

## **Air Pollution Control Board of Jefferson County Board Order - Amendment 1**

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:** General Electric Company, acting by and through its  
GE Appliances operating component (GE Appliances)  
Appliance Park 65-100  
Louisville, Kentucky 40225

### **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<sub>x</sub>) and that are located at a major stationary source for NO<sub>x</sub>. 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<sub>x</sub> RACT determination would be approved as part of the Kentucky SIP. This amended Board Order addresses those issues.

A Public Hearing on this amended Board Order 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.

### **Now therefore be it ordered that:**

1. The attached NO<sub>x</sub> RACT Plan - Amendment 1, applicable to GE Appliances, is approved by the District. GE Appliances shall comply with this plan.
2. Compliance with the attached NO<sub>x</sub> RACT Plan - Amendment 1 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, 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. GE Appliances has reviewed this amended Board Order and consents to all its requirements and terms.
5. The effective date of this amended Board Order and the attached NO<sub>x</sub> RACT Plan is March 1, 2001. The initial Board Order, approved on November 8, 1999, shall remain in effect until March 1, 2001.

Dated this 17th day of January, 2001.

Air Pollution Control Board  
of Jefferson County

GE Appliances

By: \_\_\_\_\_  
Robert W. Powell, M.D.  
Chairman

By: \_\_\_\_\_  
Richard F. Segalini  
Vice President - Supply Chain

Air Pollution Control District  
of Jefferson County

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

By: \_\_\_\_\_  
Jesse M. Goldsmith  
Air Pollution Control Officer

By: \_\_\_\_\_  
Gaylord B. Ballard  
Attorney

**NO<sub>x</sub> RACT Plan - Amendment 1**

1. The oxides of nitrogen (NO<sub>x</sub>, expressed as NO<sub>2</sub>) emission from each of Boiler #6 and Boiler #7 shall not exceed 0.20 pound per million Btu of heat input.
2. If either of Boiler #6 or Boiler #7 has a seasonal capacity factor greater than 15.0%, then GE Appliances shall, prior to operating that boiler during any subsequent ozone control season, conduct a performance test for NO<sub>x</sub> for that boiler in conformance with the requirements of NO<sub>x</sub> RACT Plan Element (Element) No. 5. GE Appliances shall conduct a performance test for NO<sub>x</sub> for Boiler #6 in conformance with the requirements of Element No. 5 prior to May 1, 2001.
3. As used in this NO<sub>x</sub> RACT Plan, the term “seasonal capacity factor” means the ratio between the actual heat input to a boiler from fuel combusted during the period May 1 through September 30 (ozone control season) and the potential heat input to the boiler had it been operated for 24 hours per day for each day during the ozone control season at the maximum steady state design heat input capacity. The maximum heat input capacity provided by the manufacturer shall be used unless GE Appliances determines the maximum heat input capacity using the heat loss method described in sections 5 and 7.3 of the *ASME Power Test Codes* 4.1.
4. If a boiler is required to conduct a performance test in two consecutive years and if the requirements of Regulation 6.42 *Reasonably Available Control Technology Requirements for Major Volatile Organic Compound- and Nitrogen Oxides-Emitting Facilities* section 5.1 are met, and subject to the annual performance test schedule reinstatement provision, then subsequent performance testing may be done on a biennial schedule.
5. 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, O<sub>2</sub>, 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<sub>x</sub> emissions from stationary sources.
  - 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 Element No. 5.A. may be proposed by GE Appliances as part of the testing plan required by Element No. 5.D. Such methods may be used if approved in writing by the District.
  - C. Performance testing shall meet the requirements of Regulation 1.04 *Performance Tests* that are not addressed in this Element.
  - D. A notification of intent 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.

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- 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<sub>x</sub> emission rate shall be expressed in both pounds per hour and pounds per million Btu formats. The raw data shall be retained by GE Appliances 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.
6. Each boiler of the group Boiler #1, Boiler #2, Boiler #3, Boiler #4, and Boiler #5 shall comply with one of the following options:
    - A. Option 1: The boiler shall not have a seasonal capacity factor greater than 10.0%.
    - B. Option 2: The NO<sub>x</sub> (expressed as NO<sub>2</sub>) emission from the boiler shall not exceed 0.70 pound per million Btu of heat input.
  7. GE Appliances shall, before March 1, 2001, notify the District in writing as to which option will be applicable to each of Boiler #1, Boiler #2, Boiler #3, Boiler #4, and Boiler #5 starting March 1, 2001. If GE Appliances decides to switch from the initial option for a boiler, then GE Appliances shall notify the District in writing, before the date of implementing the other option, of its decision to switch to that option for that boiler.
  8. If any boiler of the group Boiler #1, Boiler #2, Boiler #3, Boiler #4, and Boiler #5 has a seasonal capacity factor greater than 10.0%, then GE Appliances shall, prior to operating that boiler during any subsequent ozone control season, conduct a performance test for NO<sub>x</sub> for that boiler in conformance with the requirements of Element No. 5. If a performance test is required for a boiler in two consecutive years and if the requirements of Regulation 6.42 *Reasonably Available Control Technology Requirements for Major Volatile Organic Compound- and Nitrogen Oxides-Emitting Facilities* section 5.1 are met, and subject to the annual performance test schedule reinstatement provision, then subsequent performance testing may be done on a biennial schedule.
  9. GE Appliances shall make a record of the type, heat content, and amount of fuel combusted during each day of operation during the ozone control season of each boiler included in this NO<sub>x</sub> RACT Plan. GE Appliances shall, at the end of each month during the ozone control season, calculate and record for each boiler its seasonal capacity factor. Each record shall be maintained for a minimum of 5 years and made available to the District upon request.
  10. GE Appliances shall, within 12 months prior to the beginning of the ozone control season or prior to operating Boiler #6 during the ozone control season, perform and undertake corrections as necessary, and make a record of the following boiler maintenance activities:
    - A. Inspect, and either tighten or replace, the seals in the air passage to eliminate visible gaps,
    - B. Inspect burner ring,

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- C. Inspect refractory, remove any residue present, and make repairs necessary to create a smooth wall surface,
  - D. Inspect and blow sensing lines on the LFG pressure regulator, and
  - E. Inspect and check BMS electronic combustion control circuit board and terminal connections.
11. If all of the boilers of the group Boiler #1, Boiler #2, Boiler #3, Boiler #4, and Boiler #5 are operating under Option 1 of Element No. 6, then GE Appliances shall, before May 1 of each year, notify the District in writing as to which boiler of this group will be the designated primary backup boiler for that year's ozone control season. Additionally, GE Appliances shall, within 12 months prior to the beginning of the ozone control season or prior to operating the designated backup boiler during the ozone control season, perform and undertake corrections as necessary, and make a record of the following boiler maintenance activities on the designated primary backup boiler:
- A. Rebuilding the stoker mechanism,
  - B. Inspecting and either tightening or replacing the seals in the air passage to eliminate visible gaps,
  - C. Punching out all blocked grate holes,
  - D. Inspecting and repairing grate dampers as needed to make them fully functional,
  - E. Inspecting interior wall refractory and removing slag or making repairs necessary to create a smooth wall surface, or both,
  - F. Removing slag from over-fire air nozzles,
  - G. Replacing any clogged over-fire air nozzles,
  - H. Inspecting and cleaning or repairing electronic combustion controls as needed to make them operational,
  - I. Cleaning heavy ash from louvers, induced draft fans, and forced air fans, and
  - J. Setting-up and balancing the rebuilt stoker mechanism to maximize boiler efficiency.
12. GE Appliances shall keep a record identifying all deviations from the requirements of this NO<sub>x</sub> 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 boiler number,
  - B. The beginning and ending date of the reporting period,
  - C. Identification of all periods during which a deviation occurred,
  - 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.
13. GE Appliances shall include in each report pursuant to Element No. 12 a summary of the boiler maintenance activities required by Elements No. 10 and 11 that occurred during the preceding semi-annual period.

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14. GE Appliances shall, before May 1, 2001, submit to the District a written description of daily activities and procedures that may be conducted by the boiler operators to ensure proper operation of the boilers used during the ozone control season.
15. In lieu of the requirements in this NO<sub>x</sub> RACT Plan, GE Appliances may comply with alternative requirements regarding emission limitations, equipment operation, test methods, monitoring, recordkeeping, 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 pounds per million Btu,
  - 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<sub>x</sub> RACT Plan.

History: Approved 11-8-99; effective 1-1-00; amended a1/1-17-01 effective 3-1-01.