methanol content; determine the net withdrawn methanol (in the case of diurnal emission testing with fixed volume enclosures); record temperature and barometric pressure. These are the final readings for the hydrocarbon and methanol retention check. The final hydrocarbon and methanol mass, calculated in paragraph (d) of this section, shall be within three percent of that determined in paragraph (c)(1)(viii) of this section. (For 1991–1995 calendar years, the difference may exceed ±3 percent for methanol, provided it does not exceed ±6 percent.)

* * * * *

(d) *Calculations.* (1) The calculation of net methanol and hydrocarbon mass change is used to determine enclosure background and leak rate. It is also used to check the enclosure volume measurements. The methanol mass change is calculated from the initial and final methanol samples, temperature and pressure according to the following equation:

$$M_{CH3OH} = V_X \times \frac{T_{Ef}}{V_{Ef} \times T_{SHEDf}} \left(C_{MS1i} \times AV_{1f}\right) + \left(C_{MS2f} \times AV_{2f}\right)$$

$$- \frac{T_{Ei}}{V_{Ei} \times T_{SHEDi}} \left(C_{MS1i} \times AV_{1i}\right) + \left(C_{MS2i} \times AV_{2i}\right)$$

Where:

(i) $M_{CH3OH}$=Methanol mass change, μg.

(ii) V=Enclosure volume, ft$^3$, as measured in paragraph (b)(1) of this section.

(iii) $T_E$=Temperature of sample withdrawn, °R.

(iv) $T_{SHED}$=Temperature of SHED, °R.

(v) $V_E$=Volume of sample withdrawn, ft$^3$.

(vi) $P_B$=Barometric pressure at time of sampling, in. Hg.

(vii) $C_{MS}$=GC concentration of test sample.

(viii) AV=Volume of absorbing reagent in impinger (ml).

(ix) i=Initial sample.

(x) f=Final sample.

(xii) 1=First impinger.

(xiii) 2=Second impinger.

(xiv) $M_{CH3OH}$,out=mass of methanol exiting the enclosure, in the case of fixed volume enclosures for diurnal emission testing, μg.

(xv) $M_{CH3OH}$,in=mass of methanol exiting the enclosure, in the case of fixed volume enclosures for diurnal emission testing, μg.

(2) * * *

(iii) $C_{CH3OH}$=Methanol concentration as ppm carbon

$$= \frac{1.501 \times 10^{-3} \times T_E}{P_B \times V_E} \left[\left(C_{S1} \times AV_1\right) + \left(C_2 \times AV_2\right)\right]$$

* * * * *

21. Section 86.119–90 of Subpart B is amended by revising paragraphs (c)(1), (c)(4), and (c)(7) to read as follows:

### § 86.119–90 CVS calibration.

* * * * *

(c) * * *

(1) Obtain a small cylinder that has been charged with pure propane or carbon monoxide gas (CAUTION—carbon monoxide is poisonous).

* * * * *

(4) Following completion of step (3) in this paragraph (c) (if methanol injection is required), continue to operate the CVS in the normal manner and release a known quantity of pure methanol (in gaseous form) into the system during the sampling period (approximately five minutes). This step does not need to be performed with each verification, provided that it is performed at least twice annually.

* * * * *

(7) The cause for any discrepancy greater than ±2 percent must be found and corrected. (For 1991–1995 calendar years, discrepancies greater than ±2 percent are allowed for the methanol test, provided that they do not exceed ±8 percent for 1991 testing or ±6 percent for 1992–1995 testing.)

22. A new § 86.120–94 is being added to Subpart B to read as follows:

### § 86.120–94 Gas meter or flow instrumentation calibration; particulate, methanol and formaldehyde measurement.

(a) Sampling for particulate, methanol and formaldehyde emissions requires the use of gas meters or flow instrumentation to determine flow through the particulate filters, methanol impingers and formaldehyde impingers. These instruments shall receive initial and periodic calibrations as follows:

(1)(i) Install a calibration device in series with the instrument. A critical flow orifice, a bellmouth nozzle, a laminar flow element or an NBS traceable flow calibration device is required as the standard device.

(ii) The flow system should be checked for leaks between the calibration and sampling meters, including any pumps that may be part of the system, using good engineering practice.

(2) Flow air through the calibration system at the sample flow rate used for particulate, methanol, and formaldehyde testing and at the backpressure which occurs during the test.

(3) When the temperature and pressure in the system have stabilized, measure the indicated gas volume over a time period of at least five minutes or until a gas volume of at least ±1 percent accuracy can be determined by the standard device. Record the stabilized air temperature and pressure upstream of the instrument and as required for the standard device.

(4) Calculate air flow at standard conditions as measured by both the standard device and the instrument(s). (Standard conditions are defined as 68°F (20°C) and 29.92 in Hg (101.3 kPa).)

(5) Repeat the procedures of paragraphs (a)(2) through (4) of this section using at least two flow rates which bracket the typical operating range.

(6) If the air flow at standard conditions measured by the instrument differs by ±1.0 percent of the maximum operating range or ±2.0 percent of the point (whichever is smaller), then a correction shall be made by either of the following two methods: