

subject to the final rule would no longer be subject to §§ 61.52(a), 61.53(b) and (c), and 61.55(b), (c) and (d) of 40 CFR part 61, subpart E, after the compliance date, which is December 19, 2006.

II. Summary of Changes Since Proposal

The proposed rule contained a compliance date 2 years from the date that the final rule would appear in the **Federal Register**. In the final rule, the compliance date has been changed to 3 years from December 19, 2006. However, unlike the proposed rule, which would have required that performance tests be conducted within 180 days after the compliance date, the final rule requires that all performance tests be conducted on or before the compliance date.

For mercury cell chlor-alkali production facilities affected sources, the proposed rule included a single emission limitation that covered all mercury emissions from the two point sources associated with chlorine production in mercury cells: the by-product hydrogen stream and the end box ventilation system vent. The format of this limitation was total grams of mercury per Megagram of chlorine production (g Hg/Mg Cl₂). For the initial compliance determination, the aggregate mercury emissions from all hydrogen by-product streams and all end box ventilation system vents were divided by the chlorine production for the same period and compared with the applicable emission limitation. Continuous compliance would have then been demonstrated by continuously monitoring the mercury concentration in each stream and comparing the daily average mercury concentration against a level determined during the initial compliance test. Commenters objected to this daily averaging period for compliance purposes when the emission limitations were based on annual average emissions and chlorine production. In response to these comments, we have written the averaging time for continuous compliance as a 52-week period. Further, as discussed more below, rather than establishing surrogate mercury concentration operating limits for each vent, continuous compliance is determined by a direct comparison of the emissions per unit of chlorine production (g Hg/Mg Cl₂) for each 52-week compliance period and the emission limitation. This is a rolling average compliance period that is determined each week. That means a compliance determination is required each week for the previous 52-week period.

In addition to the averaging time for the by-product hydrogen/end box ventilation system vent, we changed the value of the emission limitation for plants with end box ventilation systems from the proposed limit of 0.067 g Hg/Mg Cl₂ to 0.076 g Hg/Mg Cl₂. The proposed limit of 0.033 g Hg/Mg Cl₂ for plants without end box ventilation systems is retained in the final rule.

In the final rule, we have written the method for determining continuous compliance for the point sources of emissions in both types of affected sources covered by the rule (by-product hydrogen streams and end box ventilation system vents at mercury cell chlor-alkali production facilities and mercury thermal recovery unit vents at mercury recovery facilities). In the proposed rule, performance tests would have been required to determine initial compliance with the applicable emission limitation. The proposed rule also would have required that the mercury concentration of each vent be monitored during these performance tests, and that a mercury concentration operating limit be established for each vent based on the monitoring results obtained during the test. Compliance with the emission limitation would have then been determined by comparing the results of the continuous monitoring of mercury concentration against the established operating limits. There were several comments received on this approach.

In response to these comments, continuous compliance in the final rule is determined via a direct comparison of emissions to the emission limitation rather than using mercury concentration operating limits as a surrogate. For by-product hydrogen streams and end box ventilation system vents, the aggregate mercury emissions will be determined, divided by the corresponding chlorine production, and compared with the emission limitation for each 52-week compliance period (as discussed above). For mercury thermal recovery unit vents, the measured mercury concentration will be directly compared against the emission limitations (which are in units of milligrams of mercury per dry standard cubic meter, or mg/dscm). Also, the final rule contains two options for measuring the mercury emissions for continuous compliance: Continuous mercury emission monitoring systems, and periodic sampling using EPA reference methods or approved alternative methods.

The proposed work practice provisions included a cell room monitoring program, which would have required that the mercury concentration be monitored in the cell room and

corrective action taken when a plant-specific action level was exceeded. The final rule retains the cell room monitoring program, but it is as an alternative to the work practices. The optional cell room monitoring provisions in the final rule are more detailed and prescriptive than the requirements in the proposed rule, and the final rule requires the preparation and submittal of site-specific cell room monitoring plans. Since the cell room monitoring program was made optional, the final rule requires (if optional cell room monitoring is not chosen) the owner or operator to institute a floor-level mercury vapor measurement program. This program is designed to limit the amount of mercury vapor in the cell room environment through periodic measurement of mercury vapor levels.

The final rule also requires that the owner of each mercury cell chlor-alkali plant report the mass of virgin mercury added to the cells. Initial compliance with this requirement is demonstrated by reporting the mass of mercury added to cells for the 5 years preceding the compliance date. This is a requirement requested by commenters.

III. Summary of the Final Rule

A. What Is the Source Category?

The chlorine production source category contains the mercury cell chlor-alkali plant subcategory and includes all plants engaged in the manufacture of chlorine and caustic in mercury cells. Other non-mercury cell chlorine production plants used to produce chlorine and caustic, such as diaphragm cell and membrane cell technologies, are not covered by the final rule.

B. What Are the Affected Sources and Emission Points To Be Regulated?

The final rule defines two affected sources: Mercury cell chlor-alkali production facilities, and mercury recovery facilities. The former includes all cell rooms and ancillary operations used in the manufacture of chlorine, caustic, and by-product hydrogen at a plant site. The latter includes all processes and associated operations needed for mercury recovery from wastes.

Emission points addressed within mercury cell chlor-alkali production facilities include each mercury cell by-product hydrogen stream, each mercury cell end box ventilation system vent, and fugitive emission sources throughout each cell room and various areas. Emission points addressed within mercury recovery facilities include each