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substrate, such as a filter. In this case, divide the PM by the amount of filtered exhaust to calculate the PM concentration. Multiply batch sampled concentrations by the total (raw or dilute) flow from which it was extracted during the test interval. This product is the total mass of the emitted constituent.

(iii) *Combined sampling*. You may use continuous and batch sampling simultaneously during a test interval, as follows:

(A) You may use continuous sampling for some constituents and batch sampling for others.

(B) You may use continuous and batch sampling for a single constituent, with one being a redundant measurement, subject to the provisions of 40 CFR 1065.201.

(d) Refer to the standard-setting part for calculations to determine g/mile emission rates.

(e) The regulation highlights several specific cases where good engineering judgment is especially relevant. You must use good engineering judgment for all aspects of testing under this part, not only for those provisions where we specifically re-state this requirement.

## §1066.20 Units of measure and overview of calculations.

(a) System of units. The procedures in this part follows both conventional English Units and the International System of Units (SI), as detailed in NIST Special Publication 811, which we incorporate by reference in §1066.710.

(b) Units conversion. Use good engineering judgment to convert units between measurement systems as needed. The following conventions are used throughout this document and should be used to convert units as applicable:

(1) 1 hp = 33,000 ft·lbf/min = 550 ft·lbf/ s = 0.7457 kW.

(2) 1 lbf = 32.174 ft·lbm/s<sup>2</sup> = 4.4482 N.

(3) 1 inch = 25.4 mm.

(c) *Rounding*. The rounding provisions of 40 CFR 1065.20 apply for calculations in this part. This generally specifies that you round final values but not intermediate values. Use good engineering judgment to record the appropriate number of significant digits for all measurements.

(d) Interpretation of ranges. Interpret a range as a tolerance unless we explicitly identify it as an accuracy, repeatability, linearity, or noise specification. See 40 CFR 1065.1001 for the definition of tolerance. In this part, we specify two types of ranges:

(1) Whenever we specify a range by a single value and corresponding limit values above and below that value, target any associated control point to that single value. Examples of this type of range include " $\pm 10\%$  of maximum pressure", or "(30  $\pm 10)$  kPa".

(2) Whenever we specify a range by the interval between two values, you may target any associated control point to any value within that range. An example of this type of range is "(40 to 50) kPa".

(e) Scaling of specifications with respect to an applicable standard. Because this part 1066 applies to a wide range of vehicles and emission standards, some of the specifications in this part are scaled with respect to a vehicle's applicable standard or weight. This ensures that the specification will be adequate to determine compliance, but not overly burdensome by requiring unnecessarily high-precision equipment. Many of these specifications are given with respect to a "flow-weighted mean" that is expected at the standard or during testing. Flow-weighted mean is the mean of a quantity after it is weighted proportional to a corresponding flow rate. For example, if a gas concentration is measured continuously from the raw exhaust of an engine, its flowweighted mean concentration is the sum of the products of each recorded concentration times its respective exhaust flow rate, divided by the sum of the recorded flow rates. As another example, the bag concentration from a CVS system is the same as the flowweighted mean concentration, because the CVS system itself flow-weights the bag concentration. Refer to 40 CFR 1065.602 for information needed to estimate and calculate flow-weighted means.

## §1066.25 Recordkeeping.

The procedures in this part include various requirements to record data or