2.4 Monitor and Record Emissions Data

With the exception of LME units7, monitoring and reporting of emissions begins as soon as certification testing is successfully completed, provided that the tests are completed by the certification deadline specified in the regulations8. Part 75 monitoring systems are considered to be "provisionally certified" in the period extending from the date of successful completion of the certification tests9 through the end of a 120-day review period10, provided that the systems are operated in accordance with all Part 75 requirements and the permitting authority does not disapprove the systems in the meantime. Emissions data may be reported as quality-assured during this period of provisional certification.

Part 75 requires emissions data to be reported for every hour that an affected unit is operating, including periods of start-up, shutdown, and malfunction. If one of the required monitoring systems is not working or is out-of-control (e.g., if it fails one of its required quality assurance tests), data from an approved backup monitor or from an EPA reference method11 may be reported. If quality-assured data from a back-up monitor or reference method are not available, the Part 75 missing data substitution procedures must be used to estimate emissions.

The Part 75 missing data routines for CEMS are found in §§75.31 through 75.37. These routines consist of mathematical algorithms that are used to determine an appropriate substitute value for any unit operating hour in which quality-assured data are not obtained for a monitored parameter (i.e., for SO_2, NO_x, CO_2, O_2, flow rate, or moisture). Generally speaking, historical, quality-assured monitoring data are used to determine the substitute data values. The exact substitute data values that are applied in a given situation depends on:

- The historical availability of quality-assured data12;
- The length of the missing data period; and
- For certain parameters (NO_x and flow rate), the hourly unit loads during the missing data period.

The missing data procedures are designed to be conservative. This provides an incentive to reduce periods of monitor downtime, by rewarding high percent monitor data availability (PMA)[12]. The procedures will produce conservatively high emissions estimates for units with lower PMA values.

The monitoring methodologies in Appendices D, E, and G of Part 75 also have missing data procedures. The missing data algorithms under these appendices are considerably less complex than the CEMS algorithms. The Part 75 missing data substitution procedures are discussed in greater detail in Section 9 of this guide.