

## V. Demonstrating Compliance

We are finalizing many, but not all of the compliance provisions that we proposed. As described earlier, we are only finalizing an initial tier of standards in this final rule. Given the nature of these standards, which are equivalent to the internationally negotiated NO<sub>x</sub> standards, we are adopting an interim compliance program for Category 3 engines that is harmonized with the international program to the maximum extent possible. This compliance program will apply only for the initial tier of standards in this final rule.

Nevertheless, we continue to believe that additional compliance requirements, such as those that we proposed, may be appropriate for later tiers of standards. See Section V.F. for more information about the kinds of additional compliance provisions that we expect to include for later standards. The certification and compliance provisions for the internationally negotiated NO<sub>x</sub> standards contained in MARPOL Annex VI are set out in the Technical Code on Control of Emission of Nitrogen Oxides from Marine Diesel Engines (the NO<sub>x</sub> Technical Code).<sup>33</sup>

For those Category 1 and Category 2 engines for which we proposed Tier 1 emission standards (*i.e.*, engines over 2.5 liters per cylinder), we proposed to apply all the Tier 2 requirements for the proposed Tier 1 standards. (Note that we established those Tier 2 requirements in a previous rulemaking, in which we set the Tier 2 standards.) After considering the public comments, we are finalizing this approach with two exceptions. First, we allow manufacturers to use test data generated using the procedures in the NO<sub>x</sub> Technical Code on an interim basis, as described below. Second, we will not require manufacturers to perform production-line testing on their Tier 1 engines. Commenters expressed concerns about the lead time available to meet the Tier 1 requirements, and the burdens of deviating from the Annex VI requirements. We believe that these comments are particularly relevant to production-line testing. Given the nature of the Tier 1 standards that are being finalized, we do not believe that the burdens associated with starting a production-line testing program with less than two years lead time would be appropriate. We do not believe that the remainder of the existing compliance

program for these engines will be particularly burdensome or require additional lead time. The compliance program that was promulgated previously for Tier 2 engines is not being changed, and will remain in effect as specified in 40 CFR part 94.

Except as noted, the remainder of this section addresses the compliance program for Category 3 engines.

### A. Overview of Certification

#### 1. How Do I Certify My Engines?

We are adopting certification and compliance requirements for new Category 3 marine engines that are similar to those already in place for Category 1 and Category 2 marine engines. These provisions are contained in 40 CFR part 94 and were described in detail in the preamble to the final rule establishing those regulations (64 FR 73300, December 29, 1999). In general, these provisions require that a manufacturer do the following things to certify engines:

- Divide engines into groups of engines with similar emission characteristics. These groups are called “engine families”.
- Test the highest emitting engine configuration within the family.
- Determine deterioration rate for emissions and apply it to the “zero-hour” emission rate. The deterioration rate is essentially the difference between the emissions of the engine when produced and the point at which it will need to be rebuilt.
- Determine the emission-related maintenance that will be necessary to keep the engines in compliance with the standards.
- Submit the test data to EPA along with other information describing the engines within the engine family. This submission is called the “application for certification”.

The certification provisions for new Category 3 engines are discussed more fully below, including discussions of the differences between the requirements the NO<sub>x</sub> Technical Code (NTC) and this final rule.

#### 2. How Are These Certification Requirements Different From Those of the NO<sub>x</sub> Technical Code?

Our certification process is similar to the NTC pre-certification process. However, the Clean Air Act specifies certain requirements for our certification program that are different from the NTC requirements. The EPA approach differs from NTC in three areas: (1) We allow, but do not require witness testing, (2) we include various provisions to hold the engine

manufacturer responsible for the durability of emission controls (*see* Section V.B.5), and (3) we specify broader temperature ranges and allow manufacturers less discretion in setting engine parameters for testing, with the goal of adopting test procedures that represent a wide range of normal in-use operation. Note also, as described in Section III.B, that the timing of the new standards is based on the date of first full assembly of the engine, while NTC generally applies the standards based on the start-date of the manufacture of the vessel, which may occur before the engine is fully assembled.

We believe the regulations in this final rule are sufficiently consistent with NTC that manufacturers can use a single harmonized compliance strategy to certify under both systems. If manufacturers have used good engineering judgment in exercising their discretion for test parameters under the NTC, there will be little or no difference between the two systems. However, we are aware that the short lead time may not allow manufacturers to take whatever steps may be necessary to address any potential differences. As a result, we are adopting an interim provision in 40 CFR 94.12 to allow manufacturers to rely on test data generated under NTC provisions in place of EPA provisions for certifying all categories of engines through the 2006 model year. Beginning with the 2007 model year, EPA may extend this waiver on a case-by-case basis, provided the manufacturer satisfies EPA that any differences between its application of the NO<sub>x</sub> Technical Code test procedures and the test procedures contained in this rule will not adversely affect NO<sub>x</sub> emission rates. For the Category 1 and Category 2 engines subject to this rule, manufacturers will start certifying to EPA's Tier 2 standards starting in 2007. For Category 3 engines, the standards don't change in 2007, but this marks an appropriate time to expect manufacturers to make any minor adjustments that might be necessary to fully comply with the EPA provisions for testing and certification.

The relationship between our program and the NTC requirements is described in more detail in Section V.D.

#### 3. How Does a Certificate of Conformity Relate to a Statement of Voluntary Compliance or an EIAPP?

The Clean Air Act requires that manufacturers obtain a certificate of conformity before they introduce a new engine into commerce. Once it goes into force, MARPOL Annex VI will require manufacturers to obtain an “Engine International Air Pollution Prevention

<sup>33</sup> A copy of the conference version of the NO<sub>x</sub> Technical Code can be found in Docket A-97-50, Document II-B-01. Copies of updated versions can be obtained from the International Maritime Organization (<http://www.imo.org>).