

removing the option to perform source tests and, instead, requires the use of a PM CEMS. The U.S. Environmental Protection Agency (EPA) amended the testing requirements in 40 CFR 63 Subpart UUUUU to increase the required PM sampling volume collected during each reference method test run for the PM CEMS correlation validation from 1 dry standard cubic meter (dscm) to 4 dscm. GVEA has previously submitted comments addressing the amendments. Those comments are provided in Attachments 1 and 2.

Based on GVEA's experience with PM CEMS, installing a PM CEMS on an EGU and meeting compliance with the CEMS data collection requirements in 40 CFR 63 Subpart UUUUU is not technically feasible without incurring numerous deviations from the applicable regulations. Per 40 CFR 63.10020(d):

“... Failure to collect required quality-assured data during monitoring system malfunctions, monitoring system out-of-control periods, or repairs associated with monitoring system malfunctions or monitoring system out-of-control periods is a deviation from the monitoring requirements.”

PM CEMS are typically light scattering devices. These CEMs do not directly measure filterable PM. The electrical output from the device is compared to empirical results from filterable PM source tests, and a correlation between the PM CEMS output and the source tests is developed in accordance with EPA Performance Specification 11 (PS-11). The correlation can then be used to estimate filterable PM emissions at any time using the PM CEMS. The initial correlation requires a minimum of 15 source test runs and must meet the performance criteria in PS-11. If the correlation does not meet the performance criteria, then additional runs must be performed. After the initial correlation, quarterly audits are required to ensure that the correlation remains accurate. The annual relative response audits (RRA) require a minimum of three additional source test runs, with triennial relative correlation audits (RCA) requiring twelve additional source test runs.

Per a 2012 Consent Decree, GVEA operates PM CEMS on both Healy EGUs to demonstrate compliance with a PM emission limit of 0.020 lb/MMBtu. Over the last ten years GVEA has invested considerable funds and effort to establish and maintain the performance requirements for the PM CEMS, and in doing so, GVEA has learned a great deal about the challenges and limitations of operating PM CEMS. Based on this experience, GVEA does not believe it is technically feasible to establish and maintain PM CEMS correlations in compliance with PS-11 under the new emission standard.

GVEA has been required to re-establish the correlation of a PM CEMS on several occasions over the past decade when audit results did not meet the EPA-required performance standards. GVEA has struggled for years with the Healy Power Plant's Unit 1 and Unit 2 PM CEMS to obtain and maintain valid correlations, pass relative response audits and relative correlation audits in accordance with EPA requirements, and keep the instruments operating to maintain the required monitor availability. Each correlation requires contracting, coordination, regulatory notifications, and mobilization of specialized equipment and qualified source testing personnel to the power plant location in remote Healy, Alaska for multiple days of onsite testing. The tests are expensive, disruptive and cumbersome to balance with plant operations and power generation needs.

Given GVEA's historic struggles in obtaining valid PM correlations under the existing performance specifications and applicable PM emissions limit, GVEA believes it is technically infeasible to obtain valid PM correlations under the new, lower MATS standard of 0.010 lb/MMBtu following the PS-11. The following PS-11 performance criteria are inversely dependent on the emissions limit and therefore become increasingly difficult to attain as the emission limit is lowered. As an example, the effect the new PM standard will have on these performance criteria for GVEA's current correlation equations for the Healy Unit 1 and Unit 2 PM CEMS are noted.

- 1) Confidence Interval Half Range (CI) Performance Specification – 10%
 - CI on current Unit 1 correlation equation – 4.58% (Pass)
 - CI on Unit 1 correlation under new PM standard – 9.16% (Pass)
 - CI on current Unit 2 correlation equation – 5.28% (Pass)
 - CI on Unit 2 correlation under new PM standard – 10.56% (Fail)
- 2) Tolerance Interval Half Range (TI) Performance Specification – 25%
 - TI on current Unit 1 correlation equation – 14.7% (Pass)
 - TI on Unit 1 correlation under new PM standard – 29.4% (Fail)
 - TI on current Unit 2 correlation equation – 16.7% (Pass)
 - TI on Unit 2 correlation under new PM standard – 33.4% (Fail)