

TABLE 8 OF SUBPART YYYY OF PART 63.—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART YYYY—Continued

Citation	Subject	Applies to subpart YYYY	Explanation
§ 63.10(d)(4) .....	Progress reports .....	No .....	Compliance extensions do not apply to new or reconstructed sources.
§ 63.10(d)(5) .....	Startup, shutdown, and malfunction reports ...	No .....	Subpart YYYY does not require reporting of startup, shutdowns, or malfunctions.
§ 63.10(e)(1) and (2)(i) .....	Additional CMS reports .....	Yes.	
§ 63.10(e)(2)(ii) .....	COMS-related report .....	No .....	Subpart YYYY does not require COMS.
§ 63.10(e)(3) .....	Excess emissions and parameter exceedances reports.	Yes.	
§ 63.10(e)(4) .....	Reporting COMS data .....	No .....	Subpart YYYY does not require COMS.
§ 63.10(f) .....	Waiver for recordkeeping and reporting .....	Yes.	
§ 63.11 .....	Flares .....	No.	
§ 63.12 .....	State authority and delegations .....	Yes.	
§ 63.13 .....	Addresses .....	Yes.	
§ 63.14 .....	Incorporation by reference .....	Yes.	
§ 63.15 .....	Availability of information .....	Yes.	

3. Appendix A to Part 63 is proposed to be amended by adding, in numerical order, Method 323 to read as follows:

#### Appendix A to Part 63—Test Methods

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#### Method 323—Measurement of Formaldehyde Emissions from Natural Gas-Fired Stationary Sources—Acetyl Acetone Derivatization Method

##### 1.0 Introduction

This method describes the sampling and analysis procedures of the acetyl acetone colorimetric method for measuring formaldehyde emissions in the exhaust of natural gas-fired, stationary combustion sources. This method, which was prepared by the Gas Research Institute (GRI), is based on the Chilled Impinger Train Method for Methanol, Acetone, Acetaldehyde, Methyl Ethyl Ketone, and Formaldehyde (Technical Bulletin No. 684) developed and published by the National Council of the Paper Industry for Air and Stream Improvement, Inc. (NCASI).<sup>1</sup> However, this method has been prepared specifically for formaldehyde and does not include specifications (e.g., equipment and supplies) and procedures (e.g., sampling and analytical) for methanol, acetone, acetaldehyde, and methyl ethyl ketone. To obtain reliable results, persons using this method should have a thorough knowledge of at least Methods 1, 2, 3, and 4 of 40 CFR part 60, appendix A.

##### 1.1 Scope and Application

1.1.1 *Analytes.* The only analyte measured by this method is formaldehyde (CAS Number 50-00-0).

1.1.2 *Applicability.* This method is for analyzing formaldehyde emissions from

uncontrolled and controlled natural gas-fired, stationary combustion sources.

1.1.3 *Data Quality Objectives.* If you adhere to the quality control and quality assurance requirements of this method, then you and future users of your data will be able to assess the quality of the data you obtain and estimate the uncertainty in the measurements.

##### 2.0 Summary of Method

An emission sample from the combustion exhaust is drawn through a midjet impinger train containing chilled reagent water to absorb formaldehyde. The formaldehyde concentration in the impinger is determined by reaction with acetyl acetone to form a colored derivative which is measured colorimetrically.

##### 3.0 Definitions

[Reserved]

##### 4.0 Interferences

The presence of acetaldehyde, amines, polymers of formaldehyde, periodate, and sulfites can cause interferences with the acetyl acetone procedure which is used to determine the formaldehyde concentration. However, based on experience gained from extensive testing of natural gas-fired combustion sources using FTIR to measure a variety of compounds, GRI expects only acetaldehyde to be potentially present when combusting natural gas. Acetaldehyde has been reported to be a significant interferent only when present at concentrations above 50 ppm.<sup>4</sup> However, GRI reports that the concentration of acetaldehyde from gas-fired sources is very low (typically below the FTIR detection limit of around 0.5 ppmv); therefore, the potential positive bias due to acetaldehyde interference is expected to be negligible.

##### 5.0 Safety

5.1 Prior to applying the method in the field, a site-specific Health and Safety Plan should be prepared. General safety precautions include the use of steel-toed boots, safety glasses, hard hats, and work gloves. In certain cases, facility policy may require the use of fire-resistant clothing while on-site. Since the method involves testing at high-temperature sampling locations, precautions must be taken to limit the potential for exposure to high-temperature gases and surfaces while inserting or removing the sample probe. In warm locations, precautions must also be taken to avoid dehydration.

5.2 Potential chemical hazards associated with sampling include formaldehyde, nitrogen oxides (NO<sub>x</sub>), and carbon monoxide (CO). Formalin solution, used for field spiking, is an aqueous solution containing formaldehyde and methanol. Formaldehyde is a skin, eye, and respiratory irritant and a carcinogen, and should be handled accordingly. Eye and skin contact and inhalation of formaldehyde vapors should be avoided.

Natural gas-fired combustion sources can potentially emit CO at toxic concentrations. Care should be taken to minimize exposure to the sample gas while inserting or removing the sample probe. If the work area is enclosed, personal CO monitors should be used to insure that the concentration of CO in the work area is maintained at safe levels.

5.3 Potential chemical hazards associated with the analytical procedures include acetyl acetone and glacial acetic acid. Acetyl acetone is an irritant to the skin and respiratory system, as well as being moderately toxic. Glacial acetic acid is highly