

3745-103-62 **Alternative emission limitations.**

[Comment: For dates of non-regulatory government publications, publications of recognized organizations and associations, federal rules, and federal statutory provisions referenced in this rule, see paragraph (C) of rule 3745-103-01 of the Administrative Code titled "Referenced materials."]

(A) General provisions.

- (1) The designated representative of an affected unit that is not an early election unit pursuant to rule 3745-103-60 of the Administrative Code and cannot meet the applicable emission limitation in rule 3745-103-57, 3745-103-58, or 3745-103-59 of the Administrative Code using, for group one boilers, either low NO_x burner technology or an alternative technology in accordance with paragraph (E)(11) of this rule, or, for tangentially fired boilers, separated overfire air, or, for group two boilers, the technology on which the applicable emission limitation is based may petition the permitting authority for an alternative emission limitation less stringent than the applicable emission limitation.
- (2) In order for the unit to qualify for an alternative emission limitation, the designated representative shall demonstrate that the affected unit cannot meet the applicable emission limitation in rule 3745-103-57, 3745-103-58, or 3745-103-59 of the Administrative Code based on a showing, to the satisfaction of the director and the USEPA that:
 - (a) For a tangentially fired boiler, the owner or operator has either properly installed low NO_x burner technology or properly installed separated overfire air; or
 - (b) For a dry bottom wall-fired boiler (other than a unit applying cell burner technology), the owner or operator has properly installed low NO_x burner technology; or
 - (c) For a group one boiler, the owner or operator has properly installed an alternative technology (including but not limited to reburning, selective noncatalytic reduction, or selective catalytic reduction) that achieves NO_x emission reductions demonstrated in accordance with paragraph (E)(11) of this rule; or
 - (d) For a group two boiler, the owner or operator has properly installed the appropriate NO_x emission control technology on which the applicable emission limitation in rule 3745-103-58 of the Administrative Code is based; and

- (i) The installed NO_x emission control system has been designed to meet the applicable emission limitation in rule 3745-103-57, 3745-103-58, or 3745-103-59 of the Administrative Code; and
 - (ii) For a demonstration period of at least fifteen months or other period of time, as provided in paragraph (F)(1) of this rule:
 - (a) The NO_x emission control system has been properly installed and properly operated according to specifications and procedures designed to minimize the emissions of NO_x to the atmosphere;
 - (b) Unit operating data as specified in this rule show that the unit and NO_x emission control system were operated in accordance with the bid and design specifications on which the design of the NO_x emission control system was based; and
 - (c) Unit operating data as specified in this rule, continuous emission monitoring data obtained pursuant to 40 CFR Part 75, and the test data specific to the NO_x emission control system show that the unit could not meet the applicable emission limitation in rule 3745-103-57, 3745-103-58, or 3745-103-59 of the Administrative Code.
- (B) Petitioning process. The petitioning process for an alternative emission limitation shall consist of the following steps:
- (1) Operation during a period of at least three months, following the installation of the NO_x emission control system, that shows that the specific unit and the NO_x emission control system was unable to meet the applicable emissions limitation under rule 3745-103-57, 3745-103-58, or 3745-103-59 of the Administrative Code and was operated in accordance with the operating conditions upon which the design of the NO_x emission control system was based and with vendor specifications and procedures;
 - (2) Submission of a petition for an alternative emission limitation demonstration period as specified in paragraph (D) of this rule;
 - (3) Operation during a demonstration period of at least fifteen months, or other period of time as provided in paragraph (F)(1) of this rule, that demonstrates the inability of the specific unit to meet the applicable emissions limitation under rule 3745-103-57, 3745-103-58, or 3745-103-59 of the Administrative Code and the minimum NO_x emissions rate that the specific unit can achieve during long-term load dispatch operation; and
 - (4) Submission of a petition for a final alternative emission limitation as specified in paragraph (E) of this rule.

(C) Deadlines.

- (1) Petition for an alternative emission limitation demonstration period. The designated representative of the unit shall submit a petition for an alternative emission limitation demonstration period to the director after the unit has been operated for at least three months after installation of the NO_x emission control system required under paragraph (A)(2) of this rule and by the deadline of one hundred twenty days after January first of the first calendar year for which the demonstration period is sought to apply, or one hundred twenty days after startup of the NO_x emission control system if the unit is not operating at the beginning of that calendar year.
- (2) Petition for a final alternative emission limitation. Not later than ninety days after the end of an approved alternative emission limitation demonstration period for the unit, the designated representative of the unit may submit a petition for an alternative emission limitation to the director.
- (3) Renewal of an alternative emission limitation. In order to request continuation of an alternative emission limitation, the designated representative must submit a petition to renew the alternative emission limitation on the date that the application for renewal of the sources acid rain permit containing the alternative emission limitation is due.

(D) Contents of petition for an alternative emission limitation demonstration period. The designated representative of an affected unit that has met the minimum criteria under paragraph (A) of this rule and that has been operated for a period of at least three months following the installation of the required NO_x emission control system may submit to the director a petition for an alternative emission limitation demonstration period. In the petition, the designated representative shall provide the following information in a format prescribed by the director and the USEPA:

- (1) Identification of the unit;
- (2) The type of NO_x control technology installed (e.g., low NO_x burner technology, selective noncatalytic reduction, selective catalytic reduction, reburning);
- (3) If an alternative technology is installed, the time period (not less than six consecutive months) prior to installation of the technology to be used for the demonstration required in paragraph (E)(11) of this rule;
- (4) Documentation as set forth in paragraph (A)(1) of rule 3745-103-65 of the Administrative Code showing that the installed NO_x emission control system has been designed to meet the applicable emission limitation in rule 3745-103-57, 3745-103-58, or 3745-103-59 of the Administrative Code and that the system has been properly installed according to procedures and specifications designed to minimize the emissions of NO_x to the atmosphere;

- (5) The date the unit commenced operation following the installation of the NO_x emission control system or the date the specific unit became subject to the emission limitations of rule 3745-103-57, 3745-103-58, or 3745-103-59 of the Administrative Code, whichever is later;
- (6) The dates of the operating period (which must be at least three months long);
- (7) Certification by the designated representative that the owner(s) or operator operated the unit and the NO_x emission control system during the operating period in accordance with: specifications and procedures designed to achieve the maximum NO_x reduction possible with the installed NO_x emission control system or the applicable emission limitation in rule 3745-103-57, 3745-103-58, or 3745-103-59 of the Administrative Code; the operating conditions upon which the design of the NO_x emission control system was based; and vendor specifications and procedures;
- (8) A brief statement describing the reason(s) why the unit cannot achieve the applicable emission limitation of rule 3745-103-56, 3745-103-57, or 3745-103-58 of the Administrative Code;
- (9) A demonstration period plan, as set forth in paragraph (A)(2) of rule 3745-103-65 of the Administrative Code;
- (10) Unit operating data and quality-assured continuous emission monitoring data (including the specific data items listed in paragraph (A)(3) of rule 3745-103-65 of the Administrative Code collected in accordance with 40 CFR Part 75 during the operating period) and demonstrating the inability of the specific unit to meet the applicable emission limitation in rule 3745-103-57, 3745-103-58, or 3745-103-59 of the Administrative Code on an annual average basis while operating as certified under paragraph (D)(7) of this rule;
- (11) An interim alternative emission limitation, in pound per MMBtu, that the unit can achieve during a demonstration period of at least fifteen months. The interim alternative emission limitation shall be derived from the data specified in paragraph (D)(10) of this rule using methods and procedures satisfactory to USEPA;
- (12) The proposed dates of the demonstration period (which must be at least fifteen months long);
- (13) A report that outlines the testing and procedures to be used during the demonstration period in order to determine the maximum NO_x emission reduction obtainable with the installed system. The report shall include the reasons for the NO_x emission control system's failure to meet the applicable emission limitation, and the tests and procedures that will be followed to

optimize the NO_x emission control system's performance. Such tests and procedures may include those identified in rule 3745-103-66 of the Administrative Code as appropriate.

(14) The special provisions at paragraph (G)(1) of this rule.

(E) Contents of petition for a final alternative emission limitation. After the approved demonstration period, the designated representative of the unit may petition the director and the USEPA for an alternative emission limitation. The petition shall include the following elements in a format prescribed by the director and the USEPA:

(1) Identification of the unit;

(2) Certification that the owner(s) or operator operated the affected unit and the NO_x emission control system during the demonstration period in accordance with: specifications and procedures designed to achieve the maximum NO_x reduction possible with the installed NO_x emission control system or the applicable emissions limitation in rule 3745-103-57, 3745-103-58, or 3745-103-59 of the Administrative Code; the operating conditions (including load dispatch conditions) upon which the design of the NO_x emission control system was based; and vendor specifications and procedures;

(3) Certification that the owner(s) or operator have installed in the affected unit all NO_x emission control systems, made any operational modifications, and completed any planned upgrades and/or maintenance to equipment specified in the approved demonstration period plan for optimizing NO_x emission reduction performance, consistent with the demonstration period plan and the proper operation of the installed NO_x emission control system. Such certification shall explain any differences between the installed NO_x emission control system and the equipment configuration described in the approved demonstration period plan;

(4) A clear description of each step taken or modification made during the demonstration period to improve or optimize the performance of the installed NO_x emission control system;

(5) Engineering design calculations and drawings that show the technical specifications for installation of any additional operational or emission control modifications installed during the demonstration period;

(6) Unit operating and quality-assured continuous emission monitoring data (including the specific data listed in paragraph (B) of rule 3745-103-65 of the Administrative Code) collected in accordance with 40 CFR Part 75 during the demonstration period and demonstrating the inability of the specific unit to meet the applicable emission limitation in rule 3745-103-57, 3745-103-58, or 3745-

103-59 of the Administrative Code on an annual average basis while operating in accordance with the certification under paragraph (E)(2) of this rule;

- (7) A report (based on the parametric test requirements set forth in the approved demonstration period plan as identified in paragraph (D)(13) of this rule) that demonstrates the unit was operated in accordance with the operating conditions upon which the design of the NO_x emission control system was based and describes the reason(s) for the failure of the installed NO_x emission control system to meet the applicable emission limitation in rule 3745-103-57, 3745-103-58, or 3745-103-59 of the Administrative Code on an annual average basis;
- (8) The minimum NO_x emission rate, in pound per MMBtu, that the affected unit can achieve on an annual average basis with the installed NO_x emission control system. This value, which shall be the requested alternative emission limitation, shall be derived from the data specified in this rule using methods and procedures satisfactory to USEPA and shall be the lowest annual emission rate the unit can achieve with the installed NO_x emission control system;
- (9) All supporting data and calculations documenting the determination of the requested alternative emission limitation and its conformance with the methods and procedures satisfactory to the director and the USEPA;
- (10) The special provisions in paragraph (G)(2) of this rule; and
- (11) In addition to the other requirements of this rule, the owner or operator of an affected unit with a group one boiler that has installed an alternative technology in addition to or in lieu of low NO_x burner technology and cannot meet the applicable emission limitation in rule 3745-103-57 of the Administrative Code shall demonstrate, to the satisfaction of the director and the USEPA, that the actual percentage reduction in NO_x emissions (pound per MMBtu), on an annual average basis is greater than sixty-five per cent of the average annual NO_x emissions prior to the installation of the NO_x emission control system. The percentage reduction in NO_x emissions shall be determined using continuous emissions monitoring data for NO_x taken during the time period (under paragraph (D)(3) of this rule) prior to the installation of the NO_x emission control system and during long-term load dispatch operation of the specific boiler.

(F) Ohio EPAs action.

- (1) Alternative emission limitation demonstration period.
 - (a) The director may approve an alternative emission limitation demonstration period and demonstration period plan, provided that the requirements of this rule are met to the satisfaction of the director. The director shall disapprove

a demonstration period if the requirements of paragraph (A) of this rule were not met during the operating period.

- (b) The demonstration period as approved by the director will include, as part of the demonstration period, the four month period prior to submission of the alternative emission limitation application in the demonstration period.
- (c) The alternative emission limitation demonstration period will authorize the affected unit to emit at a rate not greater than the interim alternative emission limitation during the demonstration period on or after the applicable date established in rule 3745-103-58 or 3745-103-59 of the Administrative Code and until the date that the director and the USEPA approve or deny a final alternative emission limitation.
- (d) If the designated representative petitions for an extension of an approved alternative emission limitation demonstration period in accordance with paragraph (G)(1)(b) of this rule, the director may extend the demonstration period by administrative amendment to the acid rain permit under rule 3745-103-18 of the Administrative Code.
- (e) The director shall deny the demonstration period if the designated representative cannot demonstrate that the unit met the requirements of paragraph (A)(2) of this rule. In such cases, the director shall require that the owner or operator operate the unit in compliance with the applicable emission limitation in rule 3745-103-57, 3745-103-58, or 3745-103-59 of the Administrative Code for the period preceding the submission of the application for an alternative emission limitation demonstration period, including the operating period, if such periods are after the date on which the unit is subject to the standard limit under rule 3745-103-57, 3745-103-58, or 3745-103-59 of the Administrative Code.

(2) Alternative emission limitation.

- (a) If the director and the USEPA determine that the requirements in this rule are met, the director and the USEPA shall approve an alternative emission limitation and the director shall issue or revise an acid rain permit to apply the approved limitation, in accordance with rule 3745-103-13 of the Administrative Code. The permit will authorize the unit to emit at a rate not greater than the approved alternative emission limitation, beginning on the effective date the director revises the applicable acid rain permit to approve the alternative emission limitation.
- (b) If Ohio EPA or the USEPA disapproves an alternative emission limitation under paragraph (A)(2) of this rule, the owner or operator shall operate the affected unit in compliance with the applicable emission limitation in rule 3745-103-57, 3745-103-58, or 3745-103-59 of the Administrative Code

(unless the unit is participating in an approved averaging plan under rule 3745-103-63 of the Administrative Code) beginning on the date the director revises an acid rain permit to disapprove an alternative emission limitation.

(3) Alternative emission limitation renewal.

- (a) If, upon review of a petition to renew an approved alternative emission limitation, the director determines that no changes have been made to the control technology, its operation, the operating conditions on which the alternative emission limitation was based, or the actual NO_x emission rate, the alternative emission limitation shall be renewed.
- (b) If the director determines that changes have been made to either the control technology, its operation, the fuel quality, or the operating conditions on which the alternative emission limitation was based, the designated representative shall submit, in order to renew the alternative emission limitation or to obtain a new alternative emission limitation, a petition for an alternative emission limitation demonstration period that meets the requirements of paragraph (D) of this rule using a new demonstration period, and the director shall approve or deny the petition in accordance with paragraph (F) of this rule.

(G) Special provisions.

(1) Alternative emission limitation demonstration period.

(a) Emission limitations.

- (i) Each unit with an approved alternative emission limitation demonstration period shall comply with the interim emission limitation specified in the unit's permit beginning on the effective date of the demonstration period specified in the permit and, if a timely petition for a final alternative emission limitation is submitted, extending until the date on which the director issues or revises an acid rain permit to approve or disapprove an alternative emission limitation. If a timely petition is not submitted, then the unit shall comply with the standard emission limit under rule 3745-103-57, 3745-103-58, or 3745-103-59 of the Administrative Code beginning on the date the petition was required to be submitted under paragraph (C)(2) of this rule.
- (ii) During the demonstration period, when the owner or operator identifies, boiler operating or NO_x emission control system modifications or upgrades that would produce further NO_x emission reductions, enabling the affected unit to comply with or bring its emission rate closer to the applicable emissions limitation under rule 3745-103-57, 3745-103-58, or 3745-103-59 of the Administrative Code, the designated

representative may submit a request and the director may grant, an extension of the demonstration period for such period of time (not to exceed twelve months) as may be necessary to implement such modifications or upgrades, by administrative amendment under rule 3745-103-18 of the Administrative Code.

- (iii) If the approved interim alternative emission limitation applies to a unit for part, but not all, of a calendar year, the unit shall determine compliance for the calendar year in accordance with the procedures in 40 CFR 76.13(a).

(b) Operating requirements.

- (i) A unit with an approved alternative emission limitation demonstration period shall be operated under load dispatch conditions consistent with the operating conditions upon which the design of the NO_x emission control system and performance guarantee were based, and in accordance with the demonstration period plan.
- (ii) A unit with an approved alternative emission limitation demonstration period shall install all NO_x emission control systems, make any operational modifications, and complete any upgrades and maintenance to equipment specified in the approved demonstration period plan for optimizing NO_x emission reduction performance.
- (iii) When the owner or operator identifies boiler or NO_x emission control system operating modifications that would produce higher NO_x emission reductions, enabling the affected unit to comply with, or bring its emission rate closer to, the applicable emission limitation under rule 3745-103-57, 3745-103-58 or 3745-103-59 of the Administrative Code, the designated representative shall submit an administrative amendment under rule 3745-103-18 of the Administrative Code to revise the unit's acid rain permit and demonstration period plan to include such modifications.

- (c) Testing requirements. A unit with an approved alternative emission limitation demonstration period shall monitor in accordance with 40 CFR Part 75 and shall conduct all tests required under the approved demonstration period plan.

(2) Final alternative emission limitation.

(a) Emission limitations.

- (i) Each unit with an approved alternative emission limitation shall comply with the alternative emission limitation specified in the unit's permit

beginning on the date specified in the permit as issued or revised by the director to apply the final alternative emission limitation.

- (ii) If the approved interim or final alternative emission limitation applies to a unit for part, but not all, of a calendar year, the unit shall determine compliance for the calendar year in accordance with the procedures in 40 CFR 76.13(a).

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