Furthermore, it can take days to weeks for the scrubber chemistry to again reach optimal, steady-state conditions; and maintaining optimal scrubber chemistry is needed to ensure effective removal of mercury emissions. The increased particulate loading will physically impact the equipment and degrade the scrubber's performance, such as: scaling inside the scrubber vessel; plugging spray headers; causing buildup on mist eliminators; and eroding booster and ID fan blades and absorber recirculating pumps.

Second, PM CEMS require the use of PS-11 to establish a correlation curve.[79] For the PS-11 PM CEMS correlation test, a minimum of 15 sets of reference method testing must be conducted that are evenly spaced over three different levels of PM mass concentration by varying process operating conditions, by varying PM control device conditions, or by means of PM spiking.[80] If it is not possible to obtain three distinct levels of PM concentration, zero point testing may be used to perform correlation testing over the maximum range of PM concentration that is practical for the PM CEMS.[81] Each run requires roughly three to four hours, and most sources conduct 18 to 20 test runs for a robust correlation.[82] Barring unpredictable circumstances, based on the proposed sampling time, PS-11 may require seven to ten days to complete. Additional time likely will be needed to maintain the distinct PM test conditions that are required. Sources also will require accurate, preliminary test results to evaluate each test condition and may even need to obtain final results before concluding the test program, which further extend the length and cost of the tests. These activities increase the cost of MATS compliance and overall EGU operation, as well as disrupt the normal operation of the EGU. Ongoing PM CEMS correlation testing with injection of media in the effluent to artificially raise emission levels costs at least $250,000 per test evolution at one source, and testing is required by MATS once every three years. For Colstrip's Units 3 and 4, PM CEMS would cost approximately $136,000/year, whereas quarterly MATS PM stack testing costs approximately $24,000/year. Thus, EPA may have significantly underestimated annual costs associated with a PM CEMS (from $18,111 to $95,397 depending on type) and overestimated annual costs associated with stack testing ($85,127), particularly when specific control configurations are taken into account.[83] Furthermore, the excessive costs of installing and maintaining PM CEMS become even more onerous if required on a unit with limited remaining life (see earlier discussion on how other rules may force retirement, cessation of coal, or decreased capacity factors, or if an early retirement subcategory is created).

More importantly, EPA has failed to show how correlations can be developed on data sets where the upper end of the emissions testing is capped at 0.010 lb/MMBtu fPM following PS-11 requirements. Emissions levels are supposed to be evenly distributed between the low, mid, and high PM emission levels. Even when allowing for a low-emitting unit to use a zero point in the correlation, a correlation still needs data variation to be a valid regression model. By limiting the

[79] *See* Appendix B, 40 C.F.R. Part 60, Performance Specification 11.
[80] *See id.*
[81] *See id.*
[82] *See id.*
[83] 88 Fed. Reg. 24,872-73.