

Air Pollution Control Board of Jefferson County Board Order - Amendment 2

This amended Board Order is issued by the Air Pollution Control Board of Jefferson County pursuant to the authority granted in Kentucky Revised Statutes Chapter 77 Air Pollution Control.

Company: Texas Gas Transmission, LLC (Texas Gas)
10327 Gaslight Way
Louisville, Kentucky

Background and Discussion

Regulation 6.42 *Reasonably Available Control Technology Requirements for Major Volatile Organic Compound- and Nitrogen Oxides-Emitting Facilities* requires the establishment and implementation of reasonably available control technology (RACT) for certain affected facilities that emit oxides of nitrogen (NO_x) and that are located at a major stationary source for NO_x. Section 4.4 requires that each determination of RACT approved by the Air Pollution Control District of Jefferson County (District) be submitted to the U.S. Environmental Protection Agency (EPA) as a site-specific revision of the Kentucky State Implementation Plan (SIP).

The initial Board Order was approved by the Board on November 8, 1999, and submitted to the EPA by the Kentucky Natural Resources and Environmental Protection Cabinet on November 12, 1999, as a site-specific revision of the Kentucky SIP. Subsequently, the EPA identified issues needing resolution before this NO_x RACT determination would be approved as part of the Kentucky SIP. This amended Board Order addresses those issues.

A Public Hearing on this Board Order Amendment 1 was held before the Board on November 15, 2000. Based upon the evidence presented at that hearing, the Board determined that approval of this amended Board Order and submittal as a site-specific revision of the Kentucky SIP were appropriate.

Amendment 2 of this Board Order was done to remove old compressor turbine T-1 emission requirements, add emission requirements for new compressor turbine T-2, and incorporate emission requirements for the Lean Emission Combustion (LEC) modifications performed to the nine (9) reciprocating internal combustion engine compressors.

Now therefore be it ordered that:

1. The attached NO_x RACT Plan - Amendment 2, applicable to Texas Gas, is approved by the District. Texas Gas shall comply with this plan.
2. Compliance with the attached NO_x RACT Plan - Amendment 2 shall be deemed compliance with the requirements of Regulation 6.42 section 1.2, section 1.3, Section 2 to the extent that this Section applies to section 4.3, and Section 5 to the extent that this

Section applies to verification of compliance with the requirements pursuant to section 4.3.

3. This amended Board Order shall not be deemed or construed to be the result of any violation of any federal, state, or local statute, regulation, or ordinance for any purpose whatsoever.
4. Texas Gas has reviewed this amended Board Order and consents to all its requirements and terms.
5. The initial Board Order was approved on November 8, 1999. Amendment 1 was approved on December 20, 2000.
6. The effective date of this amended Board Order and the attached NO_x RACT Plan is June 17, 2009. The amended Board Order, approved on December 20, 2000, shall remain in effect until June 17, 2009.

Dated this 17th day of June, 2009.

Air Pollution Control Board
of Jefferson County

Texas Gas Transmission, LLC

By: _____
Robert W. Powell, M.D.
Chairman

By: 
David Goodwin
VP, Compliance & Operations Services

Air Pollution Control District
of Jefferson County

Approved as to form and legality:
Air Pollution Control District
of Jefferson County

By: _____
Paul Aud
Air Pollution Control Officer

By: _____
Stacy A. Fritze
Assistant County Attorney

NO_x RACT Plan - Amendment 2

1. The oxides of nitrogen (NO_x, expressed as NO₂) emissions from each of Internal Combustion (IC) Engines #1 through #9 shall not exceed 3 grams per brake-horsepower-hour (g/bhp-hr), based on a thirty (30) day rolling average period.
2. Existing Lean Emission Combustion (LEC) equipment modifications, completed October 2002, per construction permit 68-01-C, to the nine (9) Reciprocating Internal Combustion Engines (RICE) shall remain in place, to ensure the 3g/bhp-hr limit of NO_x, based on a thirty (30) day rolling average period, is maintained.
3. The NO_x emissions (expressed as NO₂) for the new compressor turbine T-2 (emission point U21) shall not exceed thirty-seven and one-half parts per million by volume on a dry gas basis (37.5 ppmvd) corrected to 15% O₂, based on a one hour average. (Regulation 6.42)
4. No stationary gas turbine shall discharge any gases into the atmosphere which contain nitrogen oxides in excess of one hundred ninety-seven parts per million by volume on a dry gas basis (197 ppmvd) corrected to 15% O₂, based on a one hour average. (40 CFR 60.332 (a) (2))
5. No fuel shall be combusted in the stationary gas turbine that contains sulfur in excess of 0.8 % by weight. (40 CFR 60.333 (b))
6. The NO_x (expressed as NO₂) emissions from the Emergency Generator Engine shall not exceed 2.6 grams per brake horsepower-hour, per manufacturer's guarantee, based on a thirty (30) day rolling average period, and generator usage shall not exceed 1,500 hr/yr.
7. Texas Gas shall monitor and record the following information:
 - A. For each IC engine after it is subject to the 3 g/bhp-hr NO_x emissions limit, the following parameters shall be monitored continuously on a real time basis, but no regular interval recording shall be required. Engines will continue to be properly maintained and operated based on monitored parameters.
 - (1) Engine speed,
 - (2) Engine load,
 - (3) Fuel gas flow,
 - (4) Air manifold temperature,
 - (5) Air manifold pressure, and
 - (6) Ignition timing, and
 - (7) Stack tests as required in Element No. 8, to confirm NO_x emissions less than 3 g/bhp-hr.
 - B. For Turbine T-2 (new) the following monitoring and recording plan, which shall be approved by the District, subject to EPA review and approval, and shall be incorporated into the Title V Operating Permit pursuant to the provisions of NO_x RACT Plan Element No. 11, shall be implemented:
 - (1) Periods of time when turbine T-2 is not operating in the SoLoNO_x mode, and startup and shutdown time periods, and
 - (2) Stack tests as required in Element No. 8, to confirm NO_x emissions less than 37.5 ppmvd, corrected to 15% O₂, when operating in SoLoNO_x mode.

C. For the Emergency Generator Engine:

- (1) The weekly hours of operation and the twelve (12) consecutive month period total hours of operation, shall be recorded each month, to show that the total hours of operation during the previous twelve consecutive (12) month period is less than 1,500 hrs.

Texas Gas shall record all periods when the required information in this Element was not available, the reason for the loss of data, and any corrective actions taken to resolve the problem. Each record shall be maintained for a minimum of 5 years and made available to the Air Pollution Control District (District) upon request.

8. Texas Gas shall conduct NO_x performance tests for the equipment identified in this Element according to the following schedule:
 - A. Each year, two IC engines from the group of IC Engines #1 through #6. Testing of the engines shall be alternated such that each IC engine in this group has been tested in a three-year period,
 - B. Each year, one IC engine from the group of IC Engines #7 through #9. Testing of the engines shall be alternated such that each IC engine in this group has been tested in a three-year period, and
 - C. Each year, Turbine T-2.
9. Performance testing shall meet the following requirements:
 - A. Emissions concentrations and the mass determinations shall be obtained using Reference Methods of 40 CFR Part 60 Appendix A. The following methods shall be used:
 - (1) Method 1 or 1A, which furnishes guidance in site and traverse selection for sampling velocity at traverse points in stationary sources,
 - (2) Method 2, 2A, 2B, 2C, 2D, 2E, 2F, 2G, or 2H, which applies to measurements of gas volumetric flow rates,
 - (3) Method 3, 3A, 3B, or 3C, which is applicable for determining the concentrations of one or more of the following gases: carbon dioxide (CO₂), oxygen (O₂), carbon monoxide (CO), nitrogen, and methane,
 - (4) Method 4, which determines the moisture content in stack gases, and
 - (5) Method 7, 7A, 7B, 7C, 7D, or 7E, which provides the analytical method for determining the concentration of NO_x emissions from stationary sources.
 - (6) Method 19, which is acceptable for determine the exhaust flow rate.
 - B. The use of other Reference Methods that are added to 40 CFR Part 60 Appendix A, alternative tests, or modifications to the Reference Methods listed in NO_x RACT Plan Element No. 9.A. may be proposed by Texas Gas as part of the testing plan required by Element No. 9.D. Such methods may be used if approved in writing by the Louisville Metro Air Pollution Control District (District).
 - C. Performance testing shall meet the requirements of Regulation 1.04 *Performance Tests* that are not addressed in this Element. All testing shall be conducted at 90% or greater of the maximum rated heat input capacity of the equipment.
 - D. A notification of intent (protocol) to conduct a performance test shall be submitted to the District at least 25 working days in advance of the projected starting date for the performance test. The notification shall include the proposed test methods to be used.
 - E. If a pre-test conference to discuss the proposed test methods is deemed necessary by the District, a pre-test conference shall be arranged by District personnel.

- F. At least 10 working days' prior notice of the scheduled starting date for the performance test shall be provided to the District.
 - G. A performance test report shall be submitted to the District within 60 days of completion of performance testing. The report shall include the calculations used to determine emissions. The NO_x emission rate for each RICE emissions unit for which performance testing is required in Element No. 8, shall be expressed in pounds per hour and grams per brake horsepower-hour. The NO_x emission rate for the Turbine T-2 shall be expressed in parts per million by volume on a dry gas basis, corrected to 15% O₂. The raw data shall be retained by Texas Gas for a minimum of 5 years and made available to the District upon request. Selected portions of the raw data used to calculate the emissions shall be included in the report in a format provided by the District.
10. Texas Gas shall keep a record identifying all deviations from the requirements of this NO_x RACT Plan and shall submit to the District a written report of all deviations that occurred during the preceding semi-annual period. Semi-annual periods shall run from January 1 to June 30 and July 1 to December 31. The report shall contain the following information:
- A. The equipment designation,
 - B. The beginning and ending date of the reporting period,
 - C. Identification of all periods during which a deviation occurred, including the loss of data as required by Element 7,
 - D. A description, including the magnitude, of the deviation,
 - E. If known, the cause of the deviation, and
 - F. A description of all corrective actions taken to abate the deviation.

If no deviation occurred during the semi-annual period, the report shall contain a negative declaration. Each report shall be submitted within 60 days following the end of the semi-annual period.

11. In lieu of the requirements in this NO_x RACT Plan, Texas Gas may comply with alternative requirements regarding emission limitations, equipment operation, test methods, monitoring, record keeping, or reporting, provided the following conditions are met:
- A. The alternative requirements are established and incorporated into an operating permit pursuant to a Title V Operating Permit issuance, renewal, or significant permit revision process as established in Regulation 2.16,
 - B. The alternative requirements are consistent with the streamlining procedures and guidelines set forth in section II.A. of *White Paper Number 2 for Improved Implementation of the Part 70 Operating Permits Program*, March 5, 1996, U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards. The overall effect of compliance with alternative requirements shall consider the effect on an intrinsic basis, such as grams per brake horsepower-hour,
 - C. The U.S. Environmental Protection Agency (EPA) has not objected to the issuance, renewal, or revision of the Title V Operating Permit, and either
 - D. If the public comment period preceded the EPA review period, then the District had transmitted any public comments concerning the alternative requirements to EPA with the proposed permit, or
 - E. If the EPA and public comment periods ran concurrently, then the District had transmitted any public comments concerning the alternative requirements to EPA no later than 5 working days after the end of the public comment period.

The District's determination of approval of any alternative requirements is not binding on EPA. Noncompliance with any alternative requirement established pursuant to the Title V Operating Permit process constitutes a violation of this NO_x RACT Plan.

History: Approved 11-8-99; effective 1-1-00; amended a1/12-20-00; effective 01-01-01; a2/02-XX-09 effective 3-XX-09.