



27-015A

TENNESSEE GAS PIPELINE CO LLC MARIENVILLE STA 307



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
AIR QUALITY PROGRAM

PLAN APPROVAL

Issue Date: December 7, 2018

Effective Date: December 7, 2018

Expiration Date: [REDACTED]

In accordance with the provisions of the Air Pollution Control Act, the Act of January 8, 1960, P.L. 2119, as amended, and 25 Pa. Code Chapter 127, the Owner, [and Operator if noted] (hereinafter referred to as permittee) identified below is authorized by the Department of Environmental Protection (Department) to construct, install, modify or reactivate the air emission source(s) more fully described in the site inventory list. This Facility is subject to all terms and conditions specified in this plan approval. Nothing in this plan approval relieves the permittee from its obligations to comply with all applicable Federal, State and Local laws and regulations.

The regulatory or statutory authority for each plan approval condition is set forth in brackets. All terms and conditions in this permit are federally enforceable unless otherwise designated as "State-Only" requirements.

Plan Approval No. 27-015A

Federal Tax Id - Plant Code: 74-1056569-3

Owner Information

Name: KINDER MORGAN INC
Mailing Address: 1001 LOUISIANA ST STE 1000
HOUSTON, TX 77002-5089

Plant Information

Plant: TENNESSEE GAS PIPELINE CO LLC MARIENVILLE STA 307
Location: 27 Forest County 27905 Howe Township
SIC Code: 4922 Trans. & Utilities - Natural Gas Transmission

Responsible Official

Name: RONALD S BESSETTE
Title: VICE PRESIDENT OPERATIONS
Phone: (713) 420 - 6012

Plan Approval Contact Person

Name: TAMECA HOLMES
Title: AIR PERMITTING/COMPLIANCE
Phone: (713) 420 - 5854

[Signature]

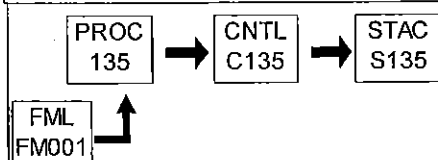
ERIC A. GUSTAFSON, NORTHWEST REGION AIR PROGRAM MANAGER



SECTION A Permit Approved Inventory List

Source ID	Source Name	Capacity/Throughput	Fuel/Material
135	A5C 3500 HP PIPELINE COMPRESSOR ENGINE	30,000 MCF/HR	Natural Gas
C135	LOW EMISSION COMBUSTION		
FM001	TENNESSEE GAS PIPELINE CO LLC/PIGEON STA 307		
S135	OXIDIATION CATALYST STACK		

PERMIT MAPS



Source Level Plan Approval Submittals

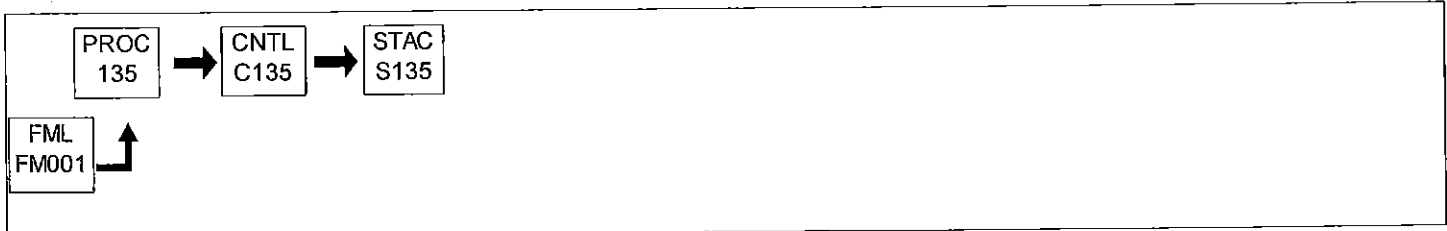
Source ID: 135

Source Name: A5C 3500 HP PIPELINE COMPRESSOR ENGINE

Source Capacity/Throughput:

30,000 MCF/HR

Natural Gas



I. RESTRICTIONS.

Emission Restriction(s).

001 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

[Plan Approval 27-015A/RACT II Approval]

(a) The NO_x control option of Low emission combustion (LEC) for Source 135 is deemed RACT II for this source with the new emission limit of 5.0 g/bhp-hr.

[Plan Approval 27-015A/RACT II Approval]

(b) The NO_x emission limits apply at all times except during periods of start-up and shut-down. Provided, however that the duration of start-up or shut-down shall not exceed one hour per occurrence.

[Plan Approval 27-015A/RACT II Approval]

(c) In accordance with §129.99(g), the emission limit and requirements specified in the plan approval or operating permit issued by the Department or appropriate approved local air pollution control agency under subsection (f) supersede the emission limit and requirements in the existing plan approval or operating permit issued to the owner or operator of the source prior to April 23, 2016, on the date specified in the plan approval or operating permit issued by the Department or appropriate approved local air pollution control agency under subsection (f), except to the extent the existing plan approval or operating permit contains more stringent requirements.

[Plan Approval 27-015A]

(d) The NO_x emissions from the engine shall not exceed 168.98 tpy based on a 12-month rolling total.

II. TESTING REQUIREMENTS.

002 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

[Plan Approval 27-015A/RACT II Approval]

The company shall perform semi-annual stack tests if the engine that operates more than 219 hours during the six-month intervals beginning the first of April through the thirtieth of September and the first of October through the thirty-first of March. The company shall perform such tests using a Department approved portable exhaust gas analyzer.

III. MONITORING REQUIREMENTS.

003 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

[Plan Approval 27-015A]

The permittee shall monitor the following:

1. Pressure drop across the oxidation catalyst
2. Catalyst Inlet Temperature

Source Level Plan Approval Requirements

IV. RECORDKEEPING REQUIREMENTS.

004 [25 Pa. Code §127.12b]
Plan approval terms and conditions.

[Plan Approval 27-015A]

(a) The permittee shall record the following operational data from the oxidation catalyst (these records may be done with strip charts recorders, data acquisition systems, or manual log entries):

1. Pressure differential - daily defined as once per calendar day
2. Catalyst Inlet Temperature - continuously defined as once per 15 minutes

[Plan Approval 27-015A/RACT II Approval]

(b) The permittee shall maintain records of the following:

1. The number of hours per calendar year that the engine is operated and the amount of fuel used in engine.
2. All portable analyzer test results and reports.
3. Monthly records of Nitrogen Oxide (NOx) emission totals from the engine. This monthly emission total shall be added to the monthly emission totals from the previous eleven months to determine the current consecutive 12-month emission totals.

[Plan Approval 27-015A/RACT II Approval]

(c) In accordance with §129.100(d), the owner and operator of an air contamination source subject to this section and §§129.96-129.99 shall keep records to demonstrate compliance with §§129.96-129.99.

[Plan Approval 27-015A/RACT II Approval]

(d) In accordance with §129.100(i), records shall be retained by the owner or operator for 5 years and made available to the Department or appropriate approved local air pollution control agency upon receipt of a written request from the Department or appropriate approved local air pollution control agency.

V. REPORTING REQUIREMENTS.

No additional reporting requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

VI. WORK PRACTICE REQUIREMENTS.

005 [25 Pa. Code §127.12b]
Plan approval terms and conditions.

[Plan Approval 27-015A]

(a) The permittee shall adhere to the approved indicator range for the oxidation catalyst so that operation within the range shall provide reasonable assurance of compliance. A departure from the specified indicator range over a specified averaging period shall be defined as an excursion. The approved indicator range for the following shall be determined during the initial performance test or any subsequently approved performance tests unless otherwise stated:

1. Pressure drop: not change by more than 2" water column from the pressure drop measured during the initial or subsequent testing
2. Catalyst Inlet Temperature: greater than or equal to 450F and less than or equal to 1350F

The permittee, with prior Departmental approval, may conduct additional performance tests to determine a new pressure drop range. Within 24 hours of discovery of a reading outside of the prescribed range the permittee shall perform a maintenance inspection on the control device and take corrective action. Records of all maintenance inspections on the control device, and corrective actions taken, shall be maintained on site for a minimum period of five years. In the event of more than one documented excursion outside the prescribed range in any calendar quarter the permittee shall submit a

SECTION D Source Level Plan Approval Requirements

~~corrective measure plan to the Department. Corrective measures may include an increase of the frequency of required preventative maintenance inspections of the control device, a modification of the prescribed range, or other appropriate action as approved by the Department. Upon receipt of a corrective measure plan the Department shall determine the appropriate corrective measure on a case by case basis.~~

[Plan Approval 27-015A/RACT II Approval]

(b) The Worthington ML-12 engine shall be set and maintained with an ignition timing range determined by the manufacturer after the modification of the engine which consists of the installation of the high-pressure fuel injection system and the pre-combustion chambers. The facility shall submit the manufacturer determined ignition timing range within 90 days after modification of the engine. Within 60 days of Department approval of the ignition timing range, the facility shall submit a major modification to the facility operating permit for inclusion of the ignition timing range into the operating permit. [This condition will replace the following condition from the original RACT: The Worthington ML-12 engine shall be set and maintained with an ignition timing of 3.5 degrees before top dead center, which corresponds to a 1.5-degree retard from a standard ignition timing of 5 degrees before top dead center.]

[Plan Approval 27-015A/RACT II Approval]

(c) The engine shall also be operated and maintained in accordance with good air pollution control practices which consists of the following:

1. Tune-ups will be completed based on engine analysis and weekly balancing.
2. Oil changes will be completed based on monthly oil analysis.
3. Spark plug inspections will be completed based on engine analysis or balancing.
4. Maintaining proper engine retard will be verified and documented during weekly balancing.
5. Duration of start-up and shutdown periods are set by automation software/controls.
6. High and low alarms set in automation software based on OEM recommendations for optimal temperatures/pressures the engine is run at.

VII. ADDITIONAL REQUIREMENTS.

006 [25 Pa. Code §127.12b]

~~Plan approval terms and conditions.~~

[Plan Approval 27-015A]

~~(a) All conditions from the facility operating permit issued on April 6, 2016, for this source remain in effect unless modified in this plan approval.~~

[Plan Approval 27-015A]

~~(b) Any information required to be submitted as part of this plan approval should be submitted to the attention of Regional Air Program Manager, PADEP, Northwest Regional Office, 230 Chestnut Street, Meadville, PA 16335.~~

[Plan Approval 27-015A]

~~(c) Issuance of an Operating Permit is contingent upon satisfactory compliance with the plan approval conditions, upon the source and control device being installed and operated as stated within the application, and upon satisfactory demonstration that the emissions from the source will not be in violation of applicable Rules and Regulations of the Department.~~