Notice

This Engineering Guide was recently converted to a PC format and it has not been proof read by our engineering staff. Therefore, it is subject to change at a later date.

Ohio EPA

Division of Air Pollution Control

Engineering Section

Engineering Guide No. 55

Questions:

U.S. EPA Method 24 normally is used to determine the VOC contents of coatings. What precautions should one take in analyzing data for high water content coatings? (This questions was submitted by Jeff Slayback of RAPCA on July 8, 1987.)

Answer:

As noted in Method 24, there is an inherent increase in imprecision when determining the VOC content of waterborne coatings as the weight percent of water increases.

As such, the laboratory measurements are adjusted using confidence limits which are based on between-laboratory precision statements. The procedures for adjusting the measurement values are given in section 4.4 of Method 24.

Compliance determinations must take these confidence limits into consideration when waterborne coatings are used.

If the adjusted measurement yields a result (lbs VOC/gal) which is less than or equal to zero, the VOC content of the coating, as specified in the manufacturer's formulation data, should be used for the compliance determinations.

If the adjusted measurement value is greater than zero, but not equivalent to the manufacturer's formulation data, the adjusted Method 24 measurement value should be used.

In the situation where it is absolutely necessary to have greater precision regarding the coating's VOC content in order to determine compliance with a very low emission limit, the individual components of the coating formulation could be analyzed for VOC content (where applicable using Method 24 prior to final weighted amount of each component in the final formulation.

BW/jse

March 15 1989