

The preamble for the final HWC rule makes this point clearly:

. . . However, for sources not burning hazardous waste and without a significant potential for extreme variability in metals feed rates, PM is an adequate surrogate for metal HAP (e.g., for nonhazardous waste burning cement kilns).¹

Hazardous waste combustors are unique and different from integrated iron and steel sources in several respects:

- They have significant levels of volatile and semi-volatile HAP metal compounds in the waste-derived fuels being burned,
- The feed rate of these metals can be highly variable, and
- The high temperatures in the combustion process can volatilize semi-volatile metals and form fine PM, which can be harder to control. In contrast, the raw materials used in iron and steel processes have relatively low levels of metal HAP, the level of metal HAP does not vary significantly as do the HAP metals in waste materials fed to HWC, and test data indicate that PM control devices effectively control the HAP metals from iron and steel processes.

A key parameter for the control of both semi-volatile and non-volatile metal compounds is the operating temperature of the air pollution control device that is applied. At temperatures of 200 to 400°F, the range typical of control devices applied to emissions from integrated iron and steel processes, any semi-volatile and non-volatile HAP metal compounds present would exist in the form of fine PM, and, therefore, will be controlled in direct relationship to PM.

Mercury is an exception because of its high volatility. However, we have no data that show any significant emissions of mercury from integrated iron and steel plants, and there is no reason to suspect its presence in any appreciable quantities in emissions from ironmaking and steelmaking. In the two sinter plant tests we conducted, we sampled and analyzed for mercury. The results showed only trace levels of mercury (7×10^{-7} to 2×10^{-6} gr/dscf). Thus, we believe that mercury emissions from integrated iron and steel sources are negligible and that the performance of these units with respect to any trace levels of mercury can not be measurably improved. Moreover, no iron and steel plants operate an emissions control system that would further reduce these trace amounts of mercury emissions, or otherwise take any steps that would reduce such emissions. Because no

units currently reduce mercury emissions from the integrated iron and steel industry, the MACT floor for mercury (for both new and existing sources) would be no reduction in emissions. Because the mercury concentrations are already so low, no technically feasible control technologies can be identified that could reduce these trace levels of mercury emissions. Therefore, no mercury emissions standards are proposed for integrated iron and steel sources.

2. Oil Content for Organic HAP

Comment. Two commenters urged us to establish emission standards for specific organic HAP, including dioxin, in lieu of the oil content limit. One commenter contends that the proposed rule should contain emission limits for the many organic HAP emitted from iron and steel plants, including dioxin, polycyclic organic matter, benzene, and toluene. The proposed operating requirement for sinter plants is not an emission standard and does not satisfy CAA requirements. Furthermore, regulations pursuant to section 112 of the CAA must include emission standards for each HAP emitted from an affected source category. The commenter adds that EPA provided no data in support of the proposed approach for controlling dioxin emissions. This commenter believes the proposed rule effectively ignores organic HAP in contradiction of CAA requirements because vapor phase organics are not removed by the fabric filters or wet scrubbers.

Several commenters contend that EPA has not met its requirements to show a correlation between the surrogate to be controlled and the object of control. Two commenters state that EPA has not provided sufficient data to demonstrate a correlation. Eight other commenters do not believe that there is a correlation to dioxin emissions or that control of the oil and grease would reduce HAP organic emissions. In support, they claim data from one plant (Bethlehem Steel, Sparrows Point) show no VOC increase in windbox emissions as oil content increases.

Response. The only available data regarding organic HAP emissions from these units are from two tests we conducted. These tests are insufficient to generate a meaningful characterization of emission control levels that can be achieved under varying process conditions over time, and there is no way to use this emissions test data to identify the best-performing plants. Moreover, the add-on emission controls used by units in the category (baghouses and venturi

scrubbers) do not control vapor phase organic compounds. As a result, we believe that the best way to assess current levels of VOC emission control, and to limit such emissions is to rely upon existing methods of pollution prevention. Accordingly, we have established limits on the amount of organic HAP precursor material (specifically oil and grease) that may be in the sinter feed, in order to control emissions of organic compounds. Additionally, section 112(d)(2) of the CAA specifically allows EPA to establish MACT standards based on emission controls that rely on pollution prevention techniques.

We have added information to the docket from a European study that shows dioxin emissions are related to oil content-emissions increase as the oil content increases. We have also added information from two U.S. sinter plants that show VOC emissions increase as oil content increases, and the VOC contains volatile HAP such as benzene. In fact, plants in Indiana control VOC emissions by limiting the amount of oil in the sinter feed. Because the two are related, Indiana allows monitoring oil content as an alternative to VOC monitoring. In the past, sinter plants with baghouses have voluntarily limited oil content because the organic compounds that were emitted tend to condense and blind the bags as well as pose a fire hazard. We believe these studies conclusively show that oil content correlates with organic emissions.

An emission limit for individual organic compounds is not practical because the emission controls that are used do not effectively control all organic HAP. Conventional control systems used for organics, such as incineration or carbon adsorption, would not be practicable because they are ineffective at the very low concentration (parts per million levels) in the windbox exhaust stream. On the other hand, a limit on oil content effectively limits emissions of organic HAP, and control of oil content is a proven emission control measure. Consequently, in this instance, we believe that a limit on oil content is the only feasible way to ensure that all plants achieve the MACT level of control for organic HAP from the sinter plant windbox exhaust.

C. Is a Risk Analysis Warranted?

Comment. Seven commenters urge EPA to perform a risk assessment under section 112(d)(4) of the CAA for manganese to determine if HAP controls are necessary. Manganese is a health threshold pollutant, and there is little likelihood of chronic or widespread

¹ See Footnote 40 in preamble to the final HWC rule (64 FR 52846, September 30, 1999).