

(c) You may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in § 63.7(e)(1).

(d) Except for opacity and visible emission observations, you must conduct three separate test runs for each performance test required in this section, as specified in § 63.7(e)(3). Each test run must last at least 1 hour.

(e) You must use the following equations to determine compliance with the emission limitations.

(1) To determine compliance with the particulate matter mass emission rate, you must use Equations 1 and 2 of this section as follows:

$$E = M_{PM}/P \quad (\text{Eq. 1})$$

Where:

E = Particulate matter emission rate, kilograms (pounds) of particulate matter per megagram (ton) of roofing product manufactured.

M_{PM} = Particulate matter mass emission rate, kilograms (pounds) per hour, determined using Equation 2.

P = The asphalt roofing product manufacturing rate during the emissions sampling period, including any material trimmed from the final product, megagram (tons) per hour.

$$M_{PM} = C * Q * K \quad (\text{Eq. 2})$$

Where:

M_{PM} = Particulate matter mass emission rate, kilograms (pounds) per hour.

C = Concentration of particulate matter on a dry basis, grams per dry standard cubic meter (g/dscm), as measured by the test method specified in Table 3 to this subpart.

Q = Vent gas stream flow rate (dry standard cubic meters per minute) at a temperature of 20°C as measured by the test method specified in Table 3 to this subpart.

K = Unit conversion constant (0.06 minute-kilogram/hour-gram).

(2) To determine compliance with the total hydrocarbon percent reduction standard, you must use Equations 3 and 4 of this section as follows:

$$RE = \left[(M_{THCi} - M_{THCo}) / (M_{THCi}) \right] * (100) \quad (\text{Eq. 3})$$

Where:

RE = Emission reduction efficiency, percent.

M_{THCi} = Mass flow rate of total hydrocarbons entering the control device, kilograms (pounds) per hour, determined using Equation 4.

M_{THCo} = Mass flow rate of total hydrocarbons exiting the control device, kilograms (pounds) per hour, determined using Equation 4.

$$M_{THC} = C * Q * K \quad (\text{Eq. 4})$$

Where:

M_{THC} = Total hydrocarbon emission rate, kilograms (pounds) per hour.

C = Concentration of total hydrocarbons on a dry basis, parts per million by volume (ppmv), as measured by the test method specified in Table 3 to this subpart.

Q = Vent gas stream flow rate (dscmm) at a temperature of 20 °C as measured

by the test method specified in Table 3 to this subpart.

K = Unit conversion constant (3.00E-05) (ppmv)⁻¹ (gram-mole/standard cubic meter) (kilogram/gram) (minutes/hour)), where standard temperature for gram-mole/standard cubic meter is 20 °C.

(3) To determine compliance with the combustion efficiency standard, you must use Equation 5 of this section as follows:

$$CE = \left[1 - (CO/CO_2) - (THC/CO_2) \right] \quad (\text{Eq. 5})$$

Where:

CE = Combustion efficiency, percent.

CO = Carbon monoxide concentration at the combustion device outlet, parts per million by volume (dry), as measured by the test method specified in Table 3 to this subpart.

CO₂ = Carbon dioxide concentration at the combustion device outlet, parts per million by volume (dry), as measured by the test method specified in Table 3 to this subpart.

THC = Total hydrocarbon concentration at the combustion device outlet, parts per million by volume (dry), as

measured by the test method specified in Table 3 to this subpart.

(4) To determine compliance with the total hydrocarbon destruction efficiency standard for a combustion device that does not use auxiliary fuel, you must use Equation 6 of this section as follows:

$$THC\ DE = \left[(CO + CO_2) / (CO + CO_2 + THC) \right] \quad (\text{Eq. 6})$$

Where:

THC DE = THC destruction efficiency, percent.

CO = Carbon monoxide concentration at the combustion device outlet, parts per million by volume (dry), as measured by the test method specified in Table 3 to this subpart.

CO₂ = Carbon dioxide concentration at the combustion device outlet, parts per million by volume (dry), as measured by the test method specified in Table 3 to this subpart.

THC = Total hydrocarbon concentration at the combustion device outlet, parts per million by volume (dry), as measured by the test method specified in Table 3 to this subpart.

§ 63.8688 What are my monitoring installation, operation, and maintenance requirements?

(a) You must install, operate, and maintain each continuous parameter monitoring system (CPMS) according to the following:

(1) The CPMS must complete a minimum of one cycle of operation for each successive 15-minute period.

(2) To determine the 3-hour average, you must:

(i) Have a minimum of four successive cycles of operation to have a valid hour of data.

(ii) Have valid data from at least three of four equally spaced data values for that hour from a CPMS that is not out-of-control according to your site-specific monitoring plan.