(15) The dilute exhaust gas flowing in the hydrocarbon sample system shall be:

(i) At 235°F ± 15°F (113°C ± 8°C) immediately before the heated filter. This will be determined by a temperature sensor located immediately upstream of the filter. The sensor shall have an accuracy and precision of ± 2°F (1.1°C).

(ii) At 235° ± 15°F (113°C ± 8°C) immediately before the HFID. This will be determined by a temperature sensor located at the exit of the heated sample line. The sensor shall have an accuracy and precision of ± 2°F (1.1°C).

(16) It is intended that the dilute exhaust gas flowing in the hydrocarbon sample system between 220°F and 250°F (105°C and 121°C).

(17) For methanol-fueled vehicles, bag sampling procedures for the measurement of hydrocarbons as described in § 86.109 may be employed.

(d) [Reserved]. For guidance see § 86.110–90.

16. Section 86.113–94 of Subpart B is amended by revising paragraph (d) to read as follows:

§ 86.113–94 Fuel specifications.

* * * * *

(d) *Mixtures of petroleum and methanol fuels for flexible fuel vehicles.* (1) Mixtures of petroleum and methanol fuels used for exhaust and evaporative emission testing and service accumulation for flexible fuel vehicles shall consist of the appropriate petroleum fuels listed in either paragraph (a) or paragraph (b) of this section and a methanol fuel representative of the fuel expected to be found in use, as specified in paragraph (c) of this section, and shall be within the range of fuel mixtures for which the vehicle was designed, as reported in § 86.94–21(j). The Administrator may use any fuel or fuel mixture within this range for testing.

(2) The fuel mixtures used by the manufacturers shall be sufficient to demonstrate compliance over the full design range, and shall include:

(i) For emission testing:

(A) The petroleum fuel specified in paragraph (a) or (b) of this section;

(B) A methanol fuel representative of the methanol fuel expected to the found in use, as specified in paragraph (c) of this section;

(C) A combination of the fuels specified in paragraphs (d)(2)(i)(A) and (d)(2)(i)(B) of this section at a composition which represents the highest Reid Vapor Pressure of in-use mixtures. This mixture shall contain between 9–13 percent methanol by volume.

(ii) For service accumulation, the fuels specified in paragraphs (a) and (c) of this section or, for diesel FFVs, paragraphs (b) and (c) of this section shall be used alternately. The fuels shall be alternated at mileage intervals not to exceed 5,000 miles. The fuels shall be alternated such that the cumulative volumes of both the methanol fuel and the petroleum fuel used shall be at least 25 percent of the total fuel volume.

(iii) Or, other combinations for testing or service accumulation which demonstrate compliance with the standards over the entire design range of the vehicle, provided that written approval is obtained from the Administrator prior to the start of testing.

(3) The specification range of the fuels to be used under this paragraph (d) shall be reported in accordance with § 86.094–21.

* * * * *

17. Section 86.114–94 of Subpart B is amended by revising paragraphs (a)(2), (a)(5), (b), and (c), and adding paragraph (d) to read as follows:

§ 86.114–94 Analytical gases.

(a) * * *

(2) Gases for the THC analyzer shall be:

(i) Single blends of propane using air as the diluent; and

(ii) Optionally, for response factor determination, single blends of methanol using air as the diluent.

* * * * *

(5) Fuel for FIDs and HFIDs and the methane analyzer shall be a blend of 40 ±2 percent hydrogen with the balance being helium. The mixture shall contain less than one ppm equivalent carbon response. 98 to 100 percent hydrogen fuel may be used with advance approval by the Administrator.

* * * * *

(b) Calibration gases (not including methanol) shall be traceable to within one percent of NIST (formerly NBS) gas standards, or other gas standards which have been approved by the Administrator.

(c) Span gases (not including methanol) shall be accurate to within two percent of true concentration, where true concentration refers to NIST (formerly NBS) gas standards, or other gas standards which have been approved by the Administrator.

(d) Methanol in air gases used for response factor determination shall:

(1) Be traceable to within ±2 percent of NIST (formerly NBS) gas standards, or other standards which have been approved by the Administrator; and

(2) Remain within ±2 percent of the labeled concentration. Demonstration of stability shall be based on a quarterly measurement procedure with a precision of ±2 percent (two standard deviations), or other method approved by the Administrator. The measurement procedure may incorporate multiple measurements. If the true concentration of the gas changes by more than two percent, but less than ten percent, the gas may be relabeled with the new concentration.

18. Section 86.116–94 of Subpart B is amended by revising paragraphs (c)(1) and (c)(3), and adding paragraph (g) to read as follows:

§ 86.116–94 Calibrations, frequency and overview.

* * * * *

(c) * * *

(1) Calibrate the THC analyzers (both evaporative and exhaust instruments), methane analyzer, carbon dioxide analyzer, carbon monoxide analyzer, and oxides of nitrogen analyzer (certain analyzers may require more frequent calibration depending on particular equipment and uses).

* * * * *

(3) Perform an organic gas retention and calibration on the evaporative emissions enclosure (see § 86.117–90(c)).

* * * * *

(g) The Administrator, upon request, may waive the requirement to comply with the specified methanol recovery tolerance (e.g., ±2 percent in §§ 86.117–90 and 86.119–90), and/or the specified methanol retention tolerance (e.g., ±4 percent in § 86.117–90), and instead require compliance with higher tolerances (not to exceed ±6 percent for recoveries and ±8 for retention), provided that:

(1) The Administrator determines that compliance with these specified tolerances is not practically feasible; and

(2) The manufacturer makes information available to the Administrator which indicates that the calibration tests and their results are consistent with good laboratory practice, and that the results are consistent with the results of calibration testing conducted by the Administrator.

19. Section 86.117–90 of Subpart B is amended by revising paragraphs (c) heading and introductory text, (c)(5), (c)(7), (c)(9), (d)(1), and (d)(2)(iii) to read as follows:

§ 86.117–90 Evaporative emission enclosure calibrations.

* * * * *

(c) *Hydrocarbon and methanol (organic gas) retention check and calibration.* The hydrocarbon and methanol (if the enclosure is used for