
40 C.F.R. § 1065.308

Continuous gas analyzer system–response and updating–recording verification—for gas analyzers not continuously compensated for other gas species.

- (a) *Scope and frequency.* This section describes a verification procedure for system response and updating–recording frequency for continuous gas analyzers that output a gas species mole fraction (i.e., concentration) using a single gas detector, i.e., gas analyzers not continuously compensated for other gas species measured with multiple gas detectors. See § 1065.309 for verification procedures that apply to continuous gas analyzers that are continuously compensated for other gas species measured with multiple gas detectors. Perform this verification to determine the system response of the continuous gas analyzer and its sampling system. This verification is required for continuous gas analyzers used for transient or ramped–modal testing. You need not perform this verification for batch gas analyzer systems or for continuous gas analyzer systems that are used only for discrete–mode testing. Perform this verification after initial installation (i.e., test cell commissioning) and after any modifications to the system that would change system response. For example, perform this verification if you add a significant volume to the transfer lines by increasing their length or adding a filter; or if you reduce the frequency at which the gas analyzer updates its output or the frequency at which you sample and record gas–analyzer concentrations.
- (b) *Measurement principles.* This test verifies that the updating and recording frequencies match the overall system response to a rapid change in the value of concentrations at the sample probe. Gas analyzers and their sampling systems must be optimized such that their overall response to a rapid change in concentration is updated and recorded at an appropriate frequency to prevent loss of information. This test also verifies that the measurement system meets a minimum response time. You may use the results of this test to determine transformation time, t_{50} , for the purposes of time alignment of continuous data in accordance with § 1065.650(c)(2)(i). You may also use an alternate procedure to determine t_{50} in accordance with good engineering judgment. Note that any such procedure for determining t_{50} must account for both transport delay and analyzer response time.

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