



Ohio Administrative Code

Rule 3745-103-66 Test methods and procedures.

Effective: October 20, 2017

[Comment: For dates and availability 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) The owner or operator may use the following tests as a basis for the report required by paragraph (E)(7) of rule 3745-103-62 of the Administrative Code:

(1) An ultimate analysis of coal using ASTM D3176, "Standard Practice for Ultimate Analysis of Coal and Coke."

(2) A proximate analysis of coal using ASTM D3172, "Standard Practice for Proximate Analysis of Coal and Coke."

(3) Measure the coal mass flow rate to each individual burner using ASME performance test code 4.2, "Test Code for Coal Pulverizers" or ISO 9931, "Coal - Sampling of Pulverized Coal Conveyed by Gases in Direct Fired Coal Systems."

(B) The owner or operator may measure and record the actual NO_x emission rate in accordance with the requirements of this part while varying the following parameters where possible to determine their effects on the emissions of NO_x from the affected boiler:

(1) Excess air levels.

(2) Settings of burners or coal and air nozzles, including tilt and yaw, or swirl.

(3) For tangentially fired boilers, distribution of combustion air within the NO_x emission control system.



(4) Coal mass flow rates to each individual burner.

(5) Coal-to-primary air ratio (based on pound per hour) for each burner, the average coal-to-primary air ratio for all burners, and the deviations of individual burners' coal-to-primary air ratios from the average value.

(6) If the boiler uses varying types of coal, the type of coal. Provide the results of proximate and ultimate analyses of each type of as-fired coal.

(C) In performing the tests specified in paragraph (A) of this rule, the owner or operator shall begin the tests using the equipment settings for which the NO_x emission control system was designed to meet the NO_x emission rate guaranteed by the primary NO_x emission control system vendor. These results constitute the baseline controlled condition.

(D) After establishing the baseline controlled condition under paragraph (C) of this rule, the owner or operator may:

(1) Change excess air levels plus or minus five per cent from the baseline controlled condition to determine the effects on emissions of NO_x , by providing a minimum of three readings (e.g., with a baseline reading of twenty per cent excess air, excess air levels may be changed to nineteen per cent and twenty-one per cent).

(2) For tangentially fired boilers, change the distribution of combustion air within the NO_x emission control system to determine the effects on NO_x emissions by providing a minimum of three readings, one with the minimum, one with the baseline, and one with the maximum amounts of staged combustion air.

(3) Show that the combustion process within the boiler is optimized (e.g., that the burners are balanced).