

6.5.1 Emission Testing

As explained in Section 6.4, above, emission testing may (and for gaseous fuels other than natural gas, must) be performed to establish fuel- and unit-specific default NO_x emission rates for a LME unit. Testing at four load levels is required (with some exceptions---see below), with three runs at each load. The basic procedures described in Part 75, Appendix E, section 2.1 are used for the testing, except that unit heat input is not measured during the test runs. To continue using site-specific NO_x emission rates, re-testing is required once every five years (20 calendar quarters).

EPA Reference Methods 7E and 3A are used for the NO_x emission rate testing.⁴⁰ For units equipped with add-on NO_x emission controls (e.g., water injection, SCR, etc.) and for combustion turbines that use lean premix (dry low-NO_x) technology to reduce NO_x emissions, appropriate parameters must be monitored and recorded during the test period, to document that the emission controls are working properly. From these data, acceptable values and/or ranges for each parameter are established and kept in a quality-assurance plan for the unit.

For a group of “identical” LME units, a subset of the units may be tested, rather than testing each unit individually. To be considered identical, all of the units in the group must:

- Be of the same size (maximum rated hourly heat input), manufacturer and model;
- Have the same history of modifications (e.g., control device installations, frequency of major maintenance outages, etc.); and
- Have outlet temperatures within $\pm 50^\circ \text{F}$ of the average outlet temperature for the group.

If the group of LME units qualifies as identical, Table LM-4 in §75.19 is used to determine how many units need to be tested (e.g., if there are 3 to 6 units in the group, at least 2 units must be tested).

In the following instances, the initial NO_x emission rate testing (or periodic retesting) for LME units may be done at fewer than four loads:

- Testing may be done in only one of the four load bands if the unit has operated within that load band for at least 85% of the operating hours in the past 3 years (or the past 3 ozone seasons⁴¹);
- Testing may be conducted in two (or three) of the four load bands if at least 85% of the operating hours in the past 3 years (or ozone seasons⁴¹) have been in those two (or three) load bands;
- Testing may be done at a single load between 75 and 100% of maximum load, if the average capacity factor⁴² of the unit was 2.5% or less in the three years (or ozone seasons⁴¹) prior to the year of the test, and the capacity factor did not exceed 4.0% in any of those three years (or ozone seasons);
- For older-style combustion turbines that operate only at two settings, i.e., at base-load (or at a set-point temperature) and at a higher peak load level (or at a higher internal operating temperature), testing may be done only at base-load, provided that a suitable upward adjustment is made to the base-load NO_x emission rate when the unit operates at peak load⁴³;
- If the initial testing was performed at multiple load levels, the subsequent retests may be done at single load, i.e., at the load level where the highest NO_x emission rate was obtained in the initial test.