

Environmental Protection Agency

§ 86.1516-84

(1) The analyzer used shall conform to the accuracy provisions of 40 CFR part 1065, subparts C, D, and F.

(2) The resolution of the readout device(s) for the range specified in paragraph (a)(1) of this section shall be equal to or less than 0.05 percent for the CO analyzer.

(3) For the range specified in paragraph (a)(1) of this section, the precision shall be less than ±3 percent of full-scale deflection. The precision is defined as two times the standard deviation of five repetitive responses to a given calibration gas.

(4) For the range specified in paragraph (a)(1) of this section, the mean response to a zero calibration gas shall not exceed ±3 percent of full-scale deflection during a 1-hour period.

(5) For the range specified in paragraph (a)(1) of this section the drift of the mean calibration response shall be less than ±3 percent of full scale during a 1-hour period. The calibration response is defined as the analyzer response to a calibration gas after the analyzer has been spanned by the electrical spanning network at the beginning of the 1-hour period.

(6) The analyzer must respond to an instantaneous step change at the entrance to the sampling system with a response equal to 90 percent of that step change within 15 seconds or less on the range specified in paragraph (a)(1) of this section. The step change shall be at least 60 percent of full-scale deflection.

(7) The interference gases listed shall individually or collectively produce an analyzer reading less than ±2 percent of full scale on the range specified in paragraph (a)(1) of this section.

Interference gas	Concentration	Applicable analyzer
CO ₂	14 percent	CO
C ₃ H ₈	1 percent	CO
H ₂ O	Saturated vapor at 100° F	CO
NO _x	1,000 ppm	CO
O ₂	5 percent	CO

(8) The analyzer shall be able to meet the specifications in paragraph (a) of this section under the following conditions:

(i) After a 30 minute warm-up from the prevailing ambient conditions;

(ii) Between 0 to 85 percent relative humidity; and

(iii) During variations of ±50 percent of nominal sample flow.

(b) The inclusion of a raw CO₂ analyzer as specified in 40 CFR part 1065 is required in order to accurately determine the CVS dilution factor.

[48 FR 52252, Nov. 16, 1983, as amended at 60 FR 34377, June 30, 1995; 70 FR 40441, July 13, 2005]

EFFECTIVE DATE NOTE: At 73 FR 37194, June 30, 2008, §86.1511-84 was redesignated as §86.1511, effective July 7, 2008.

§ 86.1513-94 Fuel specifications.

The requirements of this section are set forth in 40 CFR part 1065, subpart H, for heavy-duty engines and in §86.113-94 for light-duty trucks.

[70 FR 40441, July 13, 2005]

EFFECTIVE DATE NOTE: At 73 FR 37194, June 30, 2008, §86.1513-94 was redesignated as §86.1513, effective July 7, 2008.

§ 86.1514-84 Analytical gases.

(a) The final idle emission test results shall be reported as percent for carbon monoxide on a dry basis.

(b) If the raw CO sampling system specified in 40 CFR part 1065 is used, the analytical gases specified in 40 CFR part 1065, subpart H, shall be used.

(c) If a CVS sampling system is used, the analytical gases specified in 40 CFR part 1065, subpart H, shall be used.

[48 FR 52252, Nov. 16, 1983, as amended at 51 FR 24613, July 7, 1986; 60 FR 34377, June 30, 1995; 70 FR 40441, July 13, 2005]

EFFECTIVE DATE NOTE: At 73 FR 37194, June 30, 2008, §86.1514-84 was redesignated as §86.1514, effective July 7, 2008.

§ 86.1516-84 Calibration; frequency and overview.

(a) Calibrations shall be performed as specified in §§86.1518-84 through 86.1526-84.

(b) At least monthly or after any maintenance which could alter calibration, check the calibration of the CO analyzer. Adjust or repair the analyzer as necessary.

(c) Water traps, filters, or conditioning columns should be checked before each test.