



pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION



Bureau of Air Quality

RACT 2 Status and Results

Source Testing and Monitoring

Citizens Advisory Council Meeting
January 16, 2018
Harrisburg, PA

Tom Wolf, Governor

Patrick McDonnell, Secretary

Background

- On April 23, 2016, the Environmental Quality Board (EQB) promulgated additional reasonably available control technology (RACT 2) requirements for major stationary sources of nitrogen oxides (NO_x) and volatile organic compounds (VOCs).
- The rule was required under the Clean Air Act to implement the RACT requirements for the 1997 and 2008 8-hour ozone National Ambient Air Quality Standards (NAAQS).

Background

- The final rulemaking (RACT 2) was submitted to the US EPA in May 2016 for approval as a revision to the Commonwealth's State Implementation Plan (SIP).
- An owner or operator must demonstrate compliance with the RACT 2 regulation by January 1, 2017.
- An owner or operator of air contamination sources with continuous emission monitoring systems (CEMS) must use them to demonstrate compliance.

Background

- Applicable sources include combustion units, process heaters, combustion turbines, Portland cement kilns, and incinerators.
- Existing quality assurance, recordkeeping and reporting, emission standards, and data availability standards remain in place.
- An owner or operator of an air contamination source without CEMS must conduct source testing to demonstrate compliance.

What is a CEMS?

- A CEMS is the total equipment necessary for the determination, collection, and reporting of a pollutant or parameter in the applicable units of measurement.
- CEMS are required to be Department certified to be used for RACT 2 purposes.
- Most CEMS related activities take place in the CEM Data Processing System (CEMDPS).

What is the Certification Process?

- The Department certification process consists of the following activities:
 - Monitoring plan
 - Test protocol (as applicable)
 - Test results (as applicable)
 - Data acquisition and accuracy check
 - Sample hours of emissions under various scenarios
 - Sample emissions data and cover letter
- The Department will provide a certification approval letter containing reporting instructions.

▶ 30 Operating Day Rolling Average Emission Rate

- For an air contamination source with CEMS, compliance will be demonstrated with a 30 operating day rolling average emission rate as defined in RACT 2 (except municipal waste combustors that will comply using a daily average).
- An operating day is defined as a 24-hour period beginning at 12:00 midnight during which the source operates at any time and produces emissions. It includes emissions that occurred during startups, shutdowns, or malfunctions.

▶ 30 Operating Day Rolling Average Emission Rate

- Hourly data validation will be conducted as per the data reduction criteria contained in Revision No. 8 of the Department's Continuous Source Monitoring Manual (Manual).
- Data substitution is required for invalid hours in which monitoring is required. Procedures outlined in the Manual or a Department approved petition may be utilized.
- Data availability criteria will apply for hours in which monitoring is required.

Emissions Averaging Plans

- You may use the CEMDPS to demonstrate compliance on a facility-wide basis if the following criteria are met:
 - All underlying emission results, CEMS, and analyzers conform to the requirements of the Manual.
 - The Department may approve the use of analyzers that have been “certified” under an applicable Federal program. Additional testing may be required.
- Those utilizing both CEMS and non-CEMS must submit a quarterly compliance report to the applicable DEP Regional Office to demonstrate compliance.

Emissions Averaging Plans

- All demonstrations of compliance on a system-wide basis should be submitted as a quarterly compliance report to the applicable DEP Regional Office. If more than one DEP Region is involved, a copy of the report must be submitted to each.
 - Plans may contain information derived only from CEMS or a combination of CEMS and non-CEMS.

Source Testing Requirements

- Monitoring and testing must be conducted in accordance with a Department approved emissions source test that meets the requirements of Chapter 139, Subchapter A (relating to sampling and testing methods and procedures).
- Source testing must be conducted one time in each 5-year calendar period.
- The owner or operator of a source may request a waiver to demonstrate compliance with the applicable emission limitation in accordance with §129.100(c).

▶ What is the Implementation Status?

- Source Testing Section staff prioritized review of RACT 2 test protocols to ensure testing was conducted in a timely fashion.
- CEM Section staff has approved numerous monitoring plans, test results, and sample emissions data submittals.
- We envision RACT 2 certification of several sources in the near future.

▶ What is the Implementation Status?

- The CEMDPS is currently able to process RACT 2 emissions data for individual combustion units and process heaters.
- CEMDPS programming to address RACT 2 emissions data for individual combustion turbines and Portland cement kilns should be completed in January 2018.

▶ What is the Implementation Status?

- CEMDPS programming to address RACT 2 emissions for facility-wide averaging is scheduled to commence in January 2018.
- Upon Department certification, emissions data must be submitted starting with 1Q17 through the most recently completed quarter.

Outreach and Guidance

- Department staff have presented the Source Testing and Monitoring (ST&M) implementation requirements at numerous events, including the following:
 - The Air Quality Technical Advisory Committee
 - The Anthracite Region Independent Power Producers Association
 - Babcock and Wilcox Workshop
 - Trinity CEMS Workshop
 - Department RACT 2 Monitoring Workshop

Outreach and Guidance

- Department staff has developed internal guidance on how the rule should be implemented from a ST&M perspective.
- Large portions of this guidance including numerous examples will appear in the next iteration of the frequently asked questions that can be found on the Department's webpage under our Permit's Division.



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