



The following comments were received on the draft rulemaking text for 10 CSR 10-6.220 Restriction of Emission of Visible Air Contaminants.

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**Comment on 10 CSR 10-6.220 draft rulemaking text via email from a private citizen on November 8, 2014.**

The proposed new paragraph 10 CSR 10-6.220(3)(E)2.

*Owners and operators of emission units not required to install COMS shall conduct a visible emissions survey for all affected emission units subject to the opacity limits in (3)(A) of this rule...*

is excessive for sources that allowed 20% or 40% opacity. EPA Method 22 is inappropriate for these situations. I suggest **monitoring** and **record keeping** below (this wording should be revised for rulemaking, what is provided has been used in Title V operating permits) since it follows the Region 7 Policy on Periodic Monitoring for Opacity, April 18, 1997. What I have provided is an actual procedure for the permittee to follow, not a reference.

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Monitoring:

- 1) The permittee should note the visible emissions performance of the plant according to the schedule outlined in 2) below. Specifically, the source would first conduct a quick survey of the entire plant. The permittee must maintain a log noting whether any air emissions (except for water vapor) were visible from the plant, all emission points from which visible emissions occurred, and whether the visible emissions were normal for the process. If the permittee observes no visible or other significant emissions then no further observations would be required.

For those emission points with visible emissions perceived or believed to be above the normal opacity level, the permittee should record a formal Method 9 reading for the emission points of concern. Whether recording “qualitative” visible emission characteristics or taking Method 9 readings, the permittee should also document the total duration of any visible emission incident as part of the log.

Where the permittee opts to record “qualitative” visible emissions data, rather than record official Method 9 readings, it may be prudent for the source to bring in a certified Method 9 observer to periodically “quantify” visible emissions. These periodic Method 9 readings along with the survey results would give the responsible official some reasonable assurance

that the source is meeting its opacity obligations.

In all cases, the permittee shall insure that all persons responsible for making visible emission observations acquire basic training in the general principles and practices of “reading” opacity. At a minimum, the observers should be trained and knowledgeable about the effects on visibility of emissions caused by background contrast, ambient lighting, observer position relative to lighting, wind, and the presence of uncombined water. EPA’s Reference Method 22, found at 40 CFR Part 60, Appendix A, suggests two references in Section 7 that may be helpful.

The permittee is only required to take readings when the emission unit is operating and when the weather conditions allow. If the permittee observes no visible or other significant emissions using these procedures, then no further observations are required at that time. For emission units with visible emissions perceived or believed to exceed the applicable opacity standard, the source representative would then conduct a Method 9 observation.

- 2) The permittee must maintain the following monitoring schedule
  - a) The permittee shall conduct weekly observations for a minimum of eight (8) consecutive weeks after permit issuance.
  - b) Should the permittee observe no violations of this regulation during this period then-
    - i) The permittee may observe once every two (2) weeks for a period of eight (8) weeks.
    - ii) If a violation is noted, monitoring reverts to weekly.
    - iii) Should no violation of this regulation be observed during this period then-
      - (1) The permittee may observe once per month.
      - (2) If a violation is noted, monitoring reverts to weekly.
- 3) If the source reverts to weekly monitoring at any time, monitoring frequency will progress in an identical manner from the initial monitoring frequency.

**Recordkeeping:**

The permittee shall maintain records of all observation results using Attachments B (Opacity Emission Observations, page 88) or C (Method 9 Opacity Emissions Observations, page 89) [or their approved equivalent], noting:

- 1) Whether any air emissions (except for water vapor) were visible from the emission units;
- 2) All emission units from which visible emissions occurred;

- 3) Whether the visible emissions were normal for the process;
  - 4) The permittee shall maintain records of any equipment malfunctions, which may contribute to visible emissions; and,
  - 5) The permittee shall maintain records of all USEPA Method 9 opacity tests performed.
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**Comment on 10 CSR 10-6.220 draft rulemaking text via email from a private citizen on November 8, 2014.**

In further support of my earlier comments regarding 10 CSR 10-6.220, , below is title, purpose, scope and application statements from EPA's Method 22 (from 40 CFR 60 App. A-7, emphasis has been added). Please note that this regulation applies to fugitive emissions or flares. These are sources NOT covered by 10 CSR 10-6.220.

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**Comment on 10 CSR 10-6.220 draft rulemaking text via email from Boeing Company on November 25, 2014.**

(1)(H) The draft rule exempts emission sources subject to the Boiler NESHAP for **major** HAP sources (Subpart DDDDD), which has more stringent particulate control requirements than the draft opacity rule. We recommend exempting (new) sources subject to the Boiler NESHAP for **Area** HAP sources (Subpart JJJJJ), for the same reason. The area source Boiler NESHAP sets numeric particulate matter limits on new boilers, and imposes an ongoing PM compliance requirement based on maximum 10% opacity, well below the opacity limits of the draft Missouri rule. Note that the area source Boiler NESHAP does not specifically set numeric particulate or opacity limits on EXISTING boilers, so the backstop for existing area source boilers should be the Missouri opacity rule. Also, the area source Boiler NESHAP does not regulate gas-fired boilers (as defined in the NESHAP), but the draft gaseous fuel exemption at (1)(K) covers gas-fired boilers at area sources, unless they are equipped with liquid fuel backup for natural gas curtailments. Suggested language for an area source boiler NESHAP exemption (assuming that exemptions below it are renumbered) is provided:

“(1)(I) Emission sources regulated by 40 CFR 63 Subpart JJJJJ-National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources, with the exception of boilers constructed or reconstructed prior to June 4, 2010.”

(3)(E) The exemption from monitoring and recordkeeping for units “not subject to Title V permitting” is unclear, because the terminology is not the terminology used in the cited Missouri operating permit rule 10 CSR 10-6.065. In that rule, the three types of operating permits are called “Part 70, Intermediate, and Basic State Installations.” The first two types are authorized by Title V of the federal statute, while the third is a creation of Missouri law, but this may not be obvious to some readers. If the intent is to exempt Basic sources and those not required to obtain an operating permit from monitoring and recordkeeping (an intent with which we agree), suggested language is provided:

“(3)(E) Compliance Determination. Owners or operators of emission units, not subject to Part 70 or Intermediate operating permitting under 10 CSR 10-6.065 Operating Permits, with controlled.....”

(3)(E) The exemption from monitoring and recordkeeping for units “below the limit required to obtain a construction permit” is unclear. The words “the limit” imply that there is only one limit, but 10 CSR 10-6.061, Construction Permit Exemptions, has several limits that relate to particulate matter: 1.0 lb/hour PM10 maximum design capacity, 876 lbs/year actual emissions of any criteria pollutant, or 150 lbs./day of any air contaminant from certain small combustion sources. In addition, the rule has numerous narrative exemptions that reflect a SIP-approved determination that the listed type of operation described poses minimal potential to emit air pollutants. The draft exemption is from monitoring and recordkeeping only, not from compliance with the opacity limits of the rule, so the following more inclusive language is suggested:

“(3)(E)...emissions of particulate matter, ten (10) microns in diameter or smaller, that are exempt from construction permitting according to 10 CSR 10-6.061, are exempt from the monitoring and recordkeeping requirements of this rule.”

(3)(E)2.A. and (5)(A). We have recently become aware of an EPA-approved alternative to Method 9, called ALT-082. See Federal Register notice Feb. 15, 2012 (77 FR 8865). ALT Method 082 uses a digital camera to capture still images of stacks or other emission sources, which are then analyzed for percent opacity. This system removes a large amount of potential human errors and provides more accurate and consistent readings. ALT Method 082 requires initial certification of the camera, similar to Method 9. However, this certification lasts much longer (3.5 years) and can be renewed electronically. The Arizona Department of Environmental Quality has indicated that they will be using the Digital Opacity Compliance System Second Generation (DOCSII) for ALT Method 082 in place of Method 9 observations during inspections in the future. Additional information is available at <http://www.virtuallc.com/> For installations that are routinely required to make Method 9 readings, this alternative method offers the possibility of increased accuracy and fewer trips to “smoke school” training, which is available infrequently and geographically distant for many Missouri sources. Unless the alternative method is cited in the Missouri opacity rule, or in 10 CSR 10-6.030 and referenced in the opacity rule, it would be available to installations (and DNR enforcement staff) only through the case-by-case approval method described in the draft rule section (5)(F). In the interest of accelerating adoption of this more accurate and less burdensome test method, we urge that it be included in this round of rulemaking.

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**Comment on 10 CSR 10-6.220 draft rulemaking text via email from Kansas City Power & Light Company on December 3, 2014.**

KCP&L commends MDNR’s proposed revisions acknowledging 40 CFR 63 Subparts DDDDD (Boiler MACT) & UUUUU (MATS) thorough and strict handling of electricity and utility boiler emissions. In those rules the indicator of particulate matter, opacity, is not measured in favor of the direct measurement of particulates. Updating the state regulation with the EPA requirements for these boilers allows Missouri to match the final MACT actions already having gone through

notice and comment. These reviews and analyses, exhaustively performed over the course of years balanced cost and benefit to the public and industry and comparatively evaluated intricacies such as periodic testing and continuous monitoring.

On the point of periodic testing and continuous monitoring equivalence, the MATS preamble speaks directly at FR 77, 9372 column 2:

*G. What are the continuous compliance requirements? (2) Use of stack tests. If you demonstrate initial compliance on the basis of a stack test, you must **demonstrate continuous compliance by conducting periodic stack tests on a quarterly basis.***

According to EPA, MATS quarterly stack testing is “continuous compliance”. The wording of 10 CSR 10-6.220(1)(L) (exemptions) should be modified to:

**(L) Emission sources regulated by 40 CFR 63 subpart UUUUU, Mercury and Air Toxics Standards, and ~~demonstrating compliance with a particulate matter continuous emission monitoring system;~~ and**

Striking the “*and demonstrating compliance with a particulate matter continuous emission monitoring system*”. The stringency of the MACT limits also supports this request as exhibited in your Demonstration for this rulemaking.

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**Comment on 10 CSR 10-6.220 draft rulemaking text via email from Metropolitan St. Louis Sewer District on December 9, 2014.**

The draft rule, in in 10 CSR 10-6.220( 1 )(K), states that "any unit burning only natural gas, landfill gas, propane, liquefied petroleum gas, or refinery gas and using proper combustion techniques" will be exempt. MSD requests that the Department revise the draft rule to include wastewater treatment facility (WWTF) anaerobic digester gas with this exemption.

WWTF anaerobic digester gas is similar in composition to landfill gas and natural gas. Landfill gas and WWTF anaerobic digester gas are both considered biogas and are comprised primarily of methane and carbon dioxide. Specifically, landfill gas contains approximately 50% methane and 50% carbon dioxide with less than one percent of non-methane organic compounds,<sup>1</sup> and WWTF anaerobic digester gas is typically 60 to 70% methane with the remainder primarily carbon dioxide.<sup>2</sup> Similarly, natural gas is mostly comprised of methane at around 82% on average.<sup>3</sup>

The combustion of methane results in carbon dioxide and water. WWTF anaerobic digester gas, landfill gas, and natural gas are comprised mostly of methane, so combustion of these gases should not produce significant amounts of visible emissions. Therefore, MSD believes that WWTF anaerobic digester gas should be added to the draft rule exemption since its composition and combustion emissions are very similar to that of landfill gas and natural gas.

<sup>1</sup> U.S. Environmental Protection Agency, Landfill Methane Outreach Program. *Project Development Handbook*. 6 Apr 2011. <<http://www.epa.gov/lmop/publications-tools/handbook.html>>.

- <sup>2</sup> U.S. Environmental Protection Agency, Combined Heat and Power Partnership. *Opportunities for Combined Heat and Power at Wastewater Treatment Facilities: Market Analysis and Lessons from the Field*. Oct 2011.  
<[http://www.epa.gov/chp/documents/wwtf\\_opportunities.pdf](http://www.epa.gov/chp/documents/wwtf_opportunities.pdf)>.
- <sup>3</sup> Center for Energy Economics. *Composition of Natural Gas and LNG*.  
<[http://www.beg.utexas.edu/energyecon/lng/LNG\\_introduction\\_07.php](http://www.beg.utexas.edu/energyecon/lng/LNG_introduction_07.php)>.