

**PERFORMANCE SPECIFICATION 7 - SPECIFICATIONS  
AND TEST PROCEDURES FOR HYDROGEN SULFIDE CONTINUOUS EMISSION  
MONITORING SYSTEMS IN STATIONARY SOURCES**

*1.0 Scope and Application.*

1.1 Analytes.

Analyte	CAS No.
Hydrogen Sulfide	7783-06-4

1.2 Applicability.

1.2.1 This specification is to be used for evaluating the acceptability of hydrogen sulfide (H<sub>2</sub>S) continuous emission monitoring systems (CEMS) at the time of or soon after installation and whenever specified in an applicable subpart of the regulations.

1.2.2 This specification is not designed to evaluate the installed CEMS performance over an extended period of time nor does it identify specific calibration techniques and other auxiliary procedures to assess CEMS performance. The source owner or operator, however, is responsible to calibrate, maintain, and operate the CEMS. To evaluate CEMS performance, the Administrator may require, under Section 114 of the Act, the source owner or operator to conduct CEMS performance evaluations at other times besides the initial test. See Section 60.13(c).

*2.0 Summary.*

Calibration drift (CD) and relative accuracy (RA) tests are conducted to determine that the CEMS conforms to the specification.

### *3.0 Definitions.*

Same as Section 3.0 of PS 2.

### *4.0 Interferences. [Reserved]*

### *5.0 Safety.*

The procedures required under this performance specification may involve hazardous materials, operations, and equipment. This performance specification may not address all of the safety problems associated with these procedures. It is the responsibility of the user to establish appropriate safety problems associated with these procedures. It is the responsibility of the user to establish appropriate safety and health practices and determine the application regulatory limitations prior to performing these procedures. The CEMS user's manual and materials recommended by the reference method should be consulted for specific precautions to be taken.

### *6.0 Equipment and Supplies.*

6.1 Instrument Zero and Span. This specification is the same as Section 6.1 of PS 2.

6.2 Calibration Drift. The CEMS calibration must not drift or deviate from the reference value of the calibration

gas or reference source by more than 5 percent of the established span value for 6 out of 7 test days (e.g., the established span value is 300 ppm for Subpart J fuel gas combustion devices).

6.3 Relative Accuracy. The RA of the CEMS must be no greater than 20 percent when the average reference method (RM) value is used to calculate RA or 10 percent when the applicable emission standard is used to calculate RA.

*7.0 Reagents and Standards.*

Same as Section 7.0 of PS 2.

*8.0 Sample Collection, Preservation, Storage, and Transport.*

8.1 Installation and Measurement Location Specification. Same as Section 8.1 of PS 2.

8.2 Pretest Preparation. Same as Section 8.2 of PS 2.

8.3 Calibration Drift Test Procedure. Same as Section 8.3 of PS 2.

8.4 Relative Accuracy Test Procedure.

8.4.1 Sampling Strategy for RM Tests, Correlation of RM and CEMS Data, and Number of RM Tests. These are the same as that in PS 2, Sections 8.4.3, 8.4.5, and 8.4.4, respectively.

8.4.2 Reference Methods. Unless otherwise specified in an applicable subpart of the regulation, Method 11 is the RM for this PS.

8.5 Reporting. Same as Section 8.5 of PS 2.

9.0 *Quality Control*. [Reserved]

10.0 *Calibration and Standardizations*. [Reserved]

11.0 *Analytical Procedures*.

Sample Collection and analysis are concurrent for this PS (see Section 8.0). Refer to the RM for specific analytical procedures.

12.0 *Data Analysis and Calculations*.

Same as Section 12.0 of PS 2.

13.0 *Method Performance*. [Reserved]

14.0 *Pollution Prevention*. [Reserved]

15.0 *Waste Management*. [Reserved]

16.0 *References*.

1. U.S. Environmental Protection Agency. Standards of Performance for New Stationary Sources; Appendix B; Performance Specifications 2 and 3 for SO<sub>2</sub>, NO<sub>x</sub>, CO<sub>2</sub>, and O<sub>2</sub> Continuous Emission Monitoring Systems; Final Rule. 48 CFR 23608. Washington, D.C. U.S. Government Printing Office. May 25, 1983.

2. U.S. Government Printing Office. Gaseous Continuous Emission Monitoring Systems - Performance

Specification Guidelines for SO<sub>2</sub>, NO<sub>x</sub>, CO<sub>2</sub>, O<sub>2</sub>, and TRS.

U.S. Environmental Protection Agency. Washington, D.C. EPA-450/3-82-026. October 1982. 26 p.

3. Maines, G.D., W.C. Kelly (Scott Environmental Technology, Inc.), and J.B. Homolya. Evaluation of Monitors for Measuring H<sub>2</sub>S in Refinery Gas. Prepared for the U.S. Environmental Protection Agency. Research Triangle Park, N.C. Contract No. 68-02-2707. 1978. 60 p.

4. Ferguson, B.B., R.E. Lester (Harmon Engineering and Testing), and W.J. Mitchell. Field Evaluation of Carbon Monoxide and Hydrogen Sulfide Continuous Emission Monitors at an Oil Refinery. Prepared for the U.S. Environmental Protection Agency. Research Triangle Park, N.C. Publication No. EPA-600/4-82-054. August 1982. 100 p.

*17.0 Tables, Diagrams, Flowcharts, and Validation Data.*

Same as Section 18.0 of PS 2.