



## State of New Jersey

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### **THC Periodic Monitoring Requirements**

Periodic monitoring of Total Hydrocarbons (THC) concentration in the flue gas emitted to the atmosphere should be conducted in accordance with the following procedures.

#### **A. Sample location:**

1. Select a sampling site located at least two stack diameters downstream of any flow disturbance and one-half stack diameter upstream of any flow disturbance (typically, the gas discharge to atmosphere).
2. Alternatively, or if a location meeting the criteria above cannot be achieved, conduct a stratification check as detailed in EPA Method 7E, Section 8.1.2 and sample at the applicable number of points per that procedure.
3. Collect all samples from a single point near the center of the duct, or use a point approved by the DEP.

#### **B. Analyzer span (range):**

Use a span value equivalent to no more than 1.5 to 2.5 times the expected or allowable concentration, unless otherwise approved by the DEP. Span is as defined in EPA Method 25A, the upper limit of the analyzer measurement range.

#### **C. Sample collection:**

1. A gas sample is extracted from the source through a heated sample line (sufficient to prevent condensation) and glass fiber filter (if needed) to a flame ionization analyzer (FIA), unless another type of analyzer is approved by the DEP.
2. Calibration gases must be injected through the entire sampling system, not directly to the analyzer.

#### **D. Procedure for periodic monitoring events:**

1. Start up the analyzer and allow the unit to stabilize.
2. Calibrate the analyzer with zero gas first, and then an upscale gas, either a mid-range (45-55 percent of span) or high-range (80-90 percent of span) calibration gas. Acceptable calibration error is 5% of span for the zero gas and 5% of the calibration gas value for the upscale gas used, or that specified by the analyzer manufacturer, whichever is lower.

3. Sample for the period of time specified in the Permit conditions. If no time is specified, the sample time will be 1-hour.
4. Conduct post calibrations with the zero and upscale calibration gases and demonstrate that drift has not exceeded 5% of the span value (5% is deemed acceptable for periodic monitoring) for either gas.
5. If a drift value has been exceeded, the sampling will have to be repeated. The cause of the excessive drift may be due to a start-up period that was not long enough to allow for the analyzer to stabilize.
6. Full calibrations in accordance with EPA Method 25A must be conducted initially and on a quarterly basis to insure the continued linearity of the analyzer.

**Notes:**

This procedure is applicable to THC periodic monitoring in lieu of a CEMS for oxidizers or other controls where the allowable is surrogate for destruction/removal efficiency. The THC allowable will be established during the stack test in accordance with the procedures in Technical Manual 1005, Appendix D.

The Periodic Monitor must be installed, operational and properly calibrated (in accordance with EPA Method 25A) prior to and during the compliance test program so that measured concentration values may be compared with the compliance test data.

**EPA Method 25A Requirements incorporated by Reference (as applicable):**

1. A gas sample is extracted from the source through a heated sample line and glass fiber filter to a flame ionization analyzer (FIA). (§2.1) Sensitivity <2% of Span. (§1.1)
2. Use a span value equivalent to 1.5 to 2.5 times the expected concentration. (§3.6)
3. Calibration Gases 0, 25-35, 45-55, and 80-90 percent of the span value. (§7.1)
4. Zero Drift  $\pm$  3% of Span, Calibration Drift  $\pm$  3% of Span and Calibration Error  $\pm$  5% of Span (§13.1)