### 7.7.1 *Calibration Gases*

The certification tests of Part 75 gas monitoring systems require the use of calibration gases, either to calibrate the CEMS (e.g., for 7-day calibration error tests and linearity checks) or to calibrate the reference method analyzers that are used for RATAs. The calibration gas cylinders used for these tests are special gas mixtures that have been prepared using a standard

EPA protocol51. These protocol gas mixtures consist of known concentrations of the pollutant or diluent gases of interest (e.g., $SO_2$, $NO_x$, $CO_2$, etc.), in a non-reactive gas such as nitrogen.

To be acceptable for use in Part 75 applications, a cylinder gas must meet the definition of "calibration gas" in section 5 of Appendix A, and must be traceable to standard reference materials prepared by the National Institute of Standards and Technology (NIST). The only exception to this is "zero air material" (as defined in 40 CFR 72.2), which may be used either as a zero gas or as an upscale calibration material for $O_2$ analyzers.