

the comment period, as well as the various comments describing test conditions that are significantly different from those used in previously submitted test reports. The EPA also evaluated other rules requiring similar combustion control equipment. The Paper and Other Web Coating NESHAP, subpart JJJJ, has an option of meeting overall emissions reductions of 98 percent. This destruction efficiency achieved through thermal oxidation was generally accepted as the "level of control achievable on a continuous basis under all normal operating conditions applicable to new sources." Therefore, for that particular source category (which involves coatings and cleaning solvents), EPA determined that thermal oxidation was the best control technology and justified setting the emission limits for thermal oxidizers at 98 percent control efficiency or, alternatively, achieving an outlet concentration of 20 parts per million or less.

With this control technology limit in mind, EPA compared the two source categories for similarities and/or differences that could lead to a comparable level of destruction efficiency for engine test cells/stands. Coating operations covered by the Paper and Other Web Coating NESHAP contain large concentrations of solvents that are easily removed through thermal oxidation. Engine testing by-products, on the other hand, are the result (by-products) of an incomplete combustion process, and HAP are typically emitted in significantly lower concentrations than surface coating and solvent cleaning emissions. As noted by the commenters, there are a variety of fuels and test conditions used at different sources for several types of engine tests. (A summary of the submitted test reports and emissions data is included in the docket.) In reviewing the test data submitted by the commenters, we found that even though some of the test reports showed very high destruction efficiencies for thermal oxidizers, the best controlled facilities were only being required to meet 95 percent or 96 percent control volatile organic compounds (VOC), based on their operating permit requirements. These levels of control take into consideration differences in operating conditions for engine test cells/stands. After reviewing the comments and information submitted, we conclude that a maximum control level of 96 percent is appropriate once we consider the differences in HAP emission levels from engines tested, the testing conditions, and also the need to account for

measurement uncertainties. We also conclude that increased compliance flexibility will result from the use of total hydrocarbons (THC) (in addition to CO) for demonstrating compliance. Therefore, the new source emission limits have been changed in the final rule to 96 percent reduction for CO or THC based on the updated test data, additional test reports, and estimates reflecting the most prevalent engine test setups and conditions across all engine testing sectors involving engines greater than or equal to 25 horsepower (hp).

F. Monitoring Requirements

Several commenters requested that the continuous emissions monitoring systems (CEMS) requirements be eliminated or changed to parametric monitoring. The commenters stated that CEMS are too expensive and do not provide any meaningful environmental benefit to justify the capital costs to install them on engine test stands. They also pointed out that in other permitting decisions and guidance documents, EPA has determined that initial stack tests followed by monitoring of operating temperature is a proven and cost-effective way of monitoring oxidizer performance.

The EPA reviewed the monitoring requirements in the proposal and compared them with other similar emission sources. The HAP emitted by engine test cells are the result of byproducts of incomplete combustion. Thermal destruction of these HAP occurs at temperatures between 590 °C and 650 °C (1,100 °F and 1,200 °F), thus making temperature an appropriate parameter to monitor the destruction of HAP. In the case of monitoring a regenerative thermal oxidizer (RTO), the temperature is monitored during the initial performance test. After the RTO meets the performance test requirements and demonstrates compliance with the applicable emission limit, the operating temperature is continuously monitored to verify the performance of the RTO. As a result, we have concluded that parametric monitoring is adequate for ensuring compliance with the emission limit. Thus, we have changed the monitoring requirements in the final rule to allow parameter (temperature) monitoring for thermal oxidizers. Since some facilities may already have existing continuous monitoring equipment in place, CEMS are still included in the final rule as a monitoring option.

G. Cost and Economic Assumptions and Impacts

As a result of the changes to address public comments, the final rule includes

a new estimation of cost impacts. The final rule estimates there will be 18 affected source facilities at a cost of \$3.2 million and a HAP reduction of 65.5 tpy.

H. Startup, Shutdown, and Malfunction (SSM)

The proposed rule specifically required affected sources to comply with the applicable emission limitation at all times, including SSM of the engine test cells/stands. Many commenters disagreed with these provisions. One commenter requested an exclusion for the startup period during which a catalytic oxidizer comes up to operating temperature. The commenter also provided examples of issues involving oxidizer malfunctions: (1) Engines cannot be shut off instantaneously, and excess emissions can occur in the time that it takes to complete an orderly and safe shutdown; and (2) there are certain tests that must be redone at large cost if they are interrupted. An example piston scuff test was described by the commenter as taking about 90 minutes, and if the engine is shutdown, the engine must be rebuilt and the test rerun. In the case of an oxidizer malfunction when such a test is in progress, the commenter requested that the operator be able to complete the test without risk of enforcement action.

The majority of emissions from engine testing occur during the times that would be covered by SSM provisions. Therefore, to ensure that those emissions are controlled, the SSM provisions were excluded from the proposed rule. Because the SSM provisions apply to the process as well as the control equipment, the impact of the engine test NESHAP to minimize HAP emissions would be significantly reduced by adopting the SSM provisions.

Based on the comments, the final rule includes SSM provisions for any control equipment and monitoring equipment related to new or reconstructed affected source emissions. The new language references the General Provisions for SSM procedures related to control equipment. The time required for a catalytic oxidizer to come up to operating temperature is not covered by the SSM provisions because engine testing should not be conducted before the minimum operating temperature (determined during the initial performance test) is achieved.

I. Emissions Averaging

We asked for comments on including some type of averaging provisions, and several commenters recommended that