

Air Pollution Control Board of Jefferson County Board Order

This 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: Rohm and Haas Company (Rohm&Haas)
4300 Camp Ground Road
Louisville, Kentucky 40232

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).

A Public Hearing on this Board Order was held before the Board on November 8, 1999. Based upon the evidence presented at that hearing, the Board determined that approval of this 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_x RACT Plan applicable to Rohm&Haas is approved by the District. Rohm&Haas shall comply with this plan.
2. Compliance with the attached NO_x RACT Plan 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 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. Rohm&Haas has reviewed this Board Order and consents to all its requirements and terms.

5. The effective date of this Board Order is January 1, 2000.

Dated this 8th day of November, 1999.

Air Pollution Control Board
of Jefferson County

Rohm and Haas Company

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

By: _____
Phillip W. Davis
Plant Manager

Air Pollution Control District
of Jefferson County

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

By: _____
Arthur L. Williams
Acting Air Pollution
Control Officer

By: _____
Gaylord B. Ballard
Attorney

NO_x RACT Plan

1. When fossil fuel (natural gas or distillate fuel oil) alone is combusted, the oxides of nitrogen (NO_x, expressed as NO₂) emission from Boiler No. 100 shall not exceed 0.20 pound per million Btu (86 ng/J) of heat input, based upon a 30-day rolling average. This limit applies at all times during this fuel option, including periods of startup, shutdown, or malfunction.
2. When fossil fuel (natural gas or distillate fuel oil) and chemical by-product waste are simultaneously combusted in Boiler No. 100, the following provisions are applicable:
 - A. The oxides of nitrogen (NO_x, expressed as NO₂) emission from the boiler shall not exceed 1.1 pounds per million Btu (473 ng/J) of heat input, based upon a 30-day rolling average. This limit applies at all times during this fuel option, including periods of startup, shutdown, or malfunction,
 - B. The air ratio control damper tee handle shall be at a minimum of 5 inches out of the boiler, and
 - C. The flue gas recirculation line shall be operated at a minimum of 10 % open as indicated by its valve opening position indicator.
3. For the purpose of NO_x RACT Plan Element No. 2., the following definitions shall apply:
 - A. "Air ratio control damper" means the part of the low NO_x burner that is adjusted to control the split of total combustion air delivered to the reducing and oxidation portions of the combustion flame,
 - B. "Chemical by-product waste" means any liquid or gaseous substance produced at a chemical manufacturing plant and combusted in a steam generating unit for heat recovery or for disposal. Gaseous substances with carbon dioxide levels greater than 50 % or carbon monoxide levels greater than 10 % are not included, and
 - C. "Flue gas recirculation line" means the part of Boiler No. 100 that recirculates a portion of the boiler flue gas back into the combustion air.
4. The air ratio control damper tee handle setting and the flue gas recirculation line valve opening position indicator setting for Boiler No. 100 shall be recorded during each 8-hour operating period during which any chemical by-product waste is combusted.
5. Rohm&Haas shall install, calibrate, maintain, and operate a continuous emissions monitoring system (CEMS), and record the output of the system, for measuring NO_x emissions from Boiler No. 100. The following requirements apply to the CEMS:
 - A. The CEMS shall be operated and data recorded during all periods of operation of the boiler except for CEMS breakdowns and repairs. Data shall be recorded during calibration checks and zero and span adjustments,
 - B. The 1-hour average NO_x emission rates measured by the CEMS shall be expressed in pounds per million Btu heat input and shall be used to calculate the average emission rates under NO_x RACT Plan Element (Element) No. 1 and No. 2,
 - C. The 1-hour averages shall be calculated using the data points required under 40 CFR §60.13(b). At least 2 data points shall be used to calculate each 1-hour average,
 - D. The procedures under 40 CFR §60.13 shall be followed for installation, evaluation, and operation of the CEMS,

- E. The span value for NO_x is 1000, and
 - F. When NO_x emission data are not obtained because of CEMS breakdowns, repairs, calibration checks and zero and span adjustments, emission data shall be obtained by using standby monitoring systems, Method 7, Method 7a, or other reference methods approved by the District to provide emission data for a minimum of 75 % of the operating hours in the boiler operating day, in at least 22 out of 30 successive boiler operating days.
6. By January 1, 2000, Rohm&Haas shall submit to the District the performance evaluation of the CEMS for Boiler No. 100 using the applicable performance specifications in 40 CFR Part 60 Appendix B.
7. Rohm&Haas shall maintain the records listed in 40 CFR §60.49b (g) for Boiler No. 100 with the following clarifications:
- A. The NO_x emission rates shall be expressed in pounds per million Btu heat input measured unless Rohm&Haas cannot maintain a CEMS whose output is recorded in pounds per million Btu without a significant additional cost for data conversion, in which case the NO_x emission rates shall be expressed in ng/J , and
 - B. The applicable NO_x emission limits are contained in Element No. 1 and No. 2.
- Each record shall be maintained for a minimum of 5 years and made available to the District upon request.
8. Boiler No. 500 shall comply with one of the following options:
- A. Option 1: The boiler shall not have an annual capacity factor greater than 10.0 % for any consecutive 12-month period. The term “annual capacity factor” means the ratio between the actual heat input to a boiler from fuel combusted during a consecutive 12-month period and the potential heat input to the boiler had it been operated for 8,760 hours during that consecutive 12-month period at the maximum steady state design heat input capacity. The maximum heat input capacity provided by the manufacturer shall be used unless Rohm&Haas 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, or
 - B. Option 2: The NO_x (expressed as NO₂) emission from Boiler No. 500 shall not exceed 0.20 pound per million Btu of heat input, based upon a 30-day rolling average. This limit applies at all times, including periods of startup, shutdown, or malfunction.
9. Rohm&Haas shall, before January 1, 2000, notify the District in writing as to which option will be applicable to Boiler No. 500 starting January 1, 2000. If Rohm&Haas decides to switch from this initial option, then Rohm&Haas shall notify the District in writing, before the date of implementing the other option, of its decision to switch to that option. Option 2 shall not be implemented unless a construction permit or modified operating permit is issued by the District that authorizes the use of Boiler No. 500 at a level greater than a 10% annual capacity factor.
10. If Option 1 of Element No. 8 is in effect, Rohm&Haas shall make a record of the type and amount of fuel combusted during each day of operation of Boiler No. 500. Rohm&Haas

shall, at the end of each month, calculate and record, for Boiler No. 500, the annual capacity factor based upon the preceding consecutive 12-month period. Each record shall be maintained for a minimum of 5 years and made available to the District upon request.

11. If Option 2 of Element No. 8 is in effect, Rohm&Haas shall comply with the following requirements for Boiler No. 500:
 - A. The NO_x CEMS requirements as specified in Element No. 5, except the average emission rate is established in Element No. 8.B. and the span value for NO_x is 500,
 - B. Within 90 days after achieving the maximum production rate at which Boiler No. 500 will be operated, but not later than 210 days after implementation of Option 2, Rohm&Haas shall conduct the performance evaluation of the CEMS for Boiler No. 500 using the applicable performance specifications in 40 CFR Part 60 Appendix B and, within 60 days of the completion of the performance evaluation, submit the report for the performance evaluation to the District, and
 - C. The maintenance of records as specified in Element No. 7, except the applicable NO_x emission limit is contained in Element No. 8.
12. Rohm&Haas shall submit to the District the following reports:
 - A. Excess emission reports for any excess emissions that occurred during the reporting period. "Excess emissions" means any calculated 30-day rolling average NO_x emission rate, as determined under Element No. 5, that exceeds the emission limit contained in Element No. 1 and No. 2, or as determined under Element No. 11.A., that exceeds the emission limit contained in Element No. 8.B., and
 - B. Reports containing the information required to be recorded by Element No. 7 and, if applicable, Element 11.C.
13. The reports required to be submitted by Element No. 12 shall reflect the preceding semi-annual period. Semi-annual periods shall run from January 1 to June 30 and July 1 to December 31. 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.
14. In lieu of the requirements in this NO_x RACT Plan, Rohm&Haas 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. However, alternative requirements that are developed based upon revisions to the applicable requirements contained in 40 CFR Part 60 shall be approvable pursuant to this Element,

- 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 the NO_x RACT Plan.