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I. Background

A. What Is the Source of Authority for Development of NESHAP?

Section 112 of the CAA requires us to list categories and subcategories of major sources and area sources of HAP and to establish NESHAP for the listed source categories and subcategories. Engine test facilities were listed as a source category under the fuel combustion industry group, and rocket engine test firing was listed as a source category under the miscellaneous processes industry group in the **Federal Register** on July 16, 1992 (57 FR 31576). These two source categories were combined and renamed engine test cells/stands in the **Federal Register** on May 14, 2002 (67 FR 34547). Major sources of HAP are those that have the potential to emit greater than 10 tons per year (tpy) of any one HAP or 25 tpy of any combination of HAP.

B. What Criteria Did We Use in the Development of the NESHAP?

Section 112 of the CAA requires that we establish NESHAP for the control of

HAP from both new and existing major sources. The CAA requires the NESHAP to reflect the maximum degree of reduction in emissions of HAP that is achievable. This level of control is commonly referred to as the MACT.

The MACT floor is the minimum control level allowed for NESHAP and is defined under section 112(d)(3) of the CAA. In essence, the MACT floor ensures that the standard is set at a level that assures that all major sources achieve the level of control at least as stringent as that already achieved by the better controlled and lower emitting sources in each source category or subcategory. For new sources, the MACT standards cannot be less stringent than the emission control that is achieved in practice by the best controlled similar source. The MACT standards for existing sources can be less stringent than standards for new sources, but they cannot be less stringent than the average emission limitation achieved by the best performing 12 percent of existing sources in the category or subcategory (or the best performing 5 sources for categories or subcategories with fewer than 30 sources).

In developing MACT, we also consider control options that are more stringent than the floor. We may establish standards more stringent than the floor based on the consideration of cost of achieving the emissions reductions, any non-air quality health and environmental impacts, and energy requirements.

II. What Changes and Clarifications Have We Made to the Proposed Standards?

In response to the public comments received on the proposed standards, we made several changes in developing the final rule. Some of the comments and our responses and rule changes are summarized in the following sections. The complete summary of comments and responses can be found in the Response to Comments document, which is available from several sources (see **SUPPLEMENTARY INFORMATION** section).

A. Applicability

The final rule applies to an owner or operator of engine test cells/stands located at major sources of HAP emissions. An engine test cell/stand is any apparatus used for testing uninstalled stationary or uninstalled mobile (motive) engines. Because the proposed rule did not include a definition of uninstalled engine, many commenters requested clarification of uninstalled engine versus installed

engine testing in regards to determining applicability of the final rule.

The final rule clarifies this applicability issue. The final rule regulates the testing of engines, not the testing of any final product (*e.g.*, automobile, boat, power generator, etc.). If the engine being tested in a test cell/stand is not installed in, or an integrated part of, the final product, then the test cell/stand is considered part of the affected source.

This new clarification for uninstalled also clarifies the applicability of testing outboard motors. One of the comments specifically stated that outboard motors operated while detached from a boat should not be considered uninstalled, since "the engine remains coupled to lower unit gear drive and propeller without modification to its vessel-installed configuration."

In the final rule, outboard motors are considered installed when the engine is coupled with the gear drive and propeller. Therefore, a facility with engine testing involving outboard motors, in their vessel-installed configuration, is not an affected source.

Another comment stated that large diesel engines used in locomotives must drive a load in order to be accurately tested. The facility captures the work produced by the engine by driving a generator to provide the load and utilizes the electric power. The commenter wanted to assure that this type of engine testing situation also would not fall into a source category pertaining to power production. We agree with the comment and clarify that the only applicable source category for engine test cells/stands that utilize incidentally produced power is the Engine Test Cells/Stand NESHAP.

Two other comments prompted specific applicability exclusions. One comment from the petroleum refinery industry stated that the engine test cells/stands NESHAP should not apply to petroleum refinery industry sources using knock engine testing. Because knock engines and other devices used for testing fuels and lubricants at refineries do not test the engine per se but instead test the fuels and lubricants for product quality and development purposes, these engines are not covered. The final rule specifically excludes test cells that are operated to test or evaluate fuels (such as knock engines), transmissions, electronics, etc.

Another comment involved universities with aviation programs using engine test stands for education purposes. The final rule specifically excludes research and teaching activities at major source facilities that are not engaged in the development of