

believe it is important to account for seasonal variations and examine data covering 1 year or more to account for variability due to differences in ventilation rates, weather conditions, and changes in the process over time. We found that the casthouses with the lowest opacities were those with secondary capture and control systems. For some casthouses, most of the 6-minute averages were routinely below the proposed 20 percent limit with occasional readings that approached or exceeded 20 percent. The blast furnace casthouses at U.S. Steel (Gary) achieved the 20 percent opacity limit 99 to 100 percent of the time. One blast furnace casthouse had a maximum 6-minute average of 21 percent opacity, and another casthouse had a maximum of 20 percent opacity. At Ispat-Inland, the casthouses achieved 20 percent opacity 98 to 99.6 percent of the time. At LTV Steel, the casthouses achieved 20 percent opacity 99.5 to 99.8 percent of the time. These blast furnaces were achieving the 20 percent limit, but they were not demonstrably able to consistently achieve a level of performance more stringent than this limit. Consequently, the opacity data confirm that the 20 percent opacity limit based on the median value of the sources with the five most stringent emission limits is an accurate reflection of the MACT floor.

*Comment.* Eight commenters contend that the limits are not consistently achievable under the worst foreseeable conditions over time even by the casthouses used to establish the MACT floor. In support, the commenters claimed they had provided opacity data showing that the limits have not been consistently achieved by well-operated and maintained casthouses. Achievability of the opacity limit for blast furnace casthouses is of particular concern because the process is subject to infrequent but significant swings in emission rates. The commenters recommend that EPA collect and analyze all available opacity data from States, Regions, and industry and determine the standard based on achievability. They recommend using a statistically-derived limit based on a high confidence level (the 99.97th percentile) to avoid an unachievable standard that would result in many violations.

*Response.* Following proposal, in order to confirm the appropriateness of the proposed opacity limit, we collected additional opacity data and identified the best-performing sources in terms of low opacity. Our analysis considered all of the opacity data submitted by the commenters and data obtained from

other sources. For the five best-performing blast furnace casthouses (*i.e.*, lowest opacities) with observations over at least 1 year, a 20 percent opacity limit was achieved for 99 to 99.8 percent of the time. We believe the data clearly show that an opacity limit of 20 percent represents what has been achieved by the best-performing sources and that it can be achieved on a continuing basis.

#### 8. Opacity Standards for BOPF Shops

*Comment.* Eight commenters contend that the limits are not consistently achievable under the worst foreseeable conditions over time. They claim that opacity data submitted to EPA by the industry demonstrate that the limits are not consistently achieved by well-operated and maintained BOPF shops, and as a result, EPA must reevaluate the achievability of the proposed opacity standards.

*Response.* Following proposal, in order to confirm the appropriateness of the proposed 20 percent opacity limit, we obtained additional opacity data for operating BOPF shops to supplement the limited data we had available at proposal. We now have opacity data for 19 of the 23 existing BOPF shops ranging in coverage from a single 2-hour test to multiple tests covering several years of observations. Our analysis considered all of the opacity data submitted by the commenters and data obtained from other sources. We examined the data and found that the best-controlled BOPF shops were those with secondary capture and control systems. In contrast, several BOPF shops without secondary controls experienced frequent exceedances of the 20 percent opacity limit. A total of eight BOPF shops have capture systems for secondary emissions that are vented to baghouses. We re-evaluated the data to determine the appropriateness and achievability of the proposed 20 percent opacity limit. We focused on BOPF shops for which we had a reasonable amount of long-term data. Specifically, we examined opacity data only from shops for which we had 12 months or more of observations (*i.e.*, all seasons of the year), which included observations for 11 of the 23 existing shops. The five best-performing shops achieved the limit 99.5 to 99.98 percent of the time. These data clearly indicate that the best-performing units in the category achieve the proposed opacity limit (but do not achieve a more stringent level of control), and, therefore, that the State limits are a good proxy for actual best performance. Thus, we are confident that the proposed opacity limit of 20 percent is achievable and that it

provides an accurate picture of the actual performance achieved by the best-performing sources.

Our analysis of the opacity data for BOPF shops indicated that opacity observations are routinely made over several consecutive steel production cycles. In the proposal, we had included a provision that the opacity observations during the performance test did not have to be consecutive. In today's final rule, we have removed the provision which allowed non-consecutive observations. This is consistent with the opacity data used to support the opacity limit and with the procedures routinely used to make opacity observations for BOPF.

#### 9. Sinter Cooler Stack

*Comment.* Six commenters note that one of the plants used to calculate the MACT floor is permanently shut down. Consequently, the floor analysis does not reflect the SIP requirements for actual operating sources. In addition, EPA has not shown that the proposed standard is achievable by the best-performing sources under the foreseeable range of operating conditions.

*Response.* Our investigation into this comment indicates that all five of the sinter plants listed in Table B-11 of the BID are operating (Ispat-Inland at East Chicago, IN; WCI Steel at Youngstown, OH; Bethlehem Steel at Sparrows Point, MD; U.S. Steel at Gary, IN; and AK Steel at Middletown, OH). Because we had only limited test data, we based the MACT floor on the average of the top five sources subject to the most stringent existing State regulations or permit limits. One plant has a limit of 0.01 gr/dscf (for one-half of its cooler), three of the five best-performing plants are subject to a limit of 0.03 gr/dscf, and one plant has a lb/hr limit that is equivalent to about 0.05 gr/dscf. The average and median limit applied to the top five plants is 0.03 gr/dscf. Although our data are limited, they show that the proposed emission limit is achievable and has been achieved based on the available test results. Nationwide, baghouses are used at three plants, a cyclone at one plant, and three plants are uncontrolled. Consequently, the best-performing plants and the median of the top five would be a plant with a baghouse. A test at WCI Steel, which controls these emissions with a baghouse, ranged from 0.005 to 0.02 gr/dscf and averaged 0.009 gr/dscf. The results for WCI show significant variability in the run-to-run results, which range up to 0.02 gr/dscf. The test results indicate that the better-controlled plants can achieve the limit