repetitive PM emissions curve. In both methods, PM emissions are well in excess of normal emissions and cause unnecessary pollution. The reinjection option can cause inaccuracies in calibration due to particle size changes (agglomeration) during reinjection and flight, thus not representative of normal operation PM particle sizing.

In Conemaugh's case with wet Flue Gas Desulfurization (FGD) controls, the ash reinjection method is the only option. This will require innovative methods to extract fly ash and reinject it downstream of the scrubber. The Electrostatic Precipitator (ESP) where the ash is captured is well over 850 feet from the potential injection point so piping the ash is infeasible. Fly ash will need to be transported via bulk tanker truck to a blower skid to be pneumatically conveyed over 300 feet to elevated injection ports into the moist desulfurized flue gas. This reinjection for monitor calibration is far more onerous than traditional monitor calibration requirements, not to mention vastly more expensive and may present worker safety implications. Controlling ash injection rates to precisely reproduce a calibration as required in Performance Specification 11 has not been sufficiently demonstrated the existing 0.03 lb/MMBtu limit and has far more serious concerns at the pending 0.01 lb/MMBtu limit.

Due to the difficulties in calibrating the PM CEMS, data suggests that the lower PM limit can make demonstrating compliance with the PM CEMS difficult and possibly unachievable. At the reduced PM limit, the QA testing requirements for PM CEMS, which the Agency has mandated for all coal-fired EGUs, will become much harder to pass. The difficulty of passing these tests would not only place a burden on sources that would be forced to repeat the costly tests but, more critically, illustrates the uncertainty of PM CEMS and the PS-11 correlation process at low emissions levels.

In short, Conemaugh and other affected sources could actually have emissions that comply with the pending 0.01 lb/MMBtu emission limit, but appear to be out of compliance solely due to problems with calibrating the PM CEMS. The pending limit and the mandated method of demonstrating compliance are incompatible. EPA should delay the both the implementation of the lower limit and the requirement to install PM CEMS until a more reliable method of demonstrating compliance with the limit can be developed and promulgated, PM CEMS calibration methodologies improved, or the PM CEMS themselves made more accurate by manufacturers.

2. **PM CEMS are difficult to maintain.** PM CEMS for units with wet FGD's requires collection of wet flue gas samples. Since the water droplets show up as particulate mater in light interferometry measurements, the sample must be heated to evaporate the moisture before measuring. Collection of wet samples in notoriously problematic with scaling and buildup in instrumentation and tubing. Thus, more maintenance attention is needed to keep the PM CEMS operating and will also result in inherently longer downtimes without measurement.[1] Long periods of monitor downtime or inability to "calibrate" can have unit availability concerns. Operating without the required meter will not be an option.

[1] Direct experience realized at the Cheswick Generating Station, who was required by operating permit conditions to install, certify and operate a PM CEMs. Cheswick Unit 1 was a pulverized coal-fired unit with a wet FGD, similar to the KEY-CON units. During the period in which the Cheswick PM CEMs was required, Cheswick and KEY-CON were part of the same operating company (GenOn).