40 C.F.R. § 1065.660

THC, NMHC, NMNEHC, CH4, and C2H6 determination.

(a) *THC determination and initial THC/CH$_4$ contamination corrections.* (1) If we require you to determine THC emissions, calculate $x_{THC[THC-FID]cor}$ using the initial THC contamination concentration $x_{THC[THC-FID]init}$ from § 1065.520 as follows:

$$x_{THC[THC-FID]cor} = x_{THC[THC-FID]uncor} - x_{THC[THC-FID]init}$$

Eq. 1065.660-1

Example:

$x_{THCuncor}$ = 150.3 μmol/mol $x_{THCinit}$ = 1.1 μmol/mol x_{THCcor} = 150.3—1.1 x_{THCcor} = 149.2 μmol/mol

(2) For the NMHC determination described in paragraph (b) of this section, correct $x_{THC[THC-FID]}$ for initial THC contamination using Eq. 1065.660-1. You may correct $x_{THC[NMC-FID]}$ for initial contamination of the CH$_4$ sample train using Eq. 1065.660-1, substituting in CH$_4$ concentrations for THC.

(3) For the NMNEHC determination described in paragraph (c) of this section, correct $x_{THC[THC-FID]}$ for initial THC contamination using Eq. 1065.660-1. You may correct $x_{THC[NMC-FID]}$ for initial contamination of the CH$_4$ sample train using Eq. 1065.660-1, substituting in CH$_4$ concentrations for THC.

(4) For the CH$_4$ determination described in paragraph (d) of this section, you may correct $x_{THC[NMC-FID]}$ for initial THC contamination of the CH$_4$ sample train using Eq. 1065.660-1, substituting in CH$_4$ concentrations for THC.

(5) You may calculate THC as the sum of NMHC and CH$_4$ if you determine CH$_4$ with an FTIR as described in paragraph (d)(2) of this section and NMHC with an FTIR using the additive method from paragraph (b)(4) of this section.

(6) You may calculate THC as the sum of NMNEHC, C$_2$H$_6$, and CH$_4$ if you determine CH$_4$ with an FTIR as described in paragraph (d)(2) of this section, C$_2$H$_6$ with an FTIR as described in paragraph (e) of this section, and NMNEHC with an FTIR using the additive method from paragraph (c)(3) of this section.

(b) *NMHC determination.* Use one of the following to determine NMHC concentration, x_{NMHC}:

(1) If you do not measure CH$_4$, you may omit the calculation of NMHC concentrations and calculate the mass of NMHC as described in § 1065.650(c)(5).

(2) For nonmethane cutters, calculate x_{NMHC} using the nonmethane cutter's methane penetration fraction,

$PF_{CH4[NMC\text{-}FID]}$, and the ethane response factor penetration fraction, $RFPF_{C2H6[NMC\text{-}FID]}$, from § 1065.365, the THC FID's methane response factor, $RF_{CH4[THC\text{-}FID]}$, from § 1065.360, the initial THC contamination and dry-to-wet corrected THC concentration, $\chi_{THC[THC\text{-}FID]cor}$, as determined in paragraph (a) of this section, and the dry-to-wet corrected methane concentration, $\chi_{THC[NMC\text{-}FID]cor}$, optionally corrected for initial THC contamination as determined in paragraph (a) of this section.

(i) If you need to account for penetration fractions determined as a function of molar water concentration, use Eq. 1065.660-4. Otherwise, use the following equation for penetration fractions determined using an NMC configuration as outlined in § 1065.365(d):

This document is only available to subscribers. Please log in or purchase access.

Purchase Login