

FACT SHEET

Technical Manual 1005 (TM1005)

November 2025



The New Jersey Department of Environmental Protection (NJDEP), Division of Air Enforcement, Emission Measurement Section (EMS) *Technical Manual 1005 Guidelines for Continuous Emissions Monitoring Systems (CEMS), Continuous Opacity Monitoring Systems (COMS), Periodic Monitoring Procedures (PMPs) and Annual Combustion Adjustments (ACAs)* contains design specifications, performance specifications, performance test procedures, data storage and reporting requirements, quality assurance criteria, and administrative procedures for obtaining Department approval of CEMS/COMS. This manual also includes methodology guidance for the measurement of emissions within a PMP, which may be allowed instead of CEMS and could require Department approval, as well as procedures for the establishment of a Total Hydrocarbon allowable for use with a CEMS or PMP.

The purpose of this Fact Sheet is to outline key changes made to the technical manual approved on June 1, 2010, to the current version (effective date XX/XX/XXXX).



Section	Description of Change(s) Made
Applicability	Added 40 CFR Parts 62, 63 and 75
Minimum Specifications for COMS/CEMS	➤ Added mass-based CEMS Relative Accuracy Test Audit (RATA) requirements (for both flow monitor and F-factor) for emission units/CEMS subject to Part 60, Part 75 or EPA Methods 1-4 and 19. ➤ Added minimum specifications for CEMS analyzers interference; FID analyzers and moisture; NO_x analyzers; SO₂ fluorescence analyzers; and dual range analyzers. ➤ Opacity – Removed 40 CFR Part 51, Reference Method 203 requirements; added 40 CFR Part 60, Appendix F ➤ Carbon Monoxide – Removed reference to municipal waste combustors (MWC) and policy requiring these sources to meet PST 4A and broke down PST by 4A and 4B specifications. ➤ Added performance specification (PS) requirements for the following: Total vapor phases mercury, predictive emissions monitoring systems, gaseous hydrogen chloride, and ethylene oxide. ➤ CEMS/COMS equipment protocols now reference Facility Submittal Service (FSS) requirements. ➤ COMS Calibration Period – Modified language to state “not to exceed 15 minutes.” ➤ Daily Calibrations of CEMS – Changed (operating range) high span calibration standard from 80-90% to 50-90%. ➤ Added reference, Procedure G1 guidelines, to the calibration of gases (certified accuracy). ➤ Clarified the definition for valid compliance hour. ➤ Modified downtime policy exemptions ➤ language to include “only one calibration period of less than 15 minutes may be excluded from the downtime requirement for any calendar day.”



Section	Description of Change(s) Made
Definitions	➤ Removed reference to EPA Proposed Method 203 for COMS (continuous opacity monitoring system). ➤ Added term, Air Emission Testing Body (AETB), as defined in 40 CFR Part 72, Subpart A – Definitions.
Minimum Specifications for COMS/CEMS cont..	➤ Added a link to a reference memo about allowances for PEM downtime. ➤ Added fuel flow meter specifications (for certified and noncertified meters) for facilities that allow for startup/shutdown exclusions.
Performance Specification Tests (PST)	➤ Additional criteria for PSTs following procedures outlined in Section 4.A (min. specifications for COMS/CEMS): ➤ Modified requirements pertaining to Calibration Drift (CD) test period – e.g., must meet policies specified in PS2 Sections 8.3.1 through 8.3.3. ➤ EMS will now accept (in an effort to satisfy the alternate acceptance criterion), a 0.5 ppm absolute difference value for relative accuracy (RA) testing that results in a value less than 0.5 ppm. ➤ Added a certification date requirement – i.e., date of the successful RA during the subsequent PST. ➤ Submitters are now required to include (as attachments to the Excess Emission and Monitoring Performance Report, EEMPR): an explanation of the recertification and why the period prior to the official recertification date is not downtime; and the date the original CEMS was taken out of service, the date the replacement CEMS was installed, the date of the successful CGA, and the date of the successful RA during the subsequent PST. ➤ In the event that a NMHC CEMS needs to be certified, the facility shall comply with certification procedures outlined in Appendix I.
Performance & Emissions Reporting	➤ Language added referencing the CEMS averaging policy (as described in Appendix G).



Quality Assurance (QA) / Quality Control (QC) & Preventive Maintenance (PM)	➤ A Preventive Maintenance (PM) plan will now be included as an element of the QA/QC plan. ➤ Removed reference to EPA Reference Method 203. ➤ Modified language to note that a QA/QC – PM plan shall: be maintained onsite and available for review upon request; should be amended as need based on changes to the system; and changes do not need to be submitted to the EMS. ➤ Removed requirement needing changes made to the QA/QC – PM plan to be submitted in writing to the Supervisor/CEMS Program. ➤ Language added regarding equipment failures resulting from not having or not following the QA/QC – PM plan that includes “enforcement implications.” ➤ Language added regarding the inclusion of procedures (to the QA/QC-PM plan) “and/or spare parts necessary to ensure the CEMS/COMS data valid capture requirements specified in Section 4.B.4.” ➤ Language added noting that “failure to conduct a quarterly audit on a CEMS required for compliance purposes will result in downtime being accumulated beginning immediately after (rather than on) the last day of the quarter in which the facility failed to conduct the audit.” ➤ Language added clarifying that quarterly QA (CGA and/or RATA) “is not required in a quarter when a source did not operate.” (Note: Exemption not intended for long periods of non-operation). ➤ Language added specifying AETB requirements for relative accuracy testing and stack testing. ➤ Language added clarifying that skipped calibrations between runs for relative accuracy testing “are not permitted.”	PMPs and ACAs cont..	➤ Language added stating that for an “ACA, the four-cycle requirement if using CTM-034 only applies to the final reading after all combustion adjustments. Intermediate readings can be as many cycles as necessary. If using EPA Method 7E, sampling duration shall be one hour.” ➤ Removed requirement to perform one (1) cycle of CTM-034 for all subsequent monitoring events for approved alternative procedures to CTM-034. ➤ Removed requirement requiring facilities to use “either CTM-034 or a posted approved alternative for NO_x, CO and O₂.” ➤ Referenced (and added a link to) total hydrocarbons (THC) procedures. ➤ Language added specifying applicable operational and notification requirements (as they relate to Periodic Emission Monitoring [PEM] downtime). ➤ Defined Daily PEM as a “permit required non-certified device that measures the concentration of air contaminants or oxygen at the stack or at another location in the exhaust stream on a daily basis.” ➤ Language added that states that “daily PEMs must be used whenever the associated source operation(s) are operating except for 3 non-usage days per calendar quarter.” ➤ Language added stating that “the owner/operator must keep a service log for all PEM, record each non-usage day and maintain a current summed number of non-usage days on a quarterly calendar basis.” ➤ Language added stating “if there are more than 3 non-usage days per calendar quarter, the owner and/or operator must note the exceedance in the service log and notify the appropriate Regional Enforcement Office.” ➤ Language added stating “none of the above supersedes any existing case-by-case Daily PEM downtime allowances that may be in specific Compliance Plans.”
PMPs and ACAs	➤ Added EPA Reference Methods 10 and 3A to list of references relevant to conducting a stratification check. Language added stating that each test “must include four CTM-034 measurement cycles (to cover a total of 1 hour of source operation) with the concentrations from the four ‘test data phases’ averaged. The average concentration will be the average of all the readings over the full 8 ‘test data phase’ minutes, not the average of the four 2-minute ‘test data phase’ averages.” ➤ Language added stating that a “one-hour Reference Method test may be used instead of CTM-034 to satisfy the periodic monitoring requirement.”	TM1005 Modifications	➤ Added a TM1005 Modification section to record changes made to document.



Appendices	Appendix A – Protocol for CEM Systems and COM Systems ➤ Updated the NJ DEP shipping and mailing address. Appendix B – EEMPR Format ➤ Included instructions on how to create and submit an electronic EEMPR using the NJ DEP online portal and how to set up an NJDEP account. ➤ Language added specifying a 30-day deadline (within the end of each calendar quarter) to prepare/submit an EEMPRs to the NJ DEP regional enforcement office. ➤ Replaced references to EPA Reference Method 203, regarding minimum performance specification requirements for COMS, with Performance Specification One (PS1) and 40 CFR Part 60 – Appendix F – Procedure 3. Appendix C – NJDEP Regional Enforcement Office Locations ➤ Updated regional contract information and links. Appendix D – Procedure for the Determination of a THC Allowable ➤ Language added specifying the “THC analyzer range should be established based on preliminary concentration measurements or by the expected emission concentration allowable resulting from the permitted DRE.” ➤ Language added specifying THC spiking policies – following procedures “outlined in the PS8 FAQ section to ensure analyzer linearity.” ➤ Language added specifying THC monitoring certification procedures – i.e., must be certified prior to conducting the stack test needed to establish the THC allowable, using the Reference Method (RM) to pass RA or waiting until the THC limit is established and using that value in the denominator of the RA equation (Equation 2-6 of Performance Specification 2, incorporated by reference into Performance Specification 8 for THC analyzers). ➤ Language added referencing the EMS THC Worst-Case Outlet Allowable (WCOA) Calculation Tool (MS Excel) – for use in establishing the THC WCOA limit during an oxidizer DRE stack test.	Appendices cont.. Newly Added Appendices Contact Information	Appendix E – Policy for Validating CEMS Data After a significant Equipment Change ➤ Language added noting that the “CGA can be conducted off-line for Part 60-affected sources, but the CGA (Linearity) must be conducted on-line for Part 75-affected sources. The certification date is the date of the RA test.” ➤ Language added noting that downtime counted as a result of “a facility fails to conduct a daily calibration drift test or if a daily calibration drift test fails to meet the requirement of 40 CFR Part 60 Appendix F, will continue to accrue until a successful PST has been completed.” ➤ Appendix F - CEMS QA Requirements for Non-Operating Quarter ➤ Appendix G – CEMS Mult-hour or Block Average Emission Limit ➤ Appendix H – Averaging CEMS Data ➤ Appendix I – NMHC CEMS Certification Requirements ➤ Appendix J – Periodic Emission Monitoring (PEM) Downtime October Memo New Jersey Department of Environmental Protection www.state.nj.us/dep/bts Michael A. Klein Section Chief NJDEP - Emission Measurement Section Office: (609) 984-3443 Michael.Klein@dep.nj.gov Neil Nissim Program Specialist 3 NJDEP -Emission Measurement Section Office: 609-984-3443 Neil.Nissim@dep.nj.gov  
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Disclaimer

This publication is for general information purposes only. The information presented in this Fact Sheet is not inclusive of all of the changes made to the technical manual. Therefore, NJDEP assumes no responsibility or liability for any errors or omissions in the content of this Fact Sheet. For more information and details on CEMS/COMS requirements, please refer to the final technical manual (TM1005) for specific areas/completed sections.