	0.08	0.2	0.09
30	0.22	0.24	0.6	0.27
100	0.75	0.8	2.0	0.90

CHART C
HYDROGEN SULFIDE CONVERSION FACTOR (FLOW)
(F_{H_2S})

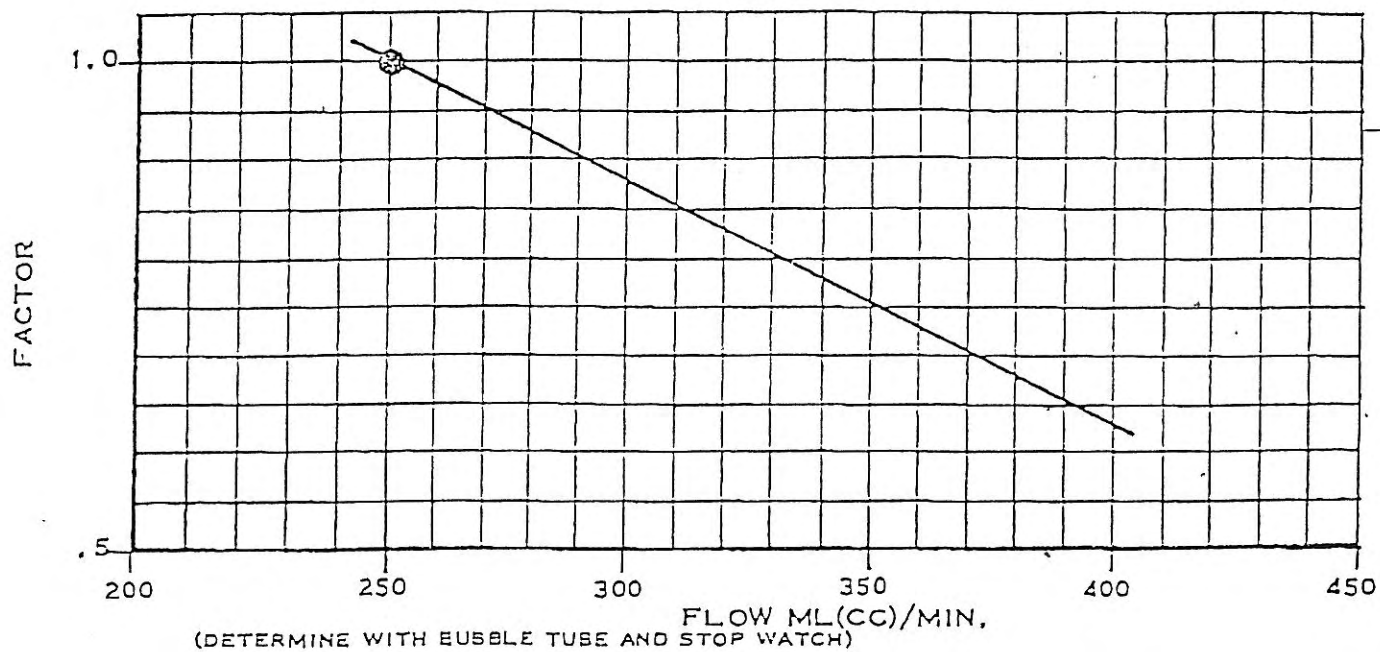


CHART D
MERCAPTANS CONVERSION FACTOR (FLOW)
(F_{RSH})

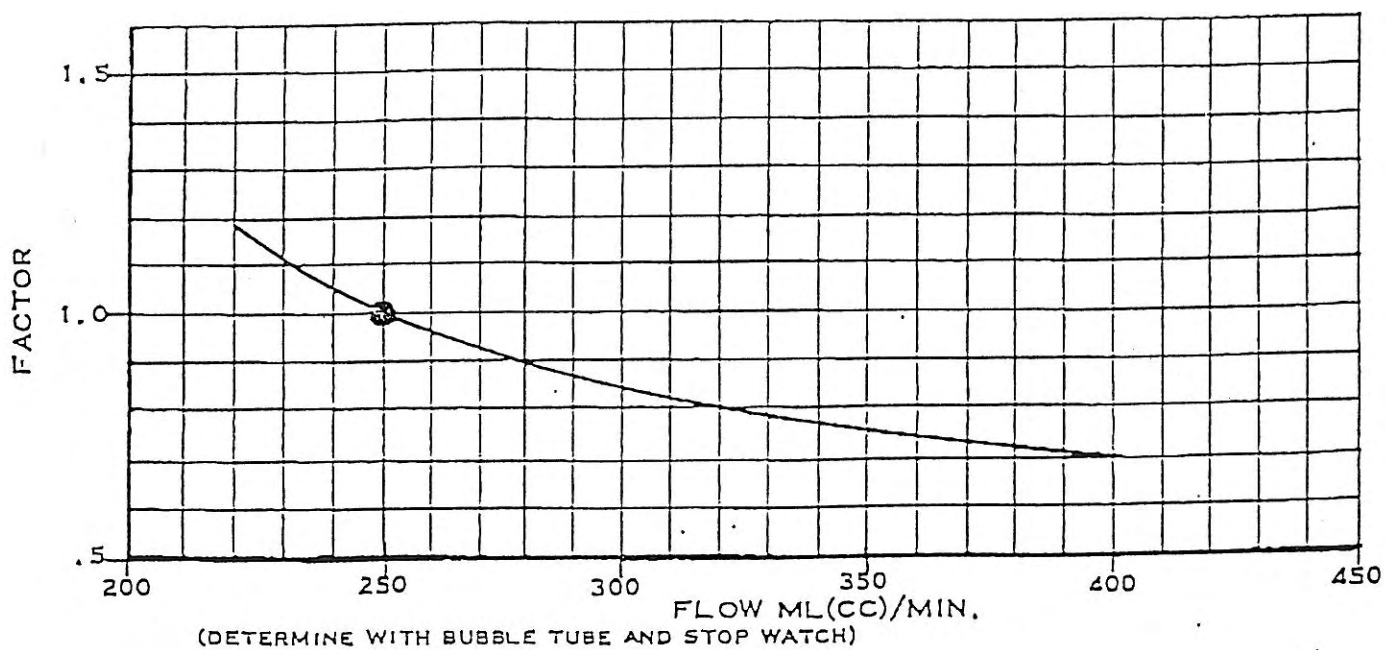


CHART E
SULF' CONVERSION FACTOR (FLOW
(FRSR)

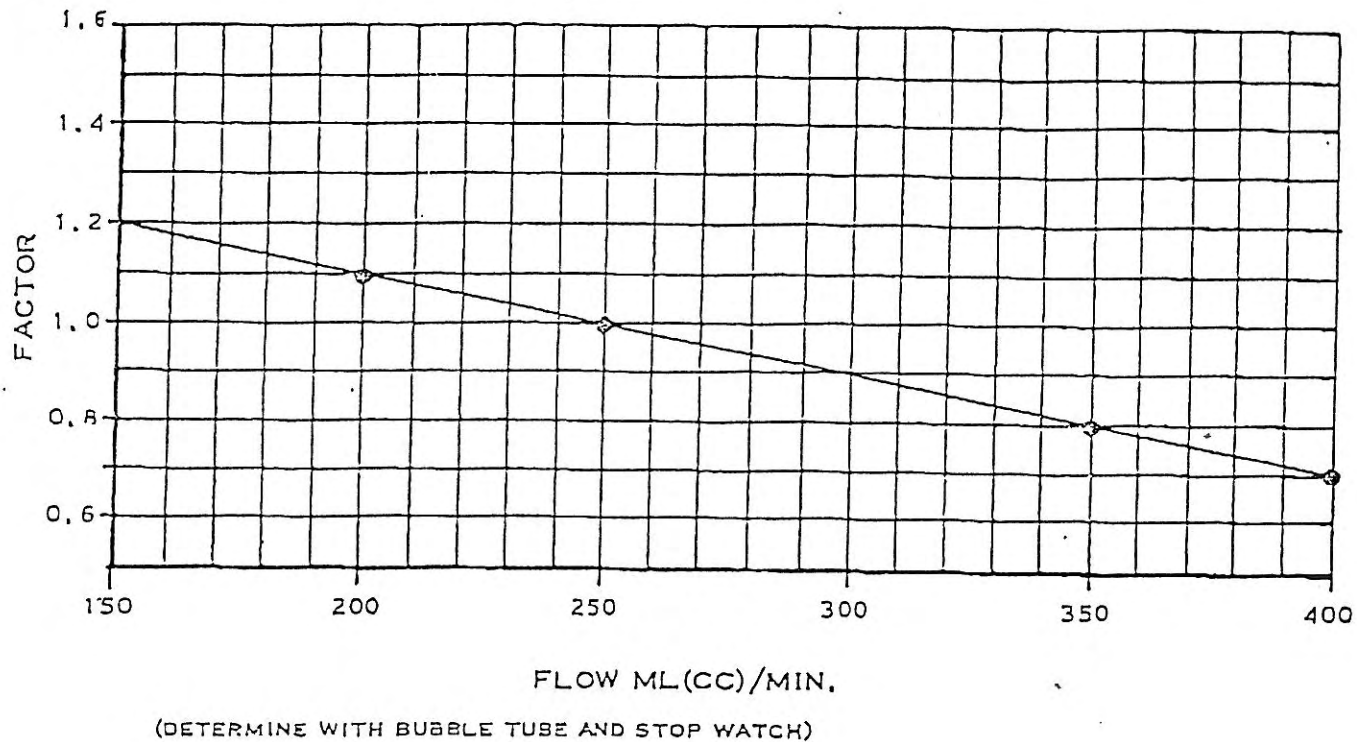


CHART F
RESIDUAL SULFUR CONVERSION FACTOR (FLOW)
(FRES)

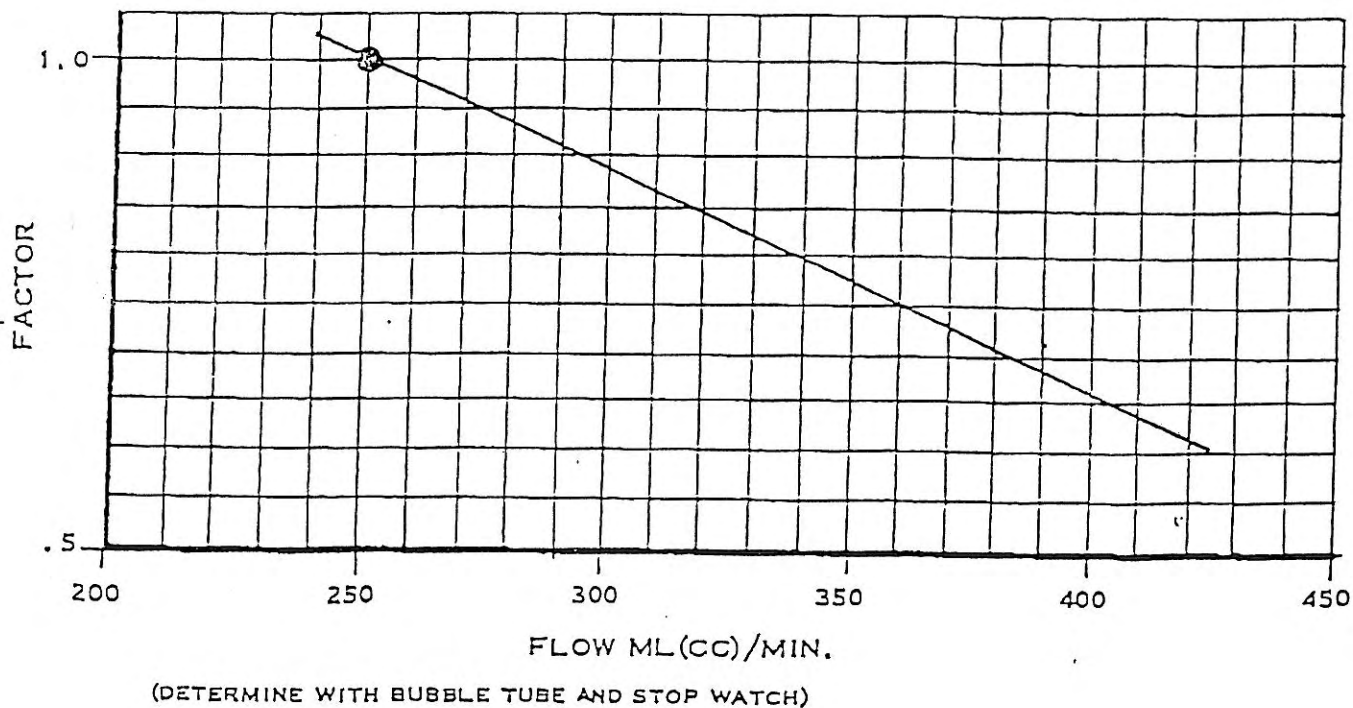
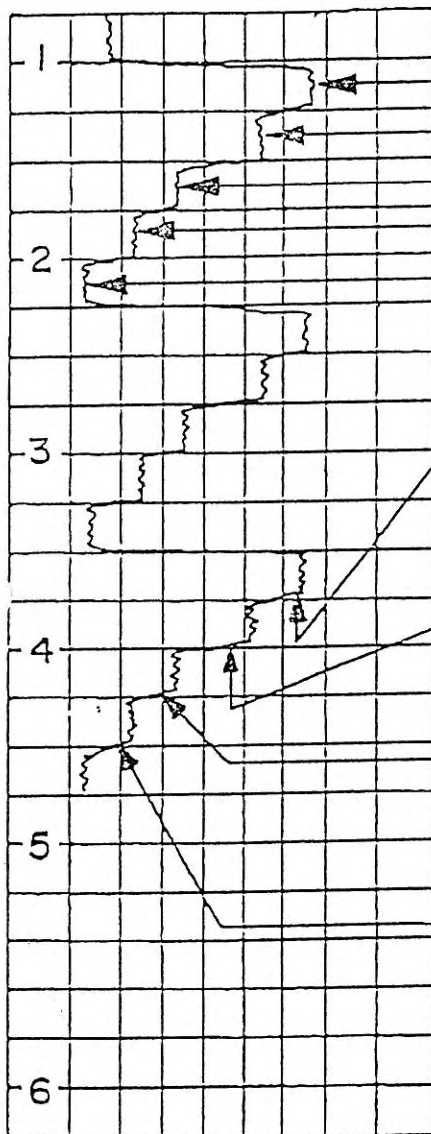


CHART G RECORDER CHART ILLUSTRATION

FROM A RUN WITH THE MODEL 302 ANALYTIC FILTER SYSTEM IN LINE WITH THE MODEL 286.
RANGE 1 MA. FLOW 250 ML/MIN. CELL CALIBRATION FACTION (K) = .95



T = TOTAL TITRATION READING = 65

[H₂S] = HYDROGEN SULFIDE READING = 54

[RSH] = MERCAPTAN READING = 35

[RSR] = SULFIDE READING = 24

B = BLANK READING = 13

FROM THE FORMULAE ON PAGE 3-9

HYDROGEN SULFIDES = (T - [H₂S]) × F_{H₂S} × K × C_{H₂S}

= 65 - 54 × 1 × .95 × .0075 = .0784

ROUND OFF TO .078 GRAINS/100 STD. CU. FT.

MERCAPTAN SULFUR = ([H₂S] - [RSH]) × F_{RSH} × K × C_{RSH}

= 54 - 35 × 1 × .95 × .008 = .144

ROUND OFF TO .14 GRAINS/100 STD. CU. FT.

SULFIDE SULFUR = ([RSH] - [RSR]) × F_{RSR} × K × C_{RSR}

= 35 - 24 × 1 × .95 × .02 = .209

ROUND OFF TO .21 GRAINS/100 STD. CU. FT.

RESIDUAL SULFUR = ([RSR] - B) × F_{RES} × K × C_{RES}

= 24 - 13 × 1 × .95 × .009 = .09405

ROUND OFF TO .094 GRAINS/100 STD. CU. FT.

TOTAL SULFUR = .078

.14

.21

.094

.522 GRAINS/100 STD. CU. FT.

(See Figure 3-2 for sample sulfur analysis work sheet for adaptation to customer use.)

SULFUR ANALYSIS USING BARTON MODEL
ANALYTIC FILTER SYSTEM AND MODEL 286 ANALYZER

DATE _____
TIME _____
BY _____
LOCATION _____

DATA AND WORK SHEET

FILTER SOLUTIONS: (SEE TABLE 3-3)

FILTER No.	FILTER DESIGNATION	5 CC FRESH SOLUTION	COMPOUNDS ABSORBED
1	HYDROGEN SULFIDE	1% $\text{CdSO}_4 + 2\% \text{H}_3\text{BO}_3$ IN H_2O	H_2S
2	MERCAPTANS	10% NaOH IN H_2O	H_2S , RSH
3	SULFIDE SULFUR	$\frac{1}{2}\%$ AgNO_3 IN H_2O	H_2S , RSH , RSR
4	BLANK	ACTIVATED CARBON	ALL SULFUR COMPOUNDS

MODEL 286 SERIAL No. _____ CELL SERIAL No. _____

FLOW RATE _____ MODEL 302 SERIAL No. _____

ENTER FACTORS FROM CHARTS C, D, E, AND F

LINE	$\text{F}_{\text{H}_2\text{S}}$ (C)	F_{RSH} (D)	F_{RSR} (E)	F_{RES} (F)
(1)	_____	_____	_____	_____

TABLE D

	$\text{C}_{\text{H}_2\text{S}}$	C_{RSH}	C_{RSR}	C_{RES}
(2)	_____	_____	_____	_____

CELL CALIBRATION TAG

	K	K	K	K
(3)	_____	_____	_____	_____

MULTIPLY

(1) X (2) X (3)	(4)	(4.1)	(4.2)	(4.3)
_____	_____	_____	_____	_____

RUN TOTAL (T) (5) _____

RUN $[\text{H}_2\text{S}]$ (6) _____

SUBTRACT (6) FROM (5) _____ MULTIPLY X (4) _____ = (10) _____
HYDROGEN SULFIDE

RUN $[\text{RSH}]$ (7) _____

SUBTRACT (7) FROM (6) _____ MULTIPLY X (4.1) _____ = (11) _____
MERCAPTAN SULFUR

RUN $[\text{RSR}]$ (8) _____

SUBTRACT (7) FROM (6) _____ MULTIPLY X (4.2) _____ = (12) _____
SULFIDE SULFUR

RUN BLANK (9) _____

SUBTRACT (9) FROM (8) _____ MULTIPLY X (4.3) _____ = (13) _____
RESIDUAL SULFUR

TOTAL SULFUR = _____ TOTAL (10), (11), (12), (13) = _____

Figure 3-2. Sample Sulfur Analysis Work Sheet

Sulfur Analysis Work Sheet

Barton Model 286 Titrator and Model 302 Analytic Filter System

Station Name <u>Sta. 200</u>	Location (Town County State) <u>Frazer Chester Pa</u>	Time of Test <u>2:15</u>	Tube No. _____	Date <u>8-11-94</u>
Model 286 Serial No. <u>286-359</u>	Cell Serial No. <u>110</u>	Flow Rate <u>250 cc/min</u>	Model 302 Serial No. _____	Range Switch Setting <u>.3MA</u>

Flow Conversion Factors *
(250 cc/min. = 1)

	F_{H_2S} (c)	F_{RSH} (d)	F_{RSR} (e)	F_{RES} (f)
(1)	<u>1.0</u>	<u>1.0</u>	<u>1.0</u>	<u>1.0</u>
	C_{H_2S}	C_{RSH}	C_{RSR}	C_{RES}

Conversion Factors for
Range Switch Settings *

(2)	<u>.0022</u>	<u>.0048</u>	<u>.006</u>	<u>.0027</u>
-----	--------------	--------------	-------------	--------------

Cell Calibration Factor
(Tagged on Cell)

	K	K	K	K
(3)	<u>1.0</u>	<u>1.0</u>	<u>1.0</u>	<u>1.0</u>

Multiply

(1) x (2) x (3) (4) .0022 (4.1) .0048 (4.2) .006 (4.3) .0027

Run Total (T) (5) 30

Run (H_2S) (6) 22

Subtract (6) from (5) 8

Multiply x (4) .0022 = (10) .0176
Hydrogen Sulfide

Run (RSH) (7) 14

Subtract (7) from (6) 8

Multiply x (4.1) .0048 = (11) .0384
Mercaptan Sulfur

Run (RSR) (8) 13

Subtract (8) from (7) 1

Multiply x (4.2) .006 = (12) .0060
Sulfide Sulfur

Run Blank (9) 10

Subtract (9) from (8) 3

Multiply x (4.3) .0027 = (13) .0081
Residual Sulfur

Total Sulfur [Total (10), (11), (12), (13)] = .0701
Grains/100 SCF

* See Model 286 Operations Manual

Pump Rate _____ (lbs./MMCF) Flow Rate _____ (MMCF/DAY)

Remarks Routine Test of unodorized gas taken at M/L C
Titration.

Witness _____

Transco D. F. Meyer



2800 Post Oak Boulevard
P.O. Box 1396
Houston, Texas 77251-1396
713-439-2000

September 19, 1994

Mr. Steven A. Herman
Assistant Administrator For Enforcement and Compliance Assurance
United States Environmental Protection Agency
401 M Street, SW
Washington, DC 20460

Re: Transcontinental Gas Pipe Line Corporation (TGPL)
Request for Systemwide Custom Fuel Sulfur Monitoring Plan
Approval

Dear Mr. Herman:

TGPL is a 1900 mile interstate natural gas pipeline system which transports gas from production areas along the Gulf Coast to customers along the Eastern Seaboard. Review of the attached system map shows that TGPL (in red) operates in Region II (New Jersey), Region III (Maryland, Pennsylvania, and Virginia), Region IV (Alabama, Georgia, Mississippi, North Carolina, and South Carolina), and Region VI (Louisiana and Texas).

TGPL is requesting regulatory guidance and approval of a custom fuel monitoring plan (federal NSPS fuel sulfur monitoring requirements) which may require approval of each EPA jurisdictional region. TGPL recognizes that EPA has in the past processed such requests through each state agency (assuming delegation of authority), but because TGPL is requesting a systemwide plan approval such an approach appears infeasible.

In preparing this letter TGPL made preliminary contacts with each state agency listed, and identified a responsible individual familiar with the NSPS custom sulfur monitoring alternative. Among those most familiar with the requirements, support for this approach appeared universal.

Regulatory Requirements:

TGPL supplies and uses natural gas, which is widely recognized as a very clean burning fossil fuel. The natural gas transported in the system typically has less than 1 ppmv of sulfur, and in fact is regulated by its Federal Energy Regulatory Commission Certificate to limit sulfur content to 20 grains per 100 standard cubic feet. Despite this characteristically low level, certain source categories are required by federal New Source Performance Standards to monitor fuel sulfur content.

Mr. Steven Herman
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40 CFR 60 Subpart GG, New Source Performance Standards (NSPS) for natural gas fired turbines, prescribes daily fuel sulfur monitoring using an approved ASTM method. The rule also provides for agency approval of a custom fuel monitoring schedule, in lieu of daily monitoring.

Draft Monitoring Plan

TGPL requests approval to adopt a semi-annual custom fuel sulfur monitoring plan at the following TGPL locations:

1. Compressor Station 35 - Houston, Texas (Region VI)
2. Compressor Station 44 - Johnson's Bayou, Louisiana (Region VI)
3. Compressor Station 60 - Jackson, Louisiana (Region VI)
4. Compressor Station 82 - Coden, Alabama (Region IV)
4. Compressor Station 120 - Stockbridge, Georgia (Region IV)
5. Compressor Station 515 - Bear Creek, Pennsylvania (Region III.)

TGPL believes that monitoring at these locations is sufficient to insure that any gas within the system, or supplied to customers, is within the standards established by the agency. The locations in Texas and Louisiana were selected to suitably evaluate the pipeline downstream of major pipeline interconnects, insuring that gas from major producing areas does not result in elevated sulfur levels. Monitoring at Station 120 in Stockbridge Georgia is sufficient to characterize gas from Mississippi to New Jersey, as the significant gas volumes introduced to the pipeline result from Mobile Bay. Monitoring at Station 515 is used to determine gas quality on the Leidy Line in Pennsylvania, which connects to a gas storage field, and therefore confirms not only TGPL's gas but the gas quality of other interstate pipelines utilizing the storage field. (Note: the pipeline capacity is in excess of 1 BCF/Day thus the introduction of even 200 MMSCF/Day is unlikely to significantly impact gas quality.)

If required, TGPL can initiate a custom scheduling plan at these locations consisting of 6 monthly samples, to be followed by 6 quarterly samples (assuming no exceedances are measured), followed by semi-annual sampling thereafter. TGPL does not believe this schedule is necessary based upon the previously demonstrated low sulfur concentrations in pipeline quality natural gas, verified on a number of interstate pipeline systems.

Plan Review and Approval (Coordination)

TGPL has concluded that because the issue involves a federal requirement applicable to our facilities in several U.S.E.P.A Regions, the headquarters office in Washington is the likely responsible organization for assuming the lead in coordinating this review. TGPL will discuss alternatives with any responsible agency official but believes that because the goal is demonstration of compliance with a federal standard, EPA can issue a single guidance or approval. In so doing the resource requirements of the agencies and TGPL will be conserved.

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As issues are resolved and a consensus reached, TGPL will submit a revised list of sampling locations (if required), scheduled dates for sampling throughout the custom cycle (plus or minus 10 days for each site), and general recordkeeping and reporting requirements.

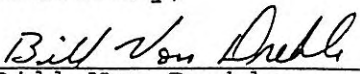
It is envisioned that the agency might issue a plan approval document certifying TGPL's gas monitoring procedure as satisfying applicable NSPS fuel gas sulfur monitoring requirements for any delivery destination, i.e. that TGPL's gas is certified and each individual source does not require approval under a separate plan. TGPL (or the subject source burning TGPL's gas) would maintain a copy of EPA's plan approval letter and sulfur analysis records provided by TGPL.

Conclusion

It is the goal of TGPL to minimize burdensome and duplicative sampling requirements for sources burning natural gas transported by TGPL. TGPL would like to provide its customers, including major utilities and industrial facilities, with a mechanism to document that all purchased gas is certified as satisfying EPA's fuel sulfur monitoring requirements (for subject NSPS sources), based upon the approved fuel monitoring plan. Such a plan can streamline recordkeeping and improve compliance achieving the goals of all concerned.

Your review of this submittal is greatly appreciated. Please contact me at (713) 439-2113 to discuss any additional issues or alternatives.

Sincerely,



Bill Von Drehle
Staff Environmental Scientist
Transcontinental Gas Pipe Line Corp.

BVD

Attachment

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Distribution:

U.S.E.P.A.

Region IV
Attn: Mr. Winston A. Smith
Director, Air Pesticides and
Toxics
345 Courtland Street, NE
Atlanta, GA 30365
(404) 347-3043

State Agency

Alabama

Attn: Mr. Elvin Lang,
1751 Congressman W.L.
Dickinson Drive
Montgomery, AL 36130
(205) 271-7861

Georgia

Attn: Mr. Mike Fogel
Source Monitoring Program
Dept. of Natural Resources
Environmental Protection Div.
4244 International Parkway
Atlanta, GA 30354
(404) 363-7141

Mississippi

Mr. Wayne Anderson
Chief of Compliance
Dept. of Environmental Quality
Bureau of Pollution Control
P.O. Box 10385
Jackson, MS 39289
(601) 961-5171

North Carolina

Attn: Mr. Michael Aldridge
Stationary Source Compliance
Supervisor
Dept. of Environment, Health
and Natural Resources
Division of Environmental Mgt.
P.O. Box 29535
(919) 733-3340

South Carolina

Attn: Mr. Jim Joy
Chief, Bureau of Air Quality
Dept. of Health & Env. Control
2600 Bull Street
Columbia, SC 29201
(803) 734-4750

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U.S.E.P.A.

Region II

Attn: Mr. Conrad Simon
Dir. Air and Waste Management
U.S.E.P.A.
26 Federal Plaza
New York, NY 10278
(212) 264-2301

Region III

U.S.E.P.A.
Attn: Mr. Thomas J. Maslany
Dir. Air, Pesticides and Toxics
841 Chestnut Building
Philadelphia, PA 19107
(215) 597-9800

State Agency

New Jersey

Attn: Dr. Iclal Atay
Chief, Bureau of Air Quality
Engineering of Environmental
New Jersey Dept. of
Environment and Engineering
401 East State Street, CN027
Trenton, NJ 08625-0027

Maryland

Dept. of the Environment
Attn: Mr. Frank Courtright
Head of Enforcement
2500 Broening Highway
Baltimore, MD 21224
(410) 631-3245

Pennsylvania

Attn: Mr. Blaine DeHaven
Div. Chief of Source Testing
Dept. of Env. Resources
P.O. Box 8468
Harrisburg, PA 17105
(717) 787-6547

Virginia

Attn: Mr. Robert Beasley
Dir. Office of Permit Eval.
Virginia Office of Natural
Resources
Dept. of Env. Quality
202 North Ninth Street
Richmond, VA 23240
(804) 786-2378

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U.S.E.P.A.

Region VI
U.S.E.P.A.
Attn: Mr. A. Stanley Meiberg
Dir. Air Pesticides and Toxics
1445 Ross Avenue
Dallas, TX 75202

State Agency

Louisiana
Dept. of Env. Quality
Attn: Mr. Jim Courville
P.O. Box 82135
Baton Rouge, Louisiana

Texas
Attn: Dean Morrill
Texas Natural Resources
Conservation Commission
Source and Mobile Monitoring
12124 Park 35 Circle
Austin, TX 78753
(512) 239-1000

bcc: w/o attachment

Bob Bahnick
Craig Chester
^{2/4}_{5/4} Bill Hammons
James Hills
Bruce Hancik
Ron Honefenger
Jim Houston
Frank Hudack
Curtis Jelks
David Jernigan
Rich Lutz
Mike Maben
Doug McShan
Carol Murin
Jim Shannon
Jerry Paul Smith
Dave Williams
Kevin Wilson

File: Air-Fed Regs Corr-NSPS-Fuel Sulphur Monitoring

APPENDIX E

**Emissions Estimates and Supporting
Documentation**

Summary of Hazardous Air Pollutant Emissions ²

Unit No.	MDE Registration No.	Model	Design Heat Input MMBtu/hr	Emissions (tons/year)									TOTAL EMISSIONS
				Formaldehyde	Acetaldehyde	Acrolein	Benzene	Methanol	Toluene	Ethylbenzene	Xylenes	n-Hexane	
M/L 1	13-5-0054	Clark HBA-8T NG Compressor Engine	15.38	3.72	0.52	0.52	0.13	0.17	0.06	0.01	0.02	0.03	5.18
M/L 2	13-5-0054	Clark HBA-8T NG Compressor Engine	15.38	3.72	0.52	0.52	0.13	0.17	0.06	0.01	0.02	0.03	5.18
M/L 3	13-5-0054	Clark HBA-8T NG Compressor Engine	15.38	3.72	0.52	0.52	0.13	0.17	0.06	0.01	0.02	0.03	5.18
M/L 4	13-5-0054	Clark HBA-8T NG Compressor Engine	15.38	3.72	0.52	0.52	0.13	0.17	0.06	0.01	0.02	0.03	5.18
M/L 5	13-5-0054	Clark HBA-8T NG Compressor Engine	15.38	3.72	0.52	0.52	0.13	0.17	0.06	0.01	0.02	0.03	5.18
M/L 6	13-5-0054	Clark HBA-8T NG Compressor Engine	15.38	3.72	0.52	0.52	0.13	0.17	0.06	0.01	0.02	0.03	5.18
M/L 7	13-5-0054	Clark HBA-8T NG Compressor Engine	15.38	3.72	0.52	0.52	0.13	0.17	0.06	0.01	0.02	0.03	5.18
M/L 8	13-5-0054	Clark TLA-6 NG Compressor Engine	15.75	3.81	0.54	0.54	0.13	0.17	0.07	0.01	0.02	0.03	5.31
M/L 9	13-5-0054	Clark TLA-6 NG Compressor Engine	15.75	3.81	0.54	0.54	0.13	0.17	0.07	0.01	0.02	0.03	5.31
M/L 10	13-5-0054	Clark TLA-6 NG Compressor Engine	15.75	3.81	0.54	0.54	0.13	0.17	0.07	0.01	0.02	0.03	5.31
M/L 11	13-5-0054	Clark TCV-10 NG Compressor Engine	25.5	6.17	0.87	0.87	0.22	0.28	0.11	0.01	0.03	0.05	8.59
M/L 12	13-5-0054	Clark TCV-16 NG Compressor Engine	41.25	9.97	1.40	1.41	0.35	0.45	0.17	0.02	0.05	0.08	13.90
M/L 13 (CT-1)	027-0223-9-0391	Solar Titan 250 Combustion Turbine	234.04	2.90	0.04	0.01	0.01	N/A	0.10	0.03	0.10	N/A	3.19
AUX 1 ³	13-9-0186	Waukesha 7042 GL Auxiliary Generator	11.1	1.47	0.23	0.14	0.01	0.07	0.01	0.00	0.01	0.03	1.97
AUX 2 (EG-1)	027-0223-9-0392	Waukesha L5794LT Auxiliary Generator	10.9	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
BLR 1	13-5-0063	Holmar Vulcan A60 Boiler (Bldg. Space Heating)	2.5	0.82			0.02		0.04				0.88
BLR 2	13-5-0064	H. B. Smith Model G28HE-13S	4.0	1.31			0.04		0.06				1.40
FUG 1		Piping Component Fugitives					0.01		0.02	0.00	0.02	0.05	0.10
FUG 2		Venting / Blowdown Emissions					0.04		0.03	0.00	0.02	0.71	0.81
TOTAL EMISSIONS				60.11	7.81	7.71	2.02	2.48	1.19	0.14	0.41	1.23	83.10

² Emission rates (excluding FUG 1 and FUG 2) calculated using GRI-HAPCalc 3.0 emissions estimation software.
For Unit Nos. FUG 1 and FUG 2, see attached "Piping Component Fugitive and Venting / Blowdown Emission Calculations".
³ Assume 5,000 hours per year operation.

Transcontinental Gas Pipe Line Company, LLC
Station 190 - Ellicott City, MD
Potential Emissions

Summary of Greenhouse Gas (GHG) Emissions ¹

Unit No.	Model	Source Type	Potential Hours of Operation	Potential GHG Emissions (tons/year)			
				Carbon Dioxide	Methane	N ₂ O	Carbon Dioxide Equivalent (CO ₂ e)
M/L 1	Clark HBA-8T NG	2 cycle lean burn engine	8,760	7,410.08	97.68		9461.33
M/L 2	Clark HBA-8T NG	2 cycle lean burn engine	8,760	7,410.08	97.68		9461.33
M/L 3	Clark HBA-8T NG	2 cycle lean burn engine	8,760	7,410.08	97.68		9461.33
M/L 4	Clark HBA-8T NG	2 cycle lean burn engine	8,760	7,410.08	97.68		9461.33
M/L 5	Clark HBA-8T NG	2 cycle lean burn engine	8,760	7,410.08	97.68		9461.33
M/L 6	Clark HBA-8T NG	2 cycle lean burn engine	8,760	7,410.08	97.68		9461.33
M/L 7	Clark HBA-8T NG	2 cycle lean burn engine	8,760	7,410.08	97.68		9461.33
M/L 8	Clark TLA-6 NG	2 cycle lean burn engine	8,760	7,588.35	100.03		9688.94
M/L 9	Clark TLA-6 NG	2 cycle lean burn engine	8,760	7,588.35	100.03		9688.94
M/L 10	Clark TLA-6 NG	2 cycle lean burn engine	8,760	7,588.35	100.03		9688.94
M/L 11	Clark TCV-10 NG	2 cycle lean burn engine	8,760	12,285.90	161.95		15686.86
M/L 12	Clark TCV-16 NG	2 cycle lean burn engine	8,760	19,874.25	261.98		25375.80
AUX 1	Waukesha 7042 GL	4 cycle lean burn engine	8,760	5,347.98	60.77		6624.20
BLR 1	Holmar Vulcan A60 Boiler		8,760	1,288.24	0.02	0.02	1296.08
BLR 2	H. B. Smith Model G28HE-13S		8,760	2,050.87	0.04	0.04	2063.35
FUG 1	Piping Component Fugitives		8,760	2.23	75.20		1581.53
FUG 2	Venting / Blowdown Emissions		8,760	1,250.77	37.21		2032.18
TOTAL EMISSIONS (After Changes)				116,735.88	1,581.01		149,956.14

¹ For details, see attached "Notes about Greenhouse Gas Emission Calculations"

Notes About Emission Calculations

Engine Model	NOx (lb/hr)	VOC (lb/hr)	CO (lb/hr)	SO2 (lb/hr)	PM10 (lb/hr)	PM Filterable (lb/hr)	PM Condensable (lb/hr)
Clark HBA-8T ¹	4.77	0.78	4.87	0.01	0.74	0.59	0.15
Clark HBA-8T ¹	4.77	0.78	4.87	0.01	0.74	0.59	0.15
Clark HBA-8T ¹	4.77	0.78	4.87	0.01	0.74	0.59	0.15
Clark HBA-8T ¹	4.77	0.78	4.87	0.01	0.74	0.59	0.15
Clark HBA-8T ¹	4.77	0.78	4.87	0.01	0.74	0.59	0.15
Clark HBA-8T ¹	4.77	0.78	4.87	0.01	0.74	0.59	0.15
Clark HBA-8T ¹	4.77	0.78	4.87	0.01	0.74	0.59	0.15
Clark TLA-6 ¹	6.51	1.0	5.63	0.01	0.76	0.60	0.16
Clark TLA-6 ¹	6.51	1.0	5.63	0.01	0.76	0.60	0.16
Clark TLA-6 ¹	6.51	1.0	5.63	0.01	0.76	0.60	0.16
Clark TCV-10 ²	12.0	1.0	7.7	0.01	1.23	0.98	0.25
Clark TCV-16 ²	19.4	11.0	12.4	0.02	1.99	1.58	0.41
Waukesha 7042GL ³	9.8	4.9	16.3	0.01	0.54	0.00	0.11
Holmar Vulcan A60 ⁴	0.21	0.018	0.1	0.002	0.02	0.01	0.02
H. B. Smith Model G28HE-13S	0.28	0.004	0.1	0.002	0.03	0.01	0.02

¹ NOx, CO, and VOC emission rates based upon average post modification reference method test results from Dec 2017.

THC emission rates based upon average 1995 stack test results for each engine model. VOC emission rates assume 9.31% of THC are VOCs

SO₂ emission rates based on AP-42, Section 3.2, Table 3.2-1 (July 2000)

PM10 emission rates based on AP-42 Section 3.2, Table 3.2-1 (July 2000) (filterable + condensable). PM condensable emission rates based on AP-42 Section 3.2, Table 3.2-1 (July 2000)

² NOx, CO, and VOC emission rates based upon average reference method tests results from 2003 test event.

SO₂ emission rates based on AP-42, Section 3.2, Table 3.2-1 (July 2000)

PM10 emission rates based on AP-42 Section 3.2, Table 3.2-1 (July 2000) (filterable + condensable). PM condensable emission rates based on AP-42 Section 3.2, Table 3.2-1 (July 2000)

³ NOx, CO, and VOC emission rates based upon vendor data.

SO₂ emission rates based on AP-42, Section 3.2, Table 3.2-2 (July 2000)

PM10 emission rates based on AP-42 Section 3.2, Table 3.2-2 (July 2000) (filterable + condensable). PM condensable emission rates based on AP-42 Section 3.2, Table 3.2-2 (July 2000)

⁴ NOx, CO, and VOC emission rates based upon emissions from 1995 stack test data (SWRI).

SO₂ emission rates based on AP-42, Section 1.4, Table 1.4-2 (July 1998)

PM10 emission rates based on AP-42 Section 1.4, Table 1.4-2 (July 1998)

Notes About HAP Emission Calculations

Engine Model	Formaldehyde lb/MMBtu	Acrolein lb/MMBtu	Acetaldehyde lb/MMBtu	Benzen lb/MMBtu	Methanol lb/MMBtu	Toluene lb/MMBtu	Ethylbenzene lb/MMBtu	Xylenes lb/MMBtu	n-Hexane lb/MMBtu
Clark HBA-8T ¹	5.52E-02	7.78E-03	7.76E-03	1.94E-03	2.48E-03	9.63E-04	1.08E-04	2.68E-04	4.45E-04
Clark HBA-8T ¹	5.52E-02	7.78E-03	7.76E-03	1.94E-03	2.48E-03	9.63E-04	1.08E-04	2.68E-04	4.45E-04
Clark HBA-8T ¹	5.52E-02	7.78E-03	7.76E-03	1.94E-03	2.48E-03	9.63E-04	1.08E-04	2.68E-04	4.45E-04

Clark HBA-8T ¹	5.52E-02	7.78E-03	7.76E-03	1.94E-03	2.48E-03	9.63E-04	1.08E-04	2.68E-04	4.45E-04
Clark HBA-8T ¹	5.52E-02	7.78E-03	7.76E-03	1.94E-03	2.48E-03	9.63E-04	1.08E-04	2.68E-04	4.45E-04
Clark HBA-8T ¹	5.52E-02	7.78E-03	7.76E-03	1.94E-03	2.48E-03	9.63E-04	1.08E-04	2.68E-04	4.45E-04
Clark HBA-8T ¹	5.52E-02	7.78E-03	7.76E-03	1.94E-03	2.48E-03	9.63E-04	1.08E-04	2.68E-04	4.45E-04
Clark TLA-6 ¹	5.52E-02	7.78E-03	7.76E-03	1.94E-03	2.48E-03	9.63E-04	1.08E-04	2.68E-04	4.45E-04
Clark TLA-6 ¹	5.52E-02	7.78E-03	7.76E-03	1.94E-03	2.48E-03	9.63E-04	1.08E-04	2.68E-04	4.45E-04
Clark TLA-6 ¹	5.52E-02	7.78E-03	7.76E-03	1.94E-03	2.48E-03	9.63E-04	1.08E-04	2.68E-04	4.45E-04
Clark TCV-10 ¹	5.52E-02	7.78E-03	7.76E-03	1.94E-03	2.48E-03	9.63E-04	1.08E-04	2.68E-04	4.45E-04
Clark TCV-16 ¹	5.52E-02	7.78E-03	7.76E-03	1.94E-03	2.48E-03	9.63E-04	1.08E-04	2.68E-04	4.45E-04
Waukesha 7042GL ²	5.28E-02	5.14E-03	8.36E-03	4.40E-04	2.50E-03	4.08E-04	3.97E-05	1.84E-04	1.11E-03
Holmar Vulcan A60 ³	7.50E-02			2.10E-03		3.40E-03			1.80E+00
H. B. Smith Model G28HE-13S	7.50E-02			2.10E-03		3.40E-03			1.80E+00

¹ Emission rates based on AP-42, Section 3.2, Table 3.2-1 (July 2000)

² Emission rates based on AP-42, Section 3.2, Table 3.2-2 (July 2000)

³ Emission rates based on AP-42, Section 1.4, Table 1.4-3 (July 1998)

Speciated Condensate Fugitive Emissions

Pollutant	Weight Percent ³
Nitrogen	0.828
Carbon Dioxide	1.564
Methane	48.641
Ethane	6.539
Propane	13.335
I-Butane	7.207
N-Butane	6.362
I-Pentane	4.211
N-Pentane	2.634
I-Hexanes	0.371
N-Hexane	0.228
I-Heptanes	0.790
N-Heptane	0.307
Benzene	0.112
Cyclohexane	0.182
Toluene	0.239
I-Octanes	1.380
N-Octane	0.405
Ethylbenzene	0.076
m, o, & p-Xylene	0.355
I-Nonanes	0.908
N-Nonane	0.404
I-Decanes	1.134
N-Decane	0.306
I-Undecanes +	1.482

³ From Transco Compressor Station 50 Extended Flash Gas Analysis (670 psig to 0 psig), Certificate #200205158-01 (SPL, 05/02)

Total =	100.000
TOC =	97.608
VOC =	42.428
VOC as % of TOC =	43.468
HAPs =	1.010
HAPs as % of TOC =	1.035

STORAGE TANK INVENTORY

Arbitrary Tank No.	Tank Name	Material Stored	Capacity (gallons)
1	Lube Oil Storage Tank	Engine Lube Oil	11,628
2a	Used Oil Settling Tank	Used Engine Lube Oil	684
2b	Used Oil Settling Tank	Used Engine Lube Oil	684
3	Used Oil Storage Tank	Used Engine Lube Oil	3,122
4	Condensate Storage Tank	Pipeline Natural Gas Condensate Liquids	10,000
5	Diesel Storage Tank	Diesel Fuel	423
6	Methanol Storage Tank	Methanol	1,284
7	Wastewater Storage Tank	Water / Oil / Glycol Mix	8,820
8	Antifreeze Storage Tank	Water / Ethylene Glycol Mix	2,700
9a	Lube Oil Cooling Water / Jacket Water Transfer Tank	Water / Ethylene Glycol Mix	4,800
9b	Lube Oil Cooling Water / Jacket Water Transfer Tank	Water / Ethylene Glycol Mix	3,232
10a	Engine Building Basement Drain and Fill Tank (Engine Maintenance)	Lube Oil	2,400
10b	Engine Building Basement Drain and Fill Tank (Engine Maintenance)	Lube Oil	478

Notes About Greenhouse Gas Emission Calculations

Unit No.	Model	Rating (MMBtu/Hr)	Carbon Dioxide (CO ₂) (lb/hr)	Methane (CH ₄) (lb/hr)	N ₂ O (Uncontrolled) (lb/hr)
M/L 1 ¹	Clark HBA-8T NG Compressor Engine	15.38	1,691.8	22.30	
M/L 2 ¹	Clark HBA-8T NG Compressor Engine	15.38	1,691.8	22.30	
M/L 3 ¹	Clark HBA-8T NG Compressor Engine	15.38	1,691.8	22.30	
M/L 4 ¹	Clark HBA-8T NG Compressor Engine	15.38	1,691.8	22.30	
M/L 5 ¹	Clark HBA-8T NG Compressor Engine	15.38	1,691.8	22.30	
M/L 6 ¹	Clark HBA-8T NG Compressor Engine	15.38	1,691.8	22.30	
M/L 7 ¹	Clark HBA-8T NG Compressor Engine	15.38	1,691.8	22.30	
M/L 8 ¹	Clark TLA-6 NG Compressor Engine	15.75	1,732.5	22.84	
M/L 9 ¹	Clark TLA-6 NG Compressor Engine	15.75	1,732.5	22.84	
M/L 10 ¹	Clark TLA-6 NG Compressor Engine	15.75	1,732.5	22.84	
M/L 11 ¹	Clark TCV-10 NG Compressor Engine	25.5	2,805.0	36.98	
M/L 12 ¹	Clark TCV-16 NG Compressor Engine	41.25	4,537.5	59.81	
AUX 1 ²	Waukesha 7042 GL Auxiliary Generator	11.1	1,221.0	13.88	
BLR 1 ³	Holmar Vulcan A60 Boiler (Bldg. Space Heating)	2.5	294.1	0.01	0.01
BLR 2 ³	H. B. Smith Model G28HE-13S Boiler (Bldg. Space Heating)	3.98	468.2	0.01	0.01

¹ CO₂ and CH₄ emission rates based on AP-42 Natural Gas-fired Reciprocating Engines Table 3.2-1 (July 2000)

² CO₂ and CH₄ emission rates based on AP-42 Natural Gas-fired Reciprocating Engines Table 3.2-2 (July 2000)

³ CO₂, CH₄, and N₂O emission rates based on AP-42 Natural Gas-fired Reciprocating Engines Table 1.4-2 (July 2000)

APPENDIX F

Checkoff List of Exempt Emissions Units and Activities

**MARYLAND DEPARTMENT OF THE ENVIRONMENT
AIR AND RADIATION ADMINISTRATION
RENEWAL TITLE V APPLICATION INSIGNIFICANT ACTIVITIES LIST**

III. Check-off List of Emissions Units and Activities Exempt from the Part 70 Permit Application

Insignificant Activities

Place a check mark beside each type of emissions unit or activity that is located at the facility. Where noted, please indicate the number of that type of emissions unit or activity located at the facility.

- (1) No. ____ Fuel burning equipment using gaseous fuels or no. 1 or no. 2 fuel oil, and having a heat input less than 1,000,000 Btu (1.06 gigajoules) per hour;
- (2) No. ____ Fuel-burning equipment using solid fuel and having a heat input of less than 350,000 Btu (0.37 gigajoule) per hour;
- (3) No. ____ Stationary internal combustion engines with less than 500 brake horsepower (373 kilowatts) of power output
- (4) ☒ Space heaters utilizing direct heat transfer and used solely for comfort heat;
- (5) ____ Water cooling towers and water cooling ponds unless used for evaporative cooling of water from barometric jets or barometric condensers, or used in conjunction with an installation requiring a permit to operate;
- (6) No. 1 Unheated VOC dispensing containers or unheated VOC rinsing containers of 60 gallons (227 liters) capacity or less;
- (7) ____ Commercial bakery ovens with a rated heat input capacity of less than 2,000,000 Btu per hour;
- (8) ____ Kilns used for firing ceramic ware, heated exclusively by natural gas, liquefied petroleum gas, electricity, or any combination of these;
- (9) ____ Confection cookers where the products are edible and intended for human consumption;
- (10) ____ Die casting machines;
- (11) ____ Photographic process equipment used to reproduce an image upon sensitized material through the use of radiant energy;
- (12) ☒ Equipment for drilling, carving, cutting, routing, turning, sawing, planing, spindle sanding, or disc sanding of wood or wood products;

**MARYLAND DEPARTMENT OF THE ENVIRONMENT
AIR AND RADIATION ADMINISTRATION
RENEWAL TITLE V APPLICATION INSIGNIFICANT ACTIVITIES LIST**

- (13) ☒ Brazing, soldering, or welding equipment, and cutting torches related to manufacturing and construction activities that emit HAP metals and not directly related to plant maintenance, upkeep and repair or maintenance shop activities;
- (14) ☒ Equipment for washing or drying products fabricated from metal or glass, provided that no VOC is used in the process and that no oil or solid fuel is burned;
- (15) ☐ Containers, reservoirs, or tanks used exclusively for electrolytic plating work, or electrolytic polishing, or electrolytic stripping of brass, bronze, cadmium, copper, iron, lead, nickel, tin, zinc, and precious metals;
- (16) Containers, reservoirs, or tanks used exclusively for:
- (a) ☐ Dipping operations for applying coatings of natural or synthetic resins that contain no VOC;
 - (b) ☐ Dipping operations for coating objects with oils, waxes, or greases, and where no VOC is used;
 - (c) ☐ Storage of butane, propane, or liquefied petroleum, or natural gas;
 - (d) No. 6 Storage of lubricating oils;
 - (e) No. 1 Unheated storage of VOC with an initial boiling point of 300 °F (
 - (f) No. 1 Storage of Numbers 1, 2, 4, 5, and 6 fuel oil and aviation jet engine fuel,
 - (g) No. ☐ Storage of motor vehicle gasoline and having individual tank capacities of 2,000 gallons (7.6 cubic meters) or less;
 - (h) No. ☐ The storage of VOC normally used as solvents, diluents, thinners, inks, colorants, paints, lacquers, enamels, varnishes, liquid resins, or other surface coatings and having individual capacities of 2,000 gallons (7.6 cubic meters) or less;
- (17) ☐ Gaseous fuel-fired or electrically heated furnaces for heat treating glass or metals, the use of which does not involve molten materials;
- (18) Crucible furnaces, pot furnaces, or induction furnaces, with individual capacities of 1,000 pounds (454 kilograms) or less each, in which no sweating or distilling is conducted, or any fluxing is conducted using chloride, fluoride,

**MARYLAND DEPARTMENT OF THE ENVIRONMENT
AIR AND RADIATION ADMINISTRATION
RENEWAL TITLE V APPLICATION INSIGNIFICANT ACTIVITIES LIST**

or ammonium compounds, and from which only the following metals are poured or in which only the following metals are held in a molten state:

- (a) ☐ Aluminum or any alloy containing over 50 percent aluminum, if no gaseous chloride compounds, chlorine, aluminum chloride, or aluminum fluoride is used;
 - (b) ☐ Magnesium or any alloy containing over 50 percent magnesium;
 - (c) ☐ Lead or any alloy containing over 50 percent lead;
 - (d) ☐ Tin or any alloy containing over 50 percent tin;
 - (e) ☐ Zinc or any alloy containing over 50 percent zinc;
 - (f) ☐ Copper;
 - (g) ☐ Precious metals;
- (19) ☐ Charbroilers and pit barbecues as defined in COMAR 26.11.18.01 with a total cooking area of 5 square feet (0.46 square meter) or less;
- (20) ☒ First aid and emergency medical care provided at the facility, including related activities such as sterilization and medicine preparation used in support of a manufacturing or production process;
- (21) ☒ Certain recreational equipment and activities, such as fireplaces, barbecue pits and cookers, fireworks displays, and kerosene fuel use;
- (22) ☐ Potable water treatment equipment, not including air stripping equipment;
- (23) ☐ Firing and testing of military weapons and explosives;
- (24) ☐ Emissions resulting from the use of explosives for blasting at quarrying operations and from the required disposal of boxes used to ship the explosive;
- (25) ☒ Comfort air conditioning subject to requirements of Title VI of the Clean Air Act;
- (26) ☐ Grain, metal, or mineral extrusion presses;
- (27) ☐ Breweries with an annual beer production less than 60,000 barrels;

**MARYLAND DEPARTMENT OF THE ENVIRONMENT
AIR AND RADIATION ADMINISTRATION
RENEWAL TITLE V APPLICATION INSIGNIFICANT ACTIVITIES LIST**

(28) ✓ Natural draft hoods or natural draft ventilators that exhaust air pollutants into the ambient air from manufacturing/industrial or commercial processes;

(29) Laboratory fume hoods and vents;

(30) No. Sheet-fed letter or lithographic printing press(es) with a cylinder width of less than 18 inches;

For the following, attach additional pages as necessary:

(31) any other emissions unit, not listed in this section, with a potential to emit less than the "de minimus" levels listed in COMAR 26.11.02.10X (list and describe units):

No. N/A _____
No. N/A _____
No. N/A _____
No. N/A _____
No. N/A _____

(32) any other emissions unit at the facility which is not subject to an applicable requirement of the Clean Air Act (list and describe):

No. N/A _____
No. N/A _____
No. N/A _____

APPENDIX G

Copy of 2021 Emissions Certification Report

027-0223



By Federal Express, Overnight

TRANSCO PIPELINE
2800 Post Oak Boulevard (77056)
P.O. Box 1396
Houston, TX 77251-1396
713-215-2000

March 29, 2022

Maryland Department of the Environment
Air and Radiation Management Administration
Attn: Laramie Daniel, Compliance Program
1800 Washington Boulevard, Suite 715
Baltimore, MD 21230-0720

Re: 2021 Emissions Certification Report
Transcontinental Gas Pipe Line Company, LLC (Transco)
Compressor Station 190 – Ellicott City, MD – Permit No. 24-027-00223

Dear Laramie Daniel:

Enclosed please find two (2) copies of a completed 2021 Emissions Certification Report for the above referenced facility. Also enclosed is documentation of emission calculations and information regarding the capacity factor for Auxiliary Generator Unit 1 as required by the above referenced permit in Section IV Condition 4.3.2.B(1).

As required, the enclosed report has been certified by an authorized company representative.

If you have any questions about this report, please contact me at (713)-215-2964 or cecilia.chapa@williams.com.

Sincerely,

A handwritten signature in blue ink that reads "Cecilia Chapa".

Cecilia Chapa
Environmental Senior Engineer
Transmission and Gulf of Mexico Operating Area

Enclosures

Rec:
3/30/22

MARYLAND DEPARTMENT OF THE ENVIRONMENT
1800 Washington Boulevard, Suite 715 • Baltimore Maryland 21230-1720
410-537-3000 • 1-800-633-6101 • <http://www.mde.state.md.us>
Air and Radiation Management Administration
Air Quality Compliance Program
410-537-3220

FORM 1:

**GENERAL FACILITY INFORMATION
EMISSIONS CERTIFICATION REPORT**

Calendar Year: 2021

A. FACILITY IDENTIFICATION				Do Not Write in This Space	
Facility Name: Transcontinental Gas Pipe Line Company, LLC – Station 190				Date Received Regional	
Address: 11910 Carroll Mill Road				Date Received State	
City: Ellicott City County: Howard Zip Code: 21042-1310				AIRS Code	
B. Briefly describe the major function of the facility				FINDS Code	
This facility is a mainline natural gas transmission station which is used to compress natural gas, thereby sustaining flow of natural gas through the pipeline.				SIC Code	
				Facility Number: 027-0223	
				TEMPO ID: 5546	
C. SEASONAL PRODUCTION (% if applicable)				Reviewed by:	
<u>Winter (Dec.-Feb.)</u>	<u>Spring (Mar – May)</u>	<u>Summer (Jun – Aug)</u>	<u>Fall (Sept – Nov)</u>	Name _____ Date _____	
16.6%	23.6%	30.4%	29.4%		
D. Explain any increases or decreases in emissions from the previous calendar year for each registration at this facility.					
Overall station utilization has changed due to changes in the demand for natural gas					
E. CONTROL DEVICE INFORMATION (for NOx and VOC sources only)					
Control Device	Capture Efficiency	Removal Efficiency			
No Control Devices in use at this facility	n/a	n/a			

I am familiar with the facility and the installations and sources for which this report is submitted. I have personally examined the information in this report, which consists of _____ pages (including attachments), and certify that the information is correct to the best of my knowledge.

<u>Glen Jasek</u> Name (Print/Type)	<u>VP GM, Eastern Interstates</u> Title	<u>March 29, 2022</u> Date
 Signature	<u>713 215-2134</u> Telephone	

CRITERIA AIR POLLUTANTS EMISSIONS CERTIFICATION REPORT

Facility Name: Transcontinental gas Pipe Line Company, LLC – Station 190
 Facility ID: _____
 Pollutant: NOx _____

Equipment Description/ Registration No.	SCC Number	Fuel	Actual Emissions		Operating Schedule (Actual)					TOSD Lbs/dy	Operating Schedule			Emissions Methods
			Tons/yr	Lbs/day	Hrs/dy	Dys/wk	Wk/yr	Days/yr	Hrs/dy		Start	End		
027-0223-5-0054 <i>Clark</i>	20200252	Natural Gas	S 44.8	245.5	24	7	52.14	365 365	36.1	24	0:00	24:00	C1	
027-0223-9-0186 <i>Em. Gen.</i>	20200254	Natural Gas	S 0.2	0.9 2.7	24	7	52.14	365 15	1.2	24	0:00	24:00	C3	
027-0223-5-0063 <i>Boiler Holmer</i>	12000603	Natural Gas	S 0.4	2.1 4.4	24	7	52.14	365 130	0.6	24	0:00	24:00	C3	
027-0223-5-0064 <i>Boiler - Cycle</i>	12000603	Natural Gas	S 0.3	1.8 3.3	24	7	52.14	365 180	0.2	24	0:00	24:00	C3	
027-0223-9-0391 <i>Solar Heat Turbine</i>	20100101	Natural Gas	S 15.7	86.1	24	7	52.14	365 365	92.1	24	0:00	24:00	C3	
027-0223-9-0392 <i>Em. Gen.</i>	20200254	Natural Gas	S 0.1	0.5 1.5	24	7	52.14	365 15	0.7	24	0:00	24:00	C3	
			S											
			F											
			S											
			F											
			S											
			F											
			S											
			F											
Total			61.5	336.8					425.9					

Daily emissions (lbs/day) are lbs/operating day of the source

Fuel: Include emissions for each fuel used. If more than one fuel is used, calculate and list emissions separately for each fuel.

C5-User calculated based on a State or local agency emission factor
C6-New construction, not operational
C7-Source closed, operation ceased
C8-Computer calculated based on standard

CRITERIA AIR POLLUTANTS EMISSIONS CERTIFICATION REPORT

Calendar Year: 2021
 Facility Name: Transcontinental gas Pipe Line Company, LLC – Station 190 Facility ID: Pollutant: CO

Equipment Description/ Registration No.	SCC Number	Fuel	Actual Emissions		Operating Schedule (Actual)					TOSD		Operating Schedule			Emissions Methods
			Tons/yr	Lbs/day	Hrs/dy	Dys/wk	Wk/yr	Days/yr	Lbs/dy	Hrs/dy	Start	End			
027-0223-5-0054	20200252	Natural Gas	S 143.6	787.1	24	7	52.14	365	n/a	24	0:00	24:00	C1		
		F													
027-0223-9-0186	20200254	Natural Gas	S 0.3	40	24	7	52.14	365/5	n/a	24	0:00	24:00	C3		
		F													
027-0223-5-0063	12000603	Natural Gas	S 0.2	2.2	24	7	52.14	365/180	n/a	24	0:00	24:00	C3		
		F													
027-0223-5-0064	12000603	Natural Gas	S 0.1	1.1	24	7	52.14	365/180	n/a	24	0:00	24:00	C3		
		F													
027-0223-9-0391	20100101	Natural Gas	S 51.6	282.6	24	7	52.14	365	n/a	24	0:00	24:00	C3		
		F													
027-0223-9-0392	20200254	Natural Gas	S 0.1	1.3	24	7	52.14	365/5	n/a	24	0:00	24:00	C3		
		F													
		S													
		F													
		S													
		F													
		S													
		F													
Total			195.9	1,073.2					n/a						

S - Stack Emissions

F - Fugitive Emissions

Daily emissions (lbs/day) are lbs/operating day of the source

TOSD: Typical Ozone Season Day means a typical day of that period of the year during which conditions for photochemical conditions are most favorable, which is generally during sustained periods of direct sunlight and warm temperatures (April-September). This section needs to be completed only for VOC and NOx sources.

Fuel: Include emissions for each fuel used. If more than one fuel is used, calculate and list emissions separately for each fuel.

Emission Estimation Method

A1-U.S. EPA Reference Method
A2-Other Particulate Sampling Train
A3-Liquid Absorption Technique
A4-Solid Absorption Technique
A5-Freezing Out Technique
A9-Other, Specify

C1-User calculated based on source test or other measurement

C2-User calculated based on material balance using engineering knowledge of the process

C3-User calculated based on AP-42

C4-User calculated by best guess/engineering judgment

C5-User calculated based on a State or local agency emission factor

C6-New construction, not operational

C7-Source closed, operation ceased

C8-Computer calculated based on standard

FORM 2:

CRITERIA AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT

Calendar Year: 2021

Facility Name: Transcontinental gas Pipe Line Company, LLC – Station 190 Facility ID: VOC Pollutant: VOC

Equipment Description/ Registration No.	SCC Number	Fuel	Actual Emissions		Operating Schedule (Actual)				TOSD Lbs/dy	Operating Schedule			Emissions Methods
			Tons/yr	Lbs/day	Hrs/dy	Dys/wk	Wk/yr	Days/yr		Hrs/dy	Start	End	
027-0223-5-0054	20200252	Natural Gas	38.6	211.3	24	7	52.14	365	5.6	24	0:00	24:00	C1
027-0223-9-0186	20200254	Natural Gas	0.1	0.4	24	7	52.14	365	0.6	24	0:00	24:00	C3
027-0223-5-0063	12000603	Natural Gas	0.03	0.2	24	7	52.14	365	0.1	24	0:00	24:00	C3
027-0223-5-0064	12000603	Natural Gas	0.00	0.0	24	7	52.14	365	0.0	24	0:00	24:00	C3
Blowdown/Venting	39000699	Natural Gas	0.7	3.8	24	7	52.14	365	3.8	24	0:00	24:00	C4
Process Fugitives	39000699	Natural Gas	0.8	4.2	24	7	52.14	365	4.2	24	0:00	24:00	C4
027-0223-9-0391	20100101	Natural Gas	51.6	161.9	24	7	52.14	365	173.2	24	0:00	24:00	C3
027-0223-9-0392	20200254	Natural Gas	0.1	0.5	24	7	52.14	365	0.8	24	0:00	24:00	C3
Total			69.8	382.4					490.4				

S - Stack Emissions

F - Fugitive Emissions

Daily emissions (lbs/day) are lbs/operating day of the source

TOSD: Typical Ozone Season Day means a typical day of that period of the year during which conditions for photochemical conditions are most favorable, which is generally during sustained periods of direct sunlight and warm temperatures (April-September). This section needs to be completed only for VOC and NOx sources.

Fuel: Include emissions for each fuel used. If more than one fuel is used, calculate and list emissions separately for each fuel.

Emission Estimation Method

A1-U.S. EPA Reference Method
A2-Other Particulate Sampling Train
A3-Liquid Absorption Technique
A4-Solid Absorption Technique
A5-Freezing Out Technique
A9-Other, Specify

C1-User calculated based on source test or other measurement
C2-User calculated based on material balance using engineering knowledge of the process
C3-User calculated based on AP-42
C4-User calculated by best guess/engineering Judgment

C5-User calculated based on a State or local agency emission factor
C6-New construction, not operational
C7-Source closed, operation ceased
C8-Computer calculated based on standard

1/09/08

EMISSIONS CERTIFICATION REPORT

Calendar Year: 2021

Pollutant: PM

Equipment Description/ Registration No.	SCC Number	Fuel	PM – Total		PM 10 –Filterable		PM 2.5 – Filterable		PM Condensable		Operation	Emissions Methods
			Tons/yr	Lbs/day	Tons/yr	Lbs/day	Tons/yr	Lbs/day	Tons/yr	Lbs/day		
027-0223-5-0054	20200252	Natural Gas	S	9.10	49.88	7.24	39.65	7.24	39.65	1.87	10.23	C3
027-0223-9-0186	20200254	Natural Gas	S	0.01	0.05	0.00	0.00	0.00	0.00	0.00	0.01	C3
027-0223-5-0063	12000603	Natural Gas	S	0.04	0.20	0.01	0.05	0.01	0.05	0.03	0.15	C3
027-0223-5-0064	12000603	Natural Gas	S	0.03	0.17	0.01	0.04	0.01	0.04	0.02	0.13	C3
027-0223-9-0391	20100101	Natural Gas	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	C3
027-0223-9-0392	20200254	Natural Gas	S	0.01	0.04	0.00	0.00	0.00	0.00	0.00	0.01	C3
			S									
			F									
			S									
			F									
			S									
			F									
			S									
			F									
Total				9.19	50.33	7.3	39.74	7.3	39.74	1.9	10.52	

Daily emissions (lbs/day) are lbs/operating day of the source

more than one fuel is used, calculate and list emissions separately for each fuel.

Emission Estimation Method

- 2. Laboratory Determination Practices**
- A1-U.S. EPA Reference Method
 - A2-Other Particulate Sampling Train
 - A3-Liquid Absorption Technique
 - A4-Solid Absorption Technique
 - A5-Freezing Out Technique
 - A9-Other, Specify _____

- C1-User calculated based on source test or other measurement
C2-User calculated based on material balance using engineering knowledge of the process
C3-User calculated based on AP-42
C4-User calculated by best guess/engineering Judgment

- C5-User calculated based on a State or local agency emission factor
C6-New construction, not operational
C7-Source closed, operation ceased
C8-Computer calculated based on standard

CRITERIA AIR POLLUTANTS EMISSIONS CERTIFICATION REPORT

Calendar Year: 2021Facility Name: Transcontinental gas Pipe Line Company, LLC – Station 190 Facility ID: Pollutant: SO2

Equipment Description/ Registration No.	SCC Number	Fuel	Actual Emissions		Operating Schedule (Actual)					TOSD		Operating Schedule			Emissions Methods
			Tons/yr	Lbs/day	Hrs/dy	Dys/wk	Wk/yr	Days/yr	Lbs/dy	Hrs/dy	Start	End			
027-0223-5-0054	20200252	Natural Gas	S 0.11 F	0.61	24	7	52.14	365 365	n/a	24	0:00	24:00	C3		
027-0223-9-0186	20200254	Natural Gas	S 0.0 F	0.0	24	7	52.14	365 365	n/a	24	0:00	24:00	C3		
027-0223-5-0063	12000603	Natural Gas	S 0.0 F	0.02	24	7	52.14	365 365	n/a	24	0:00	24:00	C3		
027-0223-5-0064	12000603	Natural Gas	S 0.00 F	0.01	24	7	52.14	365 365	n/a	24	0:00	24:00	C3		
027-0223-9-0391	20100101	Natural Gas	S 0.0 F	0.0	24	7	52.14	365 365	n/a	24	0:00	24:00	C3		
027-0223-9-0392	20200254	Natural Gas	S 0.0 F	0.0	24	7	52.14	365 365	n/a	24	0:00	24:00	C3		
			S												
			F												
			S												
			F												
			S												
			F												
			S												
			F												
Total			0.12	0.64					n/a						

S - Stack Emissions

F - Fugitive Emissions

Daily emissions (lbs/day) are lbs/operating day of the source

TOSD: Typical Ozone Season Day means a typical day of that period of the year during which conditions for photochemical conditions are most favorable, which is generally during sustained periods of direct sunlight and warm temperatures (April-September). This section needs to be completed only for VOC and NOx sources.

Fuel: Include emissions for each fuel used. If more than one fuel is used, calculate and list emissions separately for each fuel.

Emission Estimation Method

A1-U.S. EPA Reference Method
A2-Other Particulate Sampling Train
A3-Liquid Absorption Technique
A4-Solid Absorption Technique
A5-Freezing Out Technique
A9-Other, Specify

C1-User calculated based on source test or other measurement
C2-User calculated based on material balance using engineering knowledge of the process
C3-User calculated based on AP-42
C4-User calculated by best guess/engineering judgment

C5-User calculated based on a State or local agency emission factor
C6-New construction, not operational
C7-Source closed, operation ceased
C8-Computer calculated based on standard

FORM 6: Greenhouse Gases

Calendar Year: 2021

Facility Name:	Transcontinental Gas Pipe Line Company, LLC – Station 190	Facility ID:	Carbon Dioxide (CO2) *
Pollutant:	Carbon Dioxide (CO2)		

This form must be used to report Greenhouse gas emissions:

- carbon dioxide (CO₂)
- methane (CH₄)
- nitrous oxide (N₂O)
- hydrofluorocarbons (HFCs)
- perfluorocarbons (PFCs)
- sulfur hexafluoride (SF₆)

* Use a separate form for each pollutant.

* Please attach all calculations.

¹Emissions must be broken down by equipment registration number (ex. 9-0076, 9-0077)

GREENHOUSE GAS AIR POLLUTANTS

Calendar Year: 2021

EMISSIONS CERTIFICATION REPORT

Facility Name: Transcontinental Gas Pipe Line Company, LLC – Station 190 **Facility ID:** _____ **Pollutant:** Methane (CH4) *

Equipment Description/ Registration Number¹	Actual Emissions		
	Tons/yr	Lbs/day	Lbs/hr
027-0223-5-0054	268.3	1,470.0	299.1
027-0223-9-0186	0.2	1.2 27	13.9
027-0223-5-0063	0.01	0.1	0.01
027-0223-5-0064	0.01	0.0	0.01
027-0223-9-0391	1,349.8	7,396.4	339.4
027-0223-9-0392	0.2	1.0 27	13.6
TOTALS	1,618.5	8,868.7	665.9

This form must be used to report Greenhouse gas emissions.

- carbon dioxide (CO₂)
- methane (CH₄)
- nitrous oxide (N₂O)
- hydrofluorocarbons (HFCs)
- perfluorocarbons (PFCs)
- sulfur hexafluoride (SF₆)

* Use a separate form for each pollutant.

* Please attach all calculations.

¹Emissions must be broken down by equipment registration number (ex. 9-0076, 9-0077)

FORM 5:

BILLABLE TOXIC AIR POLLUTANTS EMISSIONS CERTIFICATION REPORT

Calendar Year: 2021

Facility Name: Transcontinental Gas Pipe Line Company, LLC – Station 190 Facility ID#:

Transco Station 190 does not emit any of these compounds

Chemical Name	CAS Number	Actual Emissions			Estimation Method
		Tons/year	Lbs/day	Lbs/hr	
carbon disulfide	75-15-0	S			
carbonyl sulfide	463-58-1	F			
chlorine	7782-50-5	S			
cyanide compounds	57-12-5	F			
hydrochloric acid	7647-01-0	F			
hydrogen fluoride	7664-39-3	S			
methyl chloroform	71-55-6	F			
methylene chloride	75-09-2	S			
perchloroethylene	127-18-4	F			
phosphine	7803-51-2	S			
titanium tetrachloride	7550-45-0	F			
TOTALS					

Emission Estimation Method

A1-U.S. EPA Reference Method
A2-Other Particulate Sampling Train
A3-Liquid Absorption Technique
A4-Solid Absorption Technique
A5-Freezing Out Technique
A9-Other, Specify

C1-User calculated based on source test or other measurement
C2-User calculated based on material balance using engineering knowledge of the process
C3-User calculated based on AP-42
C4-User calculated by best guess/engineering judgment
C5-User calculated based on a State or local agency factor
C6-New construction, not operational
C7-Source closed, operation ceased
C8-Computer calculated based on standards

This form to include only the chemicals identified.

S-Stack Emissions F-Fugitive Emissions Daily emissions (lbs/day) are lbs/operating day of the source

PLEASE NOTE: Be sure to attach all data and calculations necessary to support the emissions figures shown above.

03/09/09

Summary of Hazardous Air Pollutant (HAPs) Emissions ¹

Unit No.	Reg. No.	Model	2021 Hours Operated	2021 Hphr Operated	2021 Fuel Usage MMcf	Source Type	2021 Formaldehyde Emissions ^{2,3}		
							(tons/year)	(lbs/day)	(lbs/hour)
M/L 1	027-0223-5-0054	Clark HBA-8T (2050 hp)	1,541	3,121,024	27	2-cycle engines - CLARK	0.76	4.18	0.17
M/L 2	027-0223-5-0054	Clark HBA-8T (2050 hp)	3,338	6,829,662	60	2-cycle engines - CLARK	1.67	9.14	0.38
M/L 3	027-0223-5-0054	Clark HBA-8T (2050 hp)	2,712	5,510,498	46	2-cycle engines - CLARK	1.35	7.38	0.31
M/L 4	027-0223-5-0054	Clark HBA-8T (2050 hp)	2,212	4,487,379	35	2-cycle engines - CLARK	1.10	6.01	0.25
M/L 5	027-0223-5-0054	Clark HBA-8T (2050 hp)	3,182	6,439,838	52	2-cycle engines - CLARK	1.57	8.82	0.36
M/L 6	027-0223-5-0054	Clark HBA-8T (2050 hp)	0	0	0	2-cycle engines - CLARK	-	-	-
M/L 7	027-0223-5-0054	Clark HBA-8T (2050 hp)	2,815	5,734,027	43	2-cycle engines - CLARK	1.40	7.68	0.32
M/L 8	027-0223-5-0054	Clark TLA-6 (2100 hp)	1,419	2,928,176	24	2-cycle engines - CLARK	0.72	3.92	0.16
M/L 9	027-0223-5-0054	Clark TLA-6 (2100 hp)	2,887	5,975,955	46	2-cycle engines - CLARK	1.46	8.00	0.33
M/L 10	027-0223-5-0054	Clark TLA-6 (2100 hp)	3,474	7,166,619	55	2-cycle engines - CLARK	1.75	9.60	0.40
M/L 11	027-0223-5-0054	Clark TCV-10 (3400 hp)	116	385,045	3	2-cycle engines - CLARK	0.09	0.52	0.02
M/L 12	027-0223-5-0054	Clark TCV-16 (5500 hp)	35	189,113	2	2-cycle engines - CLARK	0.05	0.25	0.01
Totals - Registration No 13-5-0054							11.92	65.29	2.72
AUX 1	027-0223-9-0186	Waukesha 7042GL (1478 hp)	32	47,459	0.4	4-cycle engines - UNSPECIFIED	0.010	0.06	0.002
M/L 13	027-0223-9-0391	Solar Titan 250 (30,000 hp)	7,955	128,117,020	1,503	natural gas combustion	31.30	171.53	7.15
AUX 2	027-0223-9-0392	Waukesha L5794LT (1450 hp)	27	39,315	0.3	4-cycle engines - UNSPECIFIED	0.008	0.05	0.002
BLR 1	027-0223-5-0063	Holmar (2.5 MMBtu)	3,590		9	natural gas combustion	0.000	0.00	0.000
BLR 2	027-0223-5-0064	Cyclotherm (3.3 MMBtu)	2,315		7	natural gas combustion	0.000	0.00	0.000
STATION TOTAL EMISSIONS							43.24	236.93	9.87

¹ For details, see attached "Notes about HAPs Emission Calculations"

² The primary HAP formed during the combustion of natural gas is formaldehyde. Due to scarcity of emission data for other HAPs, only formaldehyde emissions are reported at this time.

³ Formaldehyde emission factors for engines and turbine are taken from GRIHAPCALC Version 3.0.

Formaldehyde emission factors for natural gas combustion sources from EPA AP-42 Section 1-4 (July 1998).

Summary of 2021 Station Fuel Usage ¹

Unit No.	Fuel Rate MCF/hr	Jan MCF	Feb MCF	Mar MCF	Apr MCF	May MCF	Jun MCF	Jul MCF	Aug MCF	Sep MCF	Oct MCF	Nov MCF	Dec MCF	Total MCF	O ₂ Season Total MCF
M/L 1	17.7	811	0	0	0	172	1,813	4,909	9,360	4,312	2,595	3,037	0	27,108	20,565
M/L 2	17.7	480	0	245	3,478	5,696	5,582	5,984	9,505	7,487	8,776	7,285	4,985	59,503	37,732
M/L 3	17.7	532	0	2,803	6,918	5,684	3,406	5,544	8,957	2,552	3,533	4,895	1,308	46,133	33,062
M/L 4	17.7	354	0	424	5,900	6,973	5,101	0	0	3,467	5,956	3,066	3,494	34,736	21,442
M/L 5	17.7	432	0	2,621	495	3,253	9,469	3,673	9,022	5,361	6,321	5,966	5,795	52,409	31,274
M/L 6	17.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M/L 7	17.7	433	0	1,009	2,819	6,082	7,581	4,841	6,953	5,320	3,100	3,381	1,711	43,229	33,595
M/L 8	15.9	446	0	0	0	0	0	1,195	5,380	7,917	560	5,824	2,576	23,897	14,492
M/L 9	15.9	591	0	0	4,448	6,286	7,585	8,177	11,599	7,421	0	0	0	46,107	45,516
M/L 10	15.9	457	0	0	3,212	5,798	6,068	1,552	10,664	7,121	9,736	7,844	2,810	55,263	34,417
M/L 11	25.1	707	0	0	0	0	0	25	296	955	72	1,279	0	3,335	1,277
M/L 12	40.6	1,247	0	0	0	0	0	0	0	280	0	0	0	1,527	280
M/L 13	186.9	110,468	41,032	115,574	140,922	146,671	137,246	125,698	134,734	124,894	141,958	140,597	143,165	1,502,958	810,165
AUX 1 ²	11.8	14	12	12	168	19	14	12	28	14	30	43	14	380	255
AUX 2 ²	10.7	12	14	11	13	16	17	13	161	0	10	0	19	285	220
BLR 1 ²	2.4	1,806	1,631	1,806	1,315	0	0	0	0	0	233	1,747	175	8,713	1,315
BLR 2 ²	3.2	2,384	2,153	2,384	497	0	0	0	0	0	0	0	0	7,417	497
Stn Total		121,173	44,842	126,889	170,186	186,650	183,882	161,623	206,660	177,101	182,979	184,963	166,053	1,913,001	1,086,102

¹ Fuel usage provided by field personnel unless otherwise noted

² Fuel usage calculated based on fuel rate multiplied by hours.

Summary of 2021 Emissions ¹

Unit No.	Reg. No.	Model	Heat Rate (MMBtu/hr)	Total Hours Operated	O ₂ Season Hours Operated	Total Emissions (tons/year)						
						NOx	VOC	CO	SO ₂	PM Total	PM Filterable	PM Condensable
MIL 1	027-0223-5-0054	Clark HBA-8T (2050 hp)	15.38	1,541	1,174	4.3	0.7	3.6	0.01	0.57	0.45	0.12
MIL 2	027-0223-5-0054	Clark HBA-8T (2050 hp)	15.38	3,338	2,107	6.8	5.0	27.4	0.02	1.24	0.99	0.25
MIL 3	027-0223-5-0054	Clark HBA-8T (2050 hp)	15.38	2,712	1,945	7.4	0.7	6.4	0.01	1.01	0.80	0.21
MIL 4	027-0223-5-0054	Clark HBA-8T (2050 hp)	15.38	2,212	1,384	6.5	1.0	5.8	0.01	0.82	0.65	0.17
MIL 5	027-0223-5-0054	Clark HBA-8T (2050 hp)	15.38	3,182	1,871	5.9	4.7	26.1	0.01	1.18	0.94	0.24
MIL 6	027-0223-5-0054	Clark HBA-8T (2050 hp)	15.38	0	0	0	0.0	0.0	0.00	0.00	0.00	0.00
MIL 7	027-0223-5-0054	Clark HBA-8T (2050 hp)	15.38	2,815	2,189	0.4	4.2	23.1	0.01	1.05	0.83	0.21
MIL 8	027-0223-5-0054	Clark TLA-6 (2100 hp)	15.75	1,419	855	4.3	0.7	4.0	0.01	0.54	0.43	0.11
MIL 9	027-0223-5-0054	Clark TLA-6 (2100 hp)	15.75	2,897	2,860	3.9	9.7	21.1	0.01	1.10	0.88	0.23
MIL 10	027-0223-5-0054	Clark TLA-6 (2100 hp)	15.75	3,474	2,154	4.9	11.6	25.3	0.02	1.32	1.05	0.27
MIL 11	027-0223-5-0054	Clark TCY-10 (3400 hp)	25.50	116	42	0.1	0.1	0.6	0.00	0.07	0.06	0.01
MIL 12	027-0223-5-0054	Clark TCY-16 (5500 hp)	41.25	35	5	0.3	0.0	0.2	0.00	0.20	0.16	0.04
Totals - Registration No 13-5-0054						44.8	38.6	143.6	0.11	9.10	7.24	1.87
AUX 1	027-0223-9-0186	Waukesha 7042GL (1478 hp)	11.1	32	22	0.2	0.1	0.3	0.00	0.01	0.00	0.00
MIL 13	027-0223-9-0391	Solar Titan 250 (30,000 hp)	234.04	7,955	4,267	15.7	29.6	51.6	0.00	0.00	0.00	0.00
AUX 2	027-0223-9-0392	Waukesha L5794LT (1450 hp)	10.9	27	21	0.1	0.1	0.1	0.00	0.01	0.00	0.00
BLR 1	027-0223-5-0063	Holmar (2.5 MMBtu)	2.5	3,590	542	0.4	0.03	0.2	0.00	0.04	0.01	0.03
BLR 2	027-0223-5-0064	Cyclotherm (3.3 MMBtu)	3.3	2,315	155	0.3	0.00	0.1	0.00	0.03	0.01	0.02
TOTAL EMISSIONS						61.5	68.3	196.9	0.12	9.18	7.25	1.92
FUG-2		Blowdown/Venting					0.7					
FUG-1		Process Fugitives					0.8					
STATION TOTAL EMISSIONS						61.5	69.8	196.9	0.12	9.2	7.3	1.9

Unit No.	Reg. No.	Model	Heat Rate (MMBtu/hr)	Total Hours Operated	O ₂ Season Hours Operated	Total Emissions (lbs/day)							O ₂ Season Emission (lbs/day)	
						NOx	VOC	CO	SO ₂	PM Total	PM Filterable	PM Condensable	NOx	VOC
M/L 1	027-0223-5-0054	Clark HBA-8T (2050 hp)	15.38	1,541	1,174	23.7	3.7	19.7	0.04	3.1	2.5	0.6	36.1	5.6
M/L 2	027-0223-5-0054	Clark HBA-8T (2050 hp)	15.38	3,338	2,107	37.3	27.2	150.0	0.08	6.8	5.4	1.4	47.0	34.3
M/L 3	027-0223-5-0054	Clark HBA-8T (2050 hp)	15.38	2,712	1,945	40.4	4.0	35.2	0.07	5.5	4.4	1.1	57.7	5.7
M/L 4	027-0223-5-0054	Clark HBA-8T (2050 hp)	15.38	2,212	1,384	35.9	5.7	31.6	0.05	4.5	3.6	0.9	44.8	7.1
M/L 5	027-0223-5-0054	Clark HBA-8T (2050 hp)	15.38	3,182	1,871	32.5	26.0	143.0	0.08	6.5	5.1	1.3	38.1	30.5
M/L 6	027-0223-5-0054	Clark HBA-8T (2050 hp)	15.38	0	0	0.0	0.0	0.0	0.00	0.0	0.0	0.0	0.0	0.0
M/L 7	027-0223-5-0054	Clark HBA-8T (2050 hp)	15.38	2,815	2,189	2.0	23.0	126.5	0.07	5.7	4.6	1.2	3.1	35.6
M/L 8	027-0223-5-0054	Clark TLA-6 (2100 hp)	15.75	1,419	855	23.5	3.9	21.9	0.04	3.0	2.4	0.6	28.3	4.7
M/L 9	027-0223-5-0054	Clark TLA-6 (2100 hp)	15.75	2,897	2,860	21.3	53.2	115.8	0.07	6.0	4.8	1.2	41.9	104.8
M/L 10	027-0223-5-0054	Clark TLA-6 (2100 hp)	15.75	3,474	2,154	28.9	63.8	138.8	0.09	7.2	5.8	1.5	33.3	78.9
M/L 11	027-0223-5-0054	Clark TCY-10 (3400 hp)	25.50	116	42	0.6	0.6	3.2	0.00	0.4	0.3	0.1	0.4	0.4
M/L 12	027-0223-5-0054	Clark TCY-16 (5500 hp)	41.25	35	5	1.4	0.2	1.3	0.01	1.1	0.9	0.2	0.4	0.1
Totals - Registration No 13-5-0054						245.5	211.3	787.1	0.61	49.88	39.65	10.23	331.0	307.7
AUX 1	027-0223-9-0186	Waukesha 7042GL (1478 hp)	11.1	32	22	0.9	0.4	1.4	0.00	0.05	0.00	0.01	1.2	0.6
M/L 13	027-0223-9-0391	Solar Titan 250 (30,000 hp)	234.04	7,955	4,267	86.1	161.9	282.6	0.00	0.00	0.00	0.00	92.1	173.2
AUX 2	027-0223-9-0392	Waukesha L5794LT (1450 hp)	10.9	27	21	0.5	0.5	0.4	0.00	0.04	0.00	0.01	0.7	0.8
BLR 1	027-0223-5-0063	Holmar (2.5 MMBtu)	2.5	3,590	542	2.1	0.2	1.0	0.02	0.20	0.05	0.15	0.6	0.1
BLR 2	027-0223-5-0064	Cyclotherm (3.3 MMBtu)	3.3	2,315	155	1.8	0.0	0.6	0.01	0.17	0.04	0.13	0.2	0.0
TOTAL EMISSIONS						336.8	374.4	1,073.2	0.64	50.33	39.74	10.52	425.9	482.4
FUG-1		Blowdown/Venting					3.8							3.8
FUG-1		Process Fugitives					4.2							4.2
STATION TOTAL EMISSIONS						336.8	382.4	1,073.2	0.64	50.33	39.74	10.52	425.9	480.4

¹ See attached "Notes about Emission Calculations"² For O₂ season, April, May, June, July, August, and September are included (183 days).

Notes About Emission Calculations

Unit No	Engine Model	NOx (lb/hr)	VOC (lb/hr)	CO (lb/hr)	SO ₂ (lb/hr)	PM Total (lb/hr)	PM Filterable (lb/hr)	PM Condensable (lb/hr)
M/L 1*	Clark HBA-8T ¹	5.6	0.9	4.7	0.01	0.74	0.59	0.15
M/L 2*	Clark HBA-8T ²	4.1	3.0	16.4	0.01	0.74	0.59	0.15
M/L 3*	Clark HBA-8T ³	5.4	0.5	4.7	0.01	0.74	0.59	0.15
M/L 4*	Clark HBA-8T ³	5.9	0.9	5.2	0.01	0.74	0.59	0.15
M/L 5*	Clark HBA-8T ⁴	3.7	3.0	16.4	0.01	0.74	0.59	0.15
M/L 6*	Clark HBA-8T ⁵	24.1	3.0	16.4	0.01	0.74	0.59	0.15
M/L 7*	Clark HBA-8T ⁴	0.3	3.0	16.4	0.01	0.74	0.59	0.15
M/L 8*	Clark TLA-6 ⁶	6.1	1.0	5.6	0.01	0.76	0.60	0.16
M/L 9*	Clark TLA-6 ⁴	2.7	6.7	14.6	0.01	0.76	0.60	0.16
M/L 10*	Clark TLA-6 ⁴	2.8	6.7	14.6	0.01	0.76	0.60	0.16
M/L 11*	Clark TCV-10 ⁷	1.9	1.9	10.0	0.01	1.23	0.98	0.25
M/L 12*	Clark TCV-16 ²	14.9	2.5	14.0	0.14	11.31	8.99	2.32
M/L 13	Solar Titan 250 ⁸	4.0	7.4	13.0	0.00	0.00	0.00	0.00
AUX 1 ¹⁰	Waukesha 7042GL	9.8	4.9	16.3	0.01	0.54	0.00	0.11
AUX 2 ¹¹	Waukesha L5794LT	6.4	7.4	5.8	0.01	0.53	0.00	0.11
BLR 1 ¹¹	Holmar Vulcan A60	0.21	0.018	0.1	0.002	0.02	0.01	0.02
BLR 2 ¹¹	Cyclotherm C2800	0.28	0.004	0.1	0.002	0.03	0.01	0.02

¹ NOx, CO, and VOC emission rates based upon average test results from testing conducted in 2017.

² NOx emission rates based upon average test results from testing conducted in 2021. CO emission rates based upon average test results from 1998 and 1999 test events.

THC emission rates based upon average 1995 stack test results for each engine model. VOC emission rates assume 9.31% of THC are VOCs

³ NOx emission rates based upon average test results from testing conducted in 2021. CO and VOC emission rates based upon average test results from 2017 testing.

⁴ NOx emission rates based on 2021 stack testing results. CO emission rates based upon average test results from 1998 and 1999 test events.

THC emission rates based upon average 1995 stack test results for each engine model. VOC emission rates assume 9.31% of THC are VOCs

⁵ NOx emission rates based upon average test results from 2011 and 2012 test events. CO emission rates based upon average test results from 1998 and 1999 test events.

THC emission rates based upon average 1995 stack test results for each engine model. VOC emission rates based upon average test results from 1998 and 1999 test events.

⁶ NOx emission rates based on 2020 stack testing results. VOC and CO emission rates based upon average test results from 2017 testing.

⁷ NOx, CO, and VOC emission rates based upon average test results conducted in 2017.

⁸ NOx emissions rate based on 2020 Emissions Testing. CO, and VOC emission rates based upon reference method tests results from 2019

⁹ NOx emission rate based on 2020 Emissions Testing. CO, and VOC emission rates based upon emissions from the Title V Permit Application

SO₂ and emission rates based on AP-42, Section 1.4, Table 1.4-2 (July 1998)

PM total = PM filterable + PM condensable emission rates based on AP-42 Section 1.4, Table 1.4-2 (July 1998)

¹⁰ NOx, CO, and VOC emission rates based upon emissions from the Title V Permit Application

SO₂ and emission rates based on AP-42, Section 3.2, Table 3.2-2 (July 2000)

PM10 filterable = PM2.5 filterable emission rates based on AP-42, Section 3.2, Table 3.2-2 (July 2000). PM condensable emission rates based on AP-42 Section 3.2, Table 3.2-2 (July 2000)

¹¹ All emission rates based upon emissions from the Title V Permit Application

* SO₂ and emission rates based on AP-42, Section 3.2, Table 3.2-1 (July 2000)

PM10 filterable = PM2.5 filterable emission rates based on AP-42, Section 3.2, Table 3.2-1 (July 2000). PM condensable emission rates based on AP-42 Section 3.2, Table 3.2-1 (July 2000)

Transcontinental Gas Pipe Line Company, LLC (Transco)
Compressor Station 190 - Ellicott City, MD
Part 70 Operating Permit No. 24-027-00223

As required by Section IV Condition 4.3.2.B(1) Transco hereby provides certification of the capacity factor of the Auxiliary Generator Unit 1.

Per guidance from the Department, Transco calculated the capacity factor by taking 15% of the total possible hours of operation in the calendar year. Calendar Year 2021 Possible Hours = 8,760; Capacity Factor = 1,314.00. Total hours of operation for Auxiliary Generator Unit 1 was 32.0 hours, well below the 15% capacity factor.

Summary of 2021 Greenhouse Gas Emissions

Unit No.	Reg. No.	Model	Heat Rate (MMBtu/hr)	Total Hours Operated	Methane		Carbon Dioxide (CO2)	
					(tons/year)	(lbs/day) ²	(tons/year)	(lbs/day) ²
M/L 1	027-0223-5-0054	Clark HBA-8T (2050 hp)	15.38	1,541	17.2	94.1	1,303.1	7,140.3
M/L 2	027-0223-5-0054	Clark HBA-8T (2050 hp)	15.38	3,338	37.2	203.9	2,822.7	15,466.8
M/L 3	027-0223-5-0054	Clark HBA-8T (2050 hp)	15.38	2,712	30.2	165.7	2,293.5	12,567.1
M/L 4	027-0223-5-0054	Clark HBA-8T (2050 hp)	15.38	2,212	24.7	135.1	1,870.4	10,249.0
M/L 5	027-0223-5-0054	Clark HBA-8T (2050 hp)	15.38	3,182	35.5	194.3	2,690.7	14,743.5
M/L 6	027-0223-5-0054	Clark HBA-8T (2050 hp)	15.38	0	0.0	0.0	0.0	0.0
M/L 7	027-0223-5-0054	Clark HBA-8T (2050 hp)	15.38	2,815	31.4	172.0	2,380.8	13,045.3
M/L 8	027-0223-5-0054	Clark TLA-6 (2100 hp)	15.75	1,419	16.2	88.8	1,229.1	6,734.9
M/L 9	027-0223-5-0054	Clark TLA-6 (2100 hp)	15.75	2,897	33.1	181.3	2,509.6	13,751.3
M/L 10	027-0223-5-0054	Clark TLA-6 (2100 hp)	15.75	3,474	39.7	217.4	3,009.3	16,489.1
M/L 11	027-0223-5-0054	Clark TCV-10 (3400 hp)	25.50	116	2.1	11.7	162.5	890.7
M/L 12	027-0223-5-0054	Clark TCV-16 (5500 hp)	41.25	35	1.1	5.8	80.1	438.8
Totals - Registration No 13-5-0054					268.3	1,470.0	20,351.9	111,517.0
AUX 1	027-0223-9-0186	Waukesha 7042GL (1478 hp)	11.1	32	0.2	1.2	19.6	107.3
M/L 13	027-0223-9-0391	Solar titan 250 (30,000hp)	234.04	7,955	1,349.8	7,396.4	102,402.2	561,108.0
AUX 2	027-0223-9-0392	Waukesha L5794LT (1450 hp)	10.9	27	0.2	1.0	15.9	87.4
BLR 1	027-0223-5-0063	Holmar (2.5 MMBtu)	2.5	3,590	0.01	0.1	512.9	2,810.2
BLR 2	027-0223-5-0064	Cyclotherm (3.3 MMBtu)	3.3	2,315	0.01	0.0	436.5	2,392.0
STATION TOTAL EMISSIONS					1,618.5	8,868.7	123,739.0	678,021.8
								51,513.1

¹ Lbs/hour emission rate based on AP-42 emission factors

² Lbs/day emission rate assumes 365 days/year operation

Summary of 2021 Operating Hours

Unit No.	Jan hours	Feb hours	Mar hours	Apr hours	May hours	Jun hours	Jul hours	Aug hours	Sep hours	Oct hours	Nov hours	Dec hours	Total hours	O ₃ Season ¹ hours
M/L 1	49	0	0	0	8	96	282	547	241	150	168	0	1,541	1,174
M/L 2	27	0	10	196	311	305	327	540	429	501	419	273	3,338	2,107
M/L 3	33	0	170	421	345	193	322	519	146	204	285	75	2,712	1,945
M/L 4	23	0	25	383	458	333	0	0	210	374	186	221	2,212	1,384
M/L 5	30	0	159	31	194	582	208	540	316	389	365	368	3,182	1,871
M/L 6	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M/L 7	30	0	66	187	399	503	310	450	340	201	219	112	2,815	2,189
M/L 8	30	0	0	0	0	0	65	312	479	31	350	154	1,419	855
M/L 9	37	0	0	280	390	482	506	733	469	0	0	0	2,897	2,860
M/L 10	30	0	0	198	365	384	95	669	442	612	498	179	3,474	2,154
M/L 11	30	0	0	0	0	0	1	9	33	3	41	0	116	42
M/L 12	30	0	0	0	0	0	0	0	5	0	0	0	35	5
M/L 13	621	244	622	712	740	720	672	734	690	740	718	743	7,955	4,267
AUX 1	1	1	1	14	2	1	1	2	1	3	4	1	32	22
AUX 2	1	1	1	1	2	2	1	15	0	1	0	2	27	21
BLR 1	744	672	744	542	0	0	0	0	0	96	720	72	3,590	542
BLR 2	744	672	744	155	0	0	0	0	0	0	0	0	2,315	155
Totals:	2,460	1,591	2,541	3,120	3,213	3,599	2,790	5,071	3,801	3,303	3,974	2,200	37,661	21,592

¹ For O₃ season, April, May, June, July, August, and September are included (183 days).

Summary of 2021 Horsepower-Hours Developed

Unit No	Jan hp-hrs	Feb hp-hrs	Mar hp-hrs	Apr hp-hrs	May hp-hrs	Jun hp-hrs	Jul hp-hrs	Aug hp-hrs	Sep hp-hrs	Oct hp-hrs	Nov hp-hrs	Dec hp-hrs	Total hp-hrs	O ₃ Season hp-hrs
M/L 1	90,207	0	0	0	15,114	197,142	567,202	1,108,048	492,425	306,215	344,671	0	3,121,024	2,379,931
M/L 2	50,527	0	20,699	400,794	635,370	624,651	662,700	1,097,651	870,038	1,018,129	852,963	596,141	6,829,662	4,291,203
M/L 3	58,482	0	345,401	857,738	702,568	392,804	652,667	1,050,871	297,300	416,678	582,174	153,816	5,510,498	3,953,948
M/L 4	40,319	0	50,304	783,559	930,512	669,836	0	0	428,575	756,380	379,643	448,251	4,487,379	2,812,482
M/L 5	53,179	0	323,737	63,282	396,515	1,170,044	424,367	1,098,958	644,708	788,381	739,217	737,449	6,439,838	3,797,875
M/L 6	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M/L 7	54,112	0	133,549	378,564	816,088	1,021,587	628,230	921,416	697,223	410,470	443,745	229,043	5,734,027	4,463,108
M/L 8	54,791	0	0	0	0	0	132,497	649,197	987,501	63,173	724,443	316,574	2,928,176	1,769,195
M/L 9	68,450	0	0	575,802	807,802	994,287	1,044,781	1,518,559	966,274	0	0	0	5,975,955	5,907,505
M/L 10	55,800	0	0	415,872	751,799	794,265	195,045	1,389,391	909,441	1,260,678	1,028,465	365,863	7,166,619	4,455,813
M/L 11	96,401	0	0	0	0	0	1,634	30,801	108,386	8,800	139,022	0	385,045	140,821
M/L 12	162,283	0	0	0	0	0	0	0	26,830	0	0	0	189,113	26,830
M/L 13	0	0	0	0	0	11,147,031	18,950,105	19,498,332	15,928,651	20,676,661	20,911,137	21,005,103	128,117,020	65,524,119
AUX 1 ¹	1,774	1,493	1,478	20,988	2,365	1,774	1,478	3,547	1,774	3,695	5,321	1,774	47,459	31,925
AUX 2 ¹	1,626	1,921	1,478	1,774	2,217	2,365	1,774	22,170	0	1,330	0	2,660	39,315	30,299

¹ Horsepower-hours calculated by multiplying hours operated by rated horsepower.

Pipeline Valves/Flanges Emission Calculations

Note: Station 190 component counts are based on "Toxic Air Pollutant Emission Inventory, Radian Project No. 93-664-020-06-00," for Station 140. The number of components at Station 140 was scaled down according to the relative installed horsepower at Station 190. Upon inspection of the Station 140 report, it was concluded that there is a direct proportional relationship between number of various components and installed horsepower.

Station 140 horsepower =	53,600
Station 190 horsepower =	59,550
Horsepower Ratio =	1.111

Station 140

Station 190

No. Valves in Vapor Service	517	574
No. valves in condensate service	12	13
No. flanges in vapor service	1604	1782
No. flanges in condensate service	24	27
No. compressor seals in vapor service	48	53

Fugitive losses

Equipment Type	Vapor Service			Condensate Service		
	Number of Components	Emission Factor ¹ (kg/hr-component)	Emissions kg/hr	Number of Components	Emission Factor ¹ (kg/hr-component)	Emissions kg/hr
Valve	574	4.5E-03	2.58	13	2.5E-03	0.03
Flange	1,782	3.9E-04	0.70	27	1.1E-04	0.003
Other	53	8.8E-03	0.47	-	7.5E-03	-

¹ Emission factors from Protocol for Equipment Leak Emission Estimates (EPA-453/R-95-017) Table 2.4, Oil and Gas Production Operations Average Emission Factors

Total Hydrocarbon Emissions from Pipeline Valves/Flanges	3.79	kg/hr
Total Hydrocarbon Emissions from Pipeline Valves/Flanges	8.35	lb/hr
Total Hydrocarbon Emissions from Pipeline Valves/Flanges	73,102.62	lb/yr
Total Hydrocarbon Emissions from Pipeline Valves/Flanges	36.55	tn/yr
% VOC concentration of natural gas at Station 190 is 2.11%, (% VOC concentration of THC is 2.11%)	x	2.11%
Total VOC Emissions from Pipeline Valves/Flanges	0.77	tn/yr VOCs

Assumed Composition of Natural Gas at Station 190:

* Based on Station 190 Gas Chromatograph Results (Transco, 05/07/08)

Natural Gas

	Mol %	Mol Wt.	Weighted Sum	Wt. %	Btu/lb	
Nitrogen	0.529366667	28	0.148	0.87%	0	
Carbon Dioxide	1.075366667	44	0.473	2.79%	0	
Methane	95.60986667	16.04	15.336	90.49%	21,502	19,458
Ethane	2.1452	30.07	0.645	3.81%	20,416	777
Propane	0.363766667	44.11	0.160	0.95%	19,929	189
I-Butane	0.078133333	58.13	0.045	0.27%	19,864	53
N-Butane	0.086066667	58.13	0.050	0.30%	19,665	58
I-Pentane	0.034966667	72.15	0.025	0.15%	19,359	29
N-Pentane	0.022966667	72.2	0.017	0.10%	19,340	19
Hexanes Plus	0.054233333	86.2	0.047	0.28%	19,233	53
Total			16.947	100.00%		20,636
THC			16.325	96.33%		
NM/NE VOC				2.03%		
NM/NE VOC as fraction of THC =				2.11%		

De Minimis Emission Calculations

Power Gas Venting	-	34.457 lb/d *
Facility Blowdowns	-	144.493 lb/d **
		<u>178.951 lb/d</u>

* based on Station 505 estimate performed by B. Yowell; see memo by RLB 6/1/92, and multiplied by ratio of 10:8 engines.

** based on actual reported blowdown volumes for 2021.

Total Hydrocarbons from De Minimis Sources = 178.95 lb/d THC

% VOC concentration of natural gas at Station 190 is 2.11%.
(% VOC concentration of THC is 2.11%) x 2.11%

Total VOCs from De Minimis Sources	=	3.78	lb/d total VOCs
	=	0.69	tons per year

Notes About Hazardous Air Pollutant Emission Factors ¹

Emission Source	Formaldehyde Cas No 50-00-0
Engines - No Specific Manufacturer ²	g/hphr
4-cycle engines - UNSPECIFIED	0.19
Engines - Clark	g/hphr
2-cycle engines - CLARK	0.22
Natural gas Combustion ³	lb/MMscf
natural gas combustion	0.08

¹ The primary HAP formed during the combustion of natural gas is formaldehyde. Due to scarcity of emission data for other HAPS, only formaldehyde emissions are reported at this time.

² Formaldehyde emission factors for engines and turbine are taken from GRIHAPCALC Version 3.0.

³ Formaldehyde emission factors for natural gas combustion sources from EPA AP-42 Section 1-4 (July 1998).

APPENDIX H

Copy of 2021 Compliance Certification Report

By Federal Express; Overnight

Bates Number:

March 31, 2022

Maryland Department of the Environment
Air and Radiation Management Administration
1800 Washington Blvd, Suite 715
Baltimore, MD 21230-1720
Attn: Laramie Daniel, Compliance Program

Re: Part 70 Compliance Certification Report – Calendar Year 2021
Transcontinental Gas Pipe Line Company, LLC (Transco)
Compressor Station 190; Ellicott City, MD
Part 70 Operating Permit No. 24-027-00223

Dear Laramie Daniel:

Transcontinental Gas Pipe Line Company, LLC (Transco) hereby submits the enclosed documentation to satisfy the Annual Compliance Certification requirements as specified by Condition III.9 of the above-referenced Part 70 Operating Permit. This report covers the period from January 01, 2021 through December 31, 2021. Enclosed are completed Federal and ARMA forms for the Annual Certification. These reports have been certified by an Authorized Company Representative on behalf of Transco.

If you have any questions concerning this submittal, please contact me at (713) 215-2964 or Cecilia.chapa@williams.com.

Sincerely,



Cecilia Chapa
Environmental Senior Engineer
EH&S, Transmission & Gulf of Mexico Operating Area

Enclosures

cc: ***(Via Federal Express; Overnight):***
Associate Director
Office of Enforcement and Permit Review (3AP10)
U.S. EPA Region III
1650 Arch Street
Philadelphia, PA 19103-2029



TRANSCO PIPELINE
2800 Post Oak Boulevard (77056)
P.O. Box 1396
Houston, TX 77251-1396
713-215-2000

Federal Forms

Form CTAC
and
Form A-COMP

Federal Operating Permit Program (40 CFR Part 71)
CERTIFICATION OF TRUTH, ACCURACY, AND COMPLETENESS (CTAC)

This form must be completed, signed by the "Responsible Official" designated for the facility or emission unit, and sent with each submission of documents (i.e., application forms, updates to applications, reports, or any information required by a part 71 permit).

A. Responsible Official

Name: (Last) Jasek (First) Glen (MI) _____

Title VP GM - Eastern Interstates

Street or P.O. Box P.O. Box 1396

City Houston State TX ZIP 77251 - 1396

Telephone (713) 215 - 4020 Ext. _____ Facsimile (713) 215 - 2239

B. Certification of Truth, Accuracy and Completeness (to be signed by the responsible official)

I certify under penalty of law, based on information and belief formed after reasonable inquiry, the statements and information contained in these documents are true, accurate and complete.

Name (signed) 

Name (typed) ^{ALL} Glen Jasek Date: 3 / 29 / 22



OMB No. 2060-0336, Approval Expires 06/30/2015

Federal Operating Permit Program (40 CFR Part 71)

ANNUAL COMPLIANCE CERTIFICATION (A-COMP)

A. GENERAL INFORMATION

Permit No. 24-027-00223 (issued March 1, 2019)

Reporting Period: Beg. . 01 / 01 / 2021 End. 12 / 31 / 2021

Source / Company Name Transcontinental Gas Pipe Line Company, LLC (Transco) – Station 190

Mailing Address: Street or P.O. Box 11910 Carroll Mill Road

City Ellicott City State MD ZIP 21042-1310

Contact person Anibal Pico Title District Manager

Telephone (410) 465 - 0960 Ext. _____

Continued on next page

A-COMP**B. COMPLIANCE STATUS**

Describe the compliance status of each permit term for the reporting period. Copy this page as many times as necessary to cover all permit terms and conditions.

Emission Unit ID(s): M/L Unit 1 through M/L Unit 10 (7 Clark HBA-8T rated at 2,050 BHP; and 3 Clark TLA-6 rated at 2,100 BHP mainline natural gas fired reciprocating internal combustion engines, 2-cycle, lean-burn)

Permit Term (Describe requirements and cross-reference): 4.1.1.A - Visible Emission Limitations

[COMAR 26.11.09.05E(2)] Limits visible emissions from an internal combustion engine to 10 percent opacity during idle mode.

[COMAR 26.11.09.05E(3)] Limits visible emissions from an internal combustion engine to 40 percent opacity during operating mode.

[COMAR 26.11.09.05E(4)(a)&(b)] Allows for the following exceptions from the requirement of COMAR 26.11.09.05E(2):

The requirement does not apply for a period of 2 consecutive minutes after a period of idling of 15 consecutive minutes for the purpose of clearing the exhaust system.

The requirement does not apply to emissions resulting directly from cold engine start-up and warm-up of a maximum period of 30 minutes for engines that are idled continuously when not in service; or for a maximum period of 15 minutes for all other engines.

COMAR 26.11.09.05E(4)(c) allows the exception from the requirements of COMAR 26.11.09.05E(2)&(3):
When maintenance, repair, or testing is being performed by qualified mechanics.

Compliance Methods for the Above (Description and Citation):

- (1) Records Maintenance - fuel records documenting equipment exclusively fires natural gas (continuous data)
- (2) Engineering Judgment - natural gas fired equipment has little to no visible emissions per EPA guidance (continuous data)
- (3) Visual Observation (intermittent data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): M/L Unit 1 through M/L Unit 10 (7 Clark HBA-8T rated at 2,050 BHP; and 3 Clark TLA-6 rated at 2,100 BHP mainline natural gas fired reciprocating internal combustion engines, 2-cycle, lean-burn)

Permit Term (Describe requirements and cross-reference): 4.1.1.B - Nitrogen Oxides Reasonably Available Control Technology Requirements (NOx RACT)

[COMAR 26.11.09.08I(3)(b)] Requires that facilities with more than five engines with a capacity factor over 15 percent shall meet a combined maximum hourly NOx emissions rate of 566 pounds per hour.

Compliance Methods for the Above (Description and Citation):

- (1) Records Maintenance (continuous data)
- (2) Last annual NOx testing performed shows the facility to be below the facility-wide NOx emission limit (intermittent data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

A-COMP

Emission Unit ID(s): M/L Unit 1 through M/L Unit 10 (7 Clark HBA-8T rated at 2,050 BHP; and 3 Clark TLA-6 rated at 2,100 BHP mainline natural gas fired reciprocating internal combustion engines, 2-cycle, lean-burn)

Permit Term (Describe requirements and cross-reference): 4.1.1.C - Operational Limitation

[COMAR 26.11.02.09] The Permittee shall burn only pipeline quality natural gas unless the Permittee applies for and receives an approval or permit from the Department.

Compliance Methods for the Above (Description and Citation):

(1) Records Maintenance (continuous data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): M/L Unit 1 through M/L Unit 10 (7 Clark HBA-8T rated at 2,050 BHP; and 3 Clark TLA-6 rated at 2,100 BHP mainline natural gas fired reciprocating internal combustion engines, 2-cycle, lean-burn)

Permit Term (Describe requirements and cross-reference): 4.1.2.A - Testing Requirements. Control of Visible Emissions.

[COMAR 26.11.03.06C(3)] The Permittee shall perform a Method 9 observation for a minimum of 30 minutes during any scheduled stack testing to show compliance with the applicable opacity standards.

Compliance Methods for the Above (Description and Citation):

(1) Records Maintenance (intermittent data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

A-COMP

Emission Unit ID(s): M/L Unit 1 through M/L Unit 10 (7 Clark HBA-8T rated at 2,050 BHP; and 3 Clark TLA-6 rated at 2,100 BHP mainline natural gas fired reciprocating internal combustion engines, 2-cycle, lean-burn)

Permit Term (Describe requirements and cross-reference): 4.1.2.B. - Testing Requirements. Control of Nitrogen Oxides from Natural Gas Pipeline Compression Stations

[COMAR 26.11.03.06C(3)] During the lifetime of this permit, the Permittee shall schedule and perform a NOx emission test on at least one of the seven Clark HBA-8T units and at least one of the three Clark TLA-6 engines.

The Permittee shall also perform a NOx emission test on any engine that operates more than 2,190 hours in a calendar year.

The Permittee shall submit a test protocol to the Department for approval at least 30 days prior to the proposed test date.

The Permittee shall perform an annual NOx emissions test on each engine using appropriate EPA Reference Methods unless alternative test methods receive prior approval from the Department. The most recent NOx emission test results for each engine model category shall be used to determine compliance with the 566 pounds per hour NOx emission limit for M/L engines.

Compliance Methods for the Above (Description and Citation):

- (1) Records Maintenance (continuous data)
- (2) Mainline Units 2, 3, 4, 5, 7, 9, 10 were tested in 2021. All others did not operate over 2,190 hour in 2021.
- (3) The last NOx emission test results demonstrate compliance with the NOx emission limit for M/L engines.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): M/L Unit 1 through M/L Unit 10 (7 Clark HBA-8T rated at 2,050 BHP; and 3 Clark TLA-6 rated at 2,100 BHP mainline natural gas fired reciprocating internal combustion engines, 2-cycle, lean-burn)

Permit Term (Describe requirements and cross-reference): 4.1.3 - Monitoring Requirements.

4.1.3.B [COMAR 26.11.03.06C] If the results of the NOx testing indicate that the NOx emission limit for all M/L engines combined may be exceeded, the Permittee shall determine the cause of the excess NOx emissions, take corrective action, and retest the units that contribute to the excess NOx emissions. The Permittee shall complete the investigation, corrective action, and retest within 60 days after the results of testing indicate possible exceedance of the NOx emission rate for all M/L engines combined.

Compliance Methods for the Above (Description and Citation):

- (1) Records Maintenance (continuous data)
- (2) Last annual NOx testing performed shows the facility to be below the facility-wide NOx emission limit (intermittent data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

A-COMP

Emission Unit ID(s): M/L Unit 1 through M/L Unit 10 (7 Clark HBA-8T rated at 2,050 BHP; and 3 Clark TLA-6 rated at 2,100 BHP mainline natural gas fired reciprocating internal combustion engines, 2-cycle, lean-burn)

Permit Term (Describe requirements and cross-reference): 4.1.4 - Record Keeping Requirements

Unless otherwise specified all records required by the permit shall be kept for a period of at least five (5) years and shall be made available to the Department upon request.

4.1.4.A [COMAR 26.11.03.06C] The Permittee shall keep the records of the Method 9 results and submit them to the Department upon request.

Compliance Methods for the Above (Description and Citation):

(1) Records Maintenance (continuous data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): M/L Unit 1 through M/L Unit 10 (7 Clark HBA-8T rated at 2,050 BHP; and 3 Clark TLA-6 rated at 2,100 BHP mainline natural gas fired reciprocating internal combustion engines, 2-cycle, lean-burn)

Permit Term (Describe requirements and cross-reference): 4.1.4 - Record Keeping Requirements

Unless otherwise specified all records required by the permit shall be kept for a period of at least five (5) years and shall be made available to the Department upon request.

4.1.4.B [COMAR 26.11.03.06C] The Permittee shall maintain the records that shall include at a minimum:

1. The results of NO_x testing to verify compliance with the NO_x emission limit of 566 pounds per hour for all M/L engines combined;
2. Records of maintenance performed to the engines whenever such maintenance is required in order to avoid or remedy a possible exceedance of the NO_x emission limit.

Compliance Methods for the Above (Description and Citation):

(1) Records Maintenance (continuous data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

A-COMP

Emission Unit ID(s): M/L Unit 1 through M/L Unit 10 (7 Clark HBA-8T rated at 2,050 BHP; and 3 Clark TLA-6 rated at 2,100 BHP mainline natural gas fired reciprocating internal combustion engines, 2-cycle, lean-burn)

Permit Term (Describe requirements and cross-reference): 4.1.4 - Record Keeping Requirements

Unless otherwise specified all records required by the permit shall be kept for a period of at least five (5) years and shall be made available to the Department upon request.

4.1.4.C [COMAR 26.11.02.19C(1)(c)] The Permittee shall maintain a record of the type and quantity of fuel burned in each engine.

Compliance Methods for the Above (Description and Citation):

(1) Records Maintenance (continuous data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): M/L Unit 1 through M/L Unit 10 (7 Clark HBA-8T rated at 2,050 BHP; and 3 Clark TLA-6 rated at 2,100 BHP mainline natural gas fired reciprocating internal combustion engines, 2-cycle, lean-burn)

Permit Term (Describe requirements and cross-reference): 4.1.5 - Reporting Requirements

4.1.5.A The Permittee shall report incidents of visible emissions in accordance with Condition 4, Section III, (Report of Excess Emissions and Deviations).

Compliance Methods for the Above (Description and Citation):

(1) Records Maintenance - fuel records documenting equipment exclusively fires natural gas (continuous data)

(2) Engineering Judgment - natural gas fired equipment has little to no visible emissions per EPA guidance (continuous data)

(3) Visual Observation (intermittent data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): M/L Unit 1 through M/L Unit 10 (7 Clark HBA-8T rated at 2,050 BHP; and 3 Clark TLA-6 rated at 2,100 BHP mainline natural gas fired reciprocating internal combustion engines, 2-cycle, lean-burn)

Permit Term (Describe requirements and cross-reference): 4.1.5 - Reporting Requirements

4.1.5.B [COMAR 26.11.03.06C] The Permittee shall submit to the Department the results of the annual NOx emissions testing including the Method 9 results within 45 days of the completion of the tests. The supporting data that is the basis for the compliance demonstration with the combined maximum hourly emission rate of 566 pounds per hours shall also be included.

Compliance Methods for the Above (Description and Citation):

(1) Records Maintenance (continuous data)

(2) Emissions testing results performed were submitted within the time allotted.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

A-COMP

Emission Unit ID(s): M/L Unit 1 through M/L Unit 10 (7 Clark HBA-8T rated at 2,050 BHP; and 3 Clark TLA-6 rated at 2,100 BHP mainline natural gas fired reciprocating internal combustion engines, 2-cycle, lean-burn)

Permit Term (Describe requirements and cross-reference): 4.1.5 - Reporting Requirements

4.1.5.C [COMAR 26.11.02.19C(2) and .19(D)] The Permittee shall report the quantity of natural gas burned in each engine in the annual emissions certification report.

Compliance Methods for the Above (Description and Citation):

- (1) Records Maintenance (continuous data)
- (2) Calendar Year 2020 annual emission certification report submitted prior to April 1, 2021 (intermittent data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): M/L Unit 11 through M/L Unit 12 (1 Clark TCV-10 rated at 3,400 HP; and 1 Clark TCV-16 rated at 5,500 HP mainline natural gas fired reciprocating internal combustion engines, 2-cycle, lean-burn)

Permit Term (Describe requirements and cross-reference): 4.2.1.A – Control of Visible Emissions

[COMAR 26.11.09.05E(2)] Limits visible emissions from an internal combustion engine to 10 percent opacity during idle mode.

[COMAR 26.11.09.05E(3)] Limits visible emissions from an internal combustion engine to 40 percent opacity during operating mode.

[COMAR 26.11.09.05E(4)(a)&(b)] Allows for the following exceptions from the requirement of COMAR 26.11.09.05E(2):

The requirement does not apply for a period of 2 consecutive minutes after a period of idling of 15 consecutive minutes for the purpose of clearing the exhaust system.

The requirement does not apply to emissions resulting directly from cold engine start-up and warm-up of a maximum period of 30 minutes for engines that are idled continuously when not in service; or for a maximum period of 15 minutes for all other engines.

[COMAR 26.11.09.05E(4)(c)] allows for the exception from the requirements of COMAR 26.11.09.05E(2)&(3) when maintenance, repair, or testing is being performed by qualified mechanics.

Compliance Methods for the Above (Description and Citation):

- (1) Records Maintenance - fuel records documenting equipment exclusively fires natural gas (continuous data)
- (2) Engineering Judgment - natural gas fired equipment has little to no visible emissions per EPA guidance (continuous data)
- (3) Visual Observation (intermittent data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

A-COMP

Emission Unit ID(s): M/L Unit 11 through M/L Unit 12 (1 Clark TCV-10 rated at 3,400 HP; and 1 Clark TCV-16 rated at 5,500 HP mainline natural gas fired reciprocating internal combustion engines, 2-cycle, lean-burn)

Permit Term (Describe requirements and cross-reference): 4.2.1.B – Control of Nitrogen Oxides from Natural Gas Pipeline Compression Stations – Applicability and General Requirements

[COMAR 26.11.29.02(c)] NOx Emission Rates. A person who owns or operates a stationary internal combustion engine to which this chapter applies shall perform either parametric optimization or engine rebuild to meet the following NOx emission limits:

1. Not applicable
2. Facilities with more than five engines shall meet a combined maximum hourly NOx emissions limit of 566 pounds per hour or less.

[COMAR 26.11.29.02(c)] NOx Emission Limits.

The following emissions standards for stationary internal combustion engines:

<u>Type Engine</u>	<u>Size (brake HP)</u>	<u>Standard (at 15% O₂, dry basis)</u>
Spark ignited lean burn	2400 HP	125 ppmv

Compliance Methods for the Above (Description and Citation):

- (1) Records Maintenance (continuous data)
- (2) Last Annual NOx testing shows the facility to be below the facility-wide NOx emission limit (intermittent data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): M/L Unit 11 through M/L Unit 12 (1 Clark TCV-10 rated at 3,400 HP; and 1 Clark TCV-16 rated at 5,500 HP mainline natural gas fired reciprocating internal combustion engines, 2-cycle, lean-burn)

Permit Term (Describe requirements and cross-reference): 4.2.1.C - Carbon Monoxide and VOC Annual Emissions Limitation

[PTC No. 027-9-0224M issued November 18, 2002] To avoid triggering requirements of nonattainment New Source Review (NNSR) and Prevention of Significant Deterioration (PSD), emissions increases from both affected engines collectively as a result of the modifications performed shall be limited to less than 25 tons per year for VOC and 100 tons per year for CO for any period of 12 consecutive months.

Compliance Methods for the Above (Description and Citation):

- (1) Records Maintenance (continuous data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

A-COMP

Emission Unit ID(s): M/L Unit 11 through M/L Unit 12 (1 Clark TCV-10 rated at 3,400 HP; and 1 Clark TCV-16 rated at 5,500 HP mainline natural gas fired reciprocating internal combustion engines, 2-cycle, lean-burn)

Permit Term (Describe requirements and cross-reference): 4.2.1.D - Operation Limitation

[COMAR 26.11.02.09] The Permittee shall burn only pipe line quality natural gas unless the Permittee applies for and receives an approval or permit from the Department.

Compliance Methods for the Above (Description and Citation):

(1) Records Maintenance (continuous data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): M/L Unit 11 through M/L Unit 12 (1 Clark TCV-10 rated at 3,400 HP; and 1 Clark TCV-16 rated at 5,500 HP mainline natural gas fired reciprocating internal combustion engines, 2-cycle, lean-burn)

Permit Term (Describe requirements and cross-reference): 4.2.2 - Testing Requirements

4.2.2.A – Control of Visible Emissions.

[COMAR 26.11.03.06C(3)] The Permittee shall perform a Method 9 observation for a minimum of 30 minutes during any scheduled stack testing to show compliance with the applicable opacity standards.

Compliance Methods for the Above (Description and Citation):

(1) Records Maintenance (continuous data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): M/L Unit 11 through M/L Unit 12 (1 Clark TCV-10 rated at 3,400 HP; and 1 Clark TCV-16 rated at 5,500 HP mainline natural gas fired reciprocating internal combustion engines, 2-cycle, lean-burn)

Permit Term (Describe requirements and cross-reference): 4.2.2 - Testing Requirements

4.2.2.B – Control of Nitrogen Oxides from Natural Gas Pipeline Compression Stations

[COMAR 26.11.03.06C(3)] During the lifetime of this permit, the Permittee shall schedule and perform a NOx emission test on the Clark TCV-10 and the Clark TCV-16 engines (M/L Units 11 and 12, respectively) in order to demonstrate compliance with the applicable NOx rates listed under Section 2.1.B, and with the applicable NOx emission limit of 125 ppm (at 15% O₂) and as specified under COMAR 26.11.29.02C(2).

The Permittee shall submit a test protocol to the Department for approval at least 30 days prior to the proposed test date.

The Permittee shall perform an annual NOx emissions test on each engine using appropriate EPA Reference Methods unless alternative test methods receive prior approval from the Department. The most recent NOx emission test results for each engine model category shall be used to determine compliance with the 566 pounds per hour NOx emission limit for M/L engines.

Compliance Methods for the Above (Description and Citation):

- (1) Records Maintenance (continuous data)
- (2) M/L Unit 11 tested on 08/18/2021. M/L 12 was out of service during 2021. Emission test results demonstrate compliance with the NOx emission limit.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): M/L Unit 11 through M/L Unit 12 (1 Clark TCV-10 rated at 3,400 HP; and 1 Clark TCV-16 rated at 5,500 HP mainline natural gas fired reciprocating internal combustion engines, 2-cycle, lean-burn)

Permit Term (Describe requirements and cross-reference): 4.2.2 - Testing Requirements

4.2.2.C – Carbon Monoxide and VOC Annual Emission Limitation

[COMAR 26.11.03.06C(3)] Beginning with calendar year 2014, the Permittee shall perform on a biennial basis and contemporaneously with the testing required in paragraph B above confirmatory emissions testing for VOC and CO on each engine using appropriate EPA Reference Methods, unless alternative test methods receive prior approval from the Department. The purpose of the testing is to demonstrate compliance with the nonattainment New Source Review emission limit for VOC and CO. In the event an engine's operating time does not exceed 2,190 hours in each calendar year of the biennial period, such engine would be exempt from the emissions testing requirement for VOC and CO for that biennial period. However, the Permittee shall schedule and perform a CO and VOC emission test on both units as listed, to demonstrate the maintenance of synthetic minor status with respect to CO and VOC.

Compliance Methods for the Above (Description and Citation):

- (1) Records Maintenance (continuous data)
- (2) Emissions testing for VOC and CO were performed on M/L 11 on August 18, 2021. M/L 12 has been out of order. (Intermittent data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

A-COMP

Emission Unit ID(s): M/L Unit 11 through M/L Unit 12 (1 Clark TCV-10 rated at 3,400 HP; and 1 Clark TCV-16 rated at 5,500 HP mainline natural gas fired reciprocating internal combustion engines, 2-cycle, lean-burn)

Permit Term (Describe requirements and cross-reference): 4.2.3 Monitoring Requirements

4.2.3.B(1) [COMAR 26.11.03.06C] If the results of the NOx testing indicate that the NOx emission limit for all M/L engines combined may be exceeded, the Permittee shall determine the cause of the excess NOx emissions, take corrective action, and retest the units that contribute to the excess NOx emissions. The Permittee shall complete the investigation, corrective action, and retest within 60 days after the results of testing indicate possible exceedance of the NOx emission rate.

Compliance Methods for the Above (Description and Citation):

- (1) Records Maintenance (continuous data)
- (2) Last annual NOx testing performed shows the facility to be below the NOx emission limit (intermittent data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): M/L Unit 11 through M/L Unit 12 (1 Clark TCV-10 rated at 3,400 HP; and 1 Clark TCV-16 rated at 5,500 HP mainline natural gas fired reciprocating internal combustion engines, 2-cycle, lean-burn)

Permit Term (Describe requirements and cross-reference): 4.2.3 Monitoring Requirements

4.2.3.B(2) [PTC 027-9-0224M issued November 18, 2002] The engines shall be equipped with a parametric emissions monitoring system (PEMS) that shall automatically sample data at fifteen-minute intervals or less and automatically record block hourly averages in a manner such that the data is retrievable on demand by inspectors. The following parameters shall be monitored and recorded by the system:

- (a) the engine speed in revolutions per minute (RPM);
- (b) the engine fuel flow rate in SCFM (FF_{SCFM});
- (c) the actual air manifold pressure (gage) in inches of mercury (P_M); and
- (d) the air manifold temperature in F (T_M).

Compliance Methods for the Above (Description and Citation):

- (1) Records Maintenance (continuous data)
- (2) Parametric Emissions Monitoring System experienced no excursions during the Reporting Period.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

A-COMP

Emission Unit ID(s): M/L Unit 11 through M/L Unit 12 (1 Clark TCV-10 rated at 3,400 HP; and 1 Clark TCV-16 rated at 5,500 HP mainline natural gas fired reciprocating internal combustion engines, 2-cycle, lean-burn)

Permit Term (Describe requirements and cross-reference): 4.2.3 Monitoring Requirements

4.2.3.B(3) - [PTC 027-9-0224M issued November 18, 2002 and COMAR 26.11.03.06C(3)] The PEMS shall automatically sample data and calculate at 15 minute intervals or less and automatically record a block hourly average of the following parameters in a manner that the data is retrievable on demand by inspectors:

(a) the calculated critical trapped air fuel equivalence ratio (TER_C) based on a calculated fuel flow per revolution parameter $W = FF_{SCFM}/RPM$ and an equation of the type below:

$$TER_C = A * W^2 + B * W + C$$

Where A, B, and C are constants to be determined from the emissions testing.

(b) the calculated critical air manifold pressure (gage) in inches of mercury (P_{MC}).

$$P_{MC} = 2.036 * [AF_{ST} * (0.0765 * FSG) * W * (T_M + 460) / (2.699 * TER_C * V_{TRAP}) - 14.73]$$

Where:

V_{TRAP} = the engine trapped volume in cubic feet per revolution (a constant determined by the geometry of the engine).

T_M = air manifold pressure in ° F

AF_{ST} = stoichiometric air/fuel mass ratio

FSG = the fuel gas specific gravity referenced to air

Note: The above equations may be adjusted or modified upon prior written approval from the Department if tested data or other considerations indicate that such a modification or adjustment is warranted.

Compliance Methods for the Above (Description and Citation):

(1) Records Maintenance (continuous data)

(2) Parametric Emissions Monitoring System experienced no excursions during the reporting period.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): M/L Unit 11 through M/L Unit 12 (1 Clark TCV-10 rated at 3,400 HP; and 1 Clark TCV-16 rated at 5,500 HP mainline natural gas fired reciprocating internal combustion engines, 2-cycle, lean-burn)

Permit Term (Describe requirements and cross-reference): 4.2.3 Monitoring Requirements

4.2.3.B(4) - [PTC 027-9-0224M issued November 18, 2002] The Permittee shall operate the Clark TCV-10 and Clark TCV-16 engines in compliance with the emissions standard stated in COMAR 26.11.29.05C for spark ignited lean burn engines (125 ppm NOx corrected to 15 percent O₂ dry gas). In accordance with the permit to construct, the Permittee shall comply with the standard on a year-around basis.

Compliance Methods for the Above (Description and Citation):

- (1) Records Maintenance (continuous data)
- (2) Parametric Emissions Monitoring System experienced no excursions during the Reporting Period.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): M/L Unit 11 through M/L Unit 12 (1 Clark TCV-10 rated at 3,400 HP; and 1 Clark TCV-16 rated at 5,500 HP mainline natural gas fired reciprocating internal combustion engines, 2-cycle, lean-burn)

Permit Term (Describe requirements and cross-reference): 4.2.3 Monitoring Requirements

4.2.3.C – Carbon Monoxide and VOC Annual Emissions Limitation

The Permittee should monitor the hours of operation for each engine to demonstrate compliance with the nonattainment New Source Review emission limits for VOC and CO, as stated in Section 2.1.C.

Compliance Methods for the Above (Description and Citation):

- (1) Records Maintenance (continuous data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): M/L Unit 11 through M/L Unit 12 (1 Clark TCV-10 rated at 3,400 HP; and 1 Clark TCV-16 rated at 5,500 HP mainline natural gas fired reciprocating internal combustion engines, 2-cycle, lean-burn)

Permit Term (Describe requirements and cross-reference): 4.2.4 - Record Keeping Requirements

Unless otherwise specified all records required by the permit shall be kept for a period of at least five (5) years and shall be made available to the Department upon request.

4.2.4.A Control of Visible Emissions. [COMAR 26.11.03.06C] The Permittee shall keep records of the Method 9 results and submit them to the Department upon request.

Compliance Methods for the Above (Description and Citation):

- (1) Records Maintenance (continuous data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

A-COMP

Emission Unit ID(s): M/L Unit 11 through M/L Unit 12 (1 Clark TCV-10 rated at 3,400 HP; and 1 Clark TCV-16 rated at 5,500 HP mainline natural gas fired reciprocating internal combustion engines, 2-cycle, lean-burn)

Permit Term (Describe requirements and cross-reference): 4.2.4 - Record Keeping Requirements

Unless otherwise specified all records required by the permit shall be kept for a period of at least five (5) years and shall be made available to the Department upon request.

4.2.4.B(1) The Permittee shall keep the supporting data that is the basis for the compliance demonstration with the combined maximum hourly emission rate of 566 pounds per hour.

4.2.4.B(2) The Permittee shall keep the results of the annual NOx testing done to confirm the PEMS.

Compliance Methods for the Above (Description and Citation):

(1) Records Maintenance (continuous data)

(2) Last annual NOx testing performed shows the facility to be below the NOx emission limit (intermittent data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): M/L Unit 11 through M/L Unit 12 (1 Clark TCV-10 rated at 3,400 HP; and 1 Clark TCV-16 rated at 5,500 HP mainline natural gas fired reciprocating internal combustion engines, 2-cycle, lean-burn)

Permit Term (Describe requirements and cross-reference): 4.2.4 - Record Keeping Requirements

Unless otherwise specified all records required by the permit shall be kept for a period of at least five (5) years and shall be made available to the Department upon request.

4.2.4.C [COMAR 26.11.03.06C] The Permittee shall maintain records of the calculation of emissions of CO and VOC sufficient to demonstrate that the emissions increase from the modification of the engines do not exceed the limitation based on any period of 12 consecutive months.

Compliance Methods for the Above (Description and Citation):

(1) Records Maintenance (continuous data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

A-COMP

Emission Unit ID(s): M/L Unit 11 through M/L Unit 12 (1 Clark TCV-10 rated at 3,400 HP; and 1 Clark TCV-16 rated at 5,500 HP mainline natural gas fired reciprocating internal combustion engines, 2-cycle, lean-burn)

Permit Term (Describe requirements and cross-reference): 4.2.4 - Record Keeping Requirements

Unless otherwise specified all records required by the permit shall be kept for a period of at least five (5) years and shall be made available to the Department upon request.

4.2.4.D [COMAR 26.11.02.19C(1)(c)] The Permittee shall maintain a record of the type and quantity of fuel burned.

Compliance Methods for the Above (Description and Citation):

(1) Records Maintenance (continuous data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): M/L Unit 11 through M/L Unit 12 (1 Clark TCV-10 rated at 3,400 HP; and 1 Clark TCV-16 rated at 5,500 HP mainline natural gas fired reciprocating internal combustion engines, 2-cycle, lean-burn)

Permit Term (Describe requirements and cross-reference): 4.2.5 Reporting Requirements

4.2.5.A The Permittee shall report incidents of visible emissions in accordance with Condition 4, Section III, (Report of Excess Emissions and Deviations)

Compliance Methods for the Above (Description and Citation):

(1) Records Maintenance - fuel records documenting equipment exclusively fires natural gas (continuous data)

(2) Engineering Judgment - natural gas fired equipment has little to no visible emissions per EPA guidance (continuous data)

(3) Visual Observation (intermittent data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): M/L Unit 11 through M/L Unit 12 (1 Clark TCV-10 rated at 3,400 HP; and 1 Clark TCV-16 rated at 5,500 HP mainline natural gas fired reciprocating internal combustion engines, 2-cycle, lean-burn)

Permit Term (Describe requirements and cross-reference): 4.2.5 Reporting Requirements

4.2.5.B [COMAR 26.11.29.04A(3)] The Permittee shall submit the results of the annual NOx emissions testing for compliance with the hourly NOx emissions limit within 45 days of the completion of the testing. The supporting data that is the basis for the compliance demonstration with the combined maximum hourly emission rate of 566 pounds per hour and the emission limit of 125 ppm shall also be included.

Compliance Methods for the Above (Description and Citation):

(1) Records Maintenance (continuous data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): M/L Unit 11 through M/L Unit 12 (1 Clark TCV-10 rated at 3,400 HP; and 1 Clark TCV-16 rated at 5,500 HP mainline natural gas fired reciprocating internal combustion engines, 2-cycle, lean-burn)

Permit Term (Describe requirements and cross-reference): 4.2.5 Reporting Requirements

4.2.5.B(2) [COMAR 26.11.03.06C(3)] By November 30 of each year, the Permittee shall submit to the Department a stack test results report on the annual confirmatory emissions testing.

Compliance Methods for the Above (Description and Citation):

(1) Records Maintenance (continuous data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): M/L Unit 11 through M/L Unit 12 (1 Clark TCV-10 rated at 3,400 HP; and 1 Clark TCV-16 rated at 5,500 HP mainline natural gas fired reciprocating internal combustion engines, 2-cycle, lean-burn)

Permit Term (Describe requirements and cross-reference): 4.2.5 Reporting Requirements

4.2.5.B(3) [PTC 027-9-0224M issued November 18, 2002] The Permittee shall report all excursions where the 1-hour block average P_M is less than the corresponding 1-hour block average P_{MC} to the Department within 30 days after the end of each calendar quarter. More than two excursions within any calendar quarter or more than three excursions during the control period shall constitute a reportable occurrence of excess emissions, requiring a telephone report within 24 hours and a written report if requested by the Department within 10 days, in accordance with COMAR 26.11.01.07.

Compliance Methods for the Above (Description and Citation):

(1) Records Maintenance (continuous data)

(2) Parametric Emissions Monitoring System experienced no excursions during the Reporting Period.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): M/L Unit 11 through M/L Unit 12 (1 Clark TCV-10 rated at 3,400 HP; and 1 Clark TCV-16 rated at 5,500 HP mainline natural gas fired reciprocating internal combustion engines, 2-cycle, lean-burn)

Permit Term (Describe requirements and cross-reference): 4.2.5 Reporting Requirements

4.2.5.C [COMAR 26.11.02.19D] The Permittee shall report the annual emissions of CO and VOC in the annual emissions certification report.

Compliance Methods for the Above (Description and Citation):

(1) Records Maintenance (continuous data)

(2) Calendar Year 2020 annual emission certification report submitted prior to April 1, 2021 (intermittent data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

A-COMP

Emission Unit ID(s): M/L Unit 11 through M/L Unit 12 (1 Clark TCV-10 rated at 3,400 HP; and 1 Clark TCV-16 rated at 5,500 HP mainline natural gas fired reciprocating internal combustion engines, 2-cycle, lean-burn)

Permit Term (Describe requirements and cross-reference): 4.2.5 Reporting Requirements

4.2.5.D [COMAR 26.11.02.19D] The Permittee shall report the type and quantity of fuel burned in the annual emissions certification report.

Compliance Methods for the Above (Description and Citation):

- (1) Records Maintenance (continuous data)
- (2) Calendar Year 2020 annual emission certification report submitted prior to April 1, 2021 (intermittent data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): AUX 1 (Waukesha 7042 GL rated at 1,478 HP auxiliary electric power generator, natural gas fired reciprocating internal combustion engines, 4-cycle, lean-burn)

Permit Term (Describe requirements and cross-reference): 4.3.1.A Visible Emissions Limitations

[COMAR 26.11.09.05E(2)] Limits visible emissions from an internal combustion engine to 10 percent opacity during idle mode.

[COMAR 26.11.09.05E(3)] Limits visible emissions from an internal combustion engine to 40 percent opacity during operating mode.

[COMAR 26.11.09.05E(4)(a)&(b)] Allows for the following exceptions from the requirement of COMAR 26.11.09.05E(2):

The requirement does not apply for a period of 2 consecutive minutes after a period of idling of 15 consecutive minutes for the purpose of clearing the exhaust system.

The requirement does not apply to emissions resulting directly from cold engine start-up and warm-up of a maximum period of 30 minutes for engines that are idled continuously when not in service; or for a maximum period of 15 minutes for all other engines.

[COMAR 26.11.09.05E(4)(c)] Allows the exceptions from the requirements of COMAR 26.11.09.05E(2)&(3) when maintenance, repair, or testing is being performed by qualified mechanics.

Compliance Methods for the Above (Description and Citation):

- (1) Records Maintenance - fuel records documenting equipment exclusively fires natural gas (continuous data)
- (2) Engineering Judgment - natural gas fired equipment has little to no visible emissions per EPA guidance (continuous data)
- (3) Visual Observation (intermittent data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

A-COMP

Emission Unit ID(s): AUX 1 (Waukesha 7042 GL rated at 1,478 HP auxiliary electric power generator, natural gas fired reciprocating internal combustion engines, 4-cycle, lean-burn)

Permit Term (Describe requirements and cross-reference): 4.3.1.B Nitrogen Oxides Reasonably Available Control Technology Requirements (NOx RACT)

[COMAR 26.11.09.08G(1) A person who owns or operates fuel-burning equipment with a capacity factor (as defined in 40 CFR Part 72.2) of 15 percent or less shall:

- (1) Provide certification of the capacity factor of the equipment to the Department in writing;
- (2) For fuel-burning equipment that operates more than 500 hours during a calendar year, perform a combustion analysis and optimize combustion at least once annually;
- (3) Maintain the results of the combustion analysis at the site for at least 2 years and make these results available to the Department and the EPA upon request;
- (4) Require each operator of an installation, except combustion turbines, to attend operator training programs at least once every 3 years, on combustion optimization that are sponsored by the Department, the EPA, or equipment vendors; and
- (5) Maintain a record of training program attendance for each operator at the site, and make these records available to the Department upon request.

COMAR 26.11.09.08B(6) - Operator Training: For the purpose of this regulation, the equipment operator to be trained may be the person who maintains the equipment and makes the necessary adjustments for efficient operation.

Compliance Methods for the Above (Description and Citation):

- (1) Records Maintenance (continuous data)
- (2) Per guidance from the Department, Transco calculated the capacity factor by taking 15% of the total possible hours of operation in the calendar year. Calendar Year 2021 Possible Hours = 8,760; Capacity Factor = 1,314.0. Total hours of operation for Auxiliary Generator Unit 1 were 32.00 hours, well below the 15% capacity factor.
- (3) Calendar Year 2020 annual emission certification report submitted prior to April 1, 2021 (intermittent data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): AUX 1 (Waukesha 7042 GL rated at 1,478 HP auxiliary electric power generator, natural gas fired reciprocating internal combustion engines, 4-cycle, lean-burn)

Permit Term (Describe requirements and cross-reference): 4.3.1.C Operational Limitations

4.3.1.C(1) [COMAR 26.11.02.09] The Permittee shall burn only pipeline quality natural gas unless the Permittee applies for and receives an approval or permit from the Department.

Compliance Methods for the Above (Description and Citation):

- (1) Records Maintenance (continuous data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

A-COMP

Emission Unit ID(s): AUX 1 (Waukesha 7042 GL rated at 1,478 HP auxiliary electric power generator, natural gas fired reciprocating internal combustion engines, 4-cycle, lean-burn)

Permit Term (Describe requirements and cross-reference): 4.3.1.C Operational Limitations

4.3.1.C(2) [COMAR 26.11.09.08G] The capacity factor shall be limited to 15 percent or less.

Compliance Methods for the Above (Description and Citation):

(1) Records Maintenance (continuous data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): AUX 1 (Waukesha 7042 GL rated at 1,478 HP auxiliary electric power generator, natural gas fired reciprocating internal combustion engines, 4-cycle, lean-burn)

Permit Term (Describe requirements and cross-reference): 4.3.2 Testing Requirements

4.3.2.B [COMAR 26.11.09.08G(1)(b)] Anytime the hours of operation of this engine exceed 500 hours in a calendar year, the Permittee shall perform a combustion analysis.

Compliance Methods for the Above (Description and Citation):

(1) Records Maintenance (continuous data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): AUX 1 (Waukesha 7042 GL rated at 1,478 HP auxiliary electric power generator, natural gas fired reciprocating internal combustion engines, 4-cycle, lean-burn)

Permit Term (Describe requirements and cross-reference): 4.3.3 Monitoring Requirements

4.3.3.B [COMAR 26.11.03.06C] The Permittee shall calculate the capacity factor of the engine at the end of each month.

Compliance Methods for the Above (Description and Citation):

(1) Records Maintenance (continuous data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

A-COMP

Emission Unit ID(s): AUX 1 (Waukesha 7042 GL rated at 1,478 HP auxiliary electric power generator, natural gas fired reciprocating internal combustion engines, 4-cycle, lean-burn)

Permit Term (Describe requirements and cross-reference): 4.3.4 Recordkeeping Requirements

Unless otherwise specified all records required by the permit shall be kept for a period of at least five (5) years and shall be made available to the Department upon request.

4.3.4.B The Permittee shall maintain:

- (1) [COMAR 26.11.03.06C] Monthly records of the calculated capacity factors,
- (2) [COMAR 26.11.02.19.C(1)(b)] Monthly records of the hours of operation,
- (3) [COMAR 26.11.09.08G(1)(c)] Records of combustion analysis performed if the hours of operations exceed 500, and
- (4) [COMAR 26.11.09.08G(1)(e)] Record of training program attendance for each operator.

Compliance Methods for the Above (Description and Citation):

- (1) Records Maintenance (continuous data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): AUX 1 (Waukesha 7042 GL rated at 1,478 HP auxiliary electric power generator, natural gas fired reciprocating internal combustion engines, 4-cycle, lean-burn)

Permit Term (Describe requirements and cross-reference): 4.3.4 Recordkeeping Requirements

Unless otherwise specified all records required by the permit shall be kept for a period of at least five (5) years and shall be made available to the Department upon request.

4.3.4.C [COMAR 26.11.02.19C(1)(c)] The Permittee shall maintain a record of the type and quantity of fuel burned.

Compliance Methods for the Above (Description and Citation):

- (1) Records Maintenance (continuous data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): AUX 1 (Waukesha 7042 GL rated at 1,478 HP auxiliary electric power generator, natural gas fired reciprocating internal combustion engines, 4-cycle, lean-burn)

Permit Term (Describe requirements and cross-reference): 4.3.5 Reporting Requirements

4.3.5.A The Permittee shall report incidents of visible emissions in accordance with Condition 4, Section III, (Report of Excess Emissions and Deviations).

Compliance Methods for the Above (Description and Citation):

- (1) Records Maintenance - fuel records documenting equipment exclusively fires natural gas (continuous data)
- (2) Engineering Judgment - natural gas fired equipment has little to no visible emissions per EPA guidance (continuous data)
- (3) Visual Observation (intermittent data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

A-COMP

Emission Unit ID(s): AUX 1 (Waukesha 7042 GL rated at 1,478 HP auxiliary electric power generator, natural gas fired reciprocating internal combustion engines, 4-cycle, lean-burn)

Permit Term (Describe requirements and cross-reference): 4.3.5 Reporting Requirements

4.3.5.B [COMAR 26.11.09.08G(1)(a) and COMAR 26.11.03.06C] The Permittee shall provide certification of the capacity factor of the equipment to the Department in writing as part of the April 1 emission certification report.

The Permittee shall submit a record of training program attendance for each operator to the Department upon request.

Compliance Methods for the Above (Description and Citation):

- (1) Records Maintenance (continuous data)
- (2) Calendar Year 2020 annual emission certification report submitted prior to April 1, 2021 (intermittent data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): AUX 1 (Waukesha 7042 GL rated at 1,478 HP auxiliary electric power generator, natural gas fired reciprocating internal combustion engines, 4-cycle, lean-burn)

Permit Term (Describe requirements and cross-reference): 4.3.5 Reporting Requirements

4.3.5.C [COMAR 26.11.02.11C(2) and .19D] The Permittee shall report the type and quantity of fuel burned in the annual emissions certification report.

Compliance Methods for the Above (Description and Citation):

- (1) Records Maintenance (continuous data)
- (2) Calendar Year 2020 annual emission certification report submitted prior to April 1, 2021 (intermittent data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): BLR 1 & BLR 2 (1 Holmar Vulcan A60 rated at 2.5 MMBtu/hr; and 1 Cyclotherm C2800 rated at 3.3 MMBtu/hr natural gas-fired boilers)

Permit Term (Describe requirements and cross-reference): 4.4.1.A Visible Emissions Limitations

[COMAR 26.11.09.05A(2)] A person may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is visible to human observers.

Exceptions: Section A(1) and (2) of this regulation do not apply to emissions during load changing, soot blowing, start-up, or adjustments or occasional cleaning of control equipment if: (a) The visible emissions are not greater than 40 percent opacity; and (b) The visible emissions do not occur for more than sixty consecutive minute period.

Compliance Methods for the Above (Description and Citation):

- (1) Records Maintenance - fuel records documenting equipment exclusively fires natural gas (continuous data)
- (2) Engineering Judgment - natural gas fired equipment has little to no visible emissions per EPA guidance (continuous data)
- (3) Visual Observation (intermittent data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

A-COMP

Emission Unit ID(s): BLR 1 & BLR 2 (1 Holmar Vulcan A60 rated at 2.5 MMBtu/hr; and 1 Cyclotherm C2800 rated at 3.3 MMBtu/hr natural gas-fired boilers)

Permit Term (Describe requirements and cross-reference): 4.4.1.B Control of Nitrogen Oxides

[COMAR 26.11.09.08B(1)(a)] Provides that a person who owns or operates an installation that causes NOx emissions is in compliance with regulation COMAR 26.11.09.08 if the person establishes compliance with the emissions standard stated below:

Emission Standards in Pounds of NOx per Million Btu of heat input:

Fuel	Tangential-Fired	Wall-Fired
Gas Only	0.20	0.20

Compliance Methods for the Above (Description and Citation):

(1) Records Maintenance (continuous data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): BLR 1 & BLR 2 (1 Holmar Vulcan A60 rated at 2.5 MMBtu/hr; and 1 Cyclotherm C2800 rated at 3.3 MMBtu/hr natural gas-fired boilers)

Permit Term (Describe requirements and cross-reference): 4.4.1.C(1) [COMAR 26.11.02.09]

Operational Limitation: The Permittee shall burn only pipeline quality natural gas unless the Permittee applies for and receives an approval or permit from the Department.

Compliance Methods for the Above (Description and Citation):

(1) Records Maintenance (continuous data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): BLR 1 & BLR 2 (1 Holmar Vulcan A60 rated at 2.5 MMBtu/hr; and 1 Cyclotherm C2800 rated at 3.3 MMBtu/hr natural gas-fired boilers)

Permit Term (Describe requirements and cross-reference):

4.4.1.C(2) [40 CFR part 63, subpart DDDDD] NESHAP Operating Requirements

[40 CFR § 63.7500(a)(1)] The Permittee must meet each emission limit and work practice standard in 40 CFR, Part 63, Subpart DDDDD, Tables 1 through 3 and 11 through 13, that applies to the boilers.

Compliance Methods for the Above (Description and Citation):

(1) Records Maintenance. (continuous data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

A-COMP

Emission Unit ID(s): BLR 1 & BLR 2 (1 Holmar Vulcan A60 rated at 2.5 MMBtu/hr; and 1 Cyclotherm C2800 rated at 3.3 MMBtu/hr natural gas-fired boilers)

Permit Term (Describe requirements and cross-reference): 4.4.4. Recordkeeping Requirements

4.4.4.A [COMAR 26.11.03.06C] The Permittee shall maintain an operations manual and preventative maintenance plan. The Permittee shall maintain a log of maintenance performed that relates to combustion performance.

Compliance Methods for the Above (Description and Citation):

(1) Records Maintenance (continuous data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): BLR 1 & BLR 2 (1 Holmar Vulcan A60 rated at 2.5 MMBtu/hr; and 1 Cyclotherm C2800 rated at 3.3 MMBtu/hr natural gas-fired boilers)

Permit Term (Describe requirements and cross-reference): 4.4.4. Recordkeeping Requirements

4.4.4.B [COMAR 26.11.02.19C(1)(c)] The Permittee shall maintain a record of the type and quantity of fuel burned.

Compliance Methods for the Above (Description and Citation):

(1) Records Maintenance (continuous data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): BLR 1 & BLR 2 (1 Holmar Vulcan A60 rated at 2.5 MMBtu/hr; and 1 Cyclotherm C2800 rated at 3.3 MMBtu/hr natural gas-fired boilers)

Permit Term (Describe requirements and cross-reference): 4.4.4. Recordkeeping Requirements

4.4.4.C [§63.7555(a)(1)] The Permittee shall keep a copy of each notification and report submitted to comply with subpart DDDDD, including all documentation supporting any initial Notification or Notification of Compliance Status or semiannual compliance report the Permittee submitted according to the requirements in §63.10(b)(2)(xiv).

Compliance Methods for the Above (Description and Citation):

(1) Records Maintenance (continuous data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

A-COMP

Emission Unit ID(s): BLR 1 & BLR 2 (1 Holmar Vulcan A60 rated at 2.5 MMBtu/hr; and 1 Cyclotherm C2800 rated at 3.3 MMBtu/hr natural gas-fired boilers)

Permit Term (Describe requirements and cross-reference): 4.4.5 Reporting Requirements

4.4.5.A The Permittee shall report incidents of visible emissions in accordance with Permit Condition 4, Section III, "Report of Excess Emissions and Deviations."

Compliance Methods for the Above (Description and Citation):

(1) Records Maintenance (continuous data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): BLR 1 & BLR 2 (1 Holmar Vulcan A60 rated at 2.5 MMBtu/hr; and 1 Cyclotherm C2800 rated at 3.3 MMBtu/hr natural gas-fired boilers)

Permit Term (Describe requirements and cross-reference): 4.4.5 Reporting Requirements

4.4.5.B [COMAR 26.11.02.19C(2) and .19D] The Permittee shall report the type and quantity of fuel burned in the annual emissions certification report.

Compliance Methods for the Above (Description and Citation):

(1) Records Maintenance (continuous data)

(2) Calendar Year 2020 annual emission certification report submitted prior to April 1, 2021 (intermittent data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): BLR 1 & BLR 2 (1 Holmar Vulcan A60 rated at 2.5 MMBtu/hr; and 1 Cyclotherm C2800 rated at 3.3 MMBtu/hr natural gas-fired boilers)

Permit Term (Describe requirements and cross-reference): 4.4.5 Reporting Requirements

4.4.5.C The following reporting requirements under 40 CFR part 63, subpart DDDDD apply:

- (1) The Permittee shall submit the Initial Notification of applicability not later than 120 days after January 31, 2013. [§63.9(b)(2), §63.7495(d), and §63.7545(b)]
- (2) The Permittee shall submit a Notification of Compliance Status report... The report shall be postmarked or submitted no later than January 31, 2016. [§63.7545(e)]
- (3) The Permittee must submit each report in Table 9 to Subpart DDDDD of Part 63 that applies.
- (4) The first Subpart DDDDD Compliance Report must cover the 59-month period from January 1, 2016 through December 31, 2020 and must be postmarked or submitted to the delegated authority by January 31, 2021. [§63.7550(b)]

Compliance Methods for the Above (Description and Citation):

(1) Initial Notification of applicability submitted May 22, 2013.

(2) Records Maintenance (continuous data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

A-COMP

Emission Unit ID(s): FUG 2 (Blowdown/venting fugitives)

Permit Term (Describe requirements and cross-reference): 4.5.2 Applicable Standards/Limits

4.5.1 [COMAR 26.11.06.06B(1)(a)] A person may not cause or permit the discharge of VOC from any installation constructed before May 12, 1972 in excess of 200 pounds (90.7 kilograms) per day unless the discharge is reduced by 85 percent of more overall.

Compliance Methods for the Above (Description and Citation):

(1) Records Maintenance (continuous data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): FUG 2 (Blowdown/venting fugitives)

Permit Term (Describe requirements and cross-reference): 4.5.3 Monitoring Requirements

4.5.3. [COMAR 26.11.03.06C] Prior to any planned on-site blowdown or venting of natural gas whose uncontrolled emissions would be expected to exceed 200 pounds per day of VOC, the Permittee shall submit for approval to the Air and Radiation Management Administration's Compliance Program, at least 10 days prior to the scheduled event, an emissions control plan that would lead to at least 85 percent control of the VOC emissions or limit the VOC emissions to 200 pounds per day. In the event that 10 days prior notice is not possible due to the nature of the blowdown or venting activity, the Permittee shall submit an emissions control plan as early as practicable.

Compliance Methods for the Above (Description and Citation):

(1) Records Maintenance (continuous data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): FUG 2 (Blowdown/venting fugitives)

Permit Term (Describe requirements and cross-reference): 4.5.4 Record Keeping Requirements

4.5.4 [COMAR 26.11.03.06C] For each scheduled blowdown event the Permittee shall keep the following records for at least five years and make them available to the Department.

- (1) The date, time and duration of each event;
- (2) The quantity of natural gas (DSCF) to be released before control and the resultant amount of VOC emission, including supporting calculations;
- (3) The quantity of natural gas actually released to the atmosphere and the resultant amount of VOC, after control during each day including supporting calculations;
- (4) Methods of emission control; and
- (5) Copies of all requests for approval and copies of approval letters from the Department

Compliance Methods for the Above (Description and Citation):

(1) Records Maintenance (continuous data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): FUG 2 (Blowdown/venting fugitives)

Permit Term (Describe requirements and cross-reference): 4.5.5 Reporting Requirements

4.5.5(1) [COMAR 26.11.03.06C] The records required to be kept shall be made available to the Department upon request.

4.5.5(2) The total emissions from blowdown events shall be included as a separate line item on the Permittee's annual Emissions Certification Report required by Condition 8, Section III.

Compliance Methods for the Above (Description and Citation):

(1) Records Maintenance (continuous data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): CT-1 (One Solar Titan 250 (30,000HP) natural gas-fired combustion turbine)

Permit Term (Describe requirements and cross-reference): 4.6.1 Applicable Standards/Limits

4.6.1.A. All applicable terms, provisions, emissions standards, testing, monitoring, record keeping, and reporting requirements included in federal New Source Performance Standards (NSPS) under 40 CFR Part 60, Subparts A and KKKK for Stationary Combustion Turbines.

Compliance Methods for the Above (Description and Citation):

(1) Records Maintenance (continuous data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): CT-1 (One Solar Titan 250 (30,000HP) natural gas-fired combustion turbine)

Permit Term (Describe requirements and cross-reference): 4.6.1 Applicable Standards/Limits

4.6.1.B. National Emissions Standards for Hazardous Air Pollutants (NESHAP) promulgated under 40 CFR Part 63, Subparts A and YYYY for Stationary Combustion Turbines. Only the following apply:
§63.6095(c) You must meet the notification requirements in §63.6145 according to the schedule in §63.6145 and in 40 CFR part 63, subpart A.

Compliance Methods for the Above (Description and Citation):

(1) Records Maintenance (continuous data)

(2) Need not comply with any other requirement of this subpart until EPA takes final action to require compliance and publishes a document in the FEDERAL REGISTER.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): CT-1 (One Solar Titan 250 (30,000HP) natural gas-fired combustion turbine)

Permit Term (Describe requirements and cross-reference): 4.6.1 Applicable Standards/Limits

4.6.1.C. Fuel burning equipment [COMAR 26.11.09.05A(2)] "In Areas III and IV, a person may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is visible to human observers except that, for the purpose of demonstrating compliance using COM data, emissions that are visible to a human observer are those that are equal to or greater than 10 percent opacity.

Exceptions. "Section A(1) and (2) of this regulation do not apply to emissions during load changing, soot blowing, startup, or adjustments or occasional cleaning of control equipment if: (a) The visible emissions are not greater than 40 percent opacity; and (b) The visible emissions do not occur for more than 6 consecutive minutes in any sixty minute period."

Compliance Methods for the Above (Description and Citation):

(1) Records Maintenance (continuous data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): CT-1 (One Solar Titan 250 (30,000HP) natural gas-fired combustion turbine)

Permit Term (Describe requirements and cross-reference): 4.6.1 Applicable Standards/Limits

4.6.1.D. [COMAR 26.11.09.08G(2)] "A person who owns or operates a combustion turbine with a capacity factor greater than 15 percent shall meet an hourly average NOx emission rate of not more than 42 ppm when burning gas or 65 ppm when burning fuel oil (dry volume at 15 percent oxygen) or meet applicable Prevention of Significant Deterioration limits, whichever is more restrictive."

Compliance Methods for the Above (Description and Citation):

(1) Records Maintenance (continuous data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): CT-1 (One Solar Titan 250 (30,000HP) natural gas-fired combustion turbine)

Permit Term (Describe requirements and cross-reference): 4.6.1 Applicable Standards/Limits

4.6.1.E.(1) [40 CFR part 60, subpart KKKK, §60.4333] The Permittee shall maintain and operate the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine, and any associated air pollution control equipment, in such a manner as to ensure full and continuous compliance with all applicable regulations.

4.6.1.E.(2) The Permittee shall properly maintain and keep in good working condition all control panel instrumentation and monitoring devices that the Permittee uses to determine if the air pollution control equipment is operating as designed.

4.6.1.E.(3) The Permittee must operate and maintain the stationary combustion turbine, air pollution control equipment, and monitoring equipment in a manner consistent with good air pollution control practices for minimizing emissions at all times including during startup, shutdown, and malfunction.

Compliance Methods for the Above (Description and Citation):

(1) Records Maintenance (continuous data)

Status (Check one): ☒ Intermittent Compliance ☐ Continuous Compliance

A-COMP

Emission Unit ID(s): CT-1 (One Solar Titan 250 (30,000HP) natural gas-fired combustion turbine)

Permit Term (Describe requirements and cross-reference): 4.6.1 Applicable Standards/Limits

4.6.1.E.(5) [40 CFR part 60, subpart KKKK, COMAR 26.11.09.08G(2)] In accordance with the manufacturer's guarantee, the Permittee shall operate the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine and emission controls in a manner that complies with a NOx emission limit of 15 ppm at 15 percent oxygen.

Compliance Methods for the Above (Description and Citation):

(1) Records Maintenance (continuous data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): CT-1 (One Solar Titan 250 (30,000HP) natural gas-fired combustion turbine)

Permit Term (Describe requirements and cross-reference): 4.6.2 Testing Requirements

4.6.2.A.(1) [40 CFR part 60, subpart KKKK]

§60.8 (a) ... within 60 days after achieving the maximum operating rate, but not later than 180 days after initial startup, ... conduct an initial performance test and furnish the [Department] a written report of the results of such performance test. ...

§60.8(f) ... each performance test shall consist of three separate runs using the applicable test methods.

§60.4340 (a) "If you are not using water or steam injection to control NOx emissions, you must perform annual performance tests in accordance with §60.4400 to demonstrate continuous compliance. If the NOx emission result from the performance test is less than or equal to 75 percent of the NOx emission limit for the turbine, you may reduce the frequency of subsequent performance tests to once every 2 years (no more than 26 calendar months following the previous performance test). If the results of any subsequent performance test exceed 75 percent of the NOx emission limit for the turbine, you must resume annual performance tests."

§60.4400(a) you must conduct an initial performance test, as required in §60.8. Subsequent NOx performance tests shall be conducted on an annual basis (no more than 14 calendar months following the previous performance test). Note: An annual performance test is not required if a parameter monitoring plan is submitted meeting the requirements of §60.4340(b), §60.4355, and §60.4410. Note that §60.4410 requires:

- §60.4410 If you have chosen to monitor combustion parameters or parameters indicative of proper operation of NOx emission controls in accordance with §60.4340, the appropriate parameters must be continuously monitored and recorded during each run of the initial performance test, to establish acceptable operating ranges, for purposes of the parameter monitoring plan for the affected unit, as specified in §60.4355.
- §60.4400(a)(1)-(3) and §60.4400(b) specify in detail the procedures from 40 CFR Part 60, appendix A, that must be used to conduct the performance tests. See regulation for full text. Use the procedures specified in §60.4400(a)(1)(ii) to calculate the NOx emission rate in lb/MMBtu as well as NOx ppmvd adjusted to 15% O₂.

Compliance Methods for the Above (Description and Citation):

(1) Records Maintenance (continuous data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

A-COMP

Emission Unit ID(s): CT-1 (One Solar Titan 250 (30,000HP) natural gas-fired combustion turbine)

Permit Term (Describe requirements and cross-reference): 4.6.2 Testing Requirements

4.6.2.A.(2) Within 180 days after initial startup of the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine, the Permittee shall perform initial performance tests for CO and VOC using approved 40 CFR part 60 appendix A methods or equivalent alternative methods if approved by the Department. Unless otherwise approved by the Department, Method 10 shall be used for CO and Methods 18 and 25 shall be used for VOC. Emission rates for CO and VOC shall be computed in terms of lb/MMBtu input in accordance with methodologies approved by the Department.

Compliance Methods for the Above (Description and Citation):

(1) Records Maintenance (continuous data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): CT-1 (One Solar Titan 250 (30,000HP) natural gas-fired combustion turbine)

Permit Term (Describe requirements and cross-reference): 4.6.2 Testing Requirements

4.6.2.A.(3) A stack test protocol addressing the testing requirements in conditions (1) - (3) above and a NOx parameter monitoring protocol addressing §60.4340(b) and §60.4355(a) shall be submitted to the Department for review and approval at least 30 days prior to the anticipated stack test date.

4.6.2.A.(4) The Permittee shall notify the Department of the date of the stack test at least 14 days prior to the actual date of the stack tests.

Compliance Methods for the Above (Description and Citation):

(1) Records Maintenance (continuous data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): CT-1 (One Solar Titan 250 (30,000HP) natural gas-fired combustion turbine)

Permit Term (Describe requirements and cross-reference): 4.6.2 Testing Requirements

4.6.2.D. "A person who owns or operates a combustion turbine with a capacity factor greater than 15 percent shall meet an hourly average NOx emission rate of not more than 42 ppm when burning gas or 65 ppm when burning fuel oil (dry volume at 15 percent oxygen) or meet applicable Prevention of Significant Deterioration limits, whichever is more restrictive."

Compliance Methods for the Above (Description and Citation):

(1) Records Maintenance (continuous data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): CT-1 (One Solar Titan 250 (30,000HP) natural gas-fired combustion turbine)

Permit Term (Describe requirements and cross-reference): 4.6.3 Monitoring Requirements

4.6.3.A.1. (a) Except as provided in §60.4340(b) below, §60.4340(a) provides that the Permittee must perform annual performance tests in accordance with §60.4400 to demonstrate continuous compliance.

(b) In lieu of an annual performance test for NO_x, the Permittee may submit to the Department for approval a parameter monitoring plan for the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine. The parameter monitoring plan must meet the requirements of 40 CFR part 60, Subpart KKKK, §60.4340(b), §60.4355(a)(1) through (6) and §60.4410, as applicable.

Compliance Methods for the Above (Description and Citation):

- (1) Records Maintenance (continuous data)
- (2) Complying by conducting annual performance testing

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): CT-1 (One Solar Titan 250 (30,000HP) natural gas-fired combustion turbine)

Permit Term (Describe requirements and cross-reference): 4.6.4 Recordkeeping Requirements

4.6.4.A.1. The following records shall be kept on site for at least five (5) years and shall be made available to the Department upon request:

- (a) Monthly records of fuel usage for the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine, and the Waukesha 1,450 BHP natural gas-fired emergency generator
- (c) A copy of the initial performance test report(s) for NO_x, CO, and VOC for the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine;
- (e) Copies of annual performance tests for NO_x if an approved NO_x parametric monitoring plan is not submitted.

Compliance Methods for the Above (Description and Citation):

- (1) Records Maintenance (continuous data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): CT-1 (One Solar Titan 250 (30,000HP) natural gas-fired combustion turbine)

Permit Term (Describe requirements and cross-reference): 4.6.5 Reporting Requirements

4.6.5.A.1. Prior to the date that the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine commences operation the Permittee shall submit a stack test report reporting the results of the initial stack tests on the HBA-8T and Clark TLA-6 engines in accordance with condition 0(4), Permit to Construct number 027-0223-5-0054M issued on January 20, 2015.

Compliance Methods for the Above (Description and Citation):

- (1) Records Maintenance (continuous data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

A-COMP

Emission Unit ID(s): CT-1 (One Solar Titan 250 (30,000HP) natural gas-fired combustion turbine)

Permit Term (Describe requirements and cross-reference): 4.6.5 Reporting Requirements

4.6.5.A.2. The following semiannual monitoring reports covering the 6-month periods ending each December 31 and June 30 are required under 40 CFR part 60, subpart KKKK, §60.4375(a) for the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine:

§60.4395 All reports required under §60.7(c) must be postmarked by the 30th day following the end of each 6-month period.

Compliance Methods for the Above (Description and Citation):

(1) Records Maintenance (continuous data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): CT-1 (One Solar Titan 250 (30,000HP) natural gas-fired combustion turbine)

Permit Term (Describe requirements and cross-reference): 4.6.5 Reporting Requirements

4.6.5.A.3. Reports of performance tests for NO_x are required under COMAR 26.11.09.08K(2) and 40 CFR part 60, subpart KKKK, §60.4375(b) for the Solar Titan 250 (30,000 HP) natural gas-fired combustion turbine. In order to comply with both requirements, the results of the NO_x performance (stack) tests shall be submitted to the Department within 45 days after the completion of the test.

Compliance Methods for the Above (Description and Citation):

(1) Records Maintenance (continuous data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): CT-1 (One Solar Titan 250 (30,000HP) natural gas-fired combustion turbine)

Permit Term (Describe requirements and cross-reference): 4.6.5 Reporting Requirements

4.6.5.E. [COMAR 26.11.09.08K(2)] Within 45 days after the testing required in Section 4.6.1 above, the Permittee shall submit a stack test report to the Department

Compliance Methods for the Above (Description and Citation):

(1) Records Maintenance (continuous data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EG-1 (One natural gas-fired emergency generator rated at 1,450 BHP)

Permit Term (Describe requirements and cross-reference): 4.7.1 Applicable Standards/Limits

4.7.1.A. [40 CFR, Part 60, Subpart JJJJ] All applicable terms, provisions, emissions standards, testing, monitoring, record keeping, and reporting requirements included in federal New Source Performance Standards (NSPS) under 40 CFR Part 60, Subpart JJJJ for Stationary Spark Ignition Internal Combustion.

Compliance Methods for the Above (Description and Citation):

(1) Records Maintenance (continuous data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EG-1 (One natural gas-fired emergency generator rated at 1,450 BHP)

Permit Term (Describe requirements and cross-reference): 4.7.1 Applicable Standards/Limits

4.7.1.B. [40 CFR, Part 63, Subpart ZZZZ] The Permittee shall meet the requirements included in the National Emissions Standards for Hazardous Air Pollutants (NESHAP) promulgated under 40 CFR part 63, Subparts A and ZZZZ for Reciprocating Internal Combustion Engines by meeting the requirements of 40 CFR part 60, Subpart JJJJ for the emergency generator. No further requirements apply to the emergency generator under 40 CFR, Part 63, Subpart ZZZZ.

Compliance Methods for the Above (Description and Citation):

(1) Records Maintenance (continuous data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EG-1 (One natural gas-fired emergency generator rated at 1,450 BHP)

Permit Term (Describe requirements and cross-reference): 4.7.1 Applicable Standards/Limits

4.7.1.C. [COMAR 26.11.09.05E(2)]

(2) Emissions During Idle Mode. "A person may not cause or permit the discharge of emissions from any engine, operating at idle, greater than 10 percent opacity."

(3) Emissions During Operating Mode. "A person may not cause or permit the discharge of emissions from any engine, operating at other than idle conditions greater than 40 percent opacity."

(4) Exceptions. (a) "Section E(2) of this regulation does not apply for a period of 2 consecutive minutes after a period of idling of 15 consecutive minutes for the purpose of clearing the exhaust system."

(b) "Section E(2) of this regulation does not apply to emissions resulting directly from cold engine start-up and warm-up for the following maximum periods:

(i) Engines that are idled continuously when not in service: 30 minutes;

(ii) All other engines: 15 minutes."

(c) "Section E(2) and (3) of this regulation do not apply while maintenance, repair, or testing is being performed by qualified mechanics."

Compliance Methods for the Above (Description and Citation):

(1) Records Maintenance (continuous data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

A-COMP

Emission Unit ID(s): EG-1 (One natural gas-fired emergency generator rated at 1,450 BHP)

Permit Term (Describe requirements and cross-reference): 4.7.1 Applicable Standards/Limits

4.7.1.D.(1) Operating requirements for the Waukesha 1,450 BHP natural gas-fired emergency generator from 40 CFR Part 60, Subpart JJJJ.

§60.4243(d) ... any operation other than emergency operation, [and] maintenance and testing, ... as described in paragraphs (d)(1) through (3) of this section, is prohibited

§60.4243(d)(1) There is no time limit on the use of emergency generator in emergency situations.

§60.4243(d)(2) Allows the Permittee to operate the emergency generator the purposes specified in (d)(2)(i) for a maximum of 100 hours per calendar year.

§60.4243(d)(2)(i) Allows the emergency generator to be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, or the insurance company associated with the engine.

Compliance Methods for the Above (Description and Citation):

(1) Records Maintenance (continuous data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EG-1 (One natural gas-fired emergency generator rated at 1,450 BHP)

Permit Term (Describe requirements and cross-reference): 4.7.1 Applicable Standards/Limits

4.7.1.D.(2) The Permittee shall maintain and operate the 1,450 BHP natural gas-fired emergency generator, and any associated air pollution control equipment, in such a manner as to ensure full and continuous compliance with all applicable regulations.

Compliance Methods for the Above (Description and Citation):

(1) Records Maintenance (continuous data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

A-COMP

Emission Unit ID(s): EG-1 (One natural gas-fired emergency generator rated at 1,450 BHP)

Permit Term (Describe requirements and cross-reference): 4.7.2 Testing Requirements

4.7.2.A.(1) The Permittee must comply with all applicable federal requirements. In accordance with 40 CFR §60.4243(b), "if you are an owner or operator of a stationary SI internal combustion engine and must comply with the emission standards specified in §60.4233(d) or (e), you must demonstrate compliance according to one of the methods specified in paragraphs (b)(1) and (2) of this section:

b(1) This condition is not applicable as the engine is noncertified.

b(2) Purchasing a non-certified engine and demonstrating compliance with the emission standards specified in §60.4233(d) or (e) and according to the requirements specified in §60.4244, as applicable, and according to paragraphs (b)(2)(i) and (ii) of this section.

(i) This condition is not applicable as the engine is greater than 500 HP.

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

Compliance Methods for the Above (Description and Citation):

(1) Records Maintenance (continuous data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EG-1 (One natural gas-fired emergency generator rated at 1,450 BHP)

Permit Term (Describe requirements and cross-reference): 4.7.2 Testing Requirements

4.7.2.A.(2) Compliance stack testing of the engine for NOx, CO, VOCs shall be conducted within 180 days of initial start-up to quantify pollutant emissions and demonstrate compliance with the emission limits specified in the permit to construct. The Permittee shall simultaneously monitor electrical output from the engine/generator set during the stack test.

Compliance Methods for the Above (Description and Citation):

(1) Records Maintenance (continuous data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EG-1 (One natural gas-fired emergency generator rated at 1,450 BHP)

Permit Term (Describe requirements and cross-reference): 4.7.2 Testing Requirements

4.7.2.A.(3) At least 30 days prior to conducting any compliance stack test, the Permittee shall submit a test protocol to ARA for review. Compliance stack testing shall be conducted in accordance with ARA Technical Memorandum™ 91-01, "Test Methods and Equipment Specifications for Stationary Sources" (January, 1991), as amended by Supplement 1 (July 1, 1991), 40 CFR 51, 40 CFR 60, or subsequent test protocols approved by ARA. Test ports shall be located in accordance with the TM 91-01 (January 1991), or subsequent or alternative measures approved by ARA.

Compliance Methods for the Above (Description and Citation):

(1) Records Maintenance (continuous data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EG-1 (One natural gas-fired emergency generator rated at 1,450 BHP)

Permit Term (Describe requirements and cross-reference): 4.7.2 Testing Requirements

4.7.2.A.(4) The Permittee must comply with the applicable federal requirements. In accordance with 40 CFR §60.4244.

Compliance Methods for the Above (Description and Citation):

(1) Records Maintenance (continuous data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EG-1 (One natural gas-fired emergency generator rated at 1,450 BHP)

Permit Term (Describe requirements and cross-reference): 4.7.2 Testing Requirements

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

Compliance Methods for the Above (Description and Citation):

(1) Records Maintenance (continuous data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EG-1 (One natural gas-fired emergency generator rated at 1,450 BHP)

Permit Term (Describe requirements and cross-reference): 4.7.2 Testing Requirements

4.7.2.B The Permittee shall meet the requirements included in the National Emissions Standards for Hazardous Air Pollutants (NESHAP) promulgated under 40 CFR part 63, Subparts A and ZZZZ for Reciprocating Internal Combustion Engines by meeting the requirements of 40 CFR part 60, Subpart JJJJ for the emergency generator. No further requirements apply to the emergency generator under 40 CFR, Part 63, Subpart ZZZZ

Compliance Methods for the Above (Description and Citation):

(1) Records Maintenance (continuous data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EG-1 (One natural gas-fired emergency generator rated at 1,450 BHP)

Permit Term (Describe requirements and cross-reference): 4.7.3 Monitoring Requirements

4.7.3.A The Permittee is subject to the emission standards specified in 40 CFR Part 60, Subpart JJJJ, §60.4233(e).

Compliance Methods for the Above (Description and Citation):

(1) Records Maintenance (continuous data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EG-1 (One natural gas-fired emergency generator rated at 1,450 BHP)

Permit Term (Describe requirements and cross-reference): 4.7.4 Record Keeping Requirements

4.7.4.A.(1) The following records shall be kept on site and shall be made available to the Department upon request:

- (a) Monthly records of fuel usage for the 1,450 BHP natural gas-fired emergency generator;
- (b) A copy of the initial performance test report(s) for NO_x, CO, and VOC for the Waukesha 1,450 BHP natural gas-fired emergency generator;
- (c) A copy of each subsequent performance test report (s) for NO_x, CO, and VOC for the Waukesha 1,450 BHP natural gas-fired emergency generator.

Compliance Methods for the Above (Description and Citation):

(1) Records Maintenance (continuous data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

A-COMP

Emission Unit ID(s): EG-1 (One natural gas-fired emergency generator rated at 1,450 BHP)

Permit Term (Describe requirements and cross-reference): 4.7.4 Record Keeping Requirements

4.7.4.A.(2) The following records for the 1,450 HP natural gas-fired emergency generator must be kept on site for at least five (5) years and shall be made available to the Department upon request:

§60.4245(a) Owners or operators of stationary SI ICE must keep records of the information in paragraphs (a)(1) through (4) of this section:

§60.4245(a)(1) All notifications required to comply with this subpart.

§60.4245(a)(2) Maintenance conducted on the engine.

§60.4245(a)(3) This condition is not applicable as the engine is non-certified.

§60.4245(b) For all stationary SI emergency ICE ... 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.

Compliance Methods for the Above (Description and Citation):

(1) Records Maintenance (continuous data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EG-1 (One natural gas-fired emergency generator rated at 1,450 BHP)

Permit Term (Describe requirements and cross-reference): 4.7.5 Record Keeping Requirements

4.7.5.A. [COMAR 26.11.03.06C] The records required to be kept shall be made available to the Department upon request.

Compliance Methods for the Above (Description and Citation):

(1) Records Maintenance (continuous data)

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

A-COMP**C. DEVIATIONS FROM PERMIT TERMS AND CONDITIONS**

Report all deviations from permit terms (whether reported previously or not) that occurred during the permit term. Cross-reference deviations already reported in the six-month report. Indicate whether each deviation is a possible exception to compliance. Start and end period of each deviation should be in mo/day/yr, hr:min format (24-hour clock). Also specify the date when the written deviation report was submitted (If written report required, but not submitted, leave the date field blank).

Permit Term for Which There was a Deviation: 4.6.1.E.

Emission Units (unit IDs): CT-1 (Solar Titan 250 (30,000HP) natural gas-fired combustion turbine)

Deviation Start: 02 / 14 / 2021 10 : 00 End: 02 / 14 / 2021 20 : 00

Date Written Report Submitted: 02 / 16 / 2021. Reported via email (attached)
07 / 28 / 2021 via Semiannual Monitoring Report

Permit Term for Which There was a Deviation:

Emission Units (unit IDs):

Deviation Start: / / : End: / / :

Date Written Report Submitted / / .

Permit Term for Which There was a Deviation:

Emission Units (unit IDs):

Deviation Start / / : End: / / :

Date Written Report Submitted / /

ARMA Form

CERTIFICATION OF PLANT-WIDE CONDITIONS (SECTION III OF PART 70 OPERATING PERMIT)

Indicate compliance with the following requirements of Section III of your Part 70 Operating Permit in the space provided below:

PERMITTEE: TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC (TRANSCO)
 FACILITY: COMPRESSOR STATION 190 (ELLCOTT CITY, MD)
 PERMIT NUMBER: 24-027-00223
 OPERATING PERIOD: JANUARY 01, 2020 - DECEMBER 31, 2020

1. Particulate Matter from Construction and Demolition [COMAR 26.11.06.03D]

Compliance Status		Data Collection Method		Method Used To Determine Compliance
Continuous	Intermittent	Continuous	Intermittent	
✓			✓	Reasonable precautions taken to prevent particulate matter from becoming airborne during construction and demolition projects.

2. Open Burning [COMAR 26.11.07]

Compliance Status		Data Collection Method		Method Used To Determine Compliance
Continuous	Intermittent	Continuous	Intermittent	
✓			✓	No open burning occurred over the certification period.

3. Air Pollution Episode [COMAR 26.11.05.04]

Compliance Status		Data Collection Method		Method Used To Determine Compliance
Continuous	Intermittent	Continuous	Intermittent	
✓			✓	When requested by MDE, prepare written standby emissions reduction plans, for reducing emissions creating air pollution during periods of Alert, Warning, & Emergency of an air pollution episode.

4. Report of Excess Emissions and Deviations [COMAR 26.11.01.07] and [COMAR 26.11.03.06C(7)]

Compliance Status		Data Collection Method		Method Used To Determine Compliance
Continuous	Intermittent	Continuous	Intermittent	
✓			✓	Records maintained to document compliance with permit condition. Excess Emissions: Transco worked with the Department in advance to receive approval for natural gas venting activities and to ensure an 85% VOC reduction from each event. Deviations: Reported in compliance with permit conditions.

CERTIFICATION OF PLANT-WIDE CONDITIONS (CONTINUED)
(SECTION III OF PART 70 OPERATING PERMIT)

Indicate compliance with the following requirements of Section III of your Part 70 Operating Permit in the space provided below:

5. Accidental Release Provisions (if applicable)

Not applicable

6. General Testing Requirements [COMAR 26.11.01.04]

Compliance Status		Data Collection Method		Method Used To Determine Compliance
Continuous	Intermittent	Continuous	Intermittent	
✓			✓	Testing performed as required by specific permit conditions. Records maintained to document compliance with permit condition.

7. Emissions Test Methods [COMAR 26.11.01.04]

Compliance Status		Data Collection Method		Method Used To Determine Compliance
Continuous	Intermittent	Continuous	Intermittent	
✓			✓	Test protocol(s) submitted as required by specific permit conditions. Records maintained to document compliance with permit condition.

8. Emission Certification Report [COMAR 26.11.02.19C and D] and [COMAR 26.11.01.05-1]

Compliance Status		Data Collection Method		Method Used To Determine Compliance
Continuous	Intermittent	Continuous	Intermittent	
✓			✓	Calendar Year 2020 annual compliance certification report submitted April 1, 2021. Records maintained to document compliance with permit condition.

CERTIFICATION OF PLANT-WIDE CONDITIONS (CONTINUED)
(SECTION III OF PART 70 OPERATING PERMIT)

Indicate compliance with the following requirements of Section III of your Part 70 Operating Permit in the space provided below:

9. Compliance Certification Report [COMAR 26.11.03.06C(6) and (7)]

Compliance Status		Data Collection Method		Method Used To Determine Compliance
Continuous	Intermittent	Continuous	Intermittent	
✓			✓	Calendar Year 2020 annual compliance certification report submitted April 1, 2021. Records maintained to document compliance with permit condition.

10. Certification by Responsible Official [COMAR 26.11.02.02F]

Compliance Status		Data Collection Method		Method Used To Determine Compliance
Continuous	Intermittent	Continuous	Intermittent	
✓			✓	Required submittals certified in accordance with permit condition. Records maintained to document compliance with permit condition.

11. Sampling and Emissions Testing Record Keeping [COMAR 26.11.03.06C(5)]

Compliance Status		Data Collection Method		Method Used To Determine Compliance
Continuous	Intermittent	Continuous	Intermittent	
✓			✓	Sampling and emissions testing recordkeeping performed in accordance with permit conditions. Records maintained to document compliance with permit condition.

12. General Record Keeping [COMAR 26.11.03.06C(6)]

Compliance Status		Data Collection Method		Method Used To Determine Compliance
Continuous	Intermittent	Continuous	Intermittent	
✓			✓	Records maintained to document compliance with permit condition.

13. General Conformity (N/A except for federal facilities)

Not applicable

CERTIFICATION OF PLANT-WIDE CONDITIONS (CONTINUED)
(SECTION III OF PART 70 OPERATING PERMIT)

Indicate compliance with the following requirements of Section III of your Part 70 Operating Permit in the space provided below:

14. Asbestos Provisions (if applicable) [40 CFR 61, Subpart M]

Compliance Status		Data Collection Method		Method Used To Determine Compliance
Continuous	Intermittent	Continuous	Intermittent	
✓			✓	No on-site renovation or demolition occurred over the certification period.

15. Ozone Depleting Regulations (if applicable) [40 CFR 82, Subpart F]

Compliance Status		Data Collection Method		Method Used To Determine Compliance
Continuous	Intermittent	Continuous	Intermittent	
✓			✓	Only appropriately certified personnel maintain, service, or repair all applicable on-site systems appliances.

16. Acid Rain Permit (if applicable)

Compliance Status		Data Collection Method		Method Used To Determine Compliance
Continuous	Intermittent	Continuous	Intermittent	
✓			✓	Records maintained to document compliance with permit condition.

CERTIFICATION OF GENERAL CONDITIONS
(SECTION II OF PART 70 OPERATING PERMIT)

PERMITTEE: TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC (TRANSCO)
 FACILITY: COMPRESSOR STATION 190 (ELLCOTT CITY, MD)

PERMIT NUMBER: 24-027-00223
 OPERATING PERIOD: JAN 1, 2021 - DEC 31, 2021

Permit Condition No.	Permit Description	Compliance Status		Data Collection Method		Method Used To Determine Compliance Status
		Continuous	Intermittent	Continuous	Intermittent	
5	A complete permit renewal application shall be submitted to MDE at least 6 months (but not more than 12 months) prior to expiration date of permit.	✓		✓		Records Maintenance Renewal application submitted on May 30, 2018.
17	All appropriate permit fees shall be paid.	✓		✓		Records Maintenance Annual Fee payment submitted November 2021 as required by MDE Invoice No. AG012835
24	Permittee shall comply with all terms and conditions of permit.	✓		✓		Records Maintenance
27	Permittee may not install or use any article, machine, equipment or other contrivance, the use of which, without resulting in a reduction in the total weight of emissions, conceals or dilutes an emission which would otherwise constitute a violation of any applicable air pollution control regulation.	✓		✓		Records Maintenance 2021 Annual Compliance Certification

CERTIFICATION OF INSIGNIFICANT ACTIVITIES CONDITIONS
(SECTION V OF PART 70 OPERATING PERMIT)

PERMITTEE: TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC (TRANSCO)
 FACILITY: COMPRESSOR STATION 190 (ELLCOTT CITY, MD)

PERMIT NUMBER: 24-027-00223
 OPERATING PERIOD: JAN 1, 2021 - DEC 31, 2021

Insignificant Activity	Permit Condition	Compliance Status		Data Collection Method		Method Used To Determine Compliance Status
		Continuous	Intermittent	Continuous	Intermittent	
Parts Washer	Section V Condition 2 [COMAR 26.11.19.09D(2)(b)] The Permittee shall not use any VOC degreasing material the exceeds a vapor pressure of 1mm Hg at 20 °C [COMAR 26.11.19D(3)(a-d)] Requires that the Permittee implement good operating practices designed to minimize spills and evaporation of VOC degreasing material. These practices shall be established in writing and displayed to that they are clearly visible to operators. [COMAR 26.11.19.09D(4)] Prohibits the use of any halogenated VOC for cold degreasing. The Permittee shall maintain on site for at least 5-years: Monthly records of the total VOC degreasing materials and written descriptions of good operating practices designed to minimize spills and evaporation of VOC degreasing materials.	✓		✓		Records Maintenance Standard Work Practices
Lube Oil Storage Tank (11,628 gallons)	None	N.A.	N.A.	N.A.	N.A.	N.A.
2 Used Oil Settling Tank (684 gallons)	None	N.A.	N.A.	N.A.	N.A.	N.A.
Used Oil Storage Tank (3,122 gallons)	None	N.A.	N.A.	N.A.	N.A.	N.A.
Condensate Storage Tank (10,000)	None	N.A.	N.A.	N.A.	N.A.	N.A.
Diesel Storage Tank (423 gallons)	None	N.A.	N.A.	N.A.	N.A.	N.A.

CERTIFICATION OF INSIGNIFICANT ACTIVITIES CONDITIONS (CONTINUED)
(SECTION V OF PART 70 OPERATING PERMIT)

PERMITTEE: TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC (TRANSCO)
 FACILITY: COMPRESSOR STATION 190 (ELLCOTT CITY, MD)

PERMIT NUMBER: 24-027-00223
 OPERATING PERIOD: JAN 1, 2021 - DEC 31, 2021

Methanol Storage Tank (1,284 gallons)	None	N.A.	N.A.	N.A.	N.A.	N.A.
Wastewater Storage Tank (8,820 gallons)	None	N.A.	N.A.	N.A.	N.A.	N.A.
Antifreeze Storage Tank (2,700 gallons)	None	N.A.	N.A.	N.A.	N.A.	N.A.
Lube Oil Cooling Water/Jacket Water Transfer Tank (4,800 gallons)	None	N.A.	N.A.	N.A.	N.A.	N.A.
Lube Oil Cooling Water/Jacket Water Transfer Tank (3,232 gallons)	None	N.A.	N.A.	N.A.	N.A.	N.A.
Engine Building Basement Drain and Fill Tank – Engine Maintenance (2,400 gallons)	None	N.A.	N.A.	N.A.	N.A.	N.A.
Engine Building Basement Drain and Fill Tank – Engine Maintenance (478 gallons)	None	N.A.	N.A.	N.A.	N.A.	N.A.

**CERTIFICATION OF STATE ONLY ENFORCEABLE CONDITIONS
(SECTION VI OF PART 70 OPERATING PERMIT)**

PERMITTEE: TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC (TRANSCO)
FACILITY: COMPRESSOR STATION 190 (ELLCOTT CITY, MD)

PERMIT NUMBER: 24-027-00223
OPERATING PERIOD: JAN 1, 2021 - DEC 31, 2021

Permit Condition	Unit IDs	Compliance Status		Data Collection Method		Method Used To Determine Compliance Status
		Continuous	Intermittent	Continuous	Intermittent	
[COMAR 26.11.06.08] Prohibits the operation or maintenance of an installation or premises in such a manner that a nuisance or air pollution is created.	Facility-Wide	✓		✓		Records Maintenance
[COMAR 26.11.06.09] Prohibits the discharge into the atmosphere of gases, vapors, or odors beyond the property line in such a manner that a nuisance or air pollution is created.	Facility-Wide	✓		✓		Records Maintenance

Responsible Official: Glen Jasek Title: VP GM – Eastern Interstates	Signature:  <i>ACC</i>	Date: 3/29/22
Certification Statement: <i>"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering and evaluating the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."</i>		

A-COMP**C. DEVIATIONS FROM PERMIT TERMS AND CONDITIONS**

Report all deviations from permit terms (whether reported previously or not) that occurred during the permit term. Cross-reference deviations already reported in the six-month report. Indicate whether each deviation is a possible exception to compliance. Start and end period of each deviation should be in mo/day/yr, hr:min format (24-hour clock). Also specify the date when the written deviation report was submitted (If written report required, but not submitted, leave the date field blank).

Permit Term for Which There was a Deviation: 4.6.1.E.

Emission Units (unit IDs): CT-1 (Solar Titan 250 (30,000HP) natural gas-fired combustion turbine)

Deviation Start: 02 / 14 / 2021 10 : 00 End: 02 / 14 / 2021 20 : 00

Date Written Report Submitted: 02 / 16 / 2021. Reported via email (attached)
07 / 28 / 2021 via Semiannual Monitoring Report

Permit Term for Which There was a Deviation:

Emission Units (unit IDs):

Deviation Start: / / : End: / / :

Date Written Report Submitted / / .

Permit Term for Which There was a Deviation:

Emission Units (unit IDs):

Deviation Start / / : End: / / :

Date Written Report Submitted / /

From: [Hahn, Michael](#)
To: [Roland Gorschboth -MDE-](#)
Cc: [Bill Scarpinato \(WILLIAM.SCARPINATO@Williams.com\)](#); [Kristi Evans \(Kristi.Evans@williams.com\)](#)
Subject: Transcontinental Gas Pipe Line Company - Compressor Station 190
Date: Tuesday, February 16, 2021 2:47:00 PM
Attachments: [image001.png](#)

Facility:

Transcontinental Gas Pipe Line Company - Compressor Station 190

Ellicott City MD 21042

Permit No: 24-027-00223

Emission Unit: CT-1 Solar Titan 250 natural gas fired turbine

Subject: Notification of a potential permit deviation for CT-1. Non-SoLoNOx operation for approximately 10 hours on 2/14/2021.

Current status: Unit is back in compliance

Roland,

As we discussed, this past week weekend many of the southern states experienced lower than normal temperatures (and it continues) resulting in increased natural gas demand. Station 190 is a critical location on the Transco pipeline to help move the gas south to these impacted areas.

This past Sunday, while operating the CT-1 turbine, Gas Control operators in Houston and Station Personnel identified that Station 190 was starting to experience back pressure. To address pipeline conditions and to maintain continued safe/reliable operation of the facility, it was necessary to lower the turbine speed to allow continued flow of natural gas at a slower rate. This allowed uninterrupted gas supply while downstream locations to adjust/catch-up (drawdown gas with units that were online/ bring more units online). Consequently, the lowering of turbine speed took CT-1 out of SoLoNOx mode, which is needed to achieve desired emission performance. The event lasted for approximately 10 hours (10 am to 8 pm eastern time) before returning to SoLoNox mode. It should be noted that the alternative to operating CT-1 at a slower speed would have been repeated shutdowns and startups of the unit, which would have been expected to result in a higher overall emission impact at increased operating risk.

While the Title V permit does not appear to include a permit condition that requires the unit to operate in SoLoNOx mode, it is implicit through the standard "general duty" terms under Table IV-6 E. Transco's future semi-annual compliance reporting will reference this condition when documenting this event.

In addition to future reporting, Transco has initiated a project to install new control logic on the Turbine to address these types of conditions. The overall effort includes interim measures / alerts to allow Gas Control to better anticipate / make adjustments for a short duration prior to initiating normal shutdown.

Thank you for taking the time to discuss this issue. If you have any questions or concerns, please give me a call.

Michael Hahn | [Williams](#) | Environmental Specialist V | Atlantic-Gulf

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