

choosing 98 percent control efficiency is more representative of what the thermal oxidizers can consistently achieve in practice.

One commenter objected to this procedure, stating that the CAA directs us to consider only the actual performance of the sources used to establish the MACT floor. The commenter believed that we should revise the MACT floor and emission limits based on the reported performance of the five best performing sources. While we agree that the CAA directs us to base the MACT floors on actual performance, we believe that the test data do not accurately represent actual performance because of the high-volume, low-concentration nature of the emission streams.

In response to this comment, we decided to reevaluate the process vent MACT floor by considering organic and inorganic streams separately, as suggested by another commenter. By doing so, we can more accurately assess the performance of the different control devices used for these two types of emission streams.

Organic emission streams are almost always controlled by some type of thermal oxidation. As discussed above, measurements of thermal oxidizer performance can be unreliable for high-volume, low-concentration streams. Thus, we continue to believe that the test data for organic HAP emission control we obtained for thermal oxidizers controlling semiconductor manufacturing process vents may not accurately portray actual performance. Thus, our original selection of a known achievable emission reduction percentage, as used for MACT in rules such as the Hazardous Organic NESHAP or HON (57 FR 19402), better represents actual performance as directed by the CAA. For the final rule, we retained 98 percent control as the emission limit for organic emission streams from process vents. We also retained the alternative emission limit of 20 parts per million by volume (ppmv) for organic emission streams.

For inorganic emissions from process vents, all the data we obtained showed that scrubbers were used to control those emissions. Unlike thermal oxidizers, scrubbers experience less erratic performance characteristics with high-volume, low-concentration emission streams. Accordingly, we were able to use the actual performance data to establish the MACT floor for the control of inorganic emissions from process vents. Again, using the top five best performing process vents, we established the MACT floor as 95 percent control. Based on the actual

outlet emissions of those five process vents, we established the alternative emission limit as 0.42 ppmv.

Storage tanks. We received comments on whether all of the tanks we included in the MACT floor analysis were the type of tank we intended to regulate through the rulemaking. The comments provided additional clarifying information on a number of the tanks we used to develop the MACT floor. Specifically, the comments questioned whether storage tanks for wastewater with very low concentration of HAP, waste storage tanks already covered under the Resource Conservation and Recovery Act (RCRA), and wastewater treatment tanks should have been included in the MACT floor analysis.

With the exception of wastewater treatment tanks, it was our intent to include all of these types of tanks in the affected source. However, based on the additional information provided by the industry, we have concluded that it was not appropriate to develop one MACT floor for all types of tanks due to the wide range of emissions from the each type of tank. Therefore, we developed separate MACT floors for chemical storage tanks (including waste storage tanks regulated under RCRA) and wastewater storage tanks.

We found that the level of control, based on the top five best performing sources in each data set, is the same for each type of tank. The level of control is to reduce emissions through the use of a scrubber and is identical to the level of control used to establish the MACT floor that was the basis of the emission limits in the proposed rule. However, based on other comments we received, we have decided not to use the same MACT floor procedure for the final rule.

Since the semiconductor industry storage tank emission streams will have similar characteristics to those of process vents (*i.e.*, low pollutant concentration), rather than hydrochloric acid production industry storage tanks, we now believe the most representative similar sources for evaluating the MACT floor for storage tanks are the semiconductor industry process vents. Therefore, in response to the comments concerning our use of hydrochloric acid production industry storage tanks as the most representative similar source, we are adopting the process vent inorganic HAP emission limits for all storage tanks required to control emissions in the final rule.

The comments we received clarified that the reported wastewater treatment tanks were not actually storage tanks but flow-through tanks used for certain continuous treatment processes such as pH adjustment. The tank volume merely

allows for a buffer so that the treatment can be adequately carried out. All of the flow-through tanks in the data supplied by the industry are controlled by scrubbers. However, the industry also provided information that the purpose of all of these scrubbers was primarily to control ammonia odors. We do not believe that requiring scrubbers on flow-through tanks would result in significant reductions of HAP emissions, nor was it our intent in the proposed rule to regulate such tanks. Therefore, the definition of storage tank that we added to the final rule clarifies that flow-through tanks are not considered storage tanks for the purposes of the final rule.

We made an additional change for the final rule based on our revised storage tank MACT floor analysis. Because we eliminated several tanks from the data set used in the MACT floor analysis, the cutoff for the smallest size tank for which the final rule applies increased from 800 gallons to 1,500 gallons. We also revised our analysis of alternatives more stringent than the MACT floor to reflect the increased tank size. We found that the cost per ton of additional emission reduction (approximately \$300,000/ton) is still too great to warrant a more stringent level of control. We have also included a definition for "storage tank" to 40 CFR 63.7195 to clarify which tanks we intended to be subject to the final rule.

B. Compliance Options and Procedures

As part of our reevaluation of the MACT floors for process vents as described above, we also considered other compliance options to reflect our position on the performance of control devices. While we believe the performance of scrubbers controlling high-volume, low-concentration emission streams can be measured, we also recognize that control efficiency cannot always be reliably predicted for such streams. Also, facilities may choose to use a control device other than a scrubber which may be more difficult to measure performance. For these situations, we have included a compliance option to the final rule (see 40 CFR 63.7187(i)) that allows a source to perform a design evaluation of the add-on control device. If the inlet concentration of inorganic HAP is less than or equal to 20 ppmv, then the facility may choose to perform a design evaluation of the control device that demonstrates the device is capable of achieving the required control efficiency.

We chose 20 ppmv as the cutoff for allowing a design evaluation because the data we obtained showed erratic