Michigan Power Plant - Cogeneration

Facility Information: MI-ROP-K3249-2016

CMC Solutions, LLC. was retained by a major Michigan university to install and evaluate a Predictive Emission Monitoring System (PEMS) under 40 CFR Part 75, Subpart E as an alternate monitoring system under Title IV of the Clean Air Act. The PEMS software (SmartCEMS® with Data eLements) was installed onsite for PEMS predictive models for continuous monitoring on five units. Four of these boiler units are monitored under Part 75.

The required 720 hours of data was collected on each unit during the first and second quarters of 2017. Over the observation period, Reference Method data was collected from the on-site Continuous Emission Monitoring System (CEMS) historically used to report unit continuous emissions data. The CEMS underwent Quality Assurance procedures mandated under 40 CFR Part 75 throughout the period of collection, including a compliance RATA completed March of 2017, witnessed by the Department of Air Quality. The boiler was in continuous operation throughout the data collection period, with no periods of downtime.

The SmartCEMS® PEMS was installed in 2017 to generate the compliance reports and predictive data required under Appendix D and E of Part 75, as well as under PS-16 of Part 60. The SmartCEMS® PEMS was certified under Part 60 in Q1 of 2017 concurrently with the unit CEMS Part 75 compliance RATA, after which hourly data from both monitoring systems began to be collected for Subpart E demonstration purposes. The 720 hours of PEMS predicted values were evaluated against the continuous emission monitoring data for nitrogen oxide emission rate as specified in Part 75.

DAS System: SmartCEMS® with Data eLements®