

1. Can a facility request to test a single process line for capture efficiency rather than testing all 8 lines that are not Permanent Total Enclosures (PTEs)?

No, the regulations are set for each individual line; therefore each line must be tested even if the lines are composed of the same model of equipment. The type of capture hood and coating lines are not the only thing that affects capture. The volatility of the coatings, percent coverage, and air flows across the line are a few things that can also affect the capture efficiency obtained by individual lines. Various industry representatives have said that you cannot look at two similar lines and know that they are obtaining the same capture efficiency.

2. I have a question concerning whether or not one may use the alternative of static pressure in lieu of measured facial velocity for determining a PTE or TTE. Can the 0.007" stand on its own as verification even if calculations for facial velocity from the measured total enclosure exhaust rate do not correspond?

The method was written such that either the calculation or the measurement could be used. We are not sure how to respond if the two do not agree with respect to meeting the 200ft/min requirement. We have never heard of a case where they did not correspond. The final answer would be left up to enforcement and the regulatory agency. You should look at the placement of the pressure monitor and whether it appears to be in a reasonable location. We would also recommend measuring the pressure differential at several locations to show consistency.

3. How do you calculate equivalent diameter for natural draft openings?

For a circular/oval type opening, you need to use the following equation:

$$ED = \sqrt{\frac{4 \text{ Area}}{\pi}}$$

For a square/rectangular type opening, you have two choices. The equation above or the following equation:

$$ED = \frac{2LW}{L+W}$$

Where:

L = Length

W = Width