

COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
AIR QUALITY PROGRAM

TITLE V/STATE OPERATING PERMIT

Issue Date: January 2, 2019

Effective Date: January 2, 2019

Expiration Date: XXXXXXXXXX

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 operate the air emission source(s) more fully described in this permit. This Facility is subject to all terms and conditions specified in this permit. Nothing in this permit 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 permit condition is set forth in brackets. All terms and conditions in this permit are federally enforceable applicable requirements unless otherwise designated as "State-Only" or "non-applicable" requirements.

TITLE V Permit No: 43-00272

Federal Tax Id - Plant Code: 74-1056569-2

Owner Information

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

Plant Information

Plant: TENNESSEE GAS PIPELINE CO LLC/MERCER STA 219  
Location: 43 Mercer County 43922 Jefferson Township  
SIC Code: 4922 Trans. & Utilities - Natural Gas Transmission

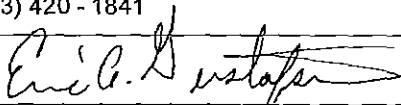
Responsible Official

Name: RONALD S. BESSETTE  
Title: VP OPERATIONS  
Phone (713) 420 - 3833

Permit Contact Person

Name: ZAINAB NAQVI  
Title: AIR PRMTG & CMPL SPCLST  
Phone: (713) 420 - 1841

[Signature]



ERIC A. GUSTAFSON, NORTHWEST REGION AIR PROGRAM MANAGER

Pages 2-53, and 65-108 are redacted entirely.

**SECTION I Source Group Restrictions**

Group Name: 1100 HP COMPRESSORS

Group Description: 1100 HP Compressors' Requirements

Sources included in this group

ID	Name
131	1-A, C-B, 1100 HP, NATURAL GAS COMPRESSOR ENGINE
132	2-A, C-B, 1100 HP, NATURAL GAS COMPRESSOR ENGINE
133	3-A, C-B, 1100 HP, NATURAL GAS COMPRESSOR ENGINE
134	4-A, C-B, 1100 HP, NATURAL GAS COMPRESSOR ENGINES
135	5-A, C-B, 1100 HP, NATURAL GAS COMPRESSOR ENGINE
136	6-A, C-B, 1100 HP, NATURAL GAS COMPRESSOR ENGINE

**I. RESTRICTIONS.****Emission Restriction(s).**

# 004

**Operating permit terms and conditions.**

The permittee shall not permit the emission of Nitrogen Oxides (NOx) from each engine in excess of:

- (1) 9.3 gram/bhp-hr (22.6 lb/hr); and
- (2) 98.7 tons per year based on a consecutive 12-month period.

[Authority for this condition is also derived in 25 Pa. Code § 129.99(a). From RACT 43-000-272 issued on April 27, 2018. Compliance with this condition assures compliance with RACT I's NOx limits.]

**Fuel Restriction(s).**

**SECTION E Source Group Restrictions**

# 007

Operating permit terms and conditions.

[Testing Requirements for NOx emissions]

- (a) The permittee shall perform semi-annual stack tests on each of the engine that operates more than 219 hours using a portable exhaust gas analyzer which has been approved by the Department. The results from these tests shall be used to demonstrate compliance with the NOx emissions limits established for each source. The permittee is not required to conduct a semi-annual test on a source which does not operate during the semi-annual period.
- (b) The tests shall be performed during the periods of January 1 through June 30 and July 1 through December 31 of each year. The tests shall be as close to six months apart as possible.
- (c) At least ninety (90) days prior to the initial performance of the testing required by this permit, a test plan must be received by the Department for evaluation. The plan shall contain a description of the proposed test methods and dimensioned drawings or sketches showing the test port locations. The Permittee shall submit a test protocol for the semi-annual testing prior to the initial testing during permit term (Once every 5 years) unless otherwise notified by the Department.
- (d) The Department shall be given at least 10 days advance notice of the schedule dates for the performance of the testing required by this permit.
- (e) Within thirty (30) days of the completion of the tests required by this permit, two copies of the test report shall be submitted to the Department. This report shall contain the results of the tests, a description of the testing and analytical procedures actually used in performance of the tests, all process and operating data collected during the tests, a copy of all raw data, and a copy of all calculations generated during data analysis. The reporting requirements in this condition may be satisfied by including the information with the semi-annual report required by Section B, Condition #025.
- (f) The Department reserves the right to require stack tests performed in accordance with 25 Pa. Code Chapter 139 and U.S. EPA reference test methods.

[Authority for this condition is also derived from 25 Pa. Code § 129.99(a). From RACT 43-000-272 issued on April 27, 2018. Language adapted from RACT I requirements for these engines.]

**SECTION E Source Group Restrictions****IV. RECORDKEEPING REQUIREMENTS.**

# 009

**Operating permit terms and conditions.**

(a) To demonstrate compliance with the RACT NOx and VOC emission limits, the permittee shall maintain comprehensive and accurate records of the following operating parameters for each source:

(1) The number of hours operated per month.

(2) The amount of fuel consumption per month.

(3) The test results and reports for the required source tests: the semi-annual portable analyzer test for NOx emission; and the once per 5-year calendar period test for VOC emission.

(4) The ignition timing settings from performance analyses performed on each engine.

(b) The permittee shall keep monthly records of NOx and VOC emission totals from each engine. For each pollutant, the monthly emission total shall be added to the monthly emission totals from the previous eleven months to determine the current consecutive 12-month emission total.

(c) The records shall be retained by the permittee 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.

[Authority for this condition is also derived from 25 Pa. Code §§ 129.91, 129.100(d) & (i), and 127.511.]

[Compliance with the requirements contained in this streamlined permit condition shall demonstrate compliance with the requirements contained in Condition #15 of RACT Operating Permit #OP-43-0272 issued on April 7, 1999.]

**SECTION 1E Source Corp Restrictions****VI. WORK PRACTICE REQUIREMENTS.**

# 011

Operating permit terms and conditions.

(a) The permittee shall set and maintain the ignition timing of each of the engines within the range of 4° to 8° before top dead center.

(b) The igniting timing range specified in paragraph (a) of this condition applies at all times of operation except during startup, shutdown, or malfunction.

[Authority for this condition is also derived from 25 Pa. Code Section § 129.99(a).]

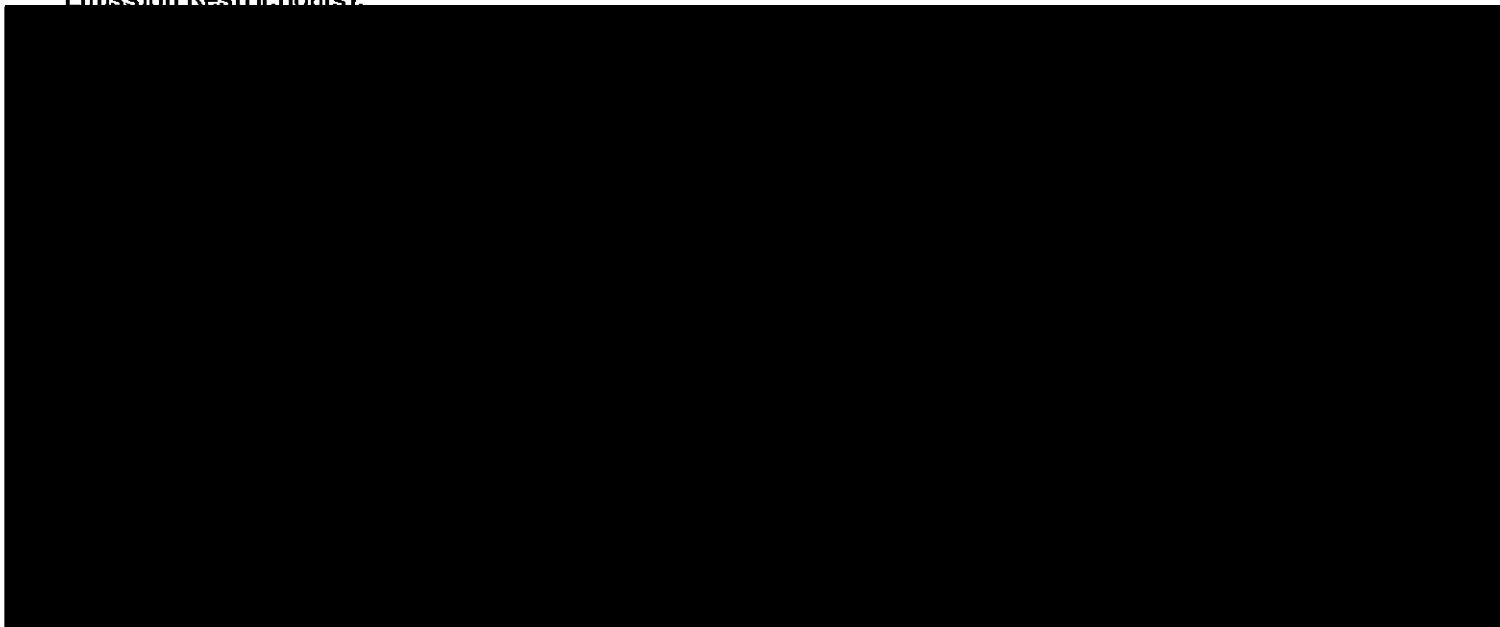
**SECTION I Source Group Restrictions**

Group Name: 1350 HP COMPRESSORS (TYPE I)

Group Description: 1350 HP Compressors' (Type 1) Requirements

Sources included in this group

ID	Name
139	9-A, C-B, 1350 HP, NATURAL GAS COMPRESSOR ENGINE
140	10-A, C-B, 1350 HP, NATURAL GAS COMPRESSOR ENGINE
141	11-A, C-B, 1350 HP, NATURAL GAS COMPRESSOR ENGINE
142	12-A, C-B, 1350 HP, NATURAL GAS COMPRESSOR ENGINE
143	13-A, C-B, 1350 HP, NATURAL GAS COMPRESSOR ENGINE

**I. RESTRICTIONS.****Emission Restriction(s).**

# 004

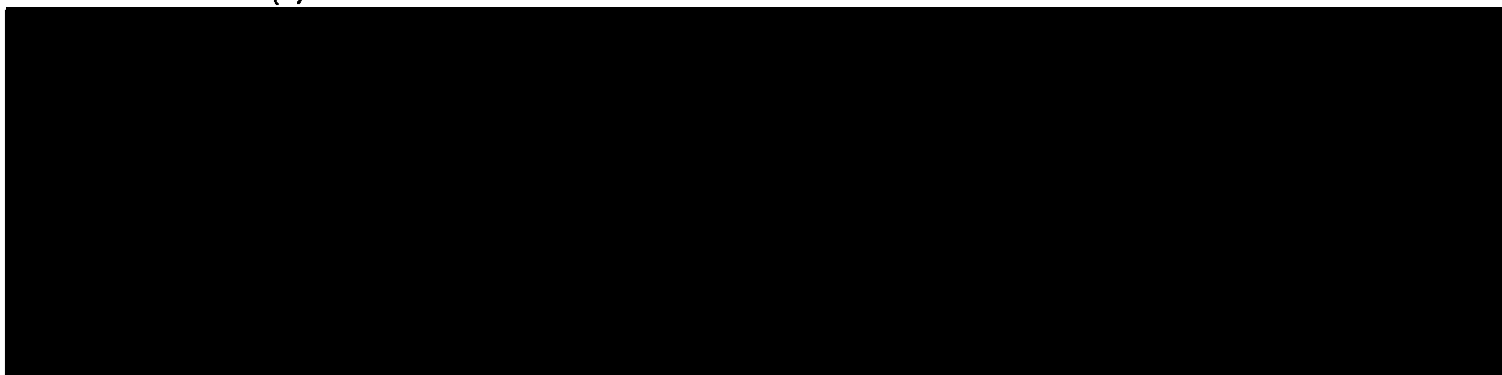
Operating permit terms and conditions.

(a) The permittee shall not permit the emission of Nitrogen Oxides (NO<sub>x</sub>) from each engine in excess of:

(1) 8.8 gram/bhp-hr (26.2 lb/hr); and

(2) 114.6 tons per year based on a consecutive 12-month period.

[Authority for this condition is also derived in 25 Pa. Code § 129.99(a). From RACT 43-000-272 issued on April 27, 2018. Compliance with this condition assures compliance with RACT I's NO<sub>x</sub> limits.]

**Fuel Restriction(s).**

**SECTION E Source Group Restrictions**

# 007

Operating permit terms and conditions.

[Testing Requirements for NOx emissions]

- (a) The permittee shall perform semi-annual stack tests on each of the engine that operates more than 219 hours using a portable exhaust gas analyzer which has been approved by the Department. The results from these tests shall be used to demonstrate compliance with the NOx emissions limits established for each source. The permittee is not required to conduct a semi-annual test on a source which does not operate during the semi-annual period.
- (b) The tests shall be performed during the periods of January 1 through June 30 and July 1 through December 31 of each year. The tests shall be as close to six months apart as possible.
- (c) At least ninety (90) days prior to the initial performance of the testing required by this permit, a test plan must be received by the Department for evaluation. The plan shall contain a description of the proposed test methods and dimensioned drawings or sketches showing the test port locations. The Permittee shall submit a test protocol for the semi-annual testing prior to the initial testing during permit term (Once every 5 years) unless otherwise notified by the Department.
- (d) The Department shall be given at least 10 days advance notice of the schedule dates for the performance of the testing required by this permit.
- (e) Within thirty (30) days of the completion of the tests required by this permit, two copies of the test report shall be submitted to the Department. This report shall contain the results of the tests, a description of the testing and analytical procedures actually used in performance of the tests, all process and operating data collected during the tests, a copy of all raw data, and a copy of all calculations generated during data analysis. The reporting requirements in this condition may be satisfied by including the information with the semi-annual report required by Section B, Condition #025.
- (f) The Department reserves the right to require stack tests performed in accordance with 25 Pa. Code Chapter 139 and U.S. EPA reference test methods.

[Authority for this condition is also derived from 25 Pa. Code § 129.99(a). From RACT 43-000-272 issued on April 27, 2018. Language adapted from RACT I requirements for these engines.]



**SECTION E Source Group Restrictions****IV. RECORDKEEPING REQUIREMENTS.**

# 009

**Operating permit terms and conditions.**

(a) To demonstrate compliance with the RACT NOx and VOC emission limits, the permittee shall maintain comprehensive and accurate records of the following operating parameters for each source:

(1) The number of hours operated per month.

(2) The amount of fuel consumption per month.

(3) The test results and reports for the required source tests: the semi-annual portable analyzer test for NOx emission; and the once per 5-year calendar period test for VOC emission.

(4) The ignition timing settings from performance analyses performed on each engine.

(b) The permittee shall keep monthly records of NOx and VOC emission totals from each engine. For each pollutant, the monthly emission total shall be added to the monthly emission totals from the previous eleven months to determine the current consecutive 12-month emission total.

(c) The records shall be retained by the permittee 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.

[Authority for this condition is also derived from 25 Pa. Code §§ 129.91, 129.100(d) & (i), and 127.511.]

[Compliance with the requirements contained in this streamlined permit condition shall demonstrate compliance with the requirements contained in Condition #15 of RACT Operating Permit #OP-43-0272 issued on April 7, 1999.]

**SECTION E Source Group Restrictions****VI. WORK PRACTICE REQUIREMENTS.**

# 011

Operating permit terms and conditions.

- (a) The permittee shall set and maintain the ignition timing of each of the engines within the range of 6° to 10° before top dead center.
- (b) The igniting timing range specified in paragraph (a) of this condition applies at all times of operation except during startup, shutdown, or malfunction.

[Authority for this condition is also derived from 25 Pa. Code Section § 129.99(a).]

**SECTION ONE Source Group Restrictions**

Group Name: 1350 HP COMPRESSORS (TYPE II)

Group Description: 1350 HP Compressors' (Type II) Requirements

Sources included in this group

ID	Name
137	7-A, C-B, 1350 HP, NATURAL GAS COMPRESSOR ENGINE
138	8-A, C-B, 1350 HP, NATURAL GAS COMPRESSOR ENGINE

**I. RESTRICTIONS.****Emission Restriction(s)**

# 004

**Operating permit terms and conditions.**

(a) The permittee shall not permit the emission of Nitrogen Oxides (NOx) from each engine in excess of:

- (1) 4.0 gram/bhp-hr (11.9 lb/hr); and
- (2) 52.1 tons per year based on a consecutive 12-month period.

[Authority for this condition is also derived in 25 Pa. Code § 129.99(a). From RACT 43-000-272 issued on April 27, 2018. Compliance with this condition assures compliance with RACT I's NOx limits.]

**Fuel Restriction(s).**

## SECTION E Source Group Restrictions

# 007

Operating permit terms and conditions.

[Testing Requirements for NOx emissions]

- (a) The permittee shall perform semi-annual stack tests on each of the engine that operates more than 219 hours using a portable exhaust gas analyzer which has been approved by the Department. The results from these tests shall be used to demonstrate compliance with the NOx emissions limits established for each source. The permittee is not required to conduct a semi-annual test on a source which does not operate during the semi-annual period.
- (b) The tests shall be performed during the periods of January 1 through June 30 and July 1 through December 31 of each year. The tests shall be as close to six months apart as possible.
- (c) At least ninety (90) days prior to the initial performance of the testing required by this permit, a test plan must be received by the Department for evaluation. The plan shall contain a description of the proposed test methods and dimensioned drawings or sketches showing the test port locations. The Permittee shall submit a test protocol for the semi-annual testing prior to the initial testing during permit term (Once every 5 years) unless otherwise notified by the Department.
- (d) The Department shall be given at least 10 days advance notice of the schedule dates for the performance of the testing required by this permit.
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- (f) The Department reserves the right to require stack tests performed in accordance with 25 Pa. Code Chapter 139 and U.S. EPA reference test methods.

[Authority for this condition is also derived from 25 Pa. Code § 129.99(a). From RACT 43-000-272 issued on April 27, 2018. Language adapted from RACT I requirements for these engines.]

**SECTION E Source Group Restrictions****IV. RECORDKEEPING REQUIREMENTS.**

# 009

**Operating permit terms and conditions.**

(a) To demonstrate compliance with the RACT NOx and VOC emission limits, the permittee shall maintain comprehensive and accurate records of the following operating parameters for each source:

(1) The number of hours operated per month.

(2) The amount of fuel consumption per month.

(3) The test results and reports for the required source tests: the semi-annual portable analyzer test for NOx emission; and the once per 5-year calendar period test for VOC emission.

(b) The permittee shall keep monthly records of NOx and VOC emission totals from each engine. For each pollutant, the monthly emission total shall be added to the monthly emission totals from the previous eleven months to determine the current consecutive 12-month emission total.

(c) The records shall be retained by the permittee 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.

[Authority for this condition is also derived from 25 Pa. Code §§ 129.91, 129.100(d) & (i), and 127.511.]

[Compliance with the requirements contained in this streamlined permit condition shall demonstrate compliance with the requirements contained in Condition #15 of RACT Operating Permit #OP-43-0272 issued on April 7, 1999.]