

Comment: Two commenters took issue with the monitoring requirements for catalytic oxidizers. The first commenter claimed that testing of the catalyst activity is unnecessary (as long as the temperature differential is maintained, the catalyst is effective); is inconsistent with the requirements under other rules that frequently share the device; and would force annual outages of the control device for sampling with significant negative environmental impacts and costs. The commenter recommended that the monitoring requirements for catalytic oxidizers be based on the 40 CFR part 63, subpart SS, requirements, which are based on the HON requirements. The other commenter suggested that vendor guarantees/warranties for catalytic incinerators be allowed as an alternative to the annual catalyst test or quarterly temperature differential check. This commenter noted that some catalyst vendors will supply a warranty if certain work practices are followed, such as raising the inlet temperature according to a set schedule. This commenter's experience indicated that temperature differential set at maximum load across the bed is not a particularly good indicator of catalyst activity for a variable process vent stream.

A third commenter expressed support for the monitoring requirements for catalytic oxidizers in the proposed rule, but requested that we make it clear that the catalyst activity test is not the only compliance alternative allowed and define what an annual catalyst test entails. The commenter further stated that, if a performance test must be done annually, EPA should consider if the cost of a performance test (e.g., \$15,000) can be justified annually. If verifying the catalyst activity does not require a performance test, then the commenter stated EPA should establish guidelines on how to conduct the annual test.

Response: We agree that maintaining a temperature differential across the bed is evidence that the catalyst is effective, and it is a valid means of demonstrating ongoing compliance. It also is the requirement specified in subpart SS and many other rules and by referencing subpart SS, it is included in the final rule. However, we also included the catalyst test option from the proposed rule because, as one commenter points out, it is difficult to maintain the required differential across the catalyst bed when the organic load into the catalytic incinerator fluctuates, even though it may actually still be achieving the same reduction efficiency. This could be a particular concern when the initial performance test must be conducted under worst-case conditions,

which generally is the maximum load. This option requires catalyst bed inlet temperature monitoring and an annual catalyst activity level check. When monitoring only the inlet temperature, the catalyst activity level check also is needed; unlike thermal oxidizers, catalytic oxidizer performance cannot be ensured simply by monitoring the operating temperature. Catalyst beds can become poisoned and rendered ineffective without any apparent change in operation. An activity level check can consist of passing an organic compound of known concentration through a sample of the catalyst, measuring the percentage reduction of the compound across the catalyst sample, and comparing that percentage reduction to the percentage reduction for a fresh sample of the same type of catalyst. Based on information from a company that offers such services, the cost is less than \$800.

We do not agree that vendor guarantees based on following specific work practices are an acceptable alternative for monitoring the performance of catalytic oxidizers. Our experience is that the performance of air pollution control devices can degrade over time if they are not properly maintained, and that most owners and operators try to follow the vendor's recommended work practices as a preventative measure. In some cases, the vendor guarantees are only valid during the first year of operation of the control device. More importantly, basing compliance solely on vendor guarantees (that are tied to work practices) would mean that an "unexpected" deterioration in the performance of the catalytic oxidizer would go undetected and unreported because no direct monitoring of the catalytic oxidizer would be performed. Therefore, the final rule does not include the suggested alternative.

Comment: Three commenters stated that the requirement for continuous pH monitoring for caustic scrubbers is unwarranted and often impractical. For batch operations, these commenters stated that it should only be necessary to verify that the scrubber is operating properly just before and just after each batch. The commenters also asserted that continuous pH meters are often unreliable in harsh service conditions and are subject to plugging, corrosion, or contamination.

Two commenters stated that measurement of pH is not appropriate for caustic scrubbers because most, if not all, have a pH near 14, which makes the measurement irrelevant. According to the commenters, the titration curve is typically so steep that the pH

measurement is not useful in controlling the scrubber. These commenters requested that the final rule be written to allow the measurement of caustic strength without the need to request EPA approval; otherwise, numerous facilities will need to request approval to measure caustic strength daily in lieu of daily pH monitoring, which would appear to place an undue burden on facilities and the regulatory organizations that must review the site-specific plans.

Response: As previously noted, the final rule references the monitoring requirements in subpart SS. For all halogen scrubbers (including caustic scrubbers), § 63.994 requires continuous pH monitoring. We have decided to retain the requirement for continuous monitoring in the final rule. This approach maintains consistency with other rules that reference subpart SS. It also addresses the commenters' concern that the steep titration curve makes pH a poor parameter for daily monitoring when pH is normally about 14 (i.e., for systems where the recirculating scrubber solution is replaced on a batch basis rather than continuously adjusted to maintain relatively constant conditions). Finally, we have decided to allow continuous measurement of caustic strength at the scrubber outlet as an alternative to the continuous monitoring of pH because caustic strength is directly related to pH.

Comment: Many commenters objected to the requirement to calculate a daily 365-day rolling summation of emissions to demonstrate compliance with the 10,000 lb/yr limit for batch process vents. According to these commenters, sources should be allowed to calculate a 12-month rolling summation instead of the daily summation because daily calculations would be burdensome, particularly for facilities manufacturing many products or products with emissions well below the limit. One of the commenters also suggested replacing the 365-day rolling summation calculation with methodology, like in 40 CFR part 63, subpart JJJ, whereby the highest-emitting batch recipe for any given product is determined and the number of batches are recorded to demonstrate that a process has less than 10,000 lb/yr uncontrolled emissions. Two commenters also are uncertain how to calculate daily emissions from batch processes that are carried out over several days. Another commenter indicated that the existing monitoring and recordkeeping requirements in title V and/or state minor new source review permits are sufficient to demonstrate compliance with the limit.