

kilns are not readily available for roller kilns.

We acknowledge that the control technologies (DIFF, DLS/FF, and WS) that formed the basis for the proposed emission limits for new and reconstructed clay ceramics kilns are not currently in use on any domestic clay ceramics kiln. However, section 112(d) of the CAA requires us to establish emission limits for new sources based on the performance of the best-controlled similar source. The CAA does not specify that the similar source must be within the same source category. To the contrary, our interpretation of section 112(d) of the CAA is that we are obligated to consider similar sources from other source categories in determining the best-controlled similar source for establishing MACT for new sources.

We have reevaluated our subcategory and best-controlled similar source determinations for new and reconstructed clay ceramics kilns. We maintain that MACT for new and reconstructed periodic kilns does not require use of add-on APCD because the best-controlled similar source is uncontrolled. In addition, based on the comments received and other information, we have concluded that there are significant differences between clay ceramics tunnel kilns and roller kilns. We believe that differences in the operation of BSCP tunnel kilns and tile roller kilns, particularly with respect to the duration of firing, result in emission characteristics that are likely to be very dissimilar. As a result, we cannot assume that APCD that have been demonstrated to be effective for reducing HF and HCl emissions from BSCP tunnel kilns are feasible for tile roller kilns. Therefore, we have concluded that BSCP tunnel kilns cannot be considered similar sources to tile roller kilns, and we have determined that MACT for new and reconstructed clay ceramics tile roller kilns does not include control with an add-on APCD.

We disagree that there are technological differences between clay ceramics tunnel kilns and BSCP tunnel kilns. Some tunnel kilns actually produce both ceramic tile and structural clay tile (a structural clay product). Regarding the effect of glazing on emissions, we cannot refute that the glazes applied to sanitaryware form a seal that could prevent further release of certain pollutants from the body of the ware. However, we have no information that indicates that the sealing becomes effective before HF and HCl are released. To the contrary, we have data from several tests on sanitaryware kilns

that quantify HF emissions, and the tests indicate that uncontrolled emissions are within the range emitted from BSCP kilns.

We maintain that the best-controlled similar source for a clay ceramics tunnel kiln is a BSCP tunnel kiln. As discussed in section II.D of this preamble, MACT for new and reconstructed BSCP tunnel kilns with design capacities less than 9.07 Mg/hr (10 tph) of fired product is based on use of a DLA, while MACT for new and reconstructed BSCP tunnel kilns with design capacities equal to or greater than 9.07 Mg/hr (10 tph) of fired product is based on use of DIFF, DLS/FF, or WS. Thus, we have adopted the same requirements for new and reconstructed clay ceramics tunnel kilns. New and reconstructed clay ceramics tile and sanitaryware tunnel kilns with design capacities less than 9.07 Mg/hr (10 tph) of fired product will be required to meet emission limits based on the levels of control that can be achieved by a kiln controlled with a DLA. The emission limits for HF are 0.029 kg/Mg (0.057 lb/ton) or at least 90 percent reduction. For HCl, the emission limits are 0.13 kg/Mg (0.26 lb/ton) or at least 30 percent reduction. For PM, which is used as a surrogate for HAP metals, the emission limit is 0.21 kg/Mg (0.42 lb/ton). For new and reconstructed clay ceramics tile and sanitaryware tunnel kilns with design capacities equal to or greater than 9.07 Mg/hr (10 tph) of fired product, we have revised the emission limits (based on the levels of control that can be achieved by a kiln controlled with a DIFF, DLS/FF, or WS) to reflect new data that were considered in the development of the final BSCP rule, as discussed in section II.F of this preamble. The revised HF emission limits are 0.029 kg/Mg (0.057 lb/ton) or at least 90 percent reduction. The revised HCl emission limits are 0.028 kg/Mg (0.056 lb/ton) or at least 85 percent reduction. The PM emission limit remains unchanged (from proposal) at 0.060 kg/Mg (0.12 lb/ton).

Similar to the requirements for existing sources, we added a work practice standard that requires facilities to use natural gas, or an equivalent fuel, to fire all new or reconstructed clay ceramics periodic kilns, tunnel kilns, and roller kilns, except during periods of natural gas curtailment or other periods when natural gas is not available.

Similar to the requirements for BSCP tunnel kilns, two types of clay ceramics tunnel kilns that would otherwise be considered reconstructed do not meet the definition of reconstruction in 40 CFR 63.2. We have added language in

40 CFR 63.8450(f) to provide that it is not technologically and economically feasible for these two types of existing kilns that would otherwise meet the criteria for reconstruction under 40 CFR 63.2 to meet the relevant standards—*i.e.*, new source MACT. The two types of kilns are existing tunnel kilns with design capacities less than 9.07 Mg/hr (10 tph) of fired product whose design capacities are increased such that they are equal to or greater than 9.07 Mg/hr (10 tph) of fired product, and existing DLA-controlled tunnel kilns with design capacities equal to or greater than 9.07 Mg/hr (10 tph) of fired product. These sources will be required to meet emission limits based on the levels of control that can be achieved by a kiln controlled with a DLA. They also will be subject to the work practice standard that requires facilities to use natural gas, or an equivalent fuel, to fire all kilns, except during periods of natural gas curtailment or other periods when natural gas is not available.

We acknowledge that the higher airflow rates that are characteristic of clay ceramics kilns result in lower pollutant concentrations in the exhaust stream, and that control efficiency limits (or percentage reduction limits) are more difficult to achieve when exhaust gas concentrations are lower. For that reason, we proposed and are promulgating today production-based mass emission limits as alternatives to the HF and HCl percentage reduction limits. Exhaust gas concentrations have no effect on mass emission rates, provided the concentrations are above the test method detection limit. The mass emission rate (*e.g.*, pounds of pollutant emitted per hour) for a source is unchanged regardless of how much dilution air is introduced. Therefore, even though a clay ceramics kiln with a diluted exhaust stream may not be able to meet the percentage HF and HCl reduction limits, the available data indicate that a kiln that is controlled to the new source MACT level will be able to meet the production-based emission limits for HF and HCl, as well as the production-based limit for PM.

D. Cost and Economic Impacts

Several commenters stated that EPA underestimated the cost per ton of pollutant removed at proposal. In general, the commenters felt the costs were unreasonable. Commenters questioned the public health benefits of the proposed clay ceramics rule.

One commenter stated that EPA entirely misunderstood the economic state of the ceramic tile industry in the U.S., and therefore, grossly underestimated the economic impact of