

Phase 2 NO_x RACT

Monitoring Issues

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October 14, 2021

Compliance Demonstration

- Compliance demonstrated through stack testing or CEMS
- Stack tests for Boilers shows compliance with applicable Phase 2 NO_x RACT Limits
- CEMS data shows compliance nearly 100% of the time
 - Instances where CEMS data shows NO_x rates above new Phase 2 limits are not a result of the inability to meet new limits
 - CEMS calculations required by NO_x RACT regulations follow different mythology than required by NSR permits

CEMS NOx Average Calculations

NSR Permits

- Calculations excludes CEMS data collected during startup, shutdown, fuel switching, and low-load operation
- Emission rate calculated as either 24-hour rolling average or 24-hour block average
- Minimum number of hours required to create a valid 24-hour average
- Partial hours – sometimes included, sometimes excluded, depending on permit or regulation

NOx RACT Regulations

- Calculations include data measured during all operation, including startup, shutdown, fuel switching, and low-load operation
- Calculated as arithmetic mean of NOx rates measured from 12:00-23:59 on calendar day
- No minimum number of hours required to create daily average
- No Guidance on Partial Hours

CEMS NOx Average Calculations

- Potential issue for startups late in the day or shutdowns early in the day
- Data analysis shows boilers and cogen units have instances where CEMS data showed NOx above Phase 2 limits following daily block average calculation methodology
 - These all occur on days with startup, shutdown, or fuel switching events and limited hours of operation for the day

CEMS Issues and Potential Solutions

- Sources without CEMS can operate in an identical way but are not generating continuous data. They simply demonstrate compliance via Stack Test.
 - They would not have any continuous data that under an interpretation that does not consider the above-mentioned issues would be cause for concern about these issues.
 - That would put CEMS sources at a serious disadvantage and would certainly have sources that are not required to have CEMS consider whether to continue using CEMS.
- One solution to the issue could be to allow sources that already have CEMS to simply follow the protocols and methods that they've been following for their NSR permits and/or federal rules.
 - These permits implement BACT and are more stringent than RACT.
- Another possible solution would be to follow the CT DEP old draft CEMS guidance since the new RACT rules do not have details about using CEMS as exemplified above.

What's Next?

- There's still plenty of time to sort out these complicated issues.
- NOx RACT CEMS calculation methodology to be discussed at CTDEEP's SIPRAC Subcommittee