ENVIRONMENTAL PROTECTION AGENCY **6560-50-P**

FRL-9928-61-ORD

Office of Research and Development;

Ambient Air Monitoring Reference and Equivalent Methods: Designation of One New Reference Method and Four New Equivalent Methods.

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice of designation of one reference method and three 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, one new reference method and one new equivalent for measuring concentrations of $PM_{2.5}$, one new equivalent method for measuring $PM_{10-2.5}$, and two new equivalent methods for measuring ozone (O_3) in the ambient air.

FOR FURTHER INFORMATION CONTACT: Robert Vanderpool, Human Exposure and Atmospheric Sciences Division (MD-D205-03), National Exposure Research Laboratory, U.S. EPA, Research Triangle Park, North Carolina 27711. E-mail:

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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 methods 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.

The EPA hereby announces the designation of one new reference method for measuring $PM_{2.5}$, one new equivalent method for measuring $PM_{2.5}$, one new equivalent method for measuring $PM_{10-2.5}$, and two equivalent methods for measuring ozone (O_3) in the ambient air. These designations are made under the provisions of 40 CFR Part 53, as amended on August 31, 2011(76 FR 54326-54341).

The new reference method for $PM_{2.5}$ is a manual monitoring method based on a particular $PM_{2.5}$ sampler and is identified as follows:

RFPS-0315-221, "Met One Instruments, Inc. e-FRM," configured for filter sampling of ambient particles using the US EPA PM_{10} inlet specified in 40 CFR 50 Appendix L, Figs. L-2 thru L-19, equipped with either a BGI VSCC™ cyclone or WINS $PM_{2.5}$ fractionator, with a flow rate of 16.67 L/min, 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 $PM_{2.5}$ method was received by the Office of Research and Development on January 9, 2015. This monitor is commercially available from the applicant, Met One Instruments, Inc., 1600 Washington Blvd., Grants Pass, OR 97526.

The new $PM_{2.5}$ Class II equivalent method is nearly identical to a corresponding Tisch Environmental Inc. sampler (RFPS-1014-219) that had been previously designated by EPA as a reference

method sampler for $PM_{2.5}$. The significant difference is that the newly designated $PM_{2.5}$ equivalent method sampler is configured to use a Tisch Environmental Inc. Model TE-PM2.5C cyclone as the principle size separator (fractionator) for the sampler rather than the WINS impactor or the BGI VSCC™ used in the corresponding $PM_{2.5}$ reference method sampler. The newly designated Class II equivalent method is identified as follows:

EQPS-0415-223 "Tisch Environmental Model TE-Wilbur2.5 $PM_{2.5}$ Low-Volume Air Particulate Sampler," configured as a $PM_{2.5}$ equivalent method, with firmware version 1.70 or later and a TE-PM10-D PM_{10} size-selective inlet as specified in 40 CFR 50 Appendix L Figs. L-2 thru L-19, configured with a Tisch TE-PM2.5C particle size separator, and operated for 24-hour continuous sample periods at a flow rate of 16.67 L/min, using 47 mm PTFE membrane filter media, operated with or without the optional TE-W-600 Solar Panel Power Supply kit, and in accordance with the Tisch Environmental Model TE-Wilbur2.5 $PM_{2.5}$ Low-Volume Air Particulate Sampler instruction manual and with the requirements and sample collection filters as specified in 40 CFR Part 50, Appendix L.

In the particular case of the new Tisch Class II $PM_{2.5}$ equivalent method, a corresponding Tisch Environmental Inc. $PM_{2.5}$ reference method sampler (RFPS-1014-219) may be converted to the equivalent method configuration by replacement of the WINS impactor or the VSCC™ cyclone with the Tisch Environmental TE-PM2.5C cyclone specified in the equivalent method description. The TE-PM2.5C device should be purchased from the sampler manufacturer, who will also furnish installation, conversion, operation, and maintenance instructions for the TE-PM2.5C, as well as a new equivalent method identification label to be placed on the sampler. If the conversion is to be permanent, the original designation reference method label should be removed from the sampler and replaced with the new designated equivalent method label. In the case where a converted sampler may need to be restored later to its original reference method configuration (such as for an application specifically requiring a reference method) by re-installation of the WINS impactor or the VSCC™ cyclone, the new equivalent method label may be installed on the sampler without removing the original reference method label, such that the sampler bears both labels. In this situation, the sampler shall be clearly and conspicuously marked by the operator to indicate its current configuration (i.e. WINS

reference method, VSCC™ reference method, or TE-PM2.5C equivalent method) so that the monitoring method is correctly identified and the correct method code is used when reporting monitoring data obtained with the sampler.

The new $PM_{10-2.5}$ equivalent method utilizes a pair of filter samplers, one of which has been designated as an equivalent method for $PM_{2.5}$, and one which has been designated as a reference method for PM_{10}. Both samplers have been shown to meet the requirements specified in Appendix O of 40 CFR Part 50. The $PM_{2.5}$ equivalent method sampler and the PM_{10} reference method sampler are designated as EQPS-0415-223 and RFPS-0714-216, respectively. The newly designated $PM_{10-2.5}$ equivalent method sampler is identified as follows:

EQPS-0415-224, "Tisch Environmental Model TE-Wilbur Low-Volume Air Particulate Sampler Pair" for the determination of coarse particulate matter as $PM_{10-2.5}$, consisting of a pair of Tisch Environmental Model TE-Wilbur samplers, with one being the TE-Wilbur2.5 $PM_{2.5}$ sampler with TE-PM2.5C particle size separator (EQPS-0415-223) and the other being a TE-Wilbur10 PM_{10} sampler (RFPS-0714-216), and operated in accordance with the associated

TE-Wilbur instruction manual. This designation applies to $PM_{10-2.5}$ measurements only.

The application for equivalent method Class II determination for the $PM_{2.5}$ method was received by the Office of Research and Development on July 21, 2014 and the $PM_{10-2.5}$ method application was received on April 21, 2015. These samplers are commercially available from the applicant, Tisch Environmental, Inc., 145 S. Miami Avenue, Village of Cleves, OH 45002.

The two new equivalent methods for ozone are both automated monitoring methods (analyzers) utilizing ultraviolet absorption photometry and are identified as follows:

EQOA-0415-222, "Sutron Model 6030 Ozone Analyzer," operated at any of the following measurement ranges: 0-0.05 ppm, 0-0.5 ppm and 0-1.0 ppm, at any ambient temperature in the range of 5°C -45 °C, with an averaging time of 1 to 99 analyzer cycles (0 to 396 seconds), with sample flow rate of 0.5 to 1 Lpm and in accordance with the Model 6030 Ozone Analyzer Operation Manual and with or without the following options: internal ozone generator, zero/span ports for external calibration.

This application for equivalent method determination for the ozone method was received by the Office of Research and Development on March 9, 2015. This monitor is commercially available from the applicant, Sutron Air Quality Division, 2548 Shell Road, Georgetown, TX 78628.

EQOA-0515-225 "Environnement S.A. Model O3 42e UV Photometric Ozone Analyzer," operated in a range of 0–0.5 ppm in an environment of 0–35 °C, with a Teflon sample inlet filter, with automatic temperature and pressure compensation, with zero/span external solenoid valve, with automatic or fixed response time, and with or without the following options: ESTEL Analog Input/Output Board, LCD color touch screen, and internal ozone generator.

The application for equivalent method determination for the ozone method was received by the Office of Research and Development on April 20, 2015. This analyzer is commercially available from the applicant, Environnement S.A., 111, Boulevard Robespierre, 78300 Poissy France.

Test monitors representative of these methods have been tested in accordance with the applicable test procedures specified in 40 CFR Part 53, as amended on August 31, 2011. After reviewing the results of those tests and other information submitted in the application, EPA has determined, in accordance with Part 53, that these methods should be designated as 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 applicable 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-08-003, December, 2008. 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 should be reported to: Director, Human Exposure and Atmospheric Sciences 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 is 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.

Dated: May 20, 2015.

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Director,
National Exposure Research Laboratory.

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