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SOURCE: 44 FR 27571, May 10, 1979; 59 FR 41628, Aug. 12, 1994, unless otherwise noted.

Subpart A—General Provisions

SOURCE: 71 FR 61296, Oct. 17, 2006, unless otherwise noted.

§ 58.1 Definitions.

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

AADT means the annual average daily traffic.

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

Additive and multiplicative bias means the linear regression intercept and slope of a linear plot fitted to corresponding candidate and reference method mean measurement data pairs.

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

Air quality system (AQS) means the EPA's computerized system for storing and reporting of information relating to ambient air quality data.

Approved regional method (ARM) means a continuous $PM_{2.5}$ method that has been approved specifically within a state or local air monitoring network for purposes of comparison to the NAAQS and to meet other monitoring objectives.

AQCR means air quality control region.

Area-wide means all monitors sited at neighborhood, urban, and regional scales, as well as those monitors sited at either micro- or middle-scale that are representative of many such locations in the same CBSA.

Certifying agency means a state, local, or tribal agency responsible for meeting the data certification requirements in accordance with § 58.15 for a unique set of monitors.

Chemical Speciation Network (CSN) includes Speciation Trends Network stations (STN) as specified in paragraph 4.7.4 of appendix D of this part and supplemental speciation stations that provide chemical species data of fine particulate.

CO means carbon monoxide.

Combined statistical area (CSA) is defined by the U.S. Office of Management and Budget as a geographical area consisting of two or more adjacent Core Based Statistical Areas (CBSA) with employment interchange of at least 15 percent. Combination is automatic if the employment interchange is 25 percent and determined by local opinion if more than 15 but less than 25 percent.

Core-based statistical area (CBSA) is defined by the U.S. Office of Management and Budget, as a statistical geographic entity consisting of the county or counties associated with at least one urbanized area/urban cluster of at least 10,000 population, plus adjacent counties having a high degree of social and economic integration. Metropolitan Statistical Areas (MSAs) and micropolitan statistical areas are the two categories of CBSA (metropolitan areas have populations greater than 50,000; and micropolitan areas have populations between 10,000 and 50,000). In the case of very large cities where two or more CBSAs are combined, these larger areas are referred to as combined statistical areas (CSAs)

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.

Design value means the calculated concentration according to the applicable appendix of part 50 of this chapter for the highest site in an attainment or nonattainment area.

EDO means environmental data operations.

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.

Federal equivalent method (FEM) means a method for measuring the concentration of an air pollutant in the ambient air 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.

Federal reference method (FRM) means a method of sampling and analyzing the ambient air for an air pollutant that is 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.

HNO_3 means nitric acid.

Implementation plan means an implementation plan approved or promulgated by the EPA pursuant to section 110 of the Act.

Local agency means any local government agency, other than the state agency, which is charged by a state with the responsibility for carrying out a portion of the annual monitoring network plan required by §58.10.

Meteorological measurements means measurements of wind speed, wind direction, barometric pressure, temperature, relative humidity, solar radiation, ultraviolet radiation, and/or precipitation that occur at SLAMS stations including the NCore and PAMS networks.

Metropolitan Statistical Area (MSA) means a CBSA associated with at least one urbanized area of 50,000 population or greater. The central-county, plus adjacent counties with a high degree of integration, comprise the area.

Monitor means 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 applicable provisions of appendix C to this part.

Monitoring agency means a state, local or tribal agency responsible for meeting the requirements of this part.

Monitoring organization means a monitoring agency responsible for operating a monitoring site for which the quality assurance regulations apply.

Monitoring path for an open path analyzer means 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 means 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 with established, well-defined boundaries, such as a CBSA, county or state, having a common area that is used for planning monitoring locations for $PM_{2.5}$. A MPA may cross state boundaries, such as the Philadelphia PA–NJ MSA, and be further subdivided into community monitoring zones. The MPAs are generally oriented toward CBSAs or CSAs with populations greater than 200,000, but for convenience, those portions of a state that are not associated with CBSAs can be considered as a single MPA.

NATTS means the national air toxics trends stations. This network provides hazardous air pollution ambient data.

NCore means the National Core multipollutant monitoring stations. Monitors at these sites are required to measure particles ($PM_{2.5}$ speciated $PM_{2.5}$, $PM_{10-2.5}$), O_3, SO_2, CO, nitrogen oxides (NO/NO_y), and meteorology (wind speed, wind direction, temperature, relative humidity).

Near-road monitor means any approved monitor meeting the applicable

specifications described in 40 CFR part 58, appendix D (sections 4.2.1, 4.3.2, 4.7.1(b)(2)) and appendix E (section 6.4(a), Table E–4) for near-road measurement of $PM_{2.5}$, CO, or NO_2.

Network means all stations of a given type or types.

Network Plan means the Annual Monitoring Network Plan described in § 58.10.

NH_3 means ammonia.

NO_2 means nitrogen dioxide.

NO means nitrogen oxide.

NO_X means the sum of the concentrations of NO_2 and NO.

NO_y means the sum of all total reactive nitrogen oxides, including NO, NO_2, and other nitrogen oxides referred to as NO_Z.

O_3 means ozone.

Open path analyzer means 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 means 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.

Pb means lead.

PM means particulate matter, including but not limited to PM_{10}, PM_{10C}, $PM_{2.5}$, and $PM_{10-2.5}$.

$PM_{2.5}$ 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 appendix L of part 50 and designated in accordance with part 53 of this chapter, by an equivalent method designated in accordance with part 53, or by an approved regional method designated in accordance with appendix C to this part.

PM_{10} 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.

PM_{10C} 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 O 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.

$PM_{10-2.5}$ means particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers and greater than a nominal 2.5 micrometers as measured by a reference method based on appendix O to 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.

Point analyzer means 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.

Primary monitor means the monitor identified by the monitoring organization that provides concentration data used for comparison to the NAAQS. For any specific site, only one monitor for each pollutant can be designated in AQS as primary monitor for a given period of time. The primary monitor identifies the default data source for

creating a combined site record for purposes of NAAQS comparisons.

Primary quality assurance organization (PQAO) means a monitoring organization, a group of monitoring organizations or other organization that is responsible for a set of stations that monitor the same pollutant and for which data quality assessments can be pooled. Each criteria pollutant sampler/monitor at a monitoring station must be associated with only one PQAO.

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

PSD monitoring network means a set of stations that provide concentration information for a specific PSD permit.

PSD monitoring organization means a source owner/operator, a government agency, or a contractor of the source or agency that operates an ambient air pollution monitoring network for PSD purposes.

PSD reviewing authority means the state air pollution control agency, local agency, other state agency, tribe, or other agency authorized by the Administrator to carry out a permit program under §§ 51.165 and 51.166 of this chapter, or the Administrator in the case of EPA-implemented permit programs under § 52.21 of this chapter.

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 this chapter.

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

Reporting organization means an entity, such as a state, local, or tribal monitoring agency, that reports air quality data to the EPA.

Site means a geographic location. One or more stations may be at the same site.

SLAMS means state or local air monitoring stations. The SLAMS include the ambient air quality monitoring sites and monitors that are required by appendix D of this part and are needed for the monitoring objectives of appendix D, including NAAQS comparisons, but may serve other data purposes. The SLAMS includes NCore, PAMS, CSN, and all other state or locally operated criteria pollutant monitors, operated in accordance to this part, that have not been designated and approved by the Regional Administrator as SPM stations in an annual monitoring network plan.

SO_2 means sulfur dioxide.

Special purpose monitor (SPM) station means a monitor included in an agency's monitoring network that the agency has designated as a special purpose monitor station in its annual monitoring network plan and in the AQS, and which the agency does not count when showing compliance with the minimum requirements of this subpart for the number and siting of monitors of various types. Any SPM operated by an air monitoring agency must be included in the periodic assessments and annual monitoring network plan required by § 58.10 and approved by the Regional Administrator.

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

Station means a single monitor, or a group of monitors, located at a particular site.

STN station means a $PM_{2.5}$ chemical speciation station designated to be part of the speciation trends network. This network provides chemical species data of fine particulate.

Supplemental speciation station means a $PM_{2.5}$ chemical speciation station that is operated for monitoring agency needs and not part of the STN.

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.

Urbanized area means an area with a minimum residential population of at least 50,000 people and which generally

includes core census block groups or blocks that have a population density of at least 1,000 people per square mile and surrounding census blocks that have an overall density of at least 500 people per square mile. The Census Bureau notes that under certain conditions, less densely settled territory may be part of each Urbanized Area.

VOCs means volatile organic compounds.

[81 FR 17276, Mar. 28, 2016]

§ 58.2 Purpose.

(a) This part contains requirements for measuring ambient air quality and for reporting ambient air quality data and related 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.

(5) Minimum ambient air quality monitoring network requirements used to provide support to the State implementation plans (SIP), national air quality assessments, and policy decisions. These minimums are described as part of the network design requirements, including minimum numbers and placement of monitors of each type.

(6) Air quality data reporting, and requirements for the daily reporting of an index of ambient air quality.

(b) The requirements pertaining to provisions for an air quality surveillance system in the SIP 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.

§ 58.3 Applicability.

This part applies to:

(a) State air pollution control agencies.

(b) Any local air pollution control agency to which the State has delegated authority to operate a portion of the State's SLAMS network.

(c) Owners or operators of proposed sources.

Subpart B—Monitoring Network

SOURCE: 71 FR 61298, Oct. 17, 2006, unless otherwise noted.

§ 58.10 Annual monitoring network plan and periodic network assessment.

(a)(1) Beginning July 1, 2007, the state, or where applicable local, agency shall submit to the Regional Administrator an annual monitoring network plan which shall provide for the documentation of the establishment and maintenance of an air quality surveillance system that consists of a network of SLAMS monitoring stations that can include FRM, FEM, and ARM monitors that are part of SLAMS, NCore, CSN, PAMS, and SPM stations. The plan shall include a statement of whether the operation of each monitor meets the requirements of appendices A, B, C, D, and E of this part, where applicable. The Regional Administrator may require additional information in support of this statement. The annual monitoring network plan must be made available for public inspection and comment for at least 30 days prior to submission to the EPA and the submitted plan shall include and address, as appropriate, any received comments.

(2) Any annual monitoring network plan that proposes network modifications (including new or discontinued monitoring sites, new determinations that data are not of sufficient quality to be compared to the NAAQS, and changes in identification of monitors as suitable or not suitable for comparison against the annual $PM_{2.5}$ NAAQS) to SLAMS networks is subject to the approval of the EPA Regional Administrator, who shall approve or disapprove the plan within 120 days of submission of a complete plan to the EPA.

(3) The plan for establishing required NCore multipollutant stations shall be submitted to the Administrator not later than July 1, 2009. The plan shall provide for all required stations to be operational by January 1, 2011.

(4) A plan for establishing source-oriented Pb monitoring sites in accordance with the requirements of appendix