



New Jersey Department of Environmental Protection
Division of Air Enforcement, Emission Measurement Section

**Air, Energy and Materials Sustainability
Division of Air Enforcement, Emission Measurement Section**

Technical Manual 1005

**Guidelines for:
Continuous Emissions Monitoring Systems (CEMS), Continuous Opacity Monitoring Systems (COMS),
Periodic Monitoring Procedures (PMPs) and Annual Combustion Adjustments (ACAs)**

**Originally Published: July 2001
Revised: June 1, 2010
Revised: November 17, 2025**

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1. INTRODUCTION

This manual is not intended to provide step-by-step instructions on designing, selecting, installing or performance testing CEMS/COMS. It 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.

Each proposed CEMS/COMS will be evaluated on an individual basis. No list of approved equipment will be maintained by the Department. Final approval will be contingent upon the system meeting performance and design standards established by the New Jersey Department of Environmental Protection (NJDEP). The standards, while based on those established in the Code of Federal Regulations, have been modified to reflect the specific needs and experiences of the NJDEP. Requests to deviate from the requirements specified in this guideline must have prior written approval from the Emission Measurement Section (EMS). Such requests will be reviewed on a case-by-case basis and must include sufficient justification. Requests submitted without sufficient justification will not be approved.

The CEMS/COMS approval process consists of four phases: The CEMS/COMS equipment protocol review, the Performance Specification Test (PST) protocol review, PST report review; and the development of a Quality Assurance (QA) and Preventive Maintenance (PM) plan. Specifications for each are included in this manual.

This document also includes methodology guidance for the measurement of emissions within a Periodic Monitoring Procedure (PMP). PMPs may be allowed instead of CEMS and could require Department approval.

If the permit requires the establishment of a Total Hydrocarbon allowable for use with a CEMS or PMP, the procedure found in [Appendix D](#) of this document must be followed. Annual Combustion Adjustments (ACAs) are addressed in the definition section of this document and also in Section 9.

All CEMS/COMS equipment protocols or revisions and all Performance Specification Test Protocols or revisions shall meet the requirements specified in this guideline on the most recent revision date.



2. APPLICABILITY

A. Applicable State and Federal Regulations

The following list of requirements may be applicable to any CEMS or COMS required to be installed.

This guideline is intended to be implemented for source operations which are required to install and operate CEMS/COMS for any one or more of the following regulations, or any other applicable regulations as they may arise.

1. New Jersey Administrative Codes (N.J.A.C.) - N.J.A.C. 7:26 and N.J.A.C. 7:27;
2. Federal Requirements for Preparation, Adoption and Submittal of Implementation Plans, Title 40 of the Code of Federal Regulations (CFR) - Part 51;
3. Federal Standards of Performance for New Stationary Sources (NSPS), 40 CFR - Part 60;
4. Federal National Emission Standards for Hazardous Air Pollutant (NESHAPS), 40 CFR – Part 61;
5. Federal Approval and Promulgation of State Plans for Designated Facilities and Pollutants, 40 CFR – Part 62;
6. Federal National Emission Standards for Hazardous Air Pollutant (NESHAPS) for Source Categories, 40 CFR – Part 63;
7. Federal Continuous Emissions Monitoring for Acid Rain/Clean Air Markets/NO_x Budget Requirements, 40 CFR – Part 75;
8. Federal Standards for Owners and Operators of Hazardous Waste Treatment, Storage and Disposal Facilities (RCRA), 40 CFR - Part 264;
9. Federal Standards for the Management of Specific Types of Hazardous Waste Management Facilities (BIF), 40 CFR - Part 266;
10. Federal Standards for the Use or Disposal of Sewerage Sludge, 40 CFR - Part 503; and
11. Federal Polychlorinated Bi-Phenyls (PCBS) Manufacturing Processing, Distribution in Commerce and use Prohibitions (TOSCA), 40 CFR - Part 761.



3. DEFINITIONS

A. Applicable Definitions

The following definitions may be applicable to any CEMS or COMS required to be installed by one or more regulations identified in Section 2.

1. CEMS (Continuous Emission Monitoring System) – The total equipment required for the determination of a gas concentration or emissions rate. The system consists of the following major subsystems; sample collection and calibration interface, pollutant analyzer, diluent analyzer (if applicable), fuel flow monitors (if applicable), stack gas volumetric flow monitors (if applicable) and data recording and storage devices.
2. COMS (Continuous Opacity Monitoring System) – The total equipment required for the determination of the opacity of emissions which meets the minimum requirements of Performance Specification One (PS1) and 40 CFR, Part 60, Appendix F, Procedure 3.
3. PMP (Periodic Monitoring Procedure) – The procedure which will be used to gather emissions data at a frequency other than continuous. If required by permit conditions, proposed PMP procedures must be submitted to and approved by the Emission Measurement Section. Our goal is to not require protocol submittals for PMPs (especially for NO_x, CO and O₂) but some may be necessary.

Reference method or site-specific method testing may be required as part of any periodic monitoring procedure.

Please understand that the terms “periodic”, “handheld” and “portable” shall not be considered limiting factors in the determination of an appropriate PMP. For example, even if the terms “periodic” or “handheld” are used in a permit condition, it may be necessary to use a reference method quality analyzer to establish an acceptable PMP.

4. ACA (Annual Combustion Adjustment) – Required by N.J.A.C. 7:27-19.7 & 19.16. When conducting a required ACA, the analyzer used to measure concentrations of Nitrogen Oxides (NO_x), Carbon Monoxide (CO) and Oxygen (O₂) shall be capable of meeting the requirements of EPA Conditional Test Method 034 (CTM-034) which may be found on EPA’s website at <https://www.epa.gov/emc/emc-conditional-test-methods>. The analyzer must be operated, calibrated and maintained in accordance with the manufacturer’s recommendations. For more details, see Section 9.
5. AETB (Air Emission Testing Body) – AETB as defined in 40 CFR Part 72, Subpart A - Definitions (§72.2) means a company or other entity (certified to operate in conformance with ASTM D7036) that provides to the owner/operator the certification required by [section 6.1.2\(b\)](#) of appendix A to Part 75.

(Note: Definitions of most terms are located in each individual section of each federal rule).



4. MINIMUM SPECIFICATIONS FOR CEMS/COMS

A. Minimum Requirements

The following are the performance requirements that may be applicable to any CEMS or COMS required to be installed by one or more regulations identified in Section 2. The list includes but is not limited to the following.

1. Opacity
 - 40 CFR - Part 60 - Appendix B Performance Specification Test No. 1
 - 40 CFR - Part 60 - Appendix F - Procedure 3
2. Sulfur Dioxide (SO₂)
 - 40 CFR - Part 60 - Appendix B Performance Specification Test No. 2
 - 40 CFR - Part 75 - Appendices A and D
3. Nitrogen Oxides (NO_x as NO₂)
 - 40 CFR - Part 60 - Appendix B Performance Specification Test No. 2
 - 40 CFR - Part 75 - Appendices A and E
4. Oxygen (O₂)
 - 40 CFR - Part 60 - Appendix B Performance Specification Test No. 3 (except for those sources affected by BIF only).
 - 40 CFR - Part 75 - Appendix A
5. Carbon Dioxide (CO₂)
 - 40 CFR - Part 60 - Appendix B Performance Specification Test No. 3
 - 40 CFR - Part 75 - Appendices A and G
6. Carbon Monoxide (CO)
 - 40 CFR - Part 60 - Appendix B Performance Specification Test No. 4 (BIF only Sources required to meet 40 CFR - Part 266).
 - 40 CFR - Part 60 - Appendix B Performance Specification Test No. 4A. (Case-by-case applicability determined by EMS).
 - 40 CFR - Part 60 - Appendix B Performance Specification Test No. 4B [Carbon Monoxide and Oxygen](#)
7. Total Reduced Sulfur (TRS)
 - 40 CFR - Part 60 - Appendix B Performance Specification Test No. 5
8. Continuous Emission Rate Monitors
 - 40 CFR - Part 60 - Appendix B Performance Specification Test No. 6
 - 40 CFR - Part 75 - Appendix A
9. Hydrogen Sulfide (H₂S)
 - 40 CFR - Part 60 - Appendix B Performance Specification Test No. 7
10. Volatile Organic Compounds (VOC) CEMS (THC CEMS in NJ)
 - 40 CFR - Part 60 - Appendix B Performance Specification Test No. 8
11. Total Hydrocarbon CEMS
 - 40 CFR - Part 60 - Appendix B Performance Specification Test No. 8A (except for those sources affected by BIF only. PS8A is not used in NJ.)



12. Gas Chromatographic CEMS Performance Specification Test No. 9

- 40 CFR - Part 266 and
- 40 CFR - Part 503

13. Particulate Matter (PM)

- Performance Specification Test No. 11

14. Total Vapor Phases Mercury

- Performance Specification Test No. 12A
- Performance Specification Test No. 12B

15. Extractive FTIR CEMS

- Performance Specification Test No. 15

16. [Predictive Emissions Monitoring Systems](#)

- Performance Specification Test No. 16

17. [Gaseous Hydrogen Chloride](#)

- Performance Specification Test No. 18

18. [Ethylene Oxide](#)

- Performance Specification Test No. 19

B. Additional CEMS/COMS Equipment Requirements

In addition to the equipment specifications referenced in Section 4.A., the following equipment specifications will also apply.

1. General Requirements

- a. CEMS/COMS equipment protocols are required to be submitted to the Emission Measurement Section (EMS) in the format specified in [Appendix A](#) and via the Facility Submittal Service (FSS). The CEMS/COMS equipment protocol must be approved, in writing (email acceptable), by the Emission measurement Section prior to conducting the required Performance Specification Tests (PST). It is recommended that the CEMS/COMS equipment protocol be submitted to and approved by the EMS, prior to the purchase/ordering of such equipment.
- b. The temperature of the sample gas at the exit of the conditioning system for any gaseous CEMS (excluding THC) must not exceed 44 °F. This temperature must be continuously monitored and continuously recorded. This may be accomplished by recording the actual temperature or an alarm status. If the conditioner utilizes something other than a chiller to remove moisture, the dew- point of the gas exiting the conditioner must be monitored in the same manner.
- c. Time-sharing of a CEMS with multiple sources is only acceptable in cases where back-up or secondary sources are utilized when primary sources are off-line (non-operational). In such cases, each source must have an independent sample probe and sample transport system.



- d. Any gaseous analyzer installed in a CEMS must have a minimum accuracy, as published by the manufacturer, of plus or minus one percent of the operating range.
- e. For each chemiluminescence based NO_x analyzer, a converter efficiency check must be conducted as the last step of each quarterly audit required by Section 8 of this document as well as 40 CFR Part 60 and/or Part 75.
- f. Fuel Flow analyzers must comply with the requirements outlined in 40 CFR, Part 75, Appendix D, Section 2.1.5 (most current version).

2. Calibration Requirements

- a. Calibration Gas Introduction Point - All calibration gases are required to be introduced into the CEMS at the sample probe, no further downstream than the immediate exit of the sample probe at the stack.
- b. CEMS calibration is that period of time which occurs once every calendar day and is to have both high span and zero gases introduced. This period shall be of sufficient duration to demonstrate the required instrument response time and instrument drift and shall include any adjustments (if necessary). If, during any hourly averaging period, the time required to complete the calibration cycle exceeds fifteen (15) minutes for any analyzer, in units of the standard (i.e. ppm at 7% O₂), then that hourly period shall be included in the downtime calculation for that parameter. If the standard requires data from two or more analyzers, the calibration of each analyzer must be completed within the same fifteen (15) minute period. Only one calibration period of less than 15 minutes may be excluded from the downtime requirement for any calendar day.
- c. COMS calibration is that period of time which occurs once every calendar day and is to include both span and zero filters being introduced to the system, not to exceed 15 minutes.
- d. Calibration of all CEMS is to be conducted once every calendar day, approximately twenty-four (24) hours apart. This calibration procedure must include the introduction of a high span calibration standard (50% to 90% of operating range) and a zero gas. For oxygen analyzers which cannot utilize a true zero gas, a gas standard containing an oxygen concentration no greater than two (2) percent will be allowed. This non-zero oxygen standard must be indicated in the CEMS Equipment Protocol.
- e. Zero gas is required to be introduced first, then the high range calibration standard.
- f. Non-methane total hydrocarbon analyzers, if approved for use, must be calibrated with a gas that contains a blend of methane and propane. The methane concentration must be no more than 10 percent of the propane concentration expressed as methane. The propane concentration shall be selected in accordance with item d. above.
- g. All calibration gases must have a minimum certified accuracy of plus or minus two percent of the cylinder label value unless a higher standard is required by



regulation. It is worth noting that Procedure G1 offers guidelines for accurately assaying and certifying a compressed gas calibration standard without the need for dilution; essentially, directly analyzing the gas mixture as is to determine its exact concentration of a specific analyte within a carrier gas, typically used for environmental monitoring applications.

- h. The quality of the calibration gas is considered an integral part of the CEMS. Accordingly, the quality of the calibration gas utilized, for the daily CEMS calibration, during the certification test program, shall be the minimum quality allowed until the next annual RATA test. Reducing the quality of the calibration gas after the certification program is not acceptable.

3. Data Recording and Storage Requirements

- a. A strip chart recorder or functionally similar Data Acquisitions System (DAS) is required as a minimum data reduction device for all CEMS/COMS. Data is to be collected at a frequency of one minute, which is represented as a minimum chart speed of at least sixty (60) millimeters per hour. A faster chart speed may be necessary to ensure proper resolution of CEMS data. The Department recommends the use of an electronic DAS that reduces CEMS data for quarterly Excess Emission and Monitoring Performance Reports (EEMPRs).
- b. Round chart recorders are not acceptable for data collection.
- c. If using a strip chart type recorder, the recorder must automatically record the date and CEMS data.
- d. Any DAS utilized without a strip chart recorder present must have the capability of producing historical and present one-minute data averages both visually (on screen) and graphically (hard copy).
- e. One-minute CEMS/COMS data must be retained for a period of one calendar quarter from the date of EEMPR submission. After that date, only applicable averages in units of the standard (example: PPM Hourly average) and all periods of emission exceedances must be stored for the time period specified in the permit.
- f. Data recording and storage equipment upgrades, replacements or repairs do not require a full recertification. The following steps must be taken in addition to any actions required by an applicable regulation.
 - i. The EMS must be notified of the changes in writing.
 - ii. Upon replacement, the system must be calibrated to demonstrate accurate recording of the data.
 - iii. All calculations performed by the data recording system must be manually verified.
 - iv. It must be documented that all data and storage requirements in the approved equipment protocol remain unchanged.
 - v. Maintain records of the above and certify in writing that the above



items have been successfully completed.

4. Valid Data Capture Requirements

- a. CEMS installed and operating for measurement of gaseous emissions, shall complete a minimum of one (1) cycle of operation, which includes sampling, analyzing and data recording for each successive one (1) minute period.
- b. CEMS must provide a minimum of seventy-five (75) percent [45 minutes] of the one-minute data averages for each one-hour (60 minute) clock period.
- c. A valid compliance hour requires 45-minutes of source operation. For any one-hour (60-minute) period where less than forty-five (45) minutes of CEMS/COMS data is provided for any analyzer, the entire sixty (60) minute period is considered downtime for that analyzer and shall be included in the quarterly EEMPR as downtime. Note: The 45 minutes of CEMS/COMS data required per clock hour is for 60 minutes of source operation in that hour. Accordingly, for clock hours when the unit operates for less than 60 minutes, the CEMS must be collecting valid data for 75% of the operating minutes, where fractional minutes are rounded down to the nearest full minute. When this criterion is not met, all operating minutes in the hour will be considered downtime. Additionally, CEMS/COMS minute data must be collected for downtime determination purposes regardless of whether a clock hour is a valid compliance hour or not.
- d. All CEMS must provide for a minimum of ninety (90) percent valid data capture of one minute data, in units of the standard, for each calendar quarter, based on source operating time (unless otherwise specified by regulation).
- e. All COMS must provide for a minimum of ninety-five (95) percent valid data based on source operating time for each calendar quarter, based on source operating time (unless otherwise specified by regulation).
- f. Downtime includes those periods where the CEMS or COMS are not providing compliance emission data while the process is in operation. It also includes periods of Quality Assurance (QA) and Preventive Maintenance (PM) procedures and CEMS calibration (if the calibration period exceeds 15 minutes in any one hour). Only one calibration period of less than 15 minutes may be excluded from the downtime requirement for any calendar day. All downtime is to be recorded on the quarterly EEMPR form.
- g. A memo explaining allowances for PEM downtime is provided here: <https://dep.nj.gov/wp-content/uploads/boss/permitting-guidance/111622-pem-downtime.pdf>. More information can be found in Section 9.C.
- h. If the minimum percent data availability percentage for any CEMS/COMS analyzer cannot be achieved for two (2) consecutive calendar quarters the facility shall implement the following items:
 - i. Install a replacement CEMS/COMS approved by EMS within one hundred and eighty (180) calendar days following the end of the second quarterly failure.



- ii. Provide a temporary alternative within thirty (30) days following the end of the second quarterly failure to be reviewed and approved by EMS to monitor the compliance status of the emissions source.
- iii. Items i and ii above do not relieve any facility from any permit condition which requires the source to be shut down in the event of a CEMS failure.
- iv. Alternatively, and to minimize downtime, the facility may install a replacement in accordance with the policy entitled "Policy for Validating CEMS Data After a Significant Equipment Change" included in [Appendix E](#) of this document

If the permit conditions for a given facility allow for startup and shutdown exclusions, calculations of percent valid data capture shall not include the excluded periods. See [Appendix G](#) to see how these conditions are applied.

- v. A small number of permits (most commonly for hazardous waste incinerators) contain conditions which limit or preclude source operations if the CEMS (and/or COMS) is not collecting valid data. Automatic shutdowns required by low oxygen or high carbon monoxide are examples of this type of condition. If this type of permit condition exists, the valid data capture requirements outlined above (items b through f) are not applicable because no downtime is allowed.
- vi. If a fuel flow monitor/meter was certified as part of CEMS system and it plays an integral role in calculating lbs./hr., the fuel meter downtime shall equal CEMS downtime, as well as apply to the Process Monitor downtime (if applicable). A non-certified substitute instrument (e.g., fuel meter) may be considered acceptable for process monitoring if it meets Part 60 requirements; however, it is not acceptable for CEMS, unless a PST is completed.

5. Stack Gas Volumetric Flow Monitoring

All stack gas volumetric flow measuring devices that are required to be installed, shall meet the following requirements:

- a. A differential pressure flow monitor shall have an automatic blow-back purge system.
- b. If a differential pressure flow monitoring device is installed in wet stack conditions, the system shall have the capability for drainage of sensing lines.
- c. The stack gas flow monitoring system shall have the capability for on-line manual transducer calibration and for a zero check.
- d. The stack gas flow monitoring system shall be capable of displaying the individual parameters used in the stack gas flow calculation.

6. Mass-based CEMS RATA Requirements (both Flow Monitor and F-factor)

- a. When an emission unit is subject to either a Part 60 or Part 75 mass emission



limit, either an exhaust gas flow meter is required, or emissions can be calculated utilizing fuel-specific F-factors. If the latter, the facility must also have a fuel flow meter calibrated in accordance with Part 75 Appendix D.

- b. When a CEMS calculates mass emissions using the Method 19 approach, RATAs shall be conducted by employing EPA Reference Methods 1 through 4 on the Reference Method (RM) side of Relative Accuracy (RA) demonstration. *Note: Facilities subject to mass emission CEMS limits and currently using the EPA Method 19 stack flow approach on both the CEMS and RM side must modify their RATA procedures as described above to utilize Methods 1-4 where possible.*

7. CEMS Analyzers Interference

- a. There are a number of different approaches that can be used to mitigate analyzer interference, including but not limited to, ensuring proper sample conditioning, dilution, conducting regular calibration checks, etc.
- b. Most analyzers can handle moisture at 21 percent; at an average moisture content of 45%, quenching typically occurs.

8. FID Analyzers and Moisture

- a. FID analyzers can have sensitivity to moisture at and above 20%. Dilution can be done to help compensate for any negative biases. Other methods must be proposed and approved by EMS to address any moisture quenching issues.

9. NO_x Analyzers

- a. Reference Method 7E requires interferences be less than or equal to 2.5% of span.

10. SO₂ Florescence Analyzers

- a. Pulsed Fluorescence analyzers can suffer from quenching in the presence of CO₂. An interference check in accordance with EPA Method 6C §8.3 (which refers back to EPA Method 7E §8.2.7) must be conducted and shown to be satisfactory. The interfering gas in this instance is CO₂.
- b. To reduce quenching effects caused by percent level concentrations of O₂, CO₂, N₂, and H₂O (found to cause errors from 5-15% in source-level fluorescence analyzers), owners/operators may use shorter UV wavelengths, measure the sample under reduced pressure, or dilute the sample with air to maintain a relatively constant background gas from which the SO₂ fluorescence radiation can be measured.

11. Dual Range Analyzers

- a. In limited instances, CEMS may need to be capable of measuring emission levels under normal conditions and also under periods of short-duration peaks or high concentrations.
- b. Regarding CO dual-range CEMS, EPA Performance Specification 4A criteria



(Section 13.2 Relative Accuracy) states that the RA of the CEMS must be no greater than 10 percent when the average RM value is used to calculate RA, 5 percent when the applicable emission standard is used to calculate RA, or as an alternative, within 5 ppmv when the RA is calculated as the absolute average difference between the RM and CEMS plus the 2.5 percent confidence coefficient. This alternate acceptance criterion may not be used without the approval of the EMS.

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5. PERFORMANCE SPECIFICATION TESTS

A. Performance Specification Tests (PST)

The following protocol procedures may be applicable to any CEMS or COMS required to be installed by one or more regulations identified in Section 2.

1. A Performance Specification Test (PST) protocol is required to be submitted to and approved by EMS for any CEMS/COMS required by any Federal or State Regulation as well as NJDEP permit conditions.
2. A full certification (i.e. PST) is required whenever a significant change or repair is made to the monitoring system. The most current version of EPA's "Part 75 Emissions Monitoring Policy Manual" shall be used by the Department to establish the minimum actions for which a full certification will be required. Due to differences in the intended use of the data between Part 75 and a compliance program, the Department may require a full certification for changes and/or repairs when Part 75 does not. It is the facility's responsibility to check with EMS on the need to conduct a full certification. (Also see Item H of this Section below.)
3. The PST protocol must outline the proposed procedures and equipment to be utilized for the certification test program.
4. PST tests are not to be conducted until after the PST protocol has been approved by EMS.
5. PSTs shall follow the applicable procedures referenced in Section 4.A., with the following additions:
 - a. Relative Accuracy (RA) tests shall be conducted during the Calibration Drift (CD) test period. It is recommended that the RA tests be conducted during the latter half of the CD test period. As specified in PS2 Section 8.3.1, the CD test requires an affected facility to calculate/determine the magnitude of the CD (while the affected facility is operating) once each day (at 24-hour intervals) for 7 consecutive calendar days according to the procedures outlined in PS2 Sections 8.3.2 and 8.3.3. Alternatively, on days when facilities do not operate, CD tests may be conducted over seven consecutive unit operating days.
 - b. If the alternate acceptance criterion (which is based on a percentage of the emission standard) for Relative Accuracy (RA) testing (e.g., for CO and NOx) results in a value less than 0.5 ppm, EMS will accept a 0.5 ppm absolute difference to satisfy this acceptance criterion. Note: This will apply only to allowables that originate from State regulations as listed in the facility's Permit. Relief from any emission limit based on a Federal allowable, i.e. Part 75 or Part 60, would necessitate a formal request to the EPA.
 - c. A facility must notify EMS in writing a minimum of thirty (30) calendar days prior to conducting the PST.
 - d. The final PST report shall be submitted to EMS within thirty (30) calendar days of completion of the PST.



- e. All CEMS/COMS shall successfully complete the PST. The final PST report must be submitted to EMS prior to conducting any compliance stack emission tests. The Department may waive this requirement if the facility provides an appropriate written justification to the CEMS Program Supervisor/Coordinator.
 - f. The PST report must include the serial number of each analyzer and data recording device.
 - g. Each PST report must be certified in accordance with N.J.A.C. 7:27-1.39(a)1 and 2 and must include the certification language specified therein.
 - h. The report must include RA calculations for raw concentrations as well as units of the standard.
6. All redundant CEMS/COMS installed to ensure the minimum data availability requirement must undergo the appropriate PSTs.
7. Data from the CEMS/COMS becomes enforceable upon the completion date of the Relative Accuracy portion of a successful certification test program, if the program was conducted in accordance with Section 5.E.1, above. Accordingly, the facility shall implement the minimum Quality Assurance/Quality Control procedures, which follow in Section 6, immediately following the successful certification test.
8. When any integral part of a CEMS is repaired or replaced, and a full certification is required, the facility should consult the policy entitled **"Policy for Validating CEMS Data After a Significant Equipment Change"** included in Appendix E of this document.
9. The certification date (when recertifying an analyzer using Appendix E, Option 1) shall be the date of the successful Relative Accuracy (RA) portion of a successful PST. It is worth noting that the under Option 1, the data is considered valid back to the date of the successful CGA.
10. As an attachment to the EEMPR, the Submitter shall include the following:
 - a. An explanation of the recertification and why the period prior to the official recertification date is not downtime,
 - b. The date the original CEMS was taken out of service,
 - c. The date the replacement CEMS was installed,
 - d. The date of the successful CGA, and
 - e. The date of the successful RA during the subsequent PST.
11. In the event that a NMHC CEMS needs to be certified, the facility shall comply with certification procedures outlined in [Appendix I](#) of this document.



6. QUALITY ASSURANCE (QA) /QUALITY CONTROL (QC) AND PREVENTATIVE MAINTENANCE (PM)

A. QA / QC - PM Procedures

The following list of QA/QC – PM procedures may be applicable to any CEMS or COMS required to be installed by one or more regulations identified in Section 2.

1. A QA/QC – PM plan is required to be developed for all CEMS/COMS required in Section 2 of this document. This QA/QC - PM plan shall incorporate at a minimum those procedures outlined in 40 CFR, Part 60, Appendix F and/or 40 CFR, Part 75, Appendix B for CEMS and those procedures outlined in 40 CFR, Part 60, Appendix B, Specification One and 40 CFR Part 60, Appendix F, Procedure 3 for COMS. The QA/QC – PM plan shall be maintained on-site and available for review upon request. The QA/QC – PM plan should be amended as need based on changes to the system. The QA/QC – PM plan and changes do not need to be submitted to the EMS.
2. The QA/QC – PM plan shall designate a coordinator for the facility who is responsible to ensure that the QA/QC – PM plan specified in 6.A is implemented.
3. The QA/QC coordinator shall be responsible for reviewing the QA/QC - PM plan specified in 6.A. on an annual basis. Equipment failures resulting from not having or not following the QA/QC - PM Plan could have enforcement implications.
4. The QA/QC - PM plan must include all procedures and/or spare parts necessary to ensure the CEMS/COMS data valid capture requirements specified in Section 4.B.4. The PM plan shall be included as an element of the QA/QC plan.
5. All quarterly and annual QA data shall be included in quarterly EEMPR reports and kept on file with the facility. The QA data must be made available upon request.
6. All procedures outlined in the QA/QC – PM plan specified in Section 6.A above shall commence upon the completion date of the PST.
7. The Department reserves the right to require the QA/QC – PM plan to be revised at any time based on the results of quarterly EEMPR reviews, inspections, audits or any other information available to the Department.
8. All redundant CEMS/COMS must undergo the QA/QC procedure specified in the source QA/QC – PM plan specified in Section 6.A.
9. Quarterly NO_x converter efficiency tests must be conducted on all chemiluminescence based NO_x CEMS at the time of the required quarterly QA/QC procedures included in Item A above and described in Section 4(B)(1)(e).
10. A CEMS required by permit condition, for the purpose of demonstrating compliance with permit allowables, must be quality assured in accordance with 40 CFR, Part 60, Appendix F. If a facility's CEMS is also required for a Part 75 based program, the Department will accept the Part 75 linearity checks as satisfying the Cylinder Gas Audit (CGA) requirements of 40 CFR, Part 60, Appendix F. However, if for any reason the linearity check is not required by the end of a given quarter (i.e. due to a Part 75 grace period allowance), a CGA must be conducted before the end of the quarter to validate future data for



compliance purposes.

11. Failure to conduct a quarterly audit on a CEMS required for compliance purposes will result in downtime being accumulated beginning immediately after the last day of the quarter in which the facility failed to conduct the audit. Downtime resulting from a failure to conduct a quarterly audit may not be included as allowable downtime in the quarterly report. This might not invalidate the Part 75 data, as these rules may allow a grace period and/or data substitution.
12. In general, quarterly QA (CGA and/or RATA) is not required in a quarter when a source did not operate; however, this exception is not intended to cover long periods of non-operation. QA requirements for CEMS for continued periods of non-operation are specified within this document, in Appendix F.
13. Beginning March 27, 2012, relative accuracy testing under §75.74(c)(2)(ii), section 6.5 of Appendix A to Part 75, and Section 2.3.1 of Appendix B to Part 75, and stack testing under §75.19 and Section 2.1 of Appendix E to Part 75 shall be performed by an "Air Emission Testing Body", as defined in §72.2. Conformance to the requirements of ASTM D7036-04 (incorporated by reference, see §75.6), referred to in Section 6.1.2 of Appendix A to Part 75, shall apply only to these tests. Section 114 of Part 75, Appendix B and Section 2.1 of Appendix E require compliance with Section 6.1.2 of Appendix A. Tests and activities under this part that are not required to be performed by an AETB as defined in §72.2, include daily CEMS operation, daily calibration error checks, daily flow interference checks, quarterly linearity checks, routine maintenance of CEMS, voluntary emissions testing, or emissions testing required under other regulations. Note: If regulatory changes (within Part 60) are made by EPA that mandate certain air emission tests to be conducted using an Air Emission Testing Body or AETB. These requirements shall also be incorporated within this document.
14. Skipped calibrations between runs for relative accuracy testing (including relative accuracy test audits) are not permitted. As such, reports (relative accuracy testing, including relative accuracy test audits) submitted using the "Skipped Calibration Approach" will be rejected and will have to be repeated. Each reference method data point must be individually quality assured. The averaging of calibration data over multiple runs prohibits individually determined drift corrected run averages for comparison to the CEMS data. It is worth noting that Part 75 procedures also prohibit "skipped calibrations."



7. CEMS/COMS PERFORMANCE AND EMISSIONS REPORTING

A. Reporting and Recordkeeping Requirements

The following list of performance and emissions reporting requirements may be applicable to any CEMS or COMS required to be installed by one or more regulations identified in Section 2.

1. A quarterly report of CEMS/COMS performance and emission exceedances is required to be submitted to the appropriate Regional Enforcement Office (REO) for the facilities location. The geographic coverage area for each REO is located in [Appendix C](#). This report shall be submitted to the appropriate REO whether or not an emission exceedance has occurred.
2. The quarterly report specified in Section 8.A. must be submitted to the REO within thirty (30) calendar days of the end of each calendar quarter.
3. The format for the quarterly report is included in [Appendix B](#). Approval of any other format shall be made through the REO having jurisdiction over the facility.
4. CEMS/COMS quarterly reports shall be submitted to the appropriate Regional Enforcement Office for the first quarter in which the CEMS/COMS is installed and for every quarter thereafter.
5. Certified CEMS/COMS data will be utilized to demonstrate compliance with applicable emission limits or emission standards beginning on the completion date of the successful certification test (see Section 5.G.).
6. Any CEMS/COMS which does not successfully demonstrate that the equipment meets the appropriate performance specification (PS), after two PST attempts, shall implement the following:
 - a. Install a replacement CEMS/COMS approved by EMS within one hundred and eighty days (180) calendar date following the rejection of the second PST results.
 - b. Provide a temporary CEMS/COMS within thirty (30) calendar days that is reviewed and approved by EMS to monitor the compliance status of the source.
7. To ensure consistency in how CEMS Data Acquisition Systems (DAS) are programmed to deal with breaks in operation for a source with a multi-hour rolling or block average emission limit, EMS wrote a CEMS averaging policy. The CEMS averaging policy is included within this document, in Appendix G.



8. PMPs and ACAs

A. NO_x, CO and O₂ Requirements

The default monitoring (non-reference method) procedure for Nitrogen Oxides (NO_x), Carbon Monoxide (CO) and Oxygen (O₂) shall be EPA Conditional Test Method 034 (CTM-034). **The NO_x analyzer must measure both NO and NO₂.**

CTM-034 (in Section 7.1) defines sample point selection procedures for Reciprocating Engines, Combustion Turbines and Process Boilers. If you are a source other than one of those listed in CTM-034 or you are sampling for VOC/THC, sampling site and points must be selected in accordance with one of the following options:

1. Select a sampling site located at least two stack diameters downstream of any disturbance and one-half stack diameter upstream of the gas discharge to atmosphere. Use a sampling location at a single point near the center of the duct or use the point approved by the DEP.
2. Conduct a stratification check as detailed in EPA Reference Method 7E, Section 8.1.2 or EPA Reference Methods 10 or 3A if applicable, and sample at the determined number of points.
3. 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.
4. A one-hour Reference Method test may be used instead of CTM-034 to satisfy the periodic monitoring requirement. Other alternative methods must be approved on a case-by-case basis.

All of the above applies to PMPs and ACAs. 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.

B. THC, VOC Requirements

The default monitoring procedure for Volatile Organic Compounds (VOC) and Total Hydrocarbon (THC) may be found at [THCPeriodicMonitoringRequirements.pdf](#).

C. Periodic Emission Monitoring (PEM) Downtime

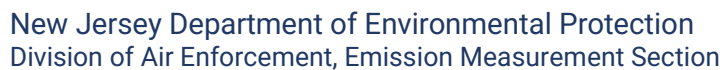
The following operational and notification requirements must be complied with:

- A Daily Periodic Emission Monitor is 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. Examples include but are not limited to photoionization detectors, flame ionization detectors, and oxygen sensors. The Bureau of Stationary Sources (BOSS) PEM downtime memo can be found in Appendix J.

- Daily PEMs must be used whenever the associated source operation(s) are operating except for 3 non-usage days per calendar quarter.
- 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. The service log must include the reasons why the PEM was not able to be operated, and any remedies taken to resume daily monitoring. DEP reserves the right to reject the reason provided for failing to comply with a particular daily monitoring requirement.
- 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. All completed daily monitoring events must be recorded. A facility shall not use the PEM downtime as a shield of a known violation of an emission standard or the occurrence an N.J.A.C. 7:27-5 violation.
- None of the above supersedes any existing case-by-case Daily PEM downtime allowances that may be in specific Compliance Plans. When warranted, alternative Daily PEM downtime allowances may be developed on a case-by-case basis.
- There is no downtime allowance for a PEM with a weekly or greater monitoring period requirement.



9. TM1005 MODIFICATIONS

A. TM1005 Modifications Tracking Sheet

This section details modifications to this document.

[illegible]



APPENDIX A - PROTOCOL FOR CEM SYSTEMS AND COM SYSTEMS

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PROTOCOL FOR CONTINUOUS EMISSION MONITORING SYSTEMS AND CONTINUOUS OPACITY MONITORING SYSTEMS

The following is a list of information to be submitted to the Emission Measurement Section for installation of Continuous Emission Monitoring Systems (CEMS) and Continuous Opacity Monitoring Systems (COMS). This information is necessary to evaluate the monitoring system and to determine if it will be acceptable to the Department. Failure to respond to any one item will result in the Department not approving the monitoring system as submitted.

The following is the minimum information required to be included in an Equipment Protocol.

- 1) Indicate the PI# and Emission Unit of the source being tested as well as the current BOP# or PCP#.
- 2) Submit the name of the manufacturer, model number and serial number of each individual analyzer proposed.
- 3) Indicate the principle of operation of each analyzer.
- 4) Indicate the range of operation at which each analyzer will be used.
- 5) Indicate the manufacturer and concentration of all calibration standards for each individual analyzer.
- 6) Indicate where calibration standards are introduced into the CEMS or COMS.
- 7) Indicate the calibration schedule proposed for each analyzer.
- 8) Indicate the percentage of valid data captured (or percent downtime) for any calendar day, based on source operation time. The facility must agree to the minimum requirements contained in Section 4(B)(4).
- 9) Indicate the percentage of valid data captured (or percent downtime) for any calendar quarter, based on source operation time. The facility must agree to the minimum requirements contained in Section 4(B)(4).
- 10) Provide written Quality Assurance practices for each CEMS or COMS.
- 11) Describe the routine maintenance schedule for each analyzer (daily, weekly, monthly, quarterly, yearly).
- 12) Indicate and describe the type of sample transport system, (if applicable).
- 13) Indicate and describe the type of sample conditioning system, (if applicable). Indicate the temperature range (°F) at exit of sample conditioner. Specify if this temperature is continuously monitored and recorded.
- 14) Submit the name of manufacturer and model of each data recording device.



New Jersey Department of Environmental Protection
Division of Air Enforcement, Emission Measurement Section

- 15) Indicate if the data recorder is a strip chart recorder or data acquisition system (DAS). If a data acquisition system is utilized, it must store one minute data averages and graphically trend one-minute data.
- 16) Indicate the number of parameters (if applicable) the recorder or DAS is monitoring.
- 17) Indicate the speed of the recorder. If no DAS is utilized, provide information on how data will be reduced for excess emission reports, if required.
- 18) Submit a schematic of the source being monitored indicating location of the following items:
 - i.) Sampling point of the monitoring system.
 - ii.) Introduction point of calibration standards.
 - iii.) Placement of the monitor(s).
 - iv.) Placement of the data recorder(s).

The Emission Measurement Section requests that a copy of the manufacturer's original technical specification brochure be submitted along with the listed information.

The following is the minimum information required to be included in a Certification Protocol.

- 1) Indicate that the RM test location is acceptable and in accordance with EPA Method 1.
- 2) The RA Test must be conducted during the 7-day CD Test.
- 3) A three-point traverse must be conducted in accordance with PS2 for the RM measurements.
- 4) Calibration Procedures must be in accordance with the appropriate Reference Method.
- 5) All the required Calibration Data must be included in the report and all of the RM and CEM Data must be time and date stamped.
- 6) All the Raw Data required to reproduce the results must be included in the report.
- 7) The report must be certified in accordance with N.J.A.C. 7:27-8.24.

All correspondence to this office must include the name of the facility where the CEMS is to be installed, the Program Interest number for the facility and the PCP or BOP identification number (Permit number). Failure to provide this information can delay the review of the proposed system.

Any questions regarding this information can be directed to the CEMS Supervisor//Coordinator at our email address (bts@dep.nj.gov) or by mail to:

US MAIL

Mail Code: 09-01

New Jersey Department of Environmental Protection
Air, Energy and Materials Sustainability,
Bureau of Diesel Enforcement and Emission Measurement
Emission Measurement Section
PO Box 420, Trenton, NJ 08625
(609) 984-3443



SHIPPING ADDRESS

New Jersey Department of Environmental Protection
Air, Energy and Materials Sustainability,
Bureau of Diesel Enforcement and Emission Measurement
Emission Measurement Section
9 Ewing Street Trenton, NJ 08625

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APPENDIX B - EEMPR FORMAT

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EXCESS EMISSIONS AND MONITORING PERFORMANCE REPORT FOR CONTINUOUS MONITORING SYSTEMS

The electronic EEMPR spreadsheet is to be used for quarterly reporting of the following Continuous Monitoring Systems (CMS):

Continuous Emission Monitoring Systems (CEMS)
Continuous Opacity Monitoring Systems (COMS)

Instructions on how to create and submit an electronic EEMPR using the NJDEP online portal can be found here: [eEEMPR PPT](#)

First time NJDEP Online users - Instructions on how to set up an account in NJDEP online can be found here: [NJDEP | DEP Online | NJDEP Online FAQs](#)

The Excess Emission and Monitoring Performance Reports (EEMPRs) are due to the NJDEP regional enforcement office within 30 days of the end of each calendar quarter. This means that the report must be postmarked within this time period.

IMPORTANT: THIS REPORT MUST BE SUBMITTED EVEN IF NO EMISSION EXCEEDANCES OR OTHER PARAMETER VIOLATIONS OCCURRED.

The electronic EEMPR is structured so that a facility with multiple CMSs can submit all the necessary data in one spreadsheet for each source. Therefore, there may be sections of the EEMPR spreadsheet which ask for information not applicable to the source's monitor operation. If such information is not applicable, please leave these sections blank.

The EEMPR spreadsheet is comprised of multiple tabs:

1. Admin
2. Copy Paste Instructions
3. Facility Profile
4. Source Info
5. Gen. Monitor Data
6. Monitor Audit Data
7. Continuous Opacity Monitor
8. Continuous Opacity Downtime
9. Monitor 1 Downtime
10. Monitor 2 Downtime
11. CMS Excursions
12. Supporting Data

Please submit the computer RATA package and any other information relative to calibration error, yearly performance tests, and other tests and procedures, as required by applicable permit conditions.



In addition, if the facility is required to conduct the following analyzer accuracy assessment tests, please submit the summary page of the results on the Supporting Data tab:

For CEMS:

Relative Accuracy Test Audits (RATA) Cylinder Gas Audits (CGA) Calibration Error (CE)

Yearly Performance Test

Other: specify _____

For COMS:

Calibration determination error

Response time determination

24-hour zero calibration drift determination

1. SOURCE AND MONITOR DOWNTIME INFORMATION

- A. Source is considered to be down when no contaminants are being emitted or generated by any source operation or the control equipment. Only those periods of unscheduled downtime such as periods when the source or control device is non-operational due to equipment failure or malfunction should be reported. Do not report that time when the source is inactive due to regularly scheduled downtime such as holiday vacation or after-hours shutdown periods.
- B. Analyzer downtime is any time the monitors are not collecting and recording valid emission data while the source or control device is operating. This includes daily calibrations which exceed 15 minutes in any one clock hour, Appendix F QA/QC activity (i.e., RATA, CGA, RAA), monitor out-of-control periods as defined in 40 CFR Part 60 Part 60 Appendices B & F, and normal or preventative maintenance.

(Note: Definition of analyzer downtime is in the EEMPR Definitions section).

Any CEM downtime which exceeds 15 minutes shall be deemed down for the entire hour, for block averages; CEM downtime for rolling averages must be reported in minutes.

Downtime of any diluent analyzer used in conjunction with an emission analyzer shall result in both analyzers being considered down until that time when both (or all) analyzers are operating simultaneously.

2. EMISSION EXCEEDANCE INFORMATION

INSTRUCTIONS FOR REPORTING EXCEEDANCES

COLUMN / EXPLANATION

1 / Enter the date the exceedance occurred.

2 / Enter the monitored emission or parameter which was exceeded.

3 / Enter the permit allowable emission concentration limit of the emission or parameter listed in Column 2.



Example: For a 2-hour period beginning 12:00 and ending 14:00, the average concentration of NO_x in the stack gas was 400 ppmvd at 13:00 and 14:00, exceeding the permit allowable limit of 300 ppmvd @ 7% O₂.

Enter 300 in Column 3.

4 / Enter the units of measurement for the contaminant or parameter, as listed in the permit. For opacity, enter DOPACITYD.

i. For the example listed in #3 above, enter "ppmvd" in Column 4.

5 / Enter the averaging time allowed by the permit for the emission or parameter listed in Column 2, if applicable.

ii. For the example given in #3 above, enter 1:00.

6 / **If the emission has a block averaging time:** The start time is the beginning of the averaging period showing the exceedance, and the end time is the end of that averaging period. If the total exceedance time is greater than the averaging time, it will require separate line-item entries on the EEMPR. Use military time.

iii. For the example given in #3 above, on one line, enter 12:00 in the "START" column and 13:00 in the "END" column; on the following line, enter 13:00 in the "START" column and 14:00 in the "END" column.

iv. **If the emission has a rolling averaging time:** Enter the time ("START") it exceeded the permit allowable, and the time ("END") it returned to the permit allowable limit.

v. For the example given in #3 above, on one line, enter 12:00 in the "START" column and 14:00 in the "END" column.

vi. If the emission has a block averaging time: Enter the averaging time, in decimal hours.

7 / For the example given in #3 above, enter 1.0 as the duration for each of the one -hour exceedances.

If the emission has a rolling averaging time: Enter the total time that the rolling average exceeded the permit allowable, in decimal hours.

For the example given in #3 above, enter 2.0 as the duration for each of the one-hour exceedances.

8 / **If the emission has a block averaging time:** Enter the total time that the rolling average exceeded the permit allowable, in decimal hours.

For the example given in #3 above, enter 2.0 as the duration for each of the one-hour exceedances.



If the emission has a rolling averaging time: Enter the average emission exceedance for the duration of the incident, in decimal hours.

For the example given in #3 above, enter the average exceedance in Column 8.

For OPACITY, see REPORTING OPACITY EXCEEDANCES below.

9 / **For all emission exceedance except oxygen and opacity:** Enter the percent over the permit allowable using the following formula:

$$\frac{\text{Column (8)} - \text{Column (3)}}{\text{Column (3)}} \times 100\%$$

For minimum oxygen concentration exceedances: Enter the percent of the minimum oxygen concentration using the following formula:

$$\frac{1 - \text{Column (8)} - \text{Column (3)}}{\text{Column (3)}} \times 100\%$$

For opacity: enter N/A

10 / Enter any remarks relating to the reported exceedance, such as cause or remedial action.



REPORTING OPACITY EXCEEDANCES

Reporting Opacity Exceedances for Sources NOT regulated by N.J.A.C. 7:27-3

Provisions in this Technical Manual 1005, concerning "No Visible Emissions (NVE)", supersede any DEP Technical Manual, including Manual #1410, page 9, which may have established NVE to mean anything other than: opacity not greater than 5 percent.

Opacity is required to be measured by a six-minute averaging method; an emission exceedance is said to have occurred after the six-minute average value exceeds the permit allowable. A continuous opacity exceedance is an incident in which consecutive six-minute average readings are greater than the permit allowable. Such an incident should be reported in the form of six-minute block averages (i.e., separate line-item entries for each six-minute average).

Example: A cogeneration plant subject to the opacity provisions in its permit cannot exceed 10% opacity in any 6-minute block period. From 15:03 to 15:33, the six minute average opacity readings from this source were 12%, 20%, 35%, etc.

On one line of the EEMPR:

In Column 5, enter 00.06.

In Column 6, enter 15:03 in "START", and 15:09 in "END". In

Column 7, enter 0.1 (6 minutes /60 minutes)

In Column 8, enter 12%, the six minute average for the first six minutes of the exceedance.

On the subsequent lines, enter the next 6-minute averages which exceed the limit.

Procedure for Determining Compliance with N.J.A.C. 7:27-3 Opacity Limits Utilizing Continuous Opacity Monitoring Systems (COMS)

The following describes the procedure for determining compliance with the opacity limits specified in N.J.A.C. 7:27-3. "Control And Prohibition of Smoke From Combustion of Fuel" when a Continuous Opacity Monitor System (COMS) is utilized.

◆ Opacity Standard

The following are the opacity standards for N.J.A.C. 7:27-3: Section 3.2(a) – No Visible Emissions

Section 3.2(b) - 20 %

Section 3.3(a) - 20 %

Section 3.4 - 40%

Section 3.5 - 20%

For any emission unit regulated by N.J.A.C. 7:27-3.2(a), for which the opacity limit is described as **No Visible Emissions (NVE)**, NVE is deemed to be opacity not greater than five (5) percent. Any opacity minute where the opacity reading is greater than 5 % determined by the use of a COMS, will be a violative minute of an NVE limit.



◆ **Compliance Period**

The averaging period in which to determine compliance with the opacity limit, utilizing a COMS, in this Subchapter, is a thirty (30) minute block average that is based on the clock hour. (Example: 12:00 to 12:30, 1:30 to 2:00, etc.)

◆ **Compliance Procedure**

The emission unit is allowed three (3) minutes in this 30-minute block, where the opacity from an emission source can exceed the opacity limit. The 3 minutes of violative opacity do not have to be consecutive, but anywhere in the 30-minute block. Upon the emission unit having a fourth minute of violative opacity (over the specified opacity limit) in the 30-minute block, the emission unit would be considered in violation of the particular opacity limit.

◆ **Compliance Procedure (cont'd)**

For documenting a violation in NJEMS, if the emission unit exceeds 3 minutes of opacity, over the opacity standard then the entire 30-minute block would be included in NJEMS as the period of violation.

◆ **Penalty Determination**

The highest opacity reading that occurred in the 30-minute block, would be included in NJEMS for determining the magnitude of the violation. The highest reading would be considered for all the opacity readings that occurred during the 30-minute block, including the 3 minutes that were initially excluded as part of the compliance determination. The compliance period allows 3 minutes to be excluded in the 30-minute block. But for penalty consideration the highest reading overall during the block, including the 3 minutes excluded, is used for the penalty determination.



DEFINITIONS

Definitions of most terms are located in each individual section of each Federal rule.

CEMS (Continuous Emission Monitoring System) – The total equipment required for the determination of a gas concentration or emission rate. The system consists of the following major subsystems; sample collection and calibration interface, pollutant analyzer, diluent analyzer (if applicable) and data recorder/acquisitions system.

COMS (Continuous Opacity Monitoring System) – The total equipment required for the determination of the opacity of emissions which must meet the minimum requirements of Performance Specification One and 40 CFR - Part 60 – Appendix F - Procedure 3.

EXCESS EMISSIONS – A period of time during which emissions of a regulated pollutant at a given source exceed the limit in units of the standard as specified in the conditions associated with the applicable permit and/or regulation.

DOWNTIME – The period of time when the source is producing emissions which are monitored by the CEMS/COMS but the monitors and/or recorders are not providing valid compliance emission data. This includes periods of Quality Assurance (QA) and Preventative Maintenance (PM) procedures, CEMS Calibration (Cal) that exceed 15 minutes in any one hour. (See definitions of Rolling and Block Averaging on Page 2 of the Instructions for Completing the EEMPR).

SOURCE – The production equipment and/or control equipment attached to and serving the production equipment for which the CEMS/COMS are monitoring emissions data.



APPENDIX C - NJDEP REGIONAL ENFORCEMENT OFFICE LOCATIONS

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AIR COMPLIANCE AND ENFORCEMENT - REGIONAL OFFICES

CENTRAL REGIONAL OFFICE

Mail Code 22-03A

401 East State Street

P.O. Box 420

Trenton, NJ 08625-0420

[NJDEP | Easy Access | Air, Energy and Materials Sustainability](#) ⁽¹⁾

Phone No. (609) 292-3187

Fax No. (609) 292-6450

COUNTIES: Burlington, Mercer, Middlesex, Monmouth, and Ocean

NORTHERN REGIONAL OFFICE

7 Ridgedale Avenue

Cedar Knolls, NJ 07927

[NJDEP | Easy Access | Air, Energy and Materials Sustainability](#) ⁽¹⁾

Phone No. (973) 656-4444

Fax No. (973) 656-4080

COUNTIES: Bergen, Essex, Hudson, Hunterdon, Morris, Passaic, Somerset, Sussex, Union and Warren

SOUTHERN REGIONAL OFFICE

2 Riverside Drive

Suite 201

Camden, NJ 08103

[NJDEP | Easy Access | Air, Energy and Materials Sustainability](#) ⁽¹⁾

Phone No. (856) 614-3601

Fax No. (856) 614-3613

COUNTIES: Atlantic, Camden, Cape May, Cumberland, Gloucester and Salem

⁽¹⁾ For the most up to date Regional Office information, [use this link](#).



APPENDIX D - PROCEDURE FOR THE DETERMINATION OF A THC ALLOWABLE

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GENERAL PROCEDURE FOR ESTABLISHING THC ALLOWABLES FOR OXIDIZERS

General Statements

This document establishes a procedure by which THC results obtained during compliance stack testing of an oxidizer can be correlated to concurrent THC CEMS or Periodic Monitor data and extrapolated to identify a not-to-exceed THC CEMS or Periodic Monitor value. This value is then utilized for on-going compliance assurance. The procedure is designed to establish an allowable ppm value based on the minimum allowable destruction efficiency (DE). THC or Periodic Monitor values correlated to compliance test results obtained at higher than the allowable DE will be normalized to the allowable DE (usually 95.0%).

The THC CEMS or Periodic Monitor must be installed, operational and properly calibrated (in accordance with EPA Method 25A) prior to and during the compliance test program so that measured concentration values may be compared with the compliance test data.

The THC analyzer range should be established based on preliminary concentration measurements or by the expected emission concentration allowable resulting from the permitted DRE. Typically, this would be the same range and basis as the corresponding stack test.

In instances where THC spiking occurs, the facility can follow the procedure outlined in the PS8 FAQ section to ensure analyzer linearity. Specifically, the range selected encompasses the highest anticipated value and one would challenge the instrument daily using a calibration gas which represents 70-80% of the full range of the analyzer and the mean difference between the measured results and the reference value should be within 10.0 percent of the tag value of the reference gas.

The THC monitor should 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).

If the THC monitor does not pass RA using the established THC limit, then the CEMS must be recertified with 3 of the 9 runs 1-hour long in duration and at similar operating conditions as the stack test. Flows (inlet and outlet), plus DRE results from the stack test can be used to re-correlate the THC CEMS.

Whenever a THC CEMS is recertified, the THC WCOA must be re-established

This procedure produces a calculated maximum THC CEMS or Periodic Monitor value that would correspond to an oxidizer destruction efficiency of 95.0% (or the limit in the Permit). Operation at or near this calculated maximum value while at lower than tested production levels may be indicative of a failure to achieve the required minimum destruction efficiency. However, mass emissions (lbs/hr) should still be in compliance in this scenario.

In addition to providing a continuous demonstration of compliance with the Worst-Case Outlet Allowable, the source will acquire real-time data to facilitate proactive maintenance procedures on their control device. This procedure should be used each time a compliance test is required, and the allowable reset as necessary.

Calculation Procedure

WCOA = Worst-Case Outlet Allowable (PPM)
TIPPH = Tested inlet pounds per hour



TOPPH	= Tested outlet pounds per hour (= TIPPH*[1-TDE])
MAOPPH	= Maximum Allowed outlet pounds per hour (= TIPPH * [1 – MADE])
TDE	= Tested Destruction Efficiency (expressed as a decimal fraction, i.e.: 0.950 for 95.0% DE)
MADE	= Minimum allowed DE (usually 95.0%...decimal 0.950)
MOPPM	= Measured outlet ppm from <u>calibrated</u> THC CEM or Periodic Monitor <u>during</u> the DE test.

$$\text{WCOA} = \frac{\text{MOPPM} \times [\text{MAOPPH}]}{\text{TOPPH}}$$

$$\text{WCOA} = \frac{\text{MOPPM} \times [\text{TIPPH} * (1 - \text{MADE})]}{\text{TIPPH} * (1 - \text{TDE})}$$

Substituting and assuming **MADE = 0.950**

$$\text{WCOA} = \frac{\text{MOPPM} \times \cancel{\text{TIPPH}} \times (1 - 0.950)}{\cancel{\text{TIPPH}} \times (1 - \text{TDE})}$$

FINAL EQUATION for MADE = 95%

$$\text{WCOA} = \frac{\text{MOPPM} \times 0.050}{(1 - \text{TDE})}$$

To ensure accuracy and consistency, EMS has added the spreadsheet titled, “THC Worst-Case Outlet Allowable (WCOA) Calculation Tool (MS Excel)” to the DEP website, under the “Consultant Services” tab, for use in establishing the THC WCOA limit during an oxidizer DRE stack test. The spreadsheet can be found at <https://www.nj.gov/dep/bts/consult.html>, within the “Technical Manuals” section.



APPENDIX E - POLICY FOR VALIDATING CEMS DATA AFTER A SIGNIFICANT EQUIPMENT CHANGE

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POLICY FOR VALIDATING CEMS DATA AFTER A SIGNIFICANT EQUIPMENT CHANGE

A facility that desires to make a modification to a CEMS is required to do the following:

1. Notify EMS of the proposed change and include the PI#, Emission Unit and Serial Number(s) of the outgoing analyzer(s).
2. Submit details of the modification to EMS in the form of an amendment to the CEMS Equipment Protocol. If the existing Equipment Protocol is more than ten years old, a new Equipment Protocol must be submitted.
3. If EMS review indicates the CEMS modification is significant enough to warrant a recertification, the facility will be required to schedule a mutually acceptable date to conduct a PST. If a recertification is warranted and the original Certification Protocol is more than ten years old, a new Certification Protocol must be submitted.

Option 1. Upon completion of the installation of the new equipment, the facility is required to conduct a cylinder gas audit (CGA) as per 40, CFR Part 60, Appendix F. The period of time beginning with the removal from service, or failure of the existing CEMS, to the completion of a successful CGA shall be considered downtime. Upon successful completion of the CGA, daily calibration drift test determinations will be required in accordance with 40 CFR, Part 60, Appendix F. If the daily calibration drift continues to comply with the QA provisions of 40 CFR, Part 60, Appendix F, the data will be considered valid on a contingent basis.

The facility will have a maximum of 30 operating days, following the CGA, to conduct a Performance Specification Test (PST), including a seven-day drift test and a relative accuracy test. If the CEMS meets the requirements of the CEMS respective performance specification on the first attempt, the CEMS data will be considered valid retroactive to the successful CGA. (This retroactive approval is contingent upon all calibrations drift tests leading up to the Performance Specification Test meeting the minimum requirements of 40 CFR Part 60 Appendix F). 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.

If the 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, the CEMS data from the point of drift failure back to the equipment's installation will be considered invalid and be counted as downtime. Downtime will continue to accrue until a successful PST has been completed.

Option 2. As an alternative, if the relative accuracy test is conducted within seven days of installation of the new CEMS, the data recorded from the start of a successful seven-day calibration drift test will be considered valid. This is contingent upon the relative accuracy test being performed during the seven-day test period **and** it meeting the performance test requirements on the first attempt. Under this option, the period of time beginning with the removal from service, or failure of the existing CEMS, to the beginning of a successful seven-day calibration drift test (that includes a successful relative accuracy test) shall be considered downtime. (Under this second option the source would not be required to validate data via a CGA during the seven-day drift test.) Again, the certification date is the date of the RA test, but the data is considered valid starting on Day 1 of the 7-day CD period.



APPENDIX F - CEMS QA REQUIREMENTS FOR NON-OPERATING QUARTER AND NON-DISPATCHED PEAKING UNITS

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CEMS QA REQUIREMENTS FOR NON-OPERATING QUARTERS AND NON-DISPATCHED PEAKING UNITS

Quarterly quality assurance for CEMS: either a Cylinder Gas Audit (CGA) or a Relative Accuracy Test Audit (RATA) are required in accordance with Part 60, Appendix F. Under Section 5.1.4 of Appendix F, a CGA is not required in a quarter when the source does not operate. Similarly, if a RATA is due in a quarter when the source does not operate, a RATA is not required (a RATA requires source operation in order to be completed), but the RATA must be done in the quarter when the source recommences operation. However, these exemptions were not intended for continued periods of non-operation. To provide clarity, the following will be required in instances of multiple successive quarters of non-operation when there was a break in quarterly quality assurance:

1. If a CGA (or RATA) is required in the first quarter of non-operation, the facility may opt to skip the CGA (or RATA) per Section 5.1.4 of Appendix F. However, if non-operation continues into a second consecutive quarter, a CGA will be required regardless of whether the unit operates or not. For extended periods of non-operation, the facility may opt to discontinue quarterly quality assurance, but two or more consecutive quarters without performing any quarterly quality assurance will trigger a recertification event for when operation resumes, using the procedures specified in Number 5 below.
2. If a RATA is due in the second or subsequent full quarter of non-operation, a CGA is required consistent with Number 1 above. For extended periods of nonoperation, the facility may opt to discontinue quarterly quality assurance, but two or more consecutive quarters without performing any quarterly quality assurance will trigger a recertification event for when operation resumes, using the procedures specified in Number 5 below.
3. In the quarter when the source resumes operation and a CGA is due, a CGA is required upon startup, since any operation in that quarter prior to the successful CGA will be considered as downtime, consistent with Section 6.A.11 of this document.
4. If a RATA is due in the quarter when the source resumes operation, follow the procedures of Appendix E, Option 1, except substitute RATA for Performance Specification Test (PST), and exclude references to 7-day drift assessments. Any operation in that quarter prior to the successful CGA will be considered as downtime, consistent with Section 6.J. of TM1005. Alternatively, a full PST can be conducted following Appendix E, Option 2 of this document.
5. Five or more consecutive quarters of non-operation, which included a quarter without quality assurance (Number 1 above) will be considered a recertification event and a PST will be required following the procedures of Appendix E in the quarter when the source resumes operation.
6. Alternatively, the facility can continue to perform quality assurance in all quarters without any break in quarterly quality assurance, regardless of non-operation in a quarter(s), by performing a CGA in the quarter when a RATA was due. However, six or more consecutive quarters without performing a RATA will be considered a recertification event and a PST will be required following the procedures of Appendix E in the quarter when the source resumes operation.

Note that valid data reporting is required upon re-start unless the facility has a Start-up Operating Scenario that allows for something different. Any operation in that quarter prior to the successful



CGA (Appendix E, Option 1) or prior to Day 1 of the 7-day Calibration Drift period (Appendix E, Option2) will be considered downtime, consistent with Section 6.J. of this document. Both Options assume a successful relative accuracy (RA) demonstration.

Monitoring Requirements for Non-Dispatched Peaking Units

As specified in Part §60.13(d)(1) owners/operators of a CEMS/COMS installed in accordance with the provisions of Part 60.13, must check the zero (or low-level value between 0 and 20 percent of span value) and span (50 to 100 percent of span value) calibration drifts at least once each operating day in accordance with the Regulation.

For peaking units on non-dispatched days, CEMS calibrations shall be conducted at least once a week, while not being dispatched to ensure proper operation of the CEMS equipment. Facilities shall run an offline calibration test the day before being dispatched to provide confidence that an online calibration will be passing and successful.

In addition:

- The facility shall continue to perform remaining QA procedures, including CGA's and RATAs.
- Calibrations shall also be conducted a day or two before the unit starts back up to ensure that the CEMS is working properly.
- If dispatch time allows, the facility shall conduct a CGA if they are offline for more than 45 days in a row to verify the linearity (assuming one has not been done recently).
- CEMS shall remain on and operating, even when a unit remains off for an extended period of time.



APPENDIX G - CEMS MULTI-HOUR OR BLOCK AVERAGE EMISSION LIMITS

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CEMS MULTI-HOUR OR BLOCK AVERAGE EMISSION LIMITS

In order to ensure consistency in how CEMS Data Acquisition Systems (DAS) are programmed to deal with breaks in operation for a source with a multi-hour rolling or block average emission limit, EMS wrote a CEMS averaging policy to provide guidance and clarification on how to calculate these averages. This policy has been posted on the EMS website at <https://www.nj.gov/dep/bts/consult.html> under Technical Manuals.

Note that exceedance reporting is outside the scope of this policy. Please refer to the [Compliance Advisory](#) document for further guidance on exceedance reporting and deadlines for updating DAS programming, if necessary.

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APPENDIX H - AVERAGING CEMS DATA

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AVERAGING CEMS DATA

Purpose: Clarifying NJDEP Policy for Determining CEMS Multi-Hour Rolling and Block Averages. Note that this does not supersede any rule or regulation. Emission exceedance reporting is outside the scope of this policy. Refer to Technical Manual 1005 (TM1005), Appendix B, Instructions (Section 4) and clarifying C&E guidance.

A. Three-hour Rolling Averages:

Assumptions:

1. One-hour limits averaged over 3 hours using 1-hour clock block averages.
2. Only source operating hours are included in the average. The 3 hours used in an average are not necessarily consecutive hours if there is a break in operation.
3. 3-hour averages only include valid CEMS hours as defined by TM1005 (Section B.4.b), namely, 45 minutes of valid data. This is further clarified to mean that there must be 45 minutes of source operation to have a valid hour.
4. If the source has a Startup/Shutdown (SU/SD) Operating Scenario, then any hour that includes a Startup/Shutdown would be excluded from the 3-hour average (compliance for the Startup/Shutdown hour will be per the Startup/Shutdown Operating Scenario).
5. If the source does NOT have a Startup/Shutdown Operating Scenario, then any hour that includes a Startup/Shutdown WOULD be included in the 3-hour average.
6. Downtime hours will be assessed as defined in TM1005 (Section B.4.c), counting as 60 minutes of downtime in calculating the total quarterly downtime minutes used to meet the quarterly valid data capture requirement found in TM1005 (Section B.4.d).

Example:

Hour 1	Hour 2	Hour 3	Hour 4	Hour 5	Hour 6
Valid	Valid	Invalid (1,2) SU/SD (3)	Valid	Valid	Valid

1. **Process Down:**

Compliance based on: Hours 1, 2 and 4; 2, 4 and 5; and 4, 5 and 6. Hour 3 is ignored. There is no downtime.

2. **CEMS down:**

Compliance based on: Hours 1, 2 and 4; 2, 4 and 5; and 4, 5 and 6. Only 1 hour (Hour 3) of downtime is accrued.

3. **Start-up/Shutdown:**

- a) No Startup/Shutdown Operating Scenario (OS) in Permit: Compliance based on Hours 1, 2 and



3; 2, 3 and 4; 3, 4 and 5; and 4, 5 and 6. There is no downtime.

b) Startup/Shutdown Operating Scenario (OS) in Permit:

- i.) Compliance is based on Hours 1, 2 and 4. For Hour 3, compliance based on Startup/Shutdown Operating Scenario. There is no downtime.
- ii.) Compliance is based on Hours 2, 4 and 5. For Hour 3, compliance based on Startup/Shutdown Operating Scenario. There is no downtime.
- iii.) Compliance is based on Hours 4, 5 and 6. There is no downtime.

The Emission Exceedance Calculation and Reporting document provides additional examples of 3-hour rolling average, based on 1-hour blocks.

B. 24-hour block averages:

Assumptions:

1. Compliance based on *valid* one-hour averages in the units of the standard divided by the number of operating hours in which valid CEMS data is obtained. Quarterly valid data capture assessments follow TM1005 (Section B.4.d). Downtime is on an hourly basis per TM1005 (Section B.4.c).
2. A valid day is any day that has a valid hour of data, as previously defined to mean 45 minutes of data and 45 minutes of source operation.
3. If the only valid hour(s) of data in a 24-hour block is/are a Startup/Shutdown hour(s) AND the facility has a Startup/Shutdown Operating Scenario (OS) in the Permit, then no 24-hour block average is determined. If there is also at least one hour of non-Startup/Shutdown operation, all valid hours, excluding the Startup/Shutdown hour(s) are included in the 24-hour average.
4. If there is no Startup/Shutdown Operating Scenario (OS) in the Permit, then a 24-hour average is determined, even if the only valid hours in a 24-hour block are Startup/Shutdown hours.
5. Notwithstanding Nos. 4 and 5 above, for a turbine showing compliance with Subchapter 19, a valid hour also has at least 45 minutes of net energy output; hours with less than this are excluded from the 24-hour average.

Note 1: The MATS regulation was used as the starting point in the above, as modified by the valid hour definition from TM1005, and including a Startup/Shutdown exemption where applicable from a Permit, rule or regulation.

Note 2: A 24-hour rolling average would follow the same principles of the 3-hour rolling average.

C. 30-day rolling averages (non-ozone season):

The average is calculated based on 30 *valid* days of operation. The 30-day period could extend until the next non-ozone season. A valid day is determined from "B" above. Downtime is calculated similar to a 3-hour rolling average, on an hourly basis per TM1005.



D. 365-day rolling averages:

The average is calculated based on 365 *valid* days of operation. A valid day is determined from "B" above. Downtime is calculated similar to a 3-hour rolling average, on an hourly basis per TM 1005.

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APPENDIX I - NMHC CEMS CERTIFICATION REQUIREMENTS

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NMHC CEMS CERTIFICATION REQUIREMENTS

Background: Below are the additional requirements that must be satisfied to certify a NMHC CEMS. Currently, the only monitor accepted in NJ is the Infrared Industries IR-8400D/DC. These procedures were developed in 2016 in conjunction with previously developed procedures from the EPA. Prior to this, there were no procedures that adequately addressed the concerns arising from this type of analyzer. These procedures should be viewed as final and not subject to modification.

Requirements:

1. Per the EPA "Skidmore" letter: The reference method (RM) analyzer used to certify the CEMS must be the Infrared Industries Model IR 208DC NDIR instrument and must include the "DC" indicator, since this was the model used by the EPA in testing the underlying data which led to the approval of this procedure.
2. During the 7-day Calibration Drift (CD) period the CEMS must be challenged daily with a zero gas and upscale gases of propane, methane and a mixed gas (methane and propane) to validate the performance on each channel; THC, NMHC and methane. Accuracy of 2.5% of span per PS8 is required, including the channels that should read zero, that is when injecting the upscale propane gas, the methane channel should read zero within 2.5% of the methane span and when injecting the upscale methane gas, the NMHC channel should read zero within 2.5% of the NMHC span. Regarding the mixed gas standard, if you prefer you may, at risk, challenge the CEMS with the mixed gas on the first day of CD and the last day of CD with the understanding that if the last check does not pass, the CD must be repeated for 7 more days.
3. Prior to relative accuracy (RA) testing, the reference method (RM) analyzer must undergo a four-point calibration per Method 25A for both methane and propane.
4. During RA testing, in addition to challenging the RM analyzer with a zero gas and upscale gases of propane and methane after each 21-minute RA run, the RM analyzer must be challenged with a mixed gas every three 21-minute RA runs. Alternatively, regarding the mixed gas, one mixed gas check test pre-RA Run 1, and post RA Run 9 can be done, at risk, with the understanding that only doing a pre-RA Run 1 and post RA Run 9 would invalidate all nine RA runs if the final mixed gas check does not pass.
5. If Protocol gases are not available, follow the procedures in EPA Method ALT-105 for preparing calibration standards.
6. The RA test must be conducted during the 7-day CD period.
7. Daily calibrations will be conducted by challenging the methane and NMHC channels of the CEMS with a zero gas and a mixed propane and methane gas (concentrations based on PS8 requirements of 80-90% of the span of each channel) and requiring accuracy of 2.5% of span per PS8.
8. Quarterly QA will involve conducting a typical RATA or CGA but also requiring a successful daily mixed gas check. The CGA will include challenging the methane and NMHC CEMS channels with methane and propane gases, respectively, in accordance with concentrations specified in Appendix F. The RATA will be conducted in a similar manner as the PST with the CEMS passing a daily calibration in accordance with Item #2 above and following the procedures in Item #4 above.



APPENDIX J – PERIODIC EMISSION MONITORING (PEM) DOWNTIME OCTOBER 2022 MEMO

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<https://dep.nj.gov/wp-content/uploads/boss/permitting-guidance/111622-pem-downtime.pdf>



State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION
AIR QUALITY, ENERGY & SUSTAINABILITY
DIVISION OF AIR QUALITY, BUREAU OF STATIONARY SOURCES

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Lt. Governor

SHAWN M. LATOURETTE
Commissioner

MEMORANDUM

TO: Bureau of Stationary Sources (BoSS) Permit Writing Staff
FROM: Danny Wong, Chief
Bureau of Stationary Sources *DW*
SUBJECT: Periodic Emission Monitoring (PEM) Downtime
DATE: November 16, 2022

Background

The following allowances for Continuous Emission Monitors (CEM) and Process Monitors have been incorporated into Compliance Plans:

1. Technical Manual 1005 specifies 90% valid data capture for CEMs per calendar quarter, based on one-minute readings (10% downtime).
2. An October 8, 2008 guidance memorandum states that Process monitors must be operated at all times when the associated process equipment is operating except during service outage time not to exceed 24 hours per calendar quarter.

No comparable downtime allowance has been developed for PEM downtime.

Permits issued to facilities that have a PEM do not generally include requirements to submit a quality assurance program (protocol), which is subject to review and approval by the Department.

Applicability:

Owners and/or operators of any permitted source operation that is required by the Department to demonstrate compliance on a continuing daily basis over an entire calendar quarter using a portable or non-portable Periodic Emission Monitor.



Definitions:

Daily Periodic Emission Monitor (PEM): 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. Examples include but are not limited to photoionization detectors, flame ionization detectors, and oxygen sensors.

Non-usage days: Any calendar day during which the source operation(s) are in use and no required stack or vent sample is taken with the PEM due to malfunction or maintenance. This may also be referred to as downtime or when data is not available.

Requirements:

The following operational and notification requirements must be complied with:

- Daily Portable Emission Monitors must be used whenever the associated source operation(s) are operating except for 3 non-usage days per calendar quarter.
- The owner and/or 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. The service log must include the reasons why the PEM was not able to be operated and any remedies taken to resume daily monitoring. The Department reserves the right to reject the reason provided for failing to comply with a particular daily monitoring requirement.
- 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. All completed daily monitoring events must be recorded. A facility shall not use the PEM downtime as a shield of a known violation of an emission standard or the occurrence an N.J.A.C. 7:27-5 violation.
- None of the above supersedes any existing case-by-case Daily PEM downtime allowances that may be in specific Compliance Plans. When warranted, alternative Daily PEM downtime allowances may be developed on a case-by-case basis.