

## § 76.15

## 40 CFR Ch. I (7-1-13 Edition)

available (e.g., the retrofit project is still underway), the designated representative shall include in the report detailed cost estimates and other projected or estimated data in lieu of the information that is not available.

(2) The report under paragraph (c)(1) of this section is not required with regard to the following types of Group 1, Phase I units:

(i) Units employing no new NO<sub>x</sub> emission control system after November 15, 1990;

(ii) Units employing modifications to boiler operating parameters (e.g., burners out of service or fuel switching) without low NO<sub>x</sub> burners or other emission reduction equipment for reducing NO<sub>x</sub> emissions;

(iii) Units with wall-fired boilers employing only overfire air and units with tangentially fired boilers employing only separated overfire air; or

(iv) Units beginning installation of a new NO<sub>x</sub> emission control system after August 11, 1995.

(3) The report under paragraph (c)(1) of this section shall be submitted to the Administrator by:

(i) 120 days after completion of the low NO<sub>x</sub> burner technology retrofit project; or

(ii) May 23, 1995, if the project was completed on or before January 23, 1995.

### § 76.15 Test methods and procedures.

(a) The owner or operator may use the following tests as a basis for the report required by § 76.10(e)(7):

(1) Conduct an ultimate analysis of coal using ASTM D 3176-89 (incorporated by reference as specified in § 76.4);

(2) Conduct a proximate analysis of coal using ASTM D 3172-89 (incorporated by reference as specified in § 76.4); and

(3) Measure the coal mass flow rate to each individual burner using ASME Power Test Code 4.2 (1991), "Test Code for Coal Pulverizers" or ISO 9931 (1991), "Coal—Sampling of Pulverized Coal Conveyed by Gases in Direct Fired Coal Systems" (incorporated by reference as specified in § 76.4).

(b) The owner or operator may measure and record the actual NO<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> 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; and

(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 section, the owner or operator shall begin the tests using the equipment settings for which the NO<sub>x</sub> emission control system was designed to meet the NO<sub>x</sub> emission rate guaranteed by the primary NO<sub>x</sub> emission control system vendor. These results constitute the "baseline controlled" condition.

(d) After establishing the baseline controlled condition under paragraph (c) of this section, the owner or operator may:

(1) Change excess air levels  $\pm 5$  percent from the baseline controlled condition to determine the effects on emissions of NO<sub>x</sub>, by providing a minimum of three readings (e.g., with a baseline reading of 20 percent excess air, excess air levels will be changed to 19 percent and 21 percent);

(2) For tangentially fired boilers, change the distribution of combustion air within the NO<sub>x</sub> emission control system to determine the effects on NO<sub>x</sub> 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; and

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