§ 86.522–78 Carbon monoxide analyzer calibration.

(a) Initial and periodic interference check. Prior to its introduction into service and annually thereafter the NDIR carbon monoxide analyzer shall be checked for response to water vapor and CO$_{2\text{g}}$.

(b) Initial and periodic calibration. Prior to its introduction into service and monthly thereafter the NDIR carbon monoxide analyzer shall be calibrated.

1. Adjust the analyzer to optimize performance.
2. Zero the carbon monoxide analyzer with either zero grade air or zero grade nitrogen.
3. Calibrate on each normally used operating range with carbon monoxide in N$_2$ calibration gases having nominal concentrations of 15, 30, 45, 60, 75, and 90 percent of that range. Additional calibration points may be generated.

For each range calibrated, if the deviation from a least-squares best-fit straight line is 2 percent or less of the value at each data point, concentration values may be calculated by use of a single calibration factor for that range. If the deviation exceeds 2 percent at any point, the best-fit non-linear equation which represents the data to within 2 percent of each test point shall be used to determine concentration.

§ 86.523–78 Oxides of nitrogen analyzer calibration.

(a) Prior to introduction into service and at least monthly thereafter, if oxides of nitrogen are measured, the chemiluminescent oxides of nitrogen analyzer must be checked for NO$_X$ to NO converter efficiency. Figure F78–8 is a reference for paragraphs (a) (1) through (11) of this section.