



Designation: D7392 – 20

Standard Practice for PM Detector and Bag Leak Detector Manufacturers to Certify Conformance with Design and Performance Specifications for Cement Plants¹

This standard is issued under the fixed designation D7392; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This practice covers the procedure for certifying particulate matter detectors (PMDs) and bag leak detectors (BLDs) that are used to monitor particulate matter (PM) emissions from kiln systems at Portland cement plants that burn hazardous waste. It includes design specifications, performance specifications, test procedures, and information requirements to ensure that these continuous monitors meet minimum requirements, necessary in part, to monitor reliably PM concentrations to indicate the need for inspection or corrective action of the types of air pollution control devices that are used at Portland cement plants that burn hazardous waste.

1.2 This practice applies specifically to the original manufacturer, or to those involved in the repair, remanufacture, or resale of PMDs or BLDs.

1.3 This practice applies to (a) wet or dry process cement kilns equipped with electrostatic precipitators, and (b) dry process kilns, including pre-heater pre-calciner kiln systems, equipped with fabric filter controls. Some types of monitoring instruments are suitable for only certain types of applications.

NOTE 1—This practice has been developed based on careful consideration of the nature and variability of PM concentrations, effluent conditions, and the type, configuration, and operating characteristics of air pollution control devices used at Portland cement plants that burn hazardous waste.

1.4 This practice applies to Portland cement kiln systems subject to PM emission standards contained in 40 CFR 63, Subpart EEE.

NOTE 2—The level of the PM emission limit is relevant to the design and selection of appropriate PMD and BLD instrumentation. The current promulgated PM emission standards (70 FR 59402, Oct. 12, 2005) are: (a)

65 mg/dscm at 7 % O₂ (0.028 gr/dscf at 7 % O₂) or approximately 30 mg/acm (0.013 gr/acf) for “existing sources” and (b) 5.3 mg/dscm at 7 % O₂ (0.0023 gr/dscf at 7 % O₂) or approximately 2.5 mg/acm (0.001 gr/acf) for “new sources.” On March 23, 2006 (71 FR 14665), EPA proposed to revise the PM standard for new cement plants to 15.9 mg/dscm at 7 % O₂ (0.0069 gr/dscf at 7 % O₂), or about 6–9 mg/acm (0.0026–0.0039 gr/acf). The emission standards may change in future rulemakings, so users of this practice should check the current regulations. Some types of monitoring instruments are not suitable for use over the range of emissions encountered at both new and existing sources.

1.5 The specifications and test procedures contained in this practice exceed those of the United States Environmental Protection Agency (USEPA). For each monitoring device that the manufacturer demonstrates conformance to this practice, the manufacturer may issue a certificate that states that monitoring device conforms with all of the applicable design and performance requirements of this practice and also meets all applicable requirements for PMDs or BLDs at 40 CFR 63, Subpart EEE, which apply to Portland cement plants.

NOTE 3—40 CFR 63.1206 (c)(8) and (9) requires that BLDs and PMDs “be certified by the manufacturer to be capable of detecting particulate matter emissions at concentrations of 1.0 milligrams per actual cubic meter unless you demonstrate under §63.1209(g), that a higher detection limit would routinely detect particulate matter loadings during normal operations.” This practice includes specific procedures for determination and reporting of the detection limit for each PMD or BLD model.

1.6 The values stated in SI units are to be regarded as standard. No other units of measurement are included in this standard.

1.7 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.8 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

¹ This practice is under the jurisdiction of ASTM Committee D22 on Air Quality and is the direct responsibility of Subcommittee D22.03 on Ambient Atmospheres and Source Emissions.

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