From:	DAVIS George
To:	WESTERSUND Joe; PALERMO Jaclyn; FELDON Leah; JOHNSON Keith; GARRAHAN Paul; ORMAN Michael; EISELE Michael; KAUTH Dave; GRUNOW Greg
Cc:	artglass2016; DAVIS George
Subject:	RE: summary of today"s meeting re CAGM baghouse source testing
Date:	Monday, July 18, 2016 5:37:34 PM

Nice summary, Joe. No comments from me.

Just to answer the question about the PM standard in 6S, I looked at the Federal Register are here is what I found:

The following is based on the preamble to the Standards of Performance for New Stationary Sources (NSPS); Glass Manufacturing Plants, Subpart CC, 45 FR 66751, Oct. 7, 1980.

Subpart CC was proposed in a different, earlier issue of the Federal Register; the FR citation above was for the final promulgated version of CC. The preamble in the citation above discusses responses to comments, and among other issues addressed comments regarding emission controls. The following quotes were copied from the preamble:

> "These commenters were also of the opinion that process modifications are an effective method of emission control, and, therefore, should be considered as an alternative to add-on control devices which are the basis for these standards of performance." (Page 66744)
>
> "It is because of this uncertainty that the Administrator decided to base these standards of performance on add-on control devices of known and proven effectiveness." (Page 66745)

Note that while the add-on emission control devices are not identified by type, it is clear from EPA's responses that the performance standards in CC are based on the use of add-on emission control devices.

Further reading of the preamble indicates that the performance standards in CC were based on the results of emissions testing done at a variety of glass manufacturing facilities. The performance standards in CC are:

Promulgated Standards of Performance for Gas-Fired Glass Melting Furnaces
[g of particulate/kg of glass produced]
Glass category….. Standard
Container glass….**0.1**
Pressed and blown glass:
Borosilicate.....**0.5**
Soda-lime and lead.... **0.1**
Other-than borosilicate, soda-lime, and lead……**0.25**
Woolfiberglass.....**0.25**
Flat glass..... **0.225**

The performance standard for particulate matter in NESHAP Subpart 6S is based on the Glass Manufacturing NSPS. The NSPS has several categories of glass for which the standards vary. EPA used the lowest standard of 0.1 g/kg (equal to 0.1 kg/metric ton) to set the performance standard in 6S.

Conclusion

The PM performance standard in 6S is based on the "Container glass" and "Soda-lime and lead" standards in NSPS CC; these in turn are based on emissions testing results and the use of emission control devices.

George

From: WESTERSUND Joe
Sent: Monday, July 18, 2016 4:22 PM
To: PALERMO Jaclyn; FELDON Leah; JOHNSON Keith; DAVIS George; GARRAHAN Paul; ORMAN Michael; EISELE Michael; KAUTH Dave; GRUNOW Greg
Cc: artglass2016
Subject: summary of today's meeting re CAGM baghouse source testing

Hi All,

Thank you for participating in the meeting this morning. Here's my summary:

- We agreed that the current standard (99% capture efficiency test) needs changing for Tier 1 facilities and possibly for Tier 2s. It's impracticably long and costly because their emissions are very dilute. (Northstar said they were quoted $350k, with 8-day test runs.)
- We talked about two ways to replace the 99% standard:
  - Specify a grain loading standard at the baghouse outlet. Source test would be cheaper & test run length would be predictable. (Emissions must be < X gr/dscf at baghouse outlet.)
  - Specify design specs for the baghouse filter media. (Baghouse filter media must be designed to capture > Y% of particulate at particle size > Z microns.)
    - This could also include a requirement for periodic leak inspection with fluorescent leak detection powder (aka dye test). Temp rule requires facility to inspect for leakage, doesn't specify how.
- We discussed the time crunch that facilities face. The temp rule requires source test within 60 days of commencing operation of the control device, and source test plan submitted at least 30 days before that. Tier 1s would need to install the baghouse before Oct 1 deadline but not too early, so the 30/60 days is after the EQC meeting.
- Initially, I thought we might need to address this before the EQC considers the permanent rule (currently scheduled for October 3rd, could possibly be moved up).
  - To do that, we'd need to modify the temporary rule, perhaps to extend the 60-day timeframe for source testing.
  - This could be a big lift and is not the preferred option.
- We thought of an option that doesn't require changing the temp rule.
  - If facilities install baghouses after 8/4 (60 days before 10/3), their source test would not be due until after the EQC considers the permanent rules.
    - The permanent rule could specify a grain loading standard and extend the timeframe to comply. (Perhaps "within 60 days of commencing operation of the emission control devices, or 60 days after the approval or this rule, whichever is later, test control device….")
    - If the permanent rule specifies baghouse design specs, then no source testing is needed for those facilities, so they could cancel their plan to source test. (Hopefully, they would have installed something that meets the design spec).
  - They'd incur a risk in doing this, since the EQC meeting could be delayed or the EQC could decide not to approve the proposed rules.
  - If the baghouse were installed before 9/3 (30 days before 10/3) then the source test plan deadline becomes a factor, and facilities might either decline to submit a source test plan, or submit one with 'subject to change if source test requirements change in permanent rule'.
- If we're comfortable with the plan not to change the temp rule, we have time. We can consider any public comments that touch on this issue, and we have until late August to:
  - 1) decide whether to use grain loading standard or design specs,

- 2) decide whether that would apply only to Tier 1 or to all facilities
- 3) decide on the detailed language of the spec.

Ugh, that was long. Thanks to any of you still reading.

I'll schedule a followup meeting to discuss some of these issues. Please let me know if there are important bits I got wrong or didn't capture.

In the meantime, please gather any data that could help us with decisions #1-3.

Thanks!

-Joe

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