MASTER GLOSSARY

Term	Definition
Calibration Drift (CD)	The difference in continuous emission monitoring systems (CEMS) output readings from the established reference value after a stated period of operation during which no unscheduled maintenance, repair, or adjustment took place.
Clean Air Act (CAA)	The Clean Air Act is the United States federal law designed to control air pollution on a national level. The Act calls for states and EPA to solve multiple air pollution problems through programs based on the latest science and technology information.
Continuous Emission Monitoring Systems (CEMS)	Total equipment necessary to determine a gas or particulate matter emission concentration. The total equipment includes sample extraction and transport hardware, analyzer/measurement method, data recording and processing hardware, and software.
Continuous Emission Rate Monitoring Systems (CERMS)	The total equipment required for determining and recording the pollutant mass emission rate (in terms of mass per unit of time).
Continuous Monitoring Systems (CMS)	Per 40 CFR, 63.2, continuous monitoring systems may include, but are not limited to, “continuous emission monitoring systems, continuous opacity monitoring systems, continuous parameter monitoring systems, or other manual or automatic monitoring that is used for demonstrating compliance with an applicable regulation on a continuous basis as defined by the regulation.”
Continuous Opacity Monitoring Systems (COMS)	The total equipment used to sample, analyze, and provide a permanent record of opacity.

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Cylinder Gas Audit (CGA)	Performed as a quarterly audit of a CEMS. It is used to determine its accuracy.
Diluent Analyzer	That portion of the CEMS that senses diluent gases (CO_2 or O_2) and generates an output proportional to the gas concentration.
Diluent Gas	A major gaseous constituent in a gaseous pollutant mixture. For combustion sources, either carbon dioxide (CO_2) or oxygen (O_2) or a combination of these two gases are the major gaseous diluents of interest.
Dilution Extractive Systems	The sample gas is diluted with dry, contamination-free air to a level below the dew point of the diluted sample gas to eliminate condensation in the sample line. The diluted sample is measured by pollutant and CO_2 monitors operating at or near ambient concentration ranges to provide concentration measurements on a wet basis.
Extractive System	A CEMS where you withdraw flue gas from the stack and transport the gas to the analyzers. An extractive system may be either source-level or dilution.
In-situ System	A CEMS where you have at least some part of their analysis subsystem mounted in the stack in direct contact with the flue gas.
Opacity	The percentage of light that is attenuated by an optical medium.
Optical Alignment	Optical alignment is an indication of alignment that is objectively apparent relative to reference markers or conditions.
Performance Audit	A quantitative evaluation, which includes things such as a Cylinder Gas Audit (CGA), Relative Accuracy Test Audit (RATA), and Relative Accuracy Audit (RAA). Performance audit procedures are critical for verifying proper performance of the

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	monitoring systems and identifying problems which may lead to inaccurate emissions accounting.
Performance Specifications (PS)	Performance specifications are used for evaluating the acceptability of the CEMS at the time of, or soon after installation, or whenever specified in the regulations.
Pitot Tubes	Use the differential pressure between the measurements of total pressure and the static pressure at a point in the stack to calculate the stack gas velocity and volumetric flowrate.
Predictive Emission Monitoring Systems (PEMS)	The total equipment necessary to predict an emission concentration or emission rate.
Quality Assurance (QA)	Quality assurance (QA) procedures are used to evaluate the effectiveness of QC and the quality of data produced by any CEMS that are used for determining compliance with the emission standards on a continuous basis as specified in the applicable regulation.
Quality Control (QC)	Quality control (QC) is the procedures, policies, and corrective actions necessary to ensure product quality.
Relative Accuracy (RA)	A measure of the accuracy of a facility's CMS when compared to a series of simultaneous measurements made by a reference method measurement system.
Relative Accuracy Audit (RAA)	An alternative **quarterly** audit procedure which correlates the CEMS data to simultaneously collected reference method (RM) data.
Relative Accuracy Test Audit (RATA)	The **annual** comparative evaluation of the CEMS performance using a RM. Consists of 9 or more RM test runs, each run being at least 21 minutes in duration.
Sample Interface	The portion of the system that is used for one or more of the following: sample acquisition, sample transportation,

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	sample conditioning, or protection of the analyzer from the effects of the stack effluent.
Source-level Extractive System	The stack gas sample is withdrawn from the stack without conditioning or modification of the sample, other than coarse particulate removal, until it reaches the measurement system, where the sample is conditioned to remove any moisture and remaining fine particulate to prevent damage to the gas concentration analyzers. The sample line is heated to maintain the sample at stack gas temperature to prevent condensation that might scrub water-soluble pollutants and to prevent freezing in cold winter climates.
System/Field Audit	A qualitative evaluation involving an inspection. System or field audits are an opportunity to provide information to the source on the regulatory requirements, and for the inspector to observe monitoring practices that may lead to regulatory problems.
Transmissometry	The measurement of the amount of light that can be transmitted through a stack exhaust.
Transmittance (Tr)	The percentage of light that is transmitted through an optical medium.
Ultrasonic Flowmeter	Uses a pair of transmitter/receivers mounted on opposite side of the stack, with one upstream from the other. The signal is alternated between them, sending it in the direction of stack gas flow, where it is speeded up, and then against the direction of flow, where it is slowed down. The difference in the time between the two signals is proportional to the stack gas velocity.