

strategy could include a number of combustion conditions and work practices which are applied collectively to achieve this goal.

While few sources in EPA's database specifically reported using good combustion practices, the data that we have suggests that boilers and process heaters within each subcategory might use any of a wide variety of different work practices, depending on the characteristics of the individual unit. The lack of information, and lack of a uniform approach to assuring combustion efficiency, is not surprising given the extreme diversity of boilers and process heaters, and given the fact that no applicable Federal standards, and most applicable State standards, do not include work practice requirements for boilers and process heaters. Even those States that do have such requirements do not require the same work practices.

Consequently, EPA was unable to identify any uniform requirements or set of work practices that would meaningfully reflect the use of good combustion practices, or that could be meaningfully implemented across any subcategory of boilers and process heaters. Therefore, EPA is not establishing combustion practice requirements as a part of the MACT floor for new units. However, we have considered the appropriateness of such requirements in the context of evaluating possible above the floor options.

In general, boilers and process heaters are designed for good combustion. Facilities have an economic incentive to ensure that fuel is not wasted, and the combustion device operates properly and is appropriately maintained. In fact, existing boilers and process heaters are used as high efficiency control devices to control (reduce) emission streams containing organic compounds from various process operations. Therefore, EPA's inability to establish a combustion practice requirements as a part of the MACT floor for new sources in this category should not reduce the incentive for owners and operators to run their boilers and process heaters at top efficiency.

Nonetheless, we consider monitoring and maintaining CO emission levels to be associated with minimizing emissions of organic HAP. Carbon monoxide is generally an indicator of incomplete combustion because CO will burn to carbon dioxide if adequate oxygen is available. Therefore, controlling CO emissions can be a mechanism for ensuring combustion efficiency and may be viewed as a kind of GCP. As discussed previously in this

preamble, CO is considered a surrogate for organic HAP emissions in the proposed rule.

To determine if CO monitoring would be the basis of the new source MACT floor for organic emissions control, we examined available information. The population databases did not contain information on existing units monitoring CO emissions. We reviewed State regulations applicable to boilers and process heaters that required the use of CO monitoring to maintain a specific CO limit. We then matched the applicability of each of the State regulations with information on the locations and characteristics of the boilers and process heaters in the population database for each subcategory to determine if each subcategory would have at least one unit that would be required to meet the CO requirements. The analysis of the State regulations indicated that at least one of the boilers and process heaters in the large and limited use subcategories for solid fuel, liquid fuel, and gaseous fuel were required to monitor CO emissions and meet a CO limit of 400 parts per million. Therefore, the new source MACT floor level of control includes a CO work practice standard of 400 parts per million for large and limited use units, reflecting the MACT floor level of control for emissions of organic HAP.

We concluded for new units that, except for CO monitoring for organic HAP, add-on control technology is the only factor that significantly controls emissions. To determine the MACT floor for new sources, EPA reviewed the population database of existing major sources. Data for units not meeting the definition of an industrial, commercial, or institutional boiler or process heater were removed from the database. Also, boilers and process heaters that would not be covered by the proposed rule, including units located at area source facilities, were not included in the analyses. As with the existing source analysis, the remaining units in the population database were first divided into three subcategories: gaseous fuel-fired units, liquid fuel-fired units, and solid fuel-fired units. They were further divided into normal use units (units with greater than 10 percent capacity utilization) and limited use units (units with less than or equal to 10 percent capacity utilization) based on hours of operation and additional descriptions provided in the population database. Units were further divided into large units (greater than 10 MMBtu/hr heat input) and small units (less than or equal to 10 MMBtu/hr heat input).

Based upon the emission reduction potential of existing air pollution control devices, EPA listed all the boilers and process heaters in the population database in order of decreasing control device effectiveness for each subcategory and each type of pollutant. Once the ranking of all existing boilers and process heaters was completed for each subcategory and type of pollutant, EPA identified, for each grouping, the control technology used by the best controlled unit. Then, for each pollutant type in each subcategory, we used the available emission test data from units using the best control technology to identify the single unit with the best average measured performance. We then calculated an emission limit, based on the measured performance of this single unit, by applying an appropriate variability factor to account for unavoidable variations in emissions due to uncontrollable variations in fuel characteristics.

The approach that we use to calculate the MACT floors for new sources is somewhat different from the approach that we use to calculate the MACT floors for existing sources. While the MACT floors for existing units are intended to reflect the average performance achieved by a representative group of sources, the MACT floors for new units are meant to reflect the emission control that is achieved in practice by the best controlled source. Thus, for existing units, we are concerned about estimating the central tendency of a set of multiple units, while for new units, we are concerned about estimating the level of control that is representative of that achieved by a single best controlled source. As with the analysis for existing sources the new unit analysis must account for variability. To accomplish this for new sources, for the fuel dependent HAP emissions, we attempt to determine what the best controlled source can achieve in light of the inherent and unavoidable variations in the HAP content of the fuel that such unit might potentially use. For non-fuel dependent HAP emissions, on the other hand, we look at the inherent variability of the control technology used by sources in the category. These approaches, respectively, represent the most reasonable way to estimate performance for purposes of establishing MACT floors for new units, given the data available.

Thus, for new units, after identifying the best control technology for each pollutant group within each subcategory (based on the control technology rankings), EPA examined the emissions