

National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters; Proposed Rule

Comments from the Kentucky Division of Air Quality (Division)

I. Definition/Unit Clarification

- A. The definition for process heater in 40 CFR 60 Subpart D is completely different from the definition in 40 CFR 63 Subpart DDDDD. For consistency and clarification, these definitions need to be identified.
- B. The definitions for “boiler” in the proposed major source rule and area source rule are different. For consistency, EPA needs to clarify the two definitions.
- C. One of the difficulties that the Division has encountered is the use of boilers/process heaters to provide heat to various processes at a source (dryers, steam press, etc.) using thermal oil. The source argued that when the boilers/process heaters stopped using thermal oil to transfer heat, and instead sent the combustion air to the dryers, the units were no longer boilers/process heaters but direct fired units. The boilers/process heaters were enclosed combustion devices used to recover thermal energy by sending the heat of combustion from one location at the facility to various other locations at the facility. Like steam, hot combustion air is a legitimate heat transfer medium. The only difference is that energy was delivered to other processes using a gas (air) instead of a liquid (thermal oil). The heat transfer medium should not matter. It is preferable that the term “heat transfer medium” be used (as it is defined in 40 CFR 60 Subpart D) to prevent this confusion. It is not the intention of the Division to incorporate direct-fired units into these regulations. But stand-alone combustion units with a controlled flame that are not directly tied to process equipment should be regulated as boilers/process heaters. The regulation needs to clarify the classification of units under these conditions.
- D. It is not clear from 40 CFR 63.7485 and 40 CFR 63.11194 how to regulate sources that are initially permitted as major sources (as defined in 40 CFR 63.2 or 40 CFR 63 Subpart HH) if they later become area sources. It appears that once a source no longer meets the definition of a major source, Subpart DDDDD would no longer apply to the source and the source would instead comply with Subpart JJJJJ. This seems to be the conclusion if the source was able to become an area source by adding a control device or by altering operations at the source so that emissions are less than the major source threshold. Please clarify this interpretation.

II. Testing/Compliance

- A. Method 30b is not listed as an option for mercury compliance testing in table 5 of subpart DDDDD of Part 63. Method 30b is currently in use for mercury compliance testing over Method 29.
- B. The impact of activated carbon injections on emission limits needs to be analyzed, the regulation doesn't appear to have taken this into account.
- C. The regulation requires certification of the energy auditor. EPA needs to clarify who or what entity is responsible for conducting these audits and what role the Division plays in these audits.

- D. There will be a significant increase in fuel sample analysis. EPA needs to clarify who or what entity is responsible for conducting these analysis and what role the Division plays in these analysis.
- E. 40 CFR 63.7505 is entitled “What are my general requirements for complying with this subpart?” 40 CFR 63.7505(c) begins with compliance demonstrations for HCl or mercury. The last sentence in that paragraph states that “You must demonstrate compliance with all other applicable limits using performance stack testing, or the continuous monitoring system (CMS) where applicable.” It is likely that this sentence is intended as a general statement covering all of the compliance demonstration options, but as written, it is more confusing than helpful, for the following reasons:
1. This sentence could be easily missed by someone not interested in HCl or mercury compliance demonstration methods and therefore should either be a separate paragraph or be used at the beginning of the sentence with HCl or mercury compliance listed as an exception to the more general requirement.
 2. The sentence is confusing because it could be interpreted that there is an option between performance stack testing or CMS. This is inconsistent with 40 CFR 63.7530(a) which states that “you must demonstrate initial compliance with each emission limit that applies to you by conducting initial performance tests (performance stack tests and fuel analyses) and establishing operating limits...,” i.e. there is no mention in the latter that demonstrating compliance with emission limits by CMS is permissible, but rather that operating limits will be established.
 3. It appears that compliance maybe demonstrated by CEMS (PM or CO¹), but not by parametric monitoring. The Division suggests that the use of the general term "CMS" be avoided when only the specific (CEMS) is allowed. Although doubtful this is the intent, if parametric monitoring is permitted without stack testing to establish correlations between operational parameters and compliance with emission limitations, the Division disagrees that it should be allowed and therefore the regulation should be very clear that is not the case. Furthermore, use of parametric monitoring is useful as a substitute for direct monitoring of emissions for continuous monitoring purposes, but is not adequate for compliance demonstrations with emission limits.
- F. 40 CFR 63.7505(c) and (d) do not belong under general requirements, but rather should be listed under sections relating to emission and operating limit compliance demonstrations, of which there are at least two: 40 CFR 63.7510 which is entitled “What are my initial compliance requirements and by what date must I conduct them” and 40 CFR 63.7530 which is entitled “How do I demonstrate initial compliance with the emission limits and work practice standards.”
- G. Because 40 CFR 63.7505(d)(1) (rules for site-specific monitoring) is listed as subordinate to 40 CFR 63.7505(d) (requirement to develop site-specific monitoring if compliance is demonstrated via performance stack testing), it could be interpreted to mean that 40 CFR 63.7505(d)(1) only applies if 40 CFR 63.7505(d) applies. However, it appears that 40 CFR 63.7505(d)(1) should apply to all CMS, or at least, all parametric monitoring, since much, if not all, the requirements are duplicative of regulations governing CEMS and COMS. The Division suggests that 40 CFR 63.7505(d)(1)-(4) be moved to sections pertaining to monitoring, such as 40 CFR 63.7535 or 40 CFR 63.7540, or at least elevated so that it is not subordinate to 40 CFR 63.7505(d) (i.e., 40 CFR 63.7505(e)).

¹ See 40 CFR 63.7510(c) and (d). Note that these paragraphs are not consistent with 40 CFR 63.7530(a).

- H. Provisions to 40 CFR 63.7505(c) should be made to allow compliance demonstrations by HCl or Hg CEMS after accuracy has been established, especially considering that fuel constituents will heavily influence the emissions of both HAPs.
- I. 40 CFR 63.7505(c) contains an error, the reference to 40 CFR 63.7530(d) should be changed to 40 CFR 63.7530(c).
- J. 40 CFR 63.7530, which is entitled, "How do I demonstrate initial compliance with the emission limits and work practice standards." Also is related to initial compliance. It appears that 40 CFR 63.7510 is intended to cover initial compliance after the regulation is newly promulgated while 40 CFR 63.7530 is intended to cover initial compliance thereafter. However, the two are inconsistent and it is not clear why. For example, as noted above, 40 CFR 63.7530 does not appear to permit compliance demonstration by CEMS and COMS, whereas 40 CFR 63.7510(c) and (d) do permit initial compliance by CO and PM CEMS. The Division suggests that these two sections be merged to ensure consistency, and where divergence is intended, it would be clearer if the different requirement was explicitly identified as such.
- K. 40 CFR 63.7510(a) states that "(f) or affected sources that elect to demonstrate compliance requirement by stack testing..." The word "elect" should be deleted. The requirements should apply whether the source elects to demonstrate compliance by stack testing, or is required to demonstrate compliance by stack testing.
- L. 40 CFR 63.7510(c) requires that boilers or process heaters that have a heat input capacity less than 100 MMBtu/hr to demonstrate initial compliance by conducting a CO performance stack test. The Division recommends that sources less than 100 MMBtu/hr should be allowed to demonstrate compliance using CO CEMS if they choose. Further it should be made clear that this requirement is not applicable to units that have no emission limit requirement (i.e., existing units under 10 MMBtu/hr).
- M. 40 CFR 63.7510(d) requires that certain boilers or process heaters demonstrate initial compliance using PM CEMS. Other sources should be allowed to demonstrate compliance using PM CEMS if they choose. While PM CEMS may be too expensive for smaller sources today, it is possible that PM CEMS may one day be less expensive than stack testing.
- N. 40 CFR 63.7515 is entitled "When must I conduct subsequent performance tests or fuel analyses." As the title suggests, this section pertains to *when* tests are performed, as opposed to *what* subsequent compliance demonstrations are required. Other sections related to compliance demonstrations specify "initial". The Division recommends that the regulation explicitly state what subsequent compliance demonstrations are required. In the alternative, no distinction should be made between initial and subsequent compliance determinations generally and where distinctions are made, they be explicitly identified.
- O. Table 4 indicates "If you demonstrate compliance using...Wet scrubber control" and the like. These requirements appear to relate to continuous compliance demonstrations using parametric monitoring instead of compliance demonstrations such as performance testing.
- P. The MDLs are discussed a little in the major source MACT, but it does not identify the use of data below a MDL or how a facility should report data below a MDL. There is also no discussion if the testing methods were statistically challenged to meet the emission limits identified.
- Q. In the proposed rule EPA is proposing a work practice standard for boilers that burn natural gas or 'refinery gas' (see Section III D. of the summary). The Division recommends that instead of identifying specific

sources of the gases subject to the work practice requirements, EPA identify those qualities which would make a gas qualify (emission standards, possibly with periodic testing requirements to show that the gas continued to meet the requirements).

III. Burden to State and Local Agencies

- A. There will be a substantial increase in the number of compliance tests and CEMS certification tests. The Division currently has 4 positions available for reviewing test protocols, observing the tests and reviewing test reports. The Division's workload is going to increase and current budget constraints simply mean that the agency will not be able to witness all tests.
- B. New or existing boilers and process heaters are required to conduct initial and annual performance tests. The increase in compliance tests will impact the state financially. The state currently spends approximately 3 business days per compliance test observation, per source. The work load includes reviewing compliance test protocols, observing the test, and reviewing the final test report. EPA estimates there are currently 13,555 boilers and process heaters at major sources.
- C. The required ASTM methods listed in the tables 5 and 6 to Subpart DDDDD of Part 63 are not available free of charge. In order for state, local, or tribal agencies to observe and review testing methods following the ASTM methodology, the agencies would be required to purchase copies of the testing methods. A free resource library such as the online EMC website would be beneficial to financially strapped agencies seeking the method information.
- D. The proposed regulation requires the use of CO CEMS. The CO CEMS will be required to be certified through RATAs and audits. State, local, and tribal agencies review and observe the quarterly RATAs. This will increase the work load for agencies and current funding sources do not provide adequate funds to meet the new demands.