

KEEP PERMIT AT SITE

CONTROL NO. B- 05676



Lawrence J. Hogan
Governor

Ben Crumbles
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.

Page 1 of 78

Baron Hoo
Program Manager

Angel Branner
Director, Air and Radiation Administration

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

SECTION I	SOURCE IDENTIFICATION	4
1.	DESCRIPTION OF FACILITY	4
2.	FACILITY INVENTORY LIST	4
SECTION II	GENERAL CONDITIONS	6
1.	DEFINITIONS	6
2.	ACRONYMS	6
3.	EFFECTIVE DATE	7
4.	PERMIT EXPIRATION	7
5.	PERMIT RENEWAL	7
6.	CONFIDENTIAL INFORMATION	8
7.	PERMIT ACTIONS	8
8.	PERMIT AVAILABILITY	9
9.	REOPENING THE PART 70 PERMIT FOR CAUSE BY THE EPA	9
10.	TRANSFER OF PERMIT	9
11.	REVISION OF PART 70 PERMITS – GENERAL CONDITIONS	9
12.	SIGNIFICANT PART 70 OPERATING PERMIT MODIFICATIONS	10
13.	MINOR PERMIT MODIFICATIONS	11
14.	ADMINISTRATIVE PART 70 OPERATING PERMIT AMENDMENTS	14
15.	OFF-PERMIT CHANGES TO THIS SOURCE	16
16.	ON-PERMIT CHANGES TO SOURCES	17
17.	FEE PAYMENT	19
18.	REQUIREMENTS FOR PERMITS-TO-CONSTRUCT AND APPROVALS	19
19.	CONSOLIDATION OF PROCEDURES FOR PUBLIC PARTICIPATION	20
20.	PROPERTY RIGHTS	21
21.	SEVERABILITY	21
22.	INSPECTION AND ENTRY	21
23.	DUTY TO PROVIDE INFORMATION	22
24.	COMPLIANCE REQUIREMENTS	22
25.	CREDIBLE EVIDENCE	23
26.	NEED TO HALT OR REDUCE ACTIVITY NOT A DEFENSE	23
27.	CIRCUMVENTION	23
28.	PERMIT SHIELD	23
29.	ALTERNATE OPERATING SCENARIOS	24
SECTION III	PLANT WIDE CONDITIONS	25
1.	PARTICULATE MATTER FROM CONSTRUCTION AND DEMOLITION	25
2.	OPEN BURNING	25
3.	AIR POLLUTION EPISODE	25
4.	REPORT OF EXCESS EMISSIONS AND DEVIATIONS	25
5.	ACCIDENTAL RELEASE PROVISIONS	26
6.	GENERAL TESTING REQUIREMENTS	27
7.	EMISSIONS TEST METHODS	27
8.	EMISSIONS CERTIFICATION REPORT	28
9.	COMPLIANCE CERTIFICATION REPORT	29
10.	CERTIFICATION BY RESPONSIBLE OFFICIAL	30
11.	SAMPLING AND EMISSIONS TESTING RECORD KEEPING	30

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

12.	GENERAL RECORDKEEPING.....	31
13.	GENERAL CONFORMITY.....	31
14.	ASBESTOS PROVISIONS	31
15.	OZONE DEPLETING REGULATIONS.....	32
16.	ACID RAIN PERMIT	32
SECTION IV	PLANT SPECIFIC CONDITIONS.....	33
SECTION V	INSIGNIFICANT ACTIVITIES	76
SECTION VI	STATE-ONLY ENFORCEABLE CONDITIONS	78

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

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

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

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	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

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

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

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

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.

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

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;

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

- 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

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

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

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

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:

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

- (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:

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

- (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.

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

- 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;

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

- (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.

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

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.

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

- 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;

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

- (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.

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

- 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;

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

- 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.

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

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.

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

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.

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

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;

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

- 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.

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

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;

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

- 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.

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

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)

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

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:

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

- (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.

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

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

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

- 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.

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

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.

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

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):</u> M/L Unit 1 through M/L Unit 10 [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> <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.

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

Table IV-1	
	(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</u> <u>[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 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> <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.

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

Table IV-1	
	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.

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

Table IV-1	
	<u>C. 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 <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> – <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] <u>C. 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> <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).

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

Table IV-1	
	<u>B. Control of Nitrogen Oxides from Natural Gas Pipeline Compression Stations</u> – <u>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>

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

Table IV-2

- (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

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

Table IV-2	
	(3) The NO_x 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 NO_x 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 NO_x rates listed under Section 2.1.B, and with the applicable NO_x 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 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

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

Table IV-2	
	to determine compliance with the 566 pounds per hour NO_x emission limit for M/L engines. [Authority: COMAR 26.11.03.06C(3)] C. <u>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)] D. <u>Operational Limitations</u> See Record Keeping and Reporting Requirements.
2.3	<u>Monitoring Requirements:</u> A. <u>Control of Visible Emissions</u> – <u>Stationary Internal Combustion Engine Powered Equipment.</u> See Reporting Requirements. B. <u>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]

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

Table IV-2

(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).

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

Table IV-2	
	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. 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.

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

Table IV-2	
	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 NO_x 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 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 (NO_x RACT)</u>

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

Table IV-2	
	(1) The Permittee shall submit the results of the annual NO_x emissions testing for compliance with the hourly NO_x 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]

Table IV-3	
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.

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

Table IV-3	
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, 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

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

Table IV-3	
	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. C. <u>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> 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</u> – <u>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)]

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

Table IV-3	
	<u>C. Operational Limits</u> See Record Keeping and Reporting Requirements.
3.3	<u>Monitoring Requirements:</u> <u>A. Control of Visible Emissions</u> <u>[COMAR 26.11.09.05E(2)] – 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> 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> <u>[COMAR 26.11.09.05E(2)] – 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> The Permittee shall maintain: (1) Monthly records of the calculated capacity factors. [Authority: COMAR 26.11.03.06C]

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

Table IV-3	
	(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> <u>[COMAR 26.11.09.05E(2)] – 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]

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

Table IV – 4

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> [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.” B. <u>Control of Nitrogen Oxides</u> [COMAR 26.11.09.08B(1)(c)] – <u>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.” <table><tr><th>Fuel</th><th>Tangential-Fired</th><th>Wall-Fired</th></tr><tr><td>Gas only</td><td>0.20</td><td>0.20</td></tr></table>	Fuel	Tangential-Fired	Wall-Fired	Gas only	0.20	0.20
Fuel	Tangential-Fired	Wall-Fired					
Gas only	0.20	0.20					

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

Table IV – 4

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

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

Table IV – 4	
	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]

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

Table IV – 4	
	<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);

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

Table IV – 4

§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)**.

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

Table IV – 5	
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;

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

Table IV – 5	
	(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.

Table IV – 6	
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>

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

Table IV – 6

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

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

Table IV – 6

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.

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

Table IV – 6	
	(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

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

Table IV – 6

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.

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

Table IV – 6	
	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.

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

Table IV – 6

§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 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 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)]

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

Table IV – 6	
	See Record Keeping Requirements. E. <u>Operational Limitations</u> See Record Keeping Requirements.
6.4	<u>Record Keeping Requirements:</u> <u>A. 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:

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

Table IV – 6	
	§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> See Record Keeping Requirements. <u>C. Visible Emissions Limitations</u> <u>[COMAR 26.11.09.05A(2)] – Fuel Burning Equipment.</u> See Record Keeping Requirements. <u>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)]</u> See Record Keeping Requirements. <u>E. Operational Limitations</u> See Record Keeping Requirements.
6.5	<u>Reporting Requirements:</u> <u>A. 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.

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

Table IV – 6

- (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.

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

Table IV – 6

§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)]**

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

Table IV – 7	
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.” (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,

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

Table IV – 7

- 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.

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

Table IV – 7	
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 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

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

Table IV – 7	
	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 the engine solely to conduct a performance test; however, you must conduct the performance test immediately upon startup of the engine.

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

Table IV – 7

(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:

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

Table IV – 7	
	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) $ER = \frac{(C_d) \times (1.833 \times 10^{-3}) \times (Q) \times (T)}{HP - hr}$ 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. <i>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)].</i>

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

Table IV – 7

(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.

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

Where:

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

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

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

Where:

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

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

Table IV – 7	
	<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.

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

Table IV – 7	
	<u>D. Operational Limits</u> See Record Keeping and Reporting Requirements.
7.4	<u>Record Keeping 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 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

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

Table IV – 7	
	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 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 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.

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

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

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

- (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;

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

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.

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

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 CO₂e	2015 tpy CO₂e	2016 tpy CO₂e	2017 tpy CO₂e
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	310	n/r	n/r	n/r	n/r
Total GHG CO _{2eq}		512.5	1,801	3,840	2,448

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

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

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 HBA-8T, 2,050 BHP	03/1951

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

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

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

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

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

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

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...

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

§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	^c 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....

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

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.

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

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:

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

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.

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

- **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 NO_x emissions. The permit requires an initial performance stack test for NO_x, 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 NO_x 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 NO_x emission rate of 1.5 g/HP-hr (per unit).

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

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]

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

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

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

566 pounds per hour NO_x 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., $\frac{1}{4}$ of the maximum potential 8760 operating hours).

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 is required to 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 facility-wide NO_x emission rate.

The Permittee is required to maintain records that include at a minimum the results of annual NO_x testing to establish and verify compliance with the NO_x 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 NO_x emission limit for all M/L engines combined.

The NO_x emissions test results that were conducted during the last 6 years is given below. The combined NO_x 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

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

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]**

Compliance demonstration:

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.

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

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.

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

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]

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

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.

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

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 NO_x 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 NO_x rates listed under Section 2.1.B, and with the applicable NO_x 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 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}).

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

- 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

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

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

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

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.

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

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.

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

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 NO_x Emissions for Major Stationary Sources, Demonstration of Compliance – Reasonable Control Technology Requirements (NO_x 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

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

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]**

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

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.

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

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.”

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

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)]:**

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

- (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.

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

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

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

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

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

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.

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

- (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;

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

- (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,

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

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.

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

§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

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

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.”

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

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

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)]**

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

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)]**

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

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.

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

§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.

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

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

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

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;

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

- (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;

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

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.