From:	WESTERSUND Joe
To:	KAUTH Dave; GRUNOW Greg; DAVIS George
Cc:	artglass2016; PALERMO Jaclyn; JOHNSON Keith; FELDON Leah; EISELE Michael
Subject:	summary of meeting re are there condensable / non-filterable emissions at art glass facilities
Date:	Tuesday, August 02, 2016 6:14:54 PM

Hi All,

George, Dave, Greg and I had a phone conversation about this topic:

"My understanding is that the Bullseye source test results showed a much lower capture efficiency for Cr6 than for particulate in general. Is that just variation from sampling and testing, or does it indicate there are condensable emissions that a baghouse is unable to capture? Do we have other data we can weigh on this question?"

My summary of the discussion:

- So far we have very limited data: only 1 test run from a single source test (the recent one at Bullseye). It suggests baghouse capture efficiency may be lower for Cr than for PM, but it's too early to say with certainty.
- If it turns out capture efficiency is lower for metals than PM, we're not sure of the mechanism. Conceptually, baghouses should capture solids and liquids, with declining efficiency as the particle size gets smaller. The baghouse inlet temperature is way too low for the metals to be in a vapor phase. So, if metals are making it through, we speculate that a portion of the metals may be being emitted at a very small particle size relative to what the bags at that site could capture. We didn't have specs for the bags in use during that source test. Welding is a different process but does also involve metals emissions, and can produce very small particles.
    - Mike, do we have info on the bags in use during the Bullseye source test? What's their particle size vs capture efficiency graph look like?
- Options going forward:
    - We've talked about replacing the 99% baghouse capture efficiency standard with a baghouse outlet grain loading standard due to source test issues. Perhaps the grain loading standard could include non-filterables, in case that fraction is important.
    - We've also talked about requiring facilities to source test for metal emissions at the baghouse outlet with EPA Method 29. M29 does capture non-filterables, and we believe a M29 source test would cost about $20-23k. That would tell us and the public more about actual emissions.
        - Can M29 easily give detection limits low enough for modeling + comparison against ambient benchmarks?
    - Big question: if we require M29 testing, what do we do with the results?
        - Could set health-based emission limit for each metal, based on ambient benchmark and default or site-specific dispersion modeling
            - Could use wording similar to the source testing + modeling option Tier 1s have in the temp rule
            - This is further from what we put in the public notice, would re-noticing be required?

- Could let M29 results be informational only, no standard. Maybe data would be useful when CAO is complete.
    - Public may not be happy with this if results show metals emissions are high.

George, Greg and Dave, feel free to weigh in.

-Joe

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