6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

[FRL-9945-90-ORD]

Office of Research and Development;

Ambient Air Monitoring Reference and Equivalent Methods: Designation of Three New Reference Methods and Three New Equivalent Methods

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice of the designation of three new reference methods and three new equivalent methods for monitoring ambient air quality.

SUMMARY: Notice is hereby given that the Environmental Protection Agency (EPA) has designated, in accordance with 40 CFR Part 53, three new reference methods and three new equivalent methods. The reference methods include one for measuring concentrations of PM_{10}, one for measuring $PM_{10-2.5}$, and one for measuring ozone (O_3) in ambient air. The three equivalent methods are for measuring $PM_{2.5}$ concentrations in ambient air.

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SUPPLEMENTARY INFORMATION: In accordance with regulations at 40 CFR part 53, the EPA evaluates various methods for monitoring the concentrations of those ambient air pollutants for which EPA has established National Ambient Air Quality Standards (NAAQSs) as set forth in 40 CFR part 50. Monitoring methods that are determined to meet specific requirements for adequacy are designated by the EPA as either reference or equivalent methods (as applicable), thereby permitting their use under 40 CFR part 58 by States and other agencies for determining compliance with the NAAQSs. A list of all reference or equivalent methods that have been previously designated by EPA may be found at http://www.epa.gov/ttn/amtic/criteria.html.

The EPA hereby announces the designation of one new reference method for measuring pollutant concentrations of PM_{10}, one new reference method for measuring pollutant concentrations of $PM_{10-2.5}$, one for measuring ozone (O_3), and three new equivalent methods for measuring pollutant concentrations of $PM_{2.5}$ in the ambient air. These designations are made under the provisions of 40 CFR part 53, as amended on October 26, 2015 (80 FR 65291-65468).

The new reference method for O_3 is an automated method that utilizes a measurement principle based on non-dispersive

ultraviolet absorption photometry. The newly designated reference method for O_3 is identified as follows:

RFOA-0216-230, "Teledyne Advanced Pollution Instrumentation, Model 265E or T265 Chemiluminescence Ozone Analyzer," operated on any full scale range between 0-100 ppb and 0-1000 ppb, with any range mode (Single, Dual, or AutoRange), at any ambient temperature in the range of 5°C to 40°C, and with a TFE filter or a Kynar® DFU in the sample air inlet, operated with a sample flow rate of 500 ± 50 cm^3/min (sea level), with the dilution factor set to 1, with Temp/Press compensation ON, and in accordance with the appropriate associated instrument manual, and with or without any of the following options: Internal or external sample pump, Sample/Cal valve option, Rack mount with or without slides, analog input option, 4-20 mA isolated current loop output. Note 2 applies to the following Teledyne Advanced Pollution Instrumentation Models 265E and T265.

The application for a reference method determination for this candidate method was received by the Office of Research and Development on February 2, 2016. The analyzer is commercially available from the applicant, Teledyne Advanced Pollution Instrumentation, Inc., 9480 Carroll Park Drive, San Diego, CA 92121-2251.

The new reference method for PM_{10} is a manual monitoring method based on a particular PM_{10} sampler and is identified as follows:

RFPS-0216-231, "Met One Instruments, Inc. E-FRM," configured for filter sampling of ambient particulate matter using the US EPA PM_{10} inlet specified in 40 CFR part 50 appendix L, Figs. L-2 thru L-19, with a flow rate of 16.67 L/min, using 47 mm PTFE membrane filter media, and operating with firmware version R2.0.1 and later, and operated in accordance with the Met One E-FRM PM_{10} operating manual. This designation applies to PM_{10} measurements only.

The new $PM_{10-2.5}$ reference method utilizes a pair of filter samplers than have been designated individually as reference methods, one for $PM_{2.5}$ and the other one for PM_{10}, and have been shown to meet the requirements specified in appendix O of 40 CFR part 50. The $PM_{2.5}$ and PM_{10} samplers are designated as reference methods RFPS-0315-221 and RFPS-0216-231, respectively. The newly designated $PM_{10-2.5}$ sampler is identified as follows:

RFPS-0316-232, "Met One Instruments, Inc. E-FRM–PM_{10} and E-FRM–$PM_{2.5}$ Sampler Pair" for the determination of coarse

particulate matter as $PM_{10-2.5}$, consisting of a pair of Met One Instruments, Inc. E-FRM samplers, with one being the E-FRM $PM_{2.5}$ sampler (RFPS-0315-221) and the other being the E-FRM PM_{10} sampler (RFPS-0216-231). The units are to be collocated to within 1-4 meters of one another and sample concurrently. Both units are operated in accordance with the associated E-FRM instruction manual. This designation applies to $PM_{10-2.5}$ measurements only.

One newly designated equivalent method for $PM_{2.5}$ is a manual monitoring method based on a particular $PM_{2.5}$ sampler and is identified as follows:

EQPS-0316-235, "Met One Instruments, Inc. E-FRM," configured for filter sampling of ambient particulate matter using the US EPA PM_{10} inlet specified in 40 CFR 50 Appendix L, Figs. L-2 thru L-19, equipped with a URG-2000-30EGN Cyclone particle size separator, and operated for a continuous 24-hour sample period at a flow rate of 16.67 liters/minute, using 47 mm PTFE membrane filter media, and operating with firmware version R1.1.0 and later, and operated in accordance with the Met One E-FRM $PM_{2.5}$ operating manual.

The application for reference method determination for the PM_{10} method was received by the Office of Research and

Development on February 4, 2016, the $PM_{10-2.5}$ method application was received on March 21, 2016, and the equivalent $PM_{2.5}$ method was received on March 28, 2016. These monitors are commercially available from the applicant, Met One Instruments, Inc., 1600 Washington Blvd., Grants Pass, OR 97526.

Two newly designated equivalent methods for $PM_{2.5}$ are manual monitoring method based on particular $PM_{2.5}$ samplers and are identified as follows:

EQPS-0316-233, "URG-MASS100 Single $PM_{2.5}$ Sampler," operated with software (firmware) version 4B or 5.0.1, configured for "Single 2.5" operation with a URG-2000-30EGN Cyclone particle size separator, and operated for a continuous 24-hour sample period at a flow rate of 16.67 liters/minute, and in accordance with the URG-MASS100 Operator's Manual and with the requirements and sample collection filters specified in 40 CFR part 50, appendix L.

EQPS-0316-234, "URG-MASS300 Sequential $PM_{2.5}$ Sampler," operated with software (firmware) version 4B or 5.0.1, configured for "Multi 2.5" operation with a URG-2000-30EGN Cyclone particle size separator, and operated for a continuous 24-hour sample period at a flow rate of 16.67 liters/minute, and

in accordance with the URG-MASS300 Operator's Manual and with the requirements and sample collection filters specified in 40 CFR part 50, appendix L.

These applications for equivalent method determinations for the $PM_{2.5}$ methods were received by the Office of Research and Development on March 21, 2016. These monitors are commercially available from the applicant, URG Corporation, 116 S. Merritt Mill Rd., Chapel Hill, NC 27516.

Representative test monitors have been tested in accordance with the applicable test procedures specified in 40 CFR part 53, as amended on October 26, 2015. After reviewing the results of those tests and other information submitted by the applicant, EPA has determined, in accordance with part 53, that these methods should be designated as a reference or equivalent methods.

As designated reference and equivalent methods, these methods are acceptable for use by states and other air monitoring agencies under the requirements of 40 CFR part 58, Ambient Air Quality Surveillance. For such purposes, the methods must be used in strict accordance with the operation or instruction manual associated with the method and subject to any

specifications and limitations (*e.g.*, configuration or operational settings) specified in the designated method description (see the identification of the method above).

Use of the methods also should be in general accordance with the guidance and recommendations of applicable sections of the "Quality Assurance Handbook for Air Pollution Measurement Systems, Volume I," EPA/600/R-94/038a and "Quality Assurance Handbook for Air Pollution Measurement Systems, Volume II, Ambient Air Quality Monitoring Program," EPA-454/B-13-003, (both available at http://www.epa.gov/ttn/amtic/qalist.html). Provisions concerning modification of such methods by users are specified under Section 2.8 (Modifications of Methods by Users) of appendix C to 40 CFR part 58.

Consistent or repeated noncompliance with any of these conditions should be reported to: Director, Exposure Methods and Measurements Division (MD-E205-01), National Exposure Research Laboratory, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711.

Designation of these reference and equivalent methods are intended to assist the States in establishing and operating their air quality surveillance systems under 40 CFR part 58.

Questions concerning the commercial availability or technical aspects of the method should be directed to the applicant.

Date: April 19, 2016.

Jennifer Orme-Zavaleta

Director

National Exposure Research Laboratory

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