

NOV 30 2011

BEFORE THE

OHIO ENVIRONMENTAL PROTECTION AGENCY

ENTERED DIRECTOR'S JOURNAL

In the Matter of:

<p>Emerald Performance Materials, LLC :</p> <p>240 West Emerling Avenue :</p> <p>Akron, Ohio 44301 :</p>	<p><u>Director's Final Findings</u></p> <p><u>and Orders</u></p>
---	--

PREAMBLE

It is agreed by the parties hereto as follows:

I. JURISDICTION

These Director's Final Findings and Orders ("Orders") are issued to Emerald Performance Materials, LLC ("Respondent") pursuant to the authority vested in the Director of the Ohio Environmental Protection Agency ("Ohio EPA") under Ohio Revised Code ("ORC") §§ 3704.03 and 3745.01.

II. PARTIES BOUND

These Orders shall apply to and be binding upon Respondent and successors in interest liable under Ohio law. No change in ownership of the Respondent or of the facility (as hereinafter defined) shall in any way alter Respondent's obligations under these Orders.

III. DEFINITIONS

Unless otherwise stated, all terms used in these Orders shall have the same meaning as defined in ORC Chapter 3704 and the rules promulgated thereunder.

IV. FINDINGS

The Director of Ohio EPA makes the following findings:

1. The rules under Ohio Administrative Code ("OAC") Chapter 3745-110 "Nitrogen Oxides ("NOx") – Reasonably Available Control Technology" were adopted by the Director and became effective on December 22, 2007. These rules are applicable, in part, to any existing very large boiler, large boiler, mid-size boiler, small boiler, stationary combustion turbine, or stationary internal combustion engine, as those terms are defined in such rules, or any NOx-emitting source located at a facility that emits or has the potential to emit a total of more than one hundred tons per year of NOx emissions from all sources at the facility, and is located in Ashtabula, Cuyahoga, Geauga, Lake, Lorain, Medina, Portage, or Summit County.

I certify this to be a true and accurate copy of the official documents as filed in the records of the Ohio Environmental Protection Agency.

[Signature] Date: 11-30-11

2. As defined by OAC Rule 3745-110-01(B)(33), "reasonably available control technology" ("RACT") means the lowest emissions limitation that a particular source is capable of meeting by the application of control technology that is reasonably available considering technological and economical feasibility.

3. As defined by OAC Rule 3745-110-01(B)(18), "large boiler" means an industrial boiler with a maximum heat input capacity greater than one hundred million Btu per hour ("MMBtu/hr") and equal to or less than two hundred fifty MMBtu/hr.

4. As defined by OAC Rule 3745-110-01(B)(2), "affected source" means any source which is located at any affected facility and is not exempt under OAC Rule 3745-110-03(J).

5. OAC Rule 3745-110-03(C) states, in part, that no owner or operator of a coal-fired large boiler shall allow or permit the discharge into the ambient air any NOx emissions in excess of 0.30 pound of NOx emissions per MMBtu on and after the compliance deadline specified by OAC Rule 3745-110-04.

6. OAC Rule 3745-110-03(I) states, in part, that for any affected source of NOx emissions at an affected facility that is not subject to the emissions limits specified in paragraphs (A) to (F) of OAC Rule 3745-110-03, the owner or operator shall conduct a detailed engineering study to determine the technical and economic feasibility of reducing NOx emissions and to define RACT for the source.

7. OAC Rule 3745-110-04(A)(2) states that any owner or operator of a source subject to OAC Rule 3745-110-03(I) shall submit a complete RACT study by not later than one year after the effective date of the rule (i.e., by December 22, 2008).

8. OAC Rule 3745-110-04(B)(1)(a) states that for facilities conducting a RACT study an owner or operator of a source which is subject to the requirements of OAC Rule 3745-110-03, including any source for which the Director approves a definition of RACT, shall achieve and demonstrate compliance with said limitations and control requirements as expeditiously as practicable, but in no event later than two years after approval by the Director of the RACT study, if combustion modifications are required to demonstrate compliance with the applicable emission limitations.

9. ORC § 3704.05(G) prohibits any person from violating any OAC rule adopted by the Director of Ohio EPA pursuant to ORC Chapter 3704. OAC Chapter 3745-110 was adopted by the Director pursuant to ORC Chapter 3704.

10. Respondent owns and operates a facility located at 240 West Emerling Avenue in Akron, Summit County, Ohio. This facility is identified by Ohio EPA facility ID number 1677010029. Respondent produces and markets technologically advanced specialty chemicals for a broad range of food and industrial applications. At this facility,

Respondent specifically produces specialty elastomer modified resins, nitrile latex emulsions, and a broad range of antioxidants. These products are integral components of coatings, adhesives, rubber and plastic articles and other manufactured goods.

11. Respondent operates a 115 MMBtu/hr dry bottom spreader stoker coal-fired boiler at the facility, which is identified as emissions unit B008 and is classified as a "large boiler" as defined by OAC Rule 3745-110-01(B)(18). Emissions unit B008 was installed on June 1, 1956, and its operation schedule is 365 days per year. Emissions unit B008 is an "air contaminant source" as defined by OAC Rule 3745-15-01(C) and (X). Additionally, process gases from emissions unit P007 (Synthetic Rubber Latex Manufacturing) are vented to emissions unit B008 for destruction in order to comply with the Group I Polymers and Resins MACT, 40 CFR Part 63, Subpart U.

12. On May 20, 2010, Respondent conducted an air emissions test for emissions unit B008 in order to determine the effect of operating emissions unit B008 at a lower firebox temperature on the destruction removal efficiency for emissions unit P007 process gases, and to determine whether the destruction removal efficiency required by the Group I Polymers and Resins MACT could be met while operating emissions unit B008 at a lower firebox temperature. At the request of Ohio EPA, Respondent agreed to measure NOx emissions from emissions unit B008 as an engineering study. Emissions unit B008 was found to be emitting NOx at 0.69 pound per million Btu ("lb/MMBtu"). As a "large boiler," emissions unit B008 was required to achieve compliance with the 0.30 lb/MMBtu NOx limitation of OAC Rule 3745-110-03(C) by the compliance deadline specified in OAC Rule 3745-110-04.

13. Per OAC Rule 3745-110-03(I)(1), the owner or operator has the option to conduct a NOx RACT study to define RACT for the source if it believes that the applicability limit is technically infeasible and/or economically unreasonable to achieve. Respondent chose this option for emissions unit B008.

14. Akron Regional Air Quality Management District ("ARAQMD") is a contractual agent for Ohio EPA responsible for administering air pollution control regulations in Summit County.

15. On June 22, 2010, ARAQMD sent a notice of violation ("NOV") letter to Respondent. Respondent was requested to submit its compliance plan and time schedule to comply with OAC Chapter 3745-110.

16. On July 1, 2010, ARAQMD received Respondent's response to the NOV of June 22, 2010. Respondent stated that it was in the process of identifying a consulting firm to perform a NOx RACT study in accordance with OAC Rule 3745-110-03(I), to define RACT for emissions unit B008, and to determine the best alternative control method to achieve compliance with OAC Rule 3745-110-03.

17. On September 28, 2010, Ohio EPA received the NOx RACT study report. The study was conducted by Environmental Resource Management ("ERM") on behalf of the Respondent. The RACT study evaluated various NOx emission control methods for technical and economic feasibility. Those controls that were determined to be technically feasible for emissions unit B008 include Flue Gas Recirculation ("FGR"), Selective Non-Catalytic Reduction ("SNCR"), Selective Catalytic Reduction ("SCR"), Non-selective Catalytic Reduction ("NSCR"), and Fuel Switching (natural gas).

As summarized in the NOx RACT study, SCR, SNCR, NSCR, and fuel switching NOx emission control options exceed the economic feasibility threshold of \$5,000/ton of pollutant removed as established by Ohio EPA. However, the FGR system was determined to be under the economic feasibility threshold.

18. On October 28, 2010, Ohio EPA informed Respondent of its comments regarding the cost-effectiveness values of the SCR control method.

19. On November 18, 2010, Respondent met with Ohio EPA to further discuss the findings of the NOx RACT study. It was determined that emission unit B008 is unique in the fact that process gases (i.e., 1,3-butadiene, acrylonitrile, and styrene) from the synthetic rubber latex manufacturing process are vented to the boiler for destruction in order to comply with the Group I Polymers and Resins MACT, 40 CFR Part 63, Subpart U. One of the process gases, acrylonitrile ($C_3H_3N_2$) contains nitrogen so it contributes to the generation of higher NOx emission levels. The 0.30 lb/MMBtu NOx limitation of OAC Rule 3745-110-03(C) only considers NOx emissions associated with combustion of coal alone and does not consider additional NOx formed from other sources. Given this unique circumstance, Ohio EPA has determined that emissions unit B008 is not subject to the presumptive NOx emission limitation of 0.30 lb/MMBtu. The facility would still be subject to the provisions of OAC Rule 3745-110-03(I): "NOx RACT Studies."

20. On January 14, 2011, a second NOx emissions test was conducted. Test results showed a 2-run average of 0.463 lb/MMBtu. The purpose of this test was to establish a NOx emission baseline that is more representative of facility operations than the NOx emissions rate that was observed during the May 20, 2010 engineering study. The NOx emissions baseline established during the January 14, 2011 emissions test was used for the purpose of evaluating potential NOx emission control equipment.

21. On February 17, 2011, Ohio EPA received revisions to the NOx RACT study as requested during the November 18, 2010 meeting. This revision to the NOx RACT study indicated that both the FGR system and SCR system were not cost-effective emission control options.

22. On March 16, 2011, Ohio EPA met with Respondent to discuss the revised NOx RACT study and requested Respondent to address concerns regarding the cost-analysis for the FGR system.

23. On May 26, 2011, Respondent informed Ohio EPA that it has been determined that FGR is both technically and economically feasible and proposed that RACT for emission unit B008 be defined as the installation and operation of a FGR system. Respondent stated that it will proceed with FGR system implementation as the RACT definition for emissions unit B008.

24. The revised cost analysis for the FGR system was received by Ohio EPA on June 21, 2011. The revised RACT study recommended the FGR system as a definition for RACT for emissions unit B008. The cost-effectiveness for the FGR system was calculated as \$2,452 per ton of NOx removed. The revised RACT study did not include an expeditious schedule for implementing the FGR.

25. Ohio EPA received Respondent's compliance schedule for implementing the FGR system on August 24, 2011, Ohio EPA considered this date as the date the complete RACT study was received. Ohio EPA approved the RACT study on September 27, 2011.

26. Respondent failed to submit a complete RACT study for emissions unit B008 by December 22, 2008, in violation of OAC Rule 3745-110-04(A)(2) and ORC § 3704.05(G).

27. Per OAC Rule 3745-110-04(B)(1)(a) and the approved RACT study, Respondent is to achieve and demonstrate compliance by completing the installation of the FGR system and conducting emissions testing as expeditiously as practicable but no later than the deadlines in the compliance schedule contained in the study. Respondent's RACT study calls for achievement and demonstration of compliance within 510 days of the effective date of these Orders.

28. In light of the situation concerning the lack of notification to Respondent concerning the applicability of the NOx RACT rules, Ohio EPA decided to use the date of the NOV letter instead of the effective date of the rules for the purpose of calculating any civil penalty and all compliance milestone dates were shifted accordingly. Based on this decision and the schedule for compliance in the Orders, Respondent's schedule will meet all the new compliance dates, and no penalty has been assessed.

29. The Director has given consideration to, and based his determination on, evidence relating to the technical feasibility and economic reasonableness of complying with the following Orders and their relation to benefits to the people of the State to be derived from such compliance.

V. ORDERS

The Director hereby issues the following Orders:

1. Respondent shall achieve and demonstrate compliance with OAC Rule 3745-110-04(B)(1)(a) and the approved RACT study by implementing the FGR system for emissions unit B008 as expeditiously as practicable but no later than the deadlines in the following schedule:
 - a. Within sixty (60) days of the effective date of these Orders, Respondent shall complete design work;
 - b. Within one hundred twenty (120) days of the effective date of these Orders, Respondent shall award contracts;
 - c. Within one hundred eighty (180) days of the effective date of these Orders, Respondent shall initiate construction;
 - d. Within two hundred seventy (270) days of the effective date of these Orders, Respondent shall complete construction;
 - e. Within four hundred fifty (450) days of the effective date of these Orders, Respondent shall submit an Intent-to-Test notification to Ohio EPA;
 - f. Within four hundred eighty (480) days of the effective date of these Orders, Respondent shall conduct stack emission tests, in accordance with OAC Rule 3745-110-05, to determine the NOx mass emission rate for emissions unit B008; and
 - g. Within five hundred ten (510) days of the effective date of these Orders, Respondent shall submit the test report to Ohio EPA.
2. Unless otherwise directed by Ohio EPA, Respondent shall submit a written progress report to Ohio EPA by at least every ninety (90) days after the effective date of these Orders and ending with the report due by at least 540 days after the effective date of these Orders. The reports shall describe the status of the work required pursuant to these Orders and describe any difficulties encountered. Also, the reports shall provide the completion dates for the milestones identified in the Orders.
3. Based upon the emissions test results, Ohio EPA will establish an appropriate NOx emission limitation for emissions unit B008. The NOx RACT determination and the NOx emission limitation will be incorporated into Respondent's Title V permit and as a site-specific rule revision in OAC Rule 3745-110-03. Until such time, Respondent shall continue to employ the FGR. Respondent shall maintain compliance with this NOx RACT determination and NOx emission limitation thereafter.

VI. TERMINATION

Respondent's obligations under these Orders shall terminate when Respondent certifies in writing and demonstrates to the satisfaction of Ohio EPA that Respondent has performed all obligations under these Orders, these obligations have been embedded in a Title V permit and rule, and the Chief of Ohio EPA's Division of Air Pollution Control acknowledges, in writing, the termination of these Orders. If Ohio EPA does not agree that all obligations have been performed, then Ohio EPA will notify Respondent of the obligations that have not been performed, in which case Respondent shall have an opportunity to address any such deficiencies and seek termination as described above.

The certification shall contain the following attestation: "I certify that the information contained in or accompanying this certification is true, accurate and complete."

This certification shall be submitted by Respondent to Ohio EPA and shall be signed by a responsible official of Respondent. For purposes of these Orders, a responsible official is a principal executive officer of at least the level of vice president, or his duly authorized representative, if such representative is responsible for the overall operation of the facility.

VII. OTHER CLAIMS

Nothing in these Orders shall constitute or be construed as a release from any claim, cause of action or demand in law or equity against any person, firm, partnership or corporation, not a party to these Orders, for any liability arising from, or related to, operations by Respondent.

VIII. OTHER APPLICABLE LAWS

All actions required to be taken pursuant to these Orders shall be undertaken in accordance with the requirements of all applicable local, state and federal laws and regulations. These Orders do not waive or compromise the applicability and enforcement of any other statutes or regulations applicable to Respondent.

IX. MODIFICATIONS

These Orders may be modified by agreement of the parties hereto. Modifications shall be in writing and shall be effective on the date entered in the journal of the Director of Ohio EPA.

X. NOTICE

All documents required to be submitted by Respondent pursuant to these Orders shall be addressed to:

Akron Regional Air Quality Management District
Citicenter, Suite 904
146 South High Street
Akron, Ohio 44308
Attn: Laura Miracle

and to:

Ohio EPA
Division of Air Pollution Control
P.O. Box 1049
Columbus, Ohio 43216-1049
Attn: Tom Kalman, Acting Assistant Chief, SIP Development
and Enforcement

or to such persons and addresses as may hereafter be otherwise specified in writing by Ohio EPA.

XI. RESERVATION OF RIGHTS

Ohio EPA and Respondent each reserve all rights, privileges and causes of action, except as specifically waived in Section XII of these Orders.

XII. WAIVER

In order to resolve disputed claims, without admission of fact, violation or liability, and in lieu of further enforcement action by Ohio EPA for only the violations specifically cited in these Orders, Respondent consents to the issuance of these Orders and agrees to comply with these Orders. Compliance with these Orders shall be a full accord and satisfaction for Respondent's liability for the violations specifically cited herein.

Respondent hereby waives the right to appeal the issuance, terms and conditions, and service of these Orders, and Respondent hereby waives any and all rights Respondent may have to seek administrative or judicial review of these Orders either in law or equity.

Notwithstanding the preceding, Ohio EPA and Respondent agree that if these Orders are appealed by any other party to the Environmental Review Appeals Commission, or any court, Respondent retains the right to intervene and participate in such appeal. In such an event, Respondent shall continue to comply with these Orders notwithstanding such appeal and intervention unless these Orders are stayed, vacated or modified.

XIII. EFFECTIVE DATE

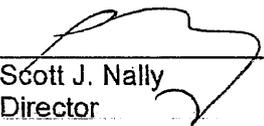
The effective date of these Orders is the date these Orders are entered into the Ohio EPA Director's journal.

XIV. SIGNATORY AUTHORITY

Each undersigned representative of a party to these Orders certifies that he or she is fully authorized to enter into these Orders and to legally bind such party to these Orders.

ORDERED AND AGREED:

Ohio Environmental Protection Agency



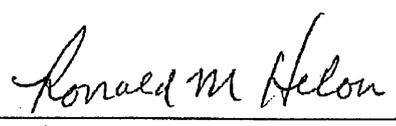
Scott J. Nally
Director

11/29/11

Date

AGREED:

Emerald Performance Materials, LLC



Signature

11/10/11

Date

Ronald M. Helon

Printed or Typed Name

Plant Manager

Title