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APPENDIX A TO PART 58—QUALITY ASSURANCE REQUIREMENTS FOR STATE AND LOCAL AIR MONITORING STATIONS (SLAMS)

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APPENDIX E TO PART 58—PROBE AND MONITORING PATH SITING CRITERIA FOR AMBIENT AIR QUALITY MONITORING

APPENDIX F TO PART 58—ANNUAL SLAMS AIR QUALITY INFORMATION

APPENDIX G TO PART 58—UNIFORM AIR QUALITY INDEX (AQI) AND DAILY REPORTING

AUTHORITY: 42 U.S.C. 7410, 7601(a), 7613, and 7619.

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Subpart A—General Provisions

§ 58.1 Definitions.

As used in this part, all terms not defined herein have the meaning given them in the Act:

Act means the Clean Air Act as amended (42 U.S.C. 7401, *et seq.*).

Administrator means the Administrator of the Environmental Protection Agency (EPA) or his or her authorized representative.

Aerometric Information Retrieval System (AIRS)-Air Quality Subsystem (AQS) is EPA's computerized system for storing and reporting of information relating to ambient air quality data.

Annual State air monitoring report is an annual report, prepared by control agencies and submitted to EPA for approval, that consists of an annual data summary report for all pollutants and a detailed report describing any proposed changes to their air quality surveillance network.

CO means carbon monoxide.

Community Monitoring Zone (CMZ) means an optional averaging area with established, well defined boundaries, such as county or census block, within a MPA that has relatively uniform concentrations of annual PM_{2.5} as defined by appendix D of this part. Two or more core SLAMS and other monitors within a CMZ that meet certain requirements as set forth in Appendix D of this part may be averaged for making comparisons to the annual PM_{2.5} NAAQS.

Consolidated Metropolitan Statistical Area (CMSA) means the most recent area as designated by the U.S. Office of Management and Budget and population figures from the Bureau of the Census. The Department of Commerce provides that within metropolitan complexes of 1 million or more population, separate component areas are defined if specific criteria are met. Such areas are designated primary metropolitan statistical areas (PMSAs); and any area containing PMSAs is designated CMSA.

Core PM_{2.5} SLAMS means community-oriented monitoring sites representative of community-wide exposures that are the basic component sites of the PM_{2.5} SLAMS regulatory network. Core PM_{2.5} SLAMS include community-oriented SLAMS monitors, and sites collocated at PAMS.

Corrected concentration pertains to the result of an accuracy or precision assessment test of an open path analyzer in which a high-concentration test or audit standard gas contained in a short test cell is inserted into the optical measurement beam of the instrument. When the pollutant concentration measured by the analyzer in such a test includes both the pollutant concentration in the test cell and the concentration in the atmosphere, the atmospheric pollutant concentration must be subtracted from the test measurement to obtain the corrected concentration test result. The corrected concentration is equal to the measured concentration minus the average of the atmospheric pollutant concentrations measured (without the test cell) immediately before and immediately after the test.

Correlated acceptable continuous (CAC) PM analyzer means an optional fine particulate matter analyzer that can be used to supplement a PM_{2.5} reference or equivalent sampler, in accordance with the provisions of § 58.13(f).

Effective concentration pertains to testing an open path analyzer with a high-concentration calibration or audit standard gas contained in a short test cell inserted into the optical measurement beam of the instrument. Effective concentration is the equivalent ambient-level concentration that would produce the same spectral absorbance over the actual atmospheric monitoring path length as produced by the high-concentration gas in the short test cell. Quantitatively, effective concentration is equal to the actual concentration of the gas standard in the test cell multiplied by the ratio of the path length of the test cell to the actual atmospheric monitoring path length.

Equivalent method means a method of sampling and analyzing the ambient air for an air pollutant that has been designated as an equivalent method in

accordance with part 53 of this chapter; it does not include a method for which an equivalent method designation has been canceled in accordance with § 53.11 or § 53.16 of this chapter.

Indian Governing Body means the governing body of any tribe, band, or group of Indians subject to the jurisdiction of the United States and recognized by the United States as possessing power of self-government.

Indian Reservation means any Federally recognized reservation established by treaty, agreement, executive order, or act of Congress.

Local agency means any local government agency, other than the State agency, which is charged with the responsibility for carrying out a portion of the plan.

Meteorological measurements means measurements of wind speed, wind direction, barometric pressure, temperature, relative humidity, and solar radiation.

Metropolitan Statistical Area (MSA) as designated by the most recent decennial U.S. Census of Population Report.

Monitor is a generic term for an instrument, sampler, analyzer, or other device that measures or assists in the measurement of atmospheric air pollutants and which is acceptable for use in ambient air surveillance under the provisions of appendix C to this part, including both point and open path analyzers that have been designated as either reference or equivalent methods under part 53 of this chapter and air samplers that are specified as part of a manual method that has been designated as a reference or equivalent method under part 53 of this chapter.

Monitoring path for an open path analyzer is the actual path in space between two geographical locations over which the pollutant concentration is measured and averaged.

Monitoring path length of an open path analyzer is the length of the monitoring path in the atmosphere over which the average pollutant concentration measurement (path-averaged concentration) is determined. See also, optical measurement path length.

Monitoring Planning Area (MPA) means a contiguous geographic area

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with established, well defined boundaries, such as a metropolitan statistical area, county or State, having a common area that is used for planning monitoring locations for $PM_{2.5}$. MPAs may cross State boundaries, such as the Philadelphia PA-NJ MSA, and be further subdivided into community monitoring zones. MPAs are generally oriented toward areas with populations greater than 200,000, but for convenience, those portions of a State that are not associated with MSAs can be considered as a single MPA. MPAs must be defined, where applicable, in a State PM monitoring network description.

NAMS means National Air Monitoring Station(s). Collectively the NAMS are a subset of the SLAMS ambient air quality monitoring network.

NO₂ means nitrogen dioxide. *NO* means nitrogen oxide. *NO_x* means oxides of nitrogen and is defined as the sum of the concentrations of NO_2 and NO .

O₃ means ozone.

Open path analyzer is an automated analytical method that measures the average atmospheric pollutant concentration in situ along one or more monitoring paths having a monitoring path length of 5 meters or more and that has been designated as a reference or equivalent method under the provisions of part 53 of this chapter.

Optical measurement path length is the actual length of the optical beam over which measurement of the pollutant is determined. The path-integrated pollutant concentration measured by the analyzer is divided by the optical measurement path length to determine the path-averaged concentration. Generally, the optical measurement path length is:

(1) Equal to the monitoring path length for a (bistatic) system having a transmitter and a receiver at opposite ends of the monitoring path;

(2) Equal to twice the monitoring path length for a (monostatic) system having a transmitter and receiver at one end of the monitoring path and a mirror or retroreflector at the other end; or

(3) Equal to some multiple of the monitoring path length for more complex systems having multiple passes of

the measurement beam through the monitoring path.

PAMS means Photochemical Assessment Monitoring Stations.

Particulate matter monitoring network description, required by § 58.20(f), means a detailed plan, prepared by control agencies and submitted to EPA for approval, that describes their $PM_{2.5}$ and PM_{10} air quality surveillance network.

Pb means lead.

Plan means an implementation plan, approved or promulgated pursuant to section 110 of the Clean Air Act.

PM_{2.5} means particulate matter with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers as measured by a reference method based on 40 CFR part 50, Appendix L, and designated in accordance with part 53 of this chapter or by an equivalent method designated in accordance with part 53 of this chapter.

PM₁₀ means particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers as measured by a reference method based on appendix J of part 50 of this chapter and designated in accordance with part 53 of this chapter or by an equivalent method designated in accordance with part 53 of this chapter.

Point analyzer is an automated analytical method that measures pollutant concentration in an ambient air sample extracted from the atmosphere at a specific inlet probe point and that has been designated as a reference or equivalent method in accordance with part 53 of this chapter.

Population-oriented monitoring (or sites) applies to residential areas, commercial areas, recreational areas, industrial areas, and other areas where a substantial number of people may spend a significant fraction of their day.

Primary Metropolitan Statistical Area (PMSA) is a separate component of a consolidated metropolitan statistical area. For the purposes of this part, PMSA is used interchangeably with MSA.

Probe is the actual inlet where an air sample is extracted from the atmosphere for delivery to a sampler or point analyzer for pollutant analysis.

PSD station means any station operated for the purpose of establishing the

effect on air quality of the emissions from a proposed source for purposes of prevention of significant deterioration as required by §51.24(n) of part 51 of this chapter.

Reference method means a method of sampling and analyzing the ambient air for an air pollutant that will be specified as a reference method in an appendix to part 50 of this chapter, or a method that has been designated as a reference method in accordance with this part; it does not include a method for which a reference method designation has been canceled in accordance with §53.11 or §53.16 of this chapter.

Regional Administrator means the Administrator of one of the ten EPA Regional Offices or his or her authorized representative.

SAROAD site identification form is one of the several forms in the SAROAD system. It is the form which provides a complete description of the site (and its surroundings) of an ambient air quality monitoring station.

SLAMS means State or Local Air Monitoring Station(s). The SLAMS make up the ambient air quality monitoring network which is required by §58.20 to be provided for in the State's implementation plan. This definition places no restrictions on the use of the physical structure or facility housing the SLAMS. Any combination of SLAMS and any other monitors (Special Purpose, NAMS, PSD) may occupy the same facility or structure without affecting the respective definitions of those monitoring station.

SO₂ means sulfur dioxide.

Special Purpose Monitor (SPM) is a generic term used for all monitors other than SLAMS, NAMS, PAMS, and PSD monitors included in an agency's monitoring network for monitors used in a special study whose data are officially reported to EPA.

State agency means the air pollution control agency primarily responsible for development and implementation of a plan under the Act.

Storage and Retrieval of Aerometric Data (SAROAD) system is a computerized system which stores and reports information relating to ambient air quality. The SAROAD system has been replaced with the AIRS-AQS system; however, the SAROAD data reporting

format continues to be used by some States and local air pollution agencies as an interface to AIRS on an interim basis.

Traceable means that a local standard has been compared and certified, either directly or via not more than one intermediate standard, to a National Institute of Standards and Technology (NIST)-certified primary standard such as a NIST-Traceable Reference Material (NTRM) or a NIST-certified Gas Manufacturer's Internal Standard (GMIS).

TSP (total suspended particulates) means particulate matter as measured by the method described in appendix B of part 50 of this chapter.

Urban area population means the population defined in the most recent decennial U.S. Census of Population Report.

VOC means volatile organic compounds.

[44 FR 27571, May 10, 1979, as amended at 48 FR 2529, Jan. 20, 1983; 51 FR 9586, Mar. 19, 1986; 52 FR 24739, July 1, 1987; 58 FR 8467, Feb. 12, 1993; 59 FR 41628, 41629, Aug. 12, 1994; 60 FR 52319, Oct. 6, 1995; 62 FR 38830, July 18, 1997; 63 FR 7714, Feb. 17, 1998]

§58.2 Purpose.

(a) This part contains criteria and requirements for ambient air quality monitoring and requirements for reporting ambient air quality data and information. The monitoring criteria pertain to the following areas:

- (1) Quality assurance procedures for monitor operation and data handling.
- (2) Methodology used in monitoring stations.
- (3) Operating schedule.
- (4) Siting parameters for instruments or instrument probes.

(b) The requirements pertaining to provisions for an air quality surveillance system in the State Implementation Plan are contained in this part.

(c) This part also acts to establish a national ambient air quality monitoring network for the purpose of providing timely air quality data upon which to base national assessments and policy decisions. This network will be operated by the States and will consist of certain selected stations from the States' SLAMS networks. These selected stations will remain as SLAMS