



Air Pollution Control District Governing Board

San Diego County Air Pollution Control District

AGENDA ITEM #F.4

DATE: **October 12, 2023**

TO: San Diego County Air Pollution Control District Governing Board

SUBJECT:

NOTICED PUBLIC HEARING - ADOPTION OF AMENDMENTS TO RULE 19.2 - CONTINUOUS EMISSION MONITORING REQUIREMENTS

REQUESTED ACTION:

1. Find that the adoption of proposed amended Rule 19.2 – Continuous Emission Monitoring Requirements is categorically exempt from the provisions of the California Environmental Quality Act pursuant to California Code of Regulations, Title 14, Section 15308, as an action taken to assure the protection of the environment, and pursuant to Section 15061(b)(3) since it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment.
2. Adopt the Resolution entitled: RESOLUTION ADOPTING AMENDED RULE 19.2 – CONTINUOUS EMISSION MONITORING REQUIREMENTS, OF REGULATION II OF THE RULES AND REGULATIONS OF THE SAN DIEGO COUNTY AIR POLLUTION CONTROL DISTRICT.
3. Direct the Air Pollution Control Officer to forward a copy of this Resolution and amended Rule 19.2 to the California Air Resources Board (CARB) for approval and subsequent submittal to the U.S. Environmental Protection Agency (EPA) for inclusion into the State Implementation Plan (SIP).

OVERVIEW:

The San Diego County Air Pollution Control District (District) is required by federal and State law to implement Rule 19.2 – Continuous Emission Monitoring Requirements. Though the primary purpose of the rule is to fulfill federal requirements, in practice, Rule 19.2 also provides guidance and specifications for continuous emission monitoring systems (CEMS) installation and operation that ensures accuracy, precision, minimum operation time requirements, and correct calibration/maintenance procedures.

A continuous emission monitoring system (CEMS) is the combination of equipment necessary to analyze and measure gas concentrations from pollutant emitting devices on a continuous basis to verify compliance with an applicable emission limitation or standard. CEMS are not an emission control technology, but typically consist of analyzers to measure gas concentrations within a gas

stream. A standard CEMS consists of a sample probe, filter, sampling line, gas conditioning system, calibration gas system, and a series of gas analyzers which reflect the parameters being monitored.

The District has regulated CEMS in San Diego County since 1977, with the last amendment to Rule 19.2 completed in 1979. Most of the equipment required to have CEMS in San Diego County are large combustion units (i.e., boilers, engines, and turbines) used for commercial, institutional, or industrial applications. These combustion units typically use gaseous and/or liquid fuel to heat water, produce steam, generate electricity, or provide mechanical motion. The combustion of fuel produces emissions which are measured by CEMS. Regulations applicable to these combustion units require CEMS to demonstrate compliance with specific emission standards. Approximately 25 facilities countywide are currently subject to Rule 19.2.

Since the last amendment, technological improvements have been made to CEMS. Federal regulatory requirements have also improved to now ensure a high quality of data is obtained from existing and new CEMS in place. Having last been amended over 40 years ago, Rule 19.2 is outdated, and now requires amending to ensure the rule meets all current federal requirements for the District and affected stakeholders.

The proposed amendments to Rule 19.2 will help align regulatory requirements already in place in other California air districts such as South Coast Air Quality Management District and San Joaquin Valley Air Pollution Control District. Pursuant to the proposed amendments, owners or operators required to have CEMS for a new emission unit will be required to comply with the rule within timelines established in existing permit application processes. Similarly, owners or operators of existing CEMS would be required to comply with the proposed amendments no later than June 30, 2024. Some facilities may be required to revise existing District permits to better align with the proposed amendments; however, these changes are expected to be minor. The technology to comply with the proposed amendments is readily available. Because CEMS are not an emission control technology, the proposed amendments to Rule 19.2 are not intended to achieve any emission reductions (or increases). However, the proposed amendments will ensure emitting devices are monitored to the maximum extent practicable and meet all applicable federal requirements.

The proposed amendments to Rule 19.2 are administrative in nature and will take effect upon adoption. If approved by the Governing Board, amended Rule 19.2 will be submitted through CARB to the EPA for approval as part of the San Diego County portion of the SIP. Analyses required pursuant to State and federal law, including (but not limited to) findings related to a socioeconomic impact assessment, comparative analysis, and incremental cost-effectiveness, are included in the District's Final Staff Report (Attachment B).

FISCAL IMPACT:

There is no fiscal impact associated with these requested actions.

ENVIRONMENTAL STATEMENT:

The California Environmental Quality Act (CEQA) requires environmental review of certain actions. District staff conducted a review of whether CEQA applies to the adoption of these proposed amendments to Rule 19.2. The proposed rule will not result in greater air pollutant emissions from existing, new, or modified stationary sources in San Diego County. District staff therefore determined that adoption of proposed amendments to Rule 19.2 are exempt from the provisions of CEQA pursuant to California Code of Regulations, Title 14, Section 15308, as an action taken to assure the protection of the environment, and pursuant to Section 15061(b)(3), since it can be seen with certainty that there is no possibility that the activity in question may have a significant adverse effect on the environment.

PREVIOUS RELEVANT BOARD ACTIONS:

N/A

PUBLIC ENGAGEMENT AND OUTREACH:

A virtual public workshop was conducted on June 14, 2023, to gather input on proposed amendments to Rule 19.2 from members of the public, regulated community, and other stakeholders. A workshop notice was posted on the District's website and sent to over 10,000 recipients including each air quality permit holder with a CEMS, each chamber of commerce in the region, subscribers to the County's email notification service, CARB and the EPA. The public workshop was attended by 19 people.

The District received comments related to the applicability of the proposed rule and recordkeeping requirements. In response to comments submitted, the District has revised the proposed amended rule to clarify the applicability and make other minor typographical changes. District staff prepared responses to all comments and questions received, which were provided to the workshop participants in a workshop report (Attachment C). Furthermore, a public notice regarding today's hearing was posted in a local newspaper, on the District's website, and sent to subscribers of the District's email notification service, to CARB and EPA.

EQUITY IMPACT STATEMENT

Today's item supports the District's vision of 'Clean Air for All' by proposing an amended rule to help ensure equipment producing emissions is monitored to the maximum extent practicable throughout the region, while also complying with federal regulations.

RECOMMENDED BY:

Michael Watt, Deputy Director

CONTACT PERSON(S):

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ATTACHMENTS:

[Item F4_AttA_Rule 19.2 Resolution.pdf](#)

[Item F4_AttB_Rule 19.2 Staff Report.pdf](#)

[Item F4_AttC_Rule 19.2 Workshop Report.pdf](#)

[Item F4_AttD_Rule 19.2 Change Copy.pdf](#)

Resolution No: 23.009
Meeting Date: 10/12/2023

**RESOLUTION ADOPTING AMENDED RULE 19.2 – CONTINUOUS
EMISSION MONITORING REQUIREMENTS, OF REGULATION IV
OF THE RULES AND REGULATIONS OF THE
SAN DIEGO COUNTY AIR POLLUTION CONTROL DISTRICT**

On motion of Member Gloria, seconded by Member Sanchez, the following resolution is adopted:

WHEREAS, the San Diego County Air Pollution Control District Governing Board (Governing Board), pursuant to Section 40702 of the California Health and Safety Code, adopted Rules and Regulations of the San Diego County Air Pollution Control District (District); and

WHEREAS, said Governing Board now desires to amend said Rules and Regulations; and

WHEREAS, notice has been given and a public hearing has been held relating to the amendments of said Rules and Regulations pursuant to Section 40725 of the California Health and Safety Code and Section 51.102 of Title 40 of the Code of Federal Regulations; and

WHEREAS, pursuant to Section 40727 of the California Health and Safety Code, the Governing Board makes the following findings:

- (1) (Necessity) The adoption of proposed amended Rule 19.2 is necessary in order to clarify the implementation of federal requirements for evaluating and permitting of new, modified, relocated and replaced continuous emission monitoring systems (CEMS) installed on emission units, for demonstrating compliance with emission standards, and replacing an outdated version of these rules in the State Implementation Plan in order to maintain clarity and consistency of requirements for affected permitted sources;
- (2) (Authority) The adoption of proposed amendments to Rule 19.2 is authorized by Section 40702 of the California Health and Safety Code;
- (3) (Clarity) Proposed amended Rule 19.2 can be easily understood by persons directly affected by it;
- (4) (Consistency) The adoption of proposed amended Rule 19.2 is in harmony with, and not in conflict with or contrary to, existing statutes, court decisions, and state and federal regulations;

- (5) (Non-duplication) The adoption of proposed amended Rule 19.2 does not impose the same requirements as an existing state or federal regulation unless the District finds that the requirements are necessary or proper to execute the power and duties granted to, and imposed upon, the District;
- (6) (Reference) The adoption of proposed amended Rule 19.2 is necessary to comply with federal law, Title 40, Section 70.4 of the Code of Federal Regulations; and state law, California Health and Safety Code Section 42700(c) which requires monitoring devices be installed for large emitting sources; and

WHEREAS, the Governing Board further finds pursuant to the California Health and Safety Code Section 40001 that adoption of proposed amended Rule 19.2 will facilitate accurate emission monitoring used to determine compliance with emission standards contributing to the attainment and maintenance of ambient air quality standards; and

WHEREAS, the Governing Board further finds that supporting documentation for proposed amended Rule 19.2, including but not limited to, the Final Staff Report, were presented to the Governing Board and the Governing Board has reviewed and considered this information, as well as considered staff testimony and public comment prior to approving the proposed amendments; and

WHEREAS, the Governing Board further finds that an analysis comparing proposed amended Rule 19.2 with applicable requirements of federal and local regulations (“Comparative Analysis”) is required pursuant to Section 40727.2 of the California Health and Safety Code and has been prepared and included in the Final Staff Report; and

WHEREAS, the Governing Board further finds that a cost-effectiveness analysis pursuant to Section 40920.6(a) of the California Health and Safety Code is not required for proposed amended Rule 19.2; and

WHEREAS, the Governing Board further finds that an assessment of the socioeconomic impacts of the proposed amended Rule 19.2 is not required pursuant to Section 40728.5(a) of the California Health and Safety Code as the proposed amendments will not significantly affect air quality or emissions limitations; and

WHEREAS, the Governing Board further finds that the adoption of proposed amended Rule 19.2 is categorically exempt from the provision of the California Environmental Quality Act (CEQA) pursuant to California Code of Regulations, Title 14, Section 15308, as an action taken to assure the protection of the environment, where the regulatory process involves procedures for protection of the environment, and Section 15061(b)(3) since it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment; and

WHEREAS, proposed amended Rule 19.2 meets the requirements of Part 51, Appendix P of Title 40 of the Code of Federal Regulations and will be submitted to the U.S. Environmental Protection Agency (EPA) through the California Air Resources Board (CARB) for inclusion in the San Diego County portion of the State Implementation Plan.

NOW THEREFORE IT IS RESOLVED AND ORDERED by the San Diego County Air Pollution Control Governing Board that the Rules and Regulations of the San Diego County Air Pollution Control District be, and hereby are amended as follows:

1. Proposed amended Rule 19.2 is to read as follows:

RULE 19.2. CONTINUOUS EMISSION MONITORING REQUIREMENTS (Rev. Adopted & Effective *(date of adoption)*)

(a) **APPLICABILITY**

This rule shall apply to an owner or operator of any emission unit that is required to install and operate a continuous emission monitoring system (CEMS) by the San Diego County Air Pollution Control District (District), U.S. Environmental Protection Agency (EPA) or California Air Resources Board (CARB) and subject to gas concentration standard or emission rate standard.

(b) **RESERVED**

(c) **DEFINITIONS-**

For the purposes of this rule, the following definitions shall apply:

- (1) **“40 CFR”** means Title 40 of the Code of Federal Regulations.
- (2) **“Calibration Drift”** means the difference in the CEMS output readings from the established reference value after a stated period of operation during which no unscheduled maintenance, repair, or adjustment took place. The reference value may be supplied by a cylinder gas, gas cell, or optical filter and need not be certified.
- (3) **“Continuous Emission Monitoring System (CEMS)”** means the total combined equipment and systems, including the sampling interface, analyzers, and data acquisition and handling system, required to continuously determine air contaminants and diluent gas concentrations and/or mass emission rate from an emission unit (as applicable).
- (4) **“Data Recorder”** means that portion of the CEMS that provides a permanent record of the analyzer output. The data recorder may include automatic data reduction capabilities.
- (5) **“Diluent Analyzer”** means that portion of the CEMS that senses the diluent gas (i.e., carbon dioxide (CO₂) or oxygen (O₂)) and generates an output proportional to the gas concentration.
- (6) **“Diluent Gas”** means a major gaseous constituent in a gaseous pollutant mixture. For combustion sources, CO₂ or O₂ or combination of these two gases are the major gaseous constituents of interest.

(7) **“NO_x”** means the same as defined in Rule 2 – Definitions.

(8) **“Pollutant Analyzer”** means that portion of the CEMS that senses the pollutant gas and generates an output proportional to the gas concentration.

(9) **“Relative Accuracy”** means the absolute mean difference between the gas concentration or emission rate determined by the CEMS and the value determined by the reference method plus the 2.5% error confidence coefficient of a series of tests divided by either the mean of the reference method tests or the applicable emission limit. The 2.5% error confidence shall be determined in accordance with 40 CFR Part 60, Appendix B, Performance Specification 2.

(10) **“Sample Interface”** means that portion of the CEMS used for one or more of the following: sample acquisition, sample delivery, sample conditioning, or protection of the analyzer from the effects of the stack effluent.

(11) **“Span Value”** means the calibrated portion of the measurement range as specified in the applicable regulation or other requirement. If the span is not specified in the applicable regulation or other requirement, then it shall be a value approximately equivalent to two times the emission standard. For span values less than 500 parts per million (ppm), the span value may either be rounded upward to the next highest multiple of 10 ppm, or to the next highest multiple of 100 ppm such that the equivalent emission concentration is not less than 30% of the selected span value.

(12) **“Zero, Low-Level, and High-Level Values”** means the CEMS response values related to the source specific span value. Determination of zero, low-level, and high-level values is defined in 40 CFR Part 60 Standards of Performance for New Stationary Sources, Appendix B – Performance Specifications.

(d) **REQUIREMENTS**

(1) Each owner or operator shall develop and submit a quality assurance/quality control (QA/QC) program for the CEMS, except monitoring systems approved under Appendix D or E of 40 CFR Part 75 – Continuous Emission Monitoring, and alternative monitoring systems under Subpart E of 40 CFR Part 75, and their components. The QA/QC program shall be submitted to, reviewed by and approved in writing by the Air Pollution Control Officer. At a minimum, each QA/QC program shall include a written protocol that describes in detail, complete, step-by-step procedures and operations for each of the following activities:

- (i) Calibration of CEMS,
- (ii) Calibration drift determination and adjustment of CEMS,
- (iii) Preventive maintenance of CEMS (including spare parts inventory),
- (iv) Data recording, calculations, and reporting,

- (v) Accuracy audit procedures including sampling and analysis methods, and
- (vi) Program of corrective action for malfunctioning CEMS.

(2) Data from monitored parameters required in 40 CFR Part 60 shall be recorded at least once every minute. Such parameters include, but are not limited to:

- (i) Air pollutant concentration (in ppm),
- (ii) Volumetric flow rate (in standard cubic feet per hour (scfh)),
- (iii) NO_x mass emissions (in pounds per million British thermal units (pounds per mmBtu)),
- (iv) O₂ and/or CO₂ concentrations (% O₂ and/or % CO₂),
- (v) Air pollutant mass emissions (in pounds per hour),
- (vi) CO₂ mass emissions (in tons per hour), and
- (vii) Fuel flow rate (in standard cubic feet per hour (scfh)).

(3) The data acquisition rate shall be set at a constant rate such that the data points are equally spaced.

(4) Each CEMS shall be installed, calibrated, operated, and maintained in good working order in accordance with the requirements of this rule.

(5) Utilize all valid data points to determine compliance with applicable limit(s), certification testing, and relative accuracy test audit(s) (RATA(s)).

(6) The District shall be notified at least two weeks prior to any replacement, modification, or change to the CEMS that affect the measurement, calculation or correction of data displayed and/or recorded by the CEMS.

(e) MONITORING REQUIREMENTS

(1) Data Averaging

For CEMS used to demonstrate compliance for an hourly average, the hourly average shall cover the 60-minute period commencing on the hour. An hourly average shall contain at least 16 data points and be computed utilizing all valid data.

For CEMS used to demonstrate compliance for an interval greater than one hour, emission data may be averaged for the required interval utilizing hourly averages computed in accordance with this subsection. All hours used in the greater than one hour interval shall contain at least 16 data points and be computed utilizing all valid data.

(2) CEMS data shall be reported in the units of the applicable standard as specified in Subsection (f)(2) of this rule.

(3) CEMS data shall be reported for a minimum of 95% of the time the emission unit is in operation.

(f) RECORD KEEPING AND REPORTING REQUIREMENTS

(1) Records

(i) Occurrence and duration of any startup, shutdown, maintenance, repairs, breakdown or malfunction in the operation of any emission units required to have a CEMS,

(ii) Performance testing, evaluations, calibrations, checks, adjustments, and maintenance of any CEMS, and

(iii) Emission measurements shall be retained in electronic and/or hardcopy format on-site for at least five years and made available to the District upon request.

(2) Quarterly Report

Each owner or operator shall submit a written report for each calendar quarter to the District. The report is due by the 30th day following the end of the calendar quarter and shall include:

(i) Time intervals, date and magnitude of excess emissions, nature and cause of the excess (if known), corrective actions taken and preventive measures adopted,

(ii) Averaging period used for data reporting corresponding to averaging period specified in the emission test period used to determine compliance with an emission standard for the pollutant/source category in question,

(iii) Time intervals and date during which the CEMS was inoperative, except for calibration drift, cylinder gas audit (CGA) and converter checks, and the nature of system repairs and adjustments, and

(iv) Time intervals and date during which the emission unit was inoperative and the reason(s) the emission unit was inoperative.

(v) A negative declaration when no excess emissions occurred.

(3) Reports of Violations

Any violation of any emission standard as indicated by the CEMS, shall be reported by the owner or operator to the District within 96 hours after such occurrence. The District shall, in turn, report the violation to CARB within five working days after receiving the report of the violation from the owner or operator.

(g) **TEST METHODS**

Each owner or operator shall perform and meet all applicable requirements of the following test methods for each CEMS.

(1) Calibration Drift

Check the zero (or low-level value between 0 and 20 percent of span value) and span (or high-level value between 50 to 100 percent of span value) calibration drifts in accordance with a written procedure. Analyzers that automatically adjust the data to the corrected calibration values (e.g., microprocessor control) shall be programmed to record the unadjusted concentration measured in the calibration drift prior to resetting the calibration, if performed, or record the amount of adjustment.

(2) Cylinder Gas Audit (CGA)

(i) Challenge the pollutant analyzer and diluent analyzer of the CEMS, if applicable, with an audit gas of known concentration at two points within the following ranges:

Audit Point	Audit Range		
	Pollutant Analyzer	Diluent Analyzer	
		CO ₂	O ₂
1	20 to 30% of span value	5 to 8% by volume	4 to 6% by volume
2	50 to 60% of span value	10 to 14% by volume	8 to 12% by volume

(ii) Introduce each of the audit gas three times each for a total of six challenges, if applicable. Introduce the gases in such a manner that the entire CEMS is challenged. The same gas concentration shall not be introduced to the CEMS twice in succession.

(iii) A separate audit gas cylinder for audit points 1 and 2 shall be used. Gas from audit gas cylinder shall not be diluted when challenging the CEMS.

(iv) The CEMS shall be challenged at each audit point for a sufficient period of time to assure adsorption-desorption of the CEMS sample transport surfaces has stabilized.

(v) Operate each CEMS in its normal sampling mode, i.e., pass the audit gas through all filters, scrubbers, conditioners, and other CEMS components used during normal sampling, and as much of the sampling probe as is practical. At a minimum, the audit gas should be introduced at the connection between the probe and the sample line.

(vi) Certified Reference Materials (CRMs) (See 40 CFR Part 60 Appendix F, Section 8, Citation 1) audit gases that have been certified by comparison to National Institute of Standards and Technology (NIST) Standard Reference Materials (SRMs)

or EPA Protocol Gases following the most recent edition of the EPA Traceability Protocol for Assay and Certification of Gaseous Calibration Standards (See 40 CFR Part 60 Appendix F, Section 8, Citation 2) shall be used. Procedures for preparation of CRMs are described in Citation 1. Procedures for preparation of EPA Protocol Gases are described in Citation 2. If a suitable audit gas level is not commercially available, Method 205 (See 40 CFR Part 60 Appendix F, Section 8, Citation 3) may be used to dilute CRMs or EPA Protocol Gases to the required level. The difference between the actual concentration of the audit gas and the concentration indicated by the analyzer shall be used to assess the accuracy of the CEMS.

(3) Relative Accuracy Test Audit (RATA)

RATAs shall be performed using the following performance specifications, as specified in 40 CFR Part 60, Appendix B and the quality control limits in Section (h) – Quality Control Requirements:

(i) NO_x analyzer – Performance Specification 2

(ii) Carbon monoxide (CO) analyzer – Performance Specification 4A

(iii) O₂ and CO₂ analyzer – Performance Specification 3

(iv) Other analyzer – approved in writing by the Air Pollution Control Officer prior to use.

(4) Nitrogen dioxide (NO₂) converter efficiency

A check of the NO₂ to nitric oxide (NO) converter with the method prescribed by the manufacturer shall be performed. CRMs (See 40 CFR Part 60 Appendix F, Section 8, Citation 1) audit gases that have been certified by comparison to National Institute of Standards and Technology (NIST) Standard Reference Materials (SRMs) or EPA Protocol Gases following the most recent edition of the EPA Traceability Protocol for Assay and Certification of Gaseous Calibration Standards (See 40 CFR Part 60 Appendix F, Section 8, Citation 2) shall be used. Procedures for preparation of CRMs are described in 40 CFR Part 60 Appendix F, Section 8, Citation 1. Procedures for preparation of EPA Protocol Gases are described in 40 CFR Part 60 Appendix F, Section 8, Citation 2.

(h) **QUALITY CONTROL REQUIREMENTS**

Each owner or operator shall perform the following quality control checks and meet all applicable requirements for all analyzers and concentration ranges. To the extent possible, quality control checks shall be performed during normal operation and not during startup and shutdown.

(1) Calibration Drift

(i) Quality Control Frequencies

(A) For CEMS subject to 40 CFR Part 75, the calibration drift shall be checked, recorded, and quantified in the frequencies in accordance with the applicable regulation.

(B) For CEMS not subject to 40 CFR Part 75, the calibration drift shall be checked, recorded, and quantified at least once a day (approximately 24 hours) in accordance with the manufacturer's specifications.

(ii) Quality Control Limits

(A) For pollutant analyzers, the zero, low-level or high-level calibration drift result shall not exceed 5.0% of the span value.

(B) For diluent analyzers, the zero, low-level or high-level calibration drift result shall not exceed 1.0% O₂ or CO₂.

(2) Cylinder Gas Audit (CGA)

(i) Quality Control Frequencies

(A) For CEMS subject to 40 CFR Part 75, the CGA check frequency shall align with 40 CFR Part 75, Appendix B linearity check frequency.

(B) For CEMS not subject to 40 CFR Part 75, the CGA shall be checked, recorded, and quantified for three of four calendar quarters, but in no more than three quarters in succession. Successive quarterly CGA checks shall occur no closer than 2 months. CGA checks are not required for calendar quarters when the emission unit does not operate in the calendar quarter.

(C) For O₂ CEMS subject to 40 CFR Part 75, the linearity check may be performed in lieu of a CGA check in accordance with 40 CFR Part 75, Appendix B.

(ii) Quality Control Limits

(A) For pollutant analyzers, the CGA absolute accuracy shall not exceed 15%. Alternatively, the absolute value of the difference between the average response and the audit value shall not exceed 0.5 ppm.

(B) For diluent analyzers, the CGA absolute accuracy shall not exceed 15%.

(3) Relative Accuracy Test Audit (RATA)

(i) Quality Control Frequencies

(A) For CEMS subject to 40 CFR Part 75, the RATA frequency shall align with 40 CFR Part 75 RATA frequency.

(B) For CEMS not subject to 40 CFR Part 75, the RATA shall be at least once every four calendar quarters except when the emission unit does not operate in the fourth calendar quarter since the quarter of the previous RATA. In this case, the RATA check shall be performed in the quarter in which the emission unit recommences operation.

(ii) Quality Control Limits

(A) For NO_x analyzers, the relative accuracy shall be 20.0% or less when the reference method value is used to calculate relative accuracy or 10.0% or less when the applicable emissions standard is used to calculate relative accuracy.

(B) For CO analyzers, the relative accuracy shall be 10% or less when the reference method value is used to calculate relative accuracy or 5.0% or less when the applicable emissions standard is used to calculate relative accuracy. Alternatively, a de minimis value calculated as the absolute value of the difference between the reference method and CEMS in units of parts per million by volume, dry (ppmvd) corrected to 15% O₂ plus the confidence coefficient may be used in lieu of all relative accuracy calculations in the applicable emissions standards if the calculated de minimis value does not exceed 0.50 ppmvd.

(C) For O₂ and CO₂ analyzers, the relative accuracy shall be 20.0% or less when the reference method value is used to calculate relative accuracy or <1.0% absolute difference between the average reference method value and average CEMS value.

(D) For other monitors, in accordance with the applicable performance specification approved in writing by the Air Pollution Control Officer.

(4) NO₂ converter efficiency

(i) Quality Control Frequencies

NO₂ to NO converter efficiency shall be checked, recorded, and quantified at least once annually. Successive annual audits shall occur no closer than 4 months from each other.

(ii) Quality Control Limits

The converter efficiency shall be >90% of the certified audit gas concentration.

(i) **CORRECTIVE ACTIONS**

(1) If any of the above requirements are not met, the owner or operator shall take the necessary corrective action(s) to eliminate the problem as soon as practicable, but not to exceed 96 hours.

(2) If any quality control limits are exceeded, the CEMS is considered out of control from the time of completion of the failed audit, until the successful completion of a repeat audit.

(3) Whenever quality control limit exceedances occur for two consecutive quarters, excluding calibration drift, the current QA/QC CEMS program shall be modified or the CEMS shall be modified or replaced to correct the deficiency causing the quality control limit exceedances as soon as practical, but not to exceed 96 hours. The modified written procedures shall then replace the previous written procedures upon approval of the Air Pollution Control Officer.

(j) **COMPLIANCE SCHEDULE**

(1) Each owner or operator of new CEMS shall comply with all applicable requirements of this rule upon initial start up.

(2) Each owner or operator of an existing CEMS shall submit to the Air Pollution Control Officer current documentation which demonstrates the CEMS is in compliance with all applicable requirements of this rule by June 30, 2024.

FURTHER RESOLVED AND ORDERED by the San Diego County Air Pollution Control District Governing Board that amended Rule 19.2 of Regulation II of the San Diego County Air Pollution Control District shall take effect (*date of adoption*) and be submitted to the U.S. Environmental Protection Agency (through the California Air Resources Board) for inclusion in the San Diego County portion of the California State Implementation Plan (SIP).

PASSED AND ADOPTED by the Air Pollution Control District Governing Board of the San Diego County Air Pollution Control District, this 12th day of October, 2023, by the following votes:

AYES: Birkbeck-Garcia, Elo-Rivera, Gloria, Medina, Sanchez, Shu

ABSENT: Bush, Gomez, Lawson-Remer, Martinez, Vargas

APPROVED AS TO FORM AND LEGALITY
COUNTY COUNSEL

BY: Veera Tyagi, Senior Deputy

— — —
STATE OF CALIFORNIA)
County of San Diego)^{SS}

I hereby certify that the foregoing is a full, true and correct copy of the Original Resolution entered in the Minutes of the San Diego County Air Pollution Control District Governing Board.



MARVICE MAZYCK
Clerk of the San Diego County Air Pollution Control District Governing Board

FINAL STAFF REPORT

EXISTING RULE 19.2 CONTINUOUS EMISSION MONITORING REQUIREMENTS

San Diego County Air Pollution Control District
Rule Development Section

Completed by Archi dela Cruz
Reviewed by Nick Cormier

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EXECUTIVE SUMMARY

This report presents information on proposed amendments to Rule 19.2 – Continuous Emission Monitoring Requirements. The proposed amendments fulfill the need to update the rule to account for the latest federal requirements specified in Code of Federal Regulations (CFR), Title 40, Part 60 (New Source Performance Standards), Part 75 (EPA Acid Rain Program), and the associated appendices. Though the primary purpose of the rule is to fulfill federal requirements, in practice, Rule 19.2 also provides guidance and specifications for continuous emission monitoring systems (CEMS) installation and operation that ensures accuracy, precision, minimum operation time requirements, and correct calibration/maintenance procedures.

Rule 19.2 was last amended on January 12, 1979. The proposed amendments are a significant update to align San Diego County's local rule with the applicable federal regulatory requirements for CEMS. The proposed amendments will ensure CEMS are operated and maintained properly, resulting in high quality data gathering and procedures to accurately determine gas concentrations or emission rates that are used for compliance with permit conditions or other regulatory limits.

Owners or operators required to have CEMS for a *new* emission unit will be required to comply with proposed amended Rule 19.2 within the timeline required by the San Diego County Air Pollution Control District (District) permit application process. Owners or operators of *existing* CEMS will be required to comply with the proposed amended rule by June 30, 2024. It is expected many facilities are already complying with most, if not all, of the proposed amendments. Nonetheless, some facilities may be required to submit an application to modify their permit to better align operations with the proposed amendments.

Proposed new CEMS requirements are not expected to result in significant compliance issues, as the District has already been implementing many of the applicable federal CEMS requirements through amendments to individual facility permits and permit applications. The proposed amendments will simplify this process and ensure permit language is consistent for each new/amended permit required to have CEMS.

There are approximately 40 existing active permits at approximately 25 facilities in San Diego County that will be affected by the proposed amendments to Rule 19.2. The proposed amendments will not result in any emission increase or reduction, as this is an administrative rule. Proposed amended Rule 19.2 is similar to regulatory requirements already in place in other California air districts such as South Coast Air Quality Management District and San Joaquin Valley Air Pollution Control District. The technology necessary to comply with the amendments exist, are established, and readily available.

The following statements summarize important elements of the proposed rulemaking:

Comparative Analysis

An analysis comparing proposed amended Rule 19.2 with applicable requirements of federal and local regulations (“Comparative Analysis”) was conducted. The proposed amendments to Rule 19.2 are based on updates to federal regulations associated with CEMS, help clarify the interpretation of these voluminous federal regulations, and streamline their implementation at the local level. The District compared proposed amended Rule 19.2 to applicable federal CEMS regulations and found they are the same or similar to federal requirements.

Socioeconomic Impact Assessment

An assessment of the socioeconomic impacts of proposed amended Rule 19.2 is not required because it will not significantly affect air quality or emissions limitations.

California Environmental Quality Act (CEQA)

Proposed administrative amendments to Rule 19.2 are categorically exempt from the provisions of CEQA because it is an action taken to assure the protection of the environment (CEQA Guidelines section 15308) and there is no possibility that the activity in question may have a significant effect on the environment (CEQA Guidelines section 15061(b)(3)).

Environmental Justice

The proposed amendments to Rule 19.2 support the District’s commitment to integrating environmental justice and equity in District’s operations, policies, and regulations. The proposed amendments will ensure facilities with CEMS adjacent to under-resourced communities are accurately capturing higher quality and more accurate information to comply with federal regulations, for use in local emission inventories, and/or for compliance determinations.

I. INTRODUCTION

Rule 19.2 – Continuous Emission Monitoring Requirements was first adopted on April 20, 1977 and later revised on January 12, 1979. Since then, many technological improvements have been made with continuous emission monitoring systems (CEMS). Along with the technological improvements, the U.S. Environmental Protection Agency (EPA) approved many new requirements that improve the quality of implementation for CEMS data acquisition. For example, in 2017, EPA required reference gases used for CEMS calibration to pass through all monitoring components and as much of the sampling probe as practical when conducting tests to verify accuracy. EPA also updated methods on how to use the gathered data to determine compliance. Applicable federal CEMS requirements can be found under Code of Federal Regulations (CFR), Title 40, Part 60 (New Source Performance Standards), Part 75 (EPA Acid Rain Program), and the associated appendices. Proposed amended Rule 19.2 meets the minimum requirements under 40 CFR Part 51, Appendix P, and will be included in the San Diego County portion of the California State Implementation Plan (SIP).

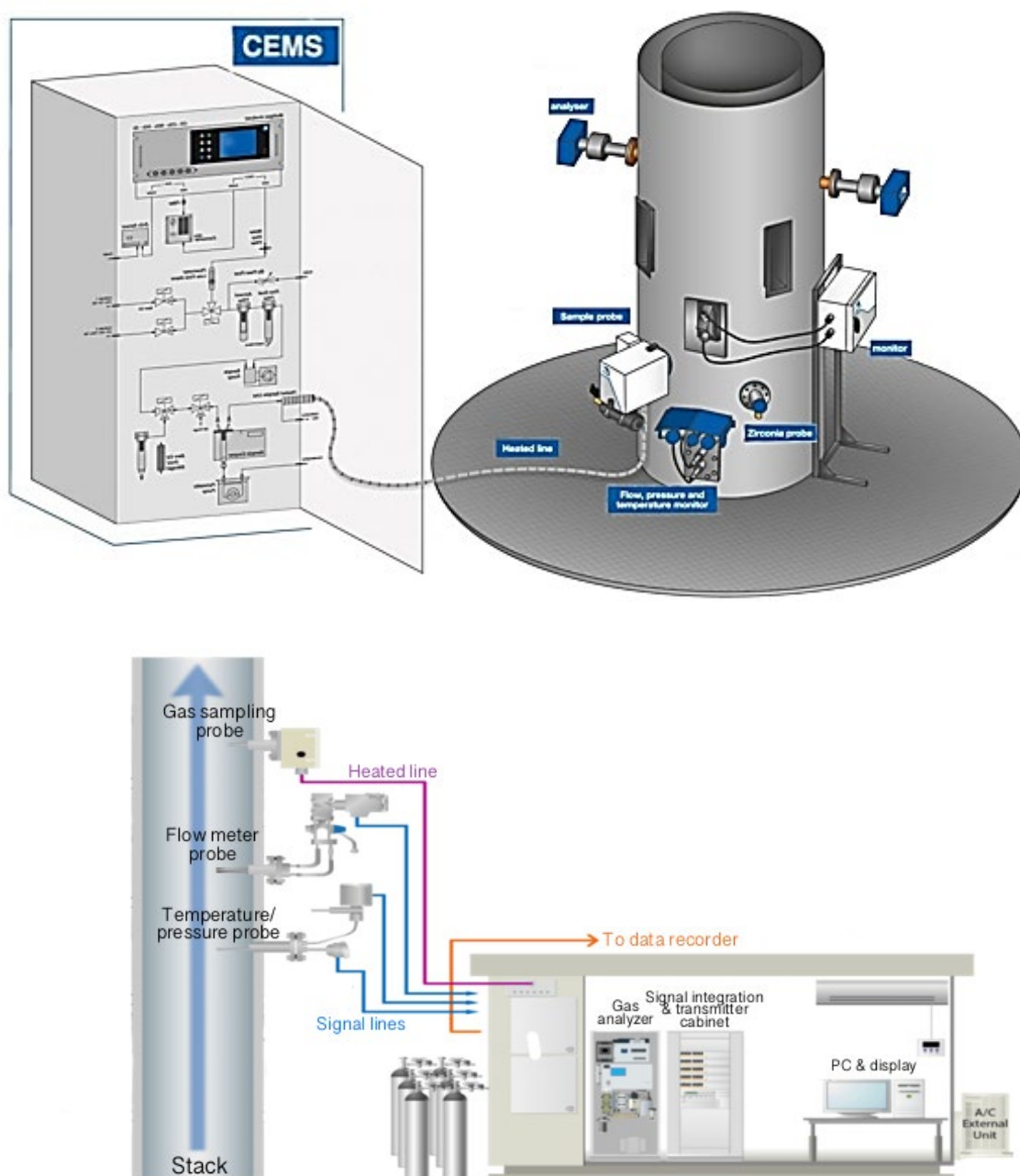
II. BACKGROUND

CEMS is the total equipment necessary for the determination of a gas or particulate matter concentration or emission rate using pollutant analyzer measurements and a conversion equation, graph, or computer program to produce results in units of the applicable emission limit or standard.¹ CEMS are required by many EPA regulations for either continual compliance determinations, or determination of exceedances of the applicable emission standards.

As shown in Figure 1, CEMS typically consist of analyzers to measure gas concentrations within a gas stream flowing through an exhaust stack. A standard CEMS consists of a sample probe, filter, sampling line, gas conditioning system, calibration gas system, and a series of gas analyzers which reflect the parameters being monitored.

¹ Environmental Protection Agency, <https://www.epa.gov/emc/emc-continuous-emission-monitoring-systems>, March 2023.

Figure 1: Examples of CEMS and Exhaust Stack



CEMS are required by federal regulation for various types of equipment, most of which are combustion units (i.e., boilers, engines, and turbines) used for commercial, institutional, or industrial applications. These combustion units typically use gaseous and/or liquid fuel to heat water, produce steam, generate electricity, or provide mechanical motion. The combustion of fuel produces emissions. Regulations applicable to such combustion units require the utilization of CEMS to demonstrate compliance with specific emission standards required by federal regulations and/or District rules. Each type of combustion unit has an applicable Subpart under 40 CFR Part 60 and Part 75.

The EPA requires data acquisition and handling systems to collect and report CEMS data. Measurements of pollutant concentrations can then be converted to pounds per hour by including flow rate measurements. The types of gases required to be collected, measured, analyzed, and calculated are dependent upon the type of combustion unit.

The primary purpose of Rule 19.2 is to fulfill federal requirements specified in the 40 CFR Part 60 and Part 75 and the associated appendices. In practice, this rule provides guidance and specifications for continuous emission monitoring systems (CEMS) installation and operation that ensures accuracy, precision, minimum operation time requirements, and correct calibration/maintenance procedures.

III. CONTROL TECHNOLOGIES

This section is not applicable to Rule 19.2. Rule 19.2 is an administrative rule for CEMS that are installed to monitor exhaust emissions caused by an emission unit which may or may not have controls depending on the applicable prohibitory rule(s) and/or regulation(s). The proposed amendments do not control, nor impact any emissions; therefore, no control technologies apply to this rule.

IV. SUMMARY OF AMENDED RULE REQUIREMENTS

The requirements for the amended rule developed to align with 40 CFR Part 60 and Part 75 are summarized below.

Section (a) – Applicability

Amended Rule 19.2 applies to any person who is required to install *and operate* a continuous emission monitoring system. Following the public comment period and release of the Workshop Report, an additional administrative edit was incorporated, as noted in italics above and in the post-workshop change copy.

Section (b) – Reserved

Section (c) – Definitions

New definitions were added for key wording used in the body of the rule. The key wording are listed as follows:

- Calibration Drift
- Continuous Emission Monitoring System
- Data Recorder
- Diluent Analyzer
- Diluent Gas
- Pollutant Analyzer
- Relative Accuracy
- Sample Interface
- Span Value
- Zero, Low-Level, and High-Level Values

Section (d) – Requirements

- (d)(1) – Each owner/operator must develop and submit a quality assurance/quality control (QA/QC) program for the CEMS. The QA/QC program shall be submitted to and approved in writing by the Air Pollution Control Officer. The QA/QC program shall include a written protocol which describe procedures and operations for various activities.
- (d)(2) – Parameters required to be monitored shall be recorded at least once every minute.
- (d)(3) – Data acquisition shall be at a constant rate and equally spaced across time.
- (d)(4) – CEMS shall be installed, calibrated, *operated* and maintained in good working order. Following the public comment period and release of the Workshop Report, an additional administrative edit was incorporated, as noted in italics above and in the post-workshop change copy.
- (d)(5) – All valid data points shall be used to determine compliance.
- (d)(6) – The District shall be notified at least two weeks prior to any modification to the CEMS.

Section (e) – Monitoring Requirements

- (e)(1) – An hourly average shall commence on the hour, span a 60-minute period and utilize all valid data points. For CEMS used to demonstrate compliance for greater than one hour, emissions data may be averaged for the required interval.
- (e)(2) – CEMS data shall be reported in the units of the applicable standard.
- (e)(3) – CEMS data shall be reported for a minimum of 95% of the time the emission unit is in operation.

Section (f) – Record Keeping and Reporting Requirements

- (f)(1) – The following records shall be maintained: emission measurements, performance testing, evaluations, calibrations, checks, adjustments, maintenance, and all occurrences and the duration of startups, shutdowns, maintenance, repairs, breakdowns or malfunctions. These records shall be retained for at least five years.
- (f)(2) – A written quarterly report shall be submitted to the District by the 30th day following the end of the calendar quarter.
- (f)(3) – Any violation of any emission standard shall be reported to the District within 96 hours after the occurrence. The District will report the violation to the California Air Resources Board (CARB) within five working days after receiving the reported violation.

Section (g) – Test Methods

The owner or operator of the CEMS shall implement the required test methods for the following CEMS components: calibration drift, cylinder gas audit, relative accuracy test audit, and NO_x converter efficiency (where applicable).

Section (h) – Quality Control Requirements

Quality control checks shall be performed and meet all applicable requirements for all analyzers and concentration ranges. Quality control checks shall be performed during normal operations of the emission unit and not during startup or shutdown.

Section (i) – Corrective Action

If the requirements of the rule are not met, the owner or operator shall take corrective action(s) to eliminate the problem as soon as practicable but not to exceed 96 hours.

V. COMPARATIVE ANALYSIS

Statutory Requirements

Prior to adopting, amending, or repealing a rule or regulation, California Health and Safety Code Section 40727 requires findings of necessity, authority, clarity, consistency, non-duplication, and reference, as defined therein. As part of the consistency finding and to ensure proposed rule requirements do not conflict with or contradict other District and/or federal regulations, Health and Safety Code Section 40727.2(a) requires the District to perform a written analysis identifying and comparing the air pollution control standards and other provisions of proposed amended Rule 19.2 with existing or proposed District rules and guidelines and existing federal rules, requirements, and guidelines applying to the same source category.

Analysis

The proposed amendments to Rule 19.2 are based on 40 CFR Parts 60 and 75. Consequently, there are more than 400 pages of federal regulations applicable to or associated with CEMS. Proposed amended Rule 19.2 helps clarify the interpretation of these voluminous federal regulations and streamlines the implementation of the federal regulations at the local level. The District compared proposed amended Rule 19.2 to applicable federal CEMS regulations. The District finds the proposed amendments are the same or similar to federal requirements. The results of this analysis are provided in Table 1.

Table 1. Detailed Comparison to Federal Regulations
Amended Rule 19.2 and 40 CFR Parts 60 and 75

District Amended Rule 19.2		EPA 40 CFR		Comment
Subsection	Description of rule wording	Part, Subsection	Description of rule wording	
(c)(1)	Definition: "Calibration Drift"	Part 60, Appendix B, Performance Specification 2, Subsection 3.1	Definition: "Calibration Drift"	The District and EPA have the same definition with the exception that the District added the following wording: "The reference value may be supplied by a cylinder gas, gas cell, or optical filter and need not be certified."
(c)(2)	Definition: "CFR"	NA	NA	
(c)(3 - 6)	Definitions for various terms	Part 60, Appendix B, Performance Specification 2, Subsections 3.1 and 3.7	Definitions for various terms	The District and EPA have the same definitions.
(c)(7)	Definition: "NOx"	Part 60, Subsection 60.2	Definition: "NOx"	The District and EPA have similar definitions.
(c)(8 - 11)	Definitions for various terms	Part 60, Appendix B, Performance Specification 2, Subsection 3.8 - 3.11	Definitions for various terms	The District and EPA have the same definitions.
(c)(12)	Definition: "Zero, Low-Level, and High-Level Values"	Part 60, Appendix B, Performance Specification, Subsection 7.1	Meaning of terms understood through context within the regulation.	District defines these levels by referencing EPA's 40 CFR Part 60, Appendix B. EPA does not formally define these terms however, through the context of the regulation, their meaning is understood.
(d)(1)	Requirements: QA/QC program	Part 75, Appendix B, Section 1.	Requirements: QA/QC program	District and EPA have similar requirements.
(d)(2)	Requirement: monitor parameters at least once every minute	Part 60, Appendix B, Performance Specification 8A, Subsection 4.9.	Requirement: CEMS must calculate hourly rolling average every minute.	District and EPA have the same "one-minute" requirement however, District rule is for monitoring operating parameters and EPA rule is for monitoring concentration results.
(d)(3)	Requirement: data acquisition rate shall be at a constant rate and equally spaced.	Part 75, Subpart B, Subsection 75.10(d)	Requirement: All data points shall be evenly spaced.	District and EPA have similar requirements.
(d)(4)	Requirement: utilize all valid data points to determine compliance.	Part 75	Requirements: various	District added this as a necessary requirement to ensure enforceability. EPA's 40 CFR has similar requirements for specific aspects of CEMS data.
(e)	Monitoring Requirements	Part 75	Monitoring Requirements	District and EPA have similar requirements.

District Amended Rule 19.2		EPA 40 CFR		Comment
Subsection	Description of rule wording	Part, Subsection	Description of rule wording	
(e)(2)	Monitoring Requirements: CEMS operate for 95% of the time.	NA	NA	There is a practical need for this requirement since CEMS cannot monitor continuously due to required QA/QC checks, calibrations, unexpected glitches, and breakdowns. Though EPA's regulations do not specifically address these situations, EPA is aware of and understands the need to account for these situations. Other districts have similar requirements in their CEMS rule.
(f)	Recordkeeping and Reporting	Part 75, Subpart B, Subsection 75.10(g)	Owner or operator shall record and report hourly, daily, quarterly and annual information required under Subparts F and G.	District and EPA have similar requirements.
(g)	Test Methods	Part 75	Test Methods	District and EPA have various test methods specified for calibration drift, cylinder gas audit, relative accuracy test audit, and nitrogen dioxide converter efficiency that are similar.
(h)	QA/QC Requirements	Part 75, Appendix B	QA/QC Requirements	District rule addresses situations where 40 CFR Part 75 is not applicable. If 40 CFR Part 75 is applicable, District references 40 CFR Part 75 which has various QA/QC requirements and procedures. 40 CFR Part 75 requires CEMS to be maintained using QA/QC procedure in Appendix B.
(i)	Corrective Actions	Part 75, Subsection 75.24	Owner or operator shall take corrective action when the CEMS is "out-of-control".	District requires corrective actions when quality control limits are exceeded, when the CEM is "out-of-control", and when excessive inaccuracies occur. Part 75 requires corrective actions for various situations, including but not limited to, failed checks, failed calibrations, and when the CEM is "out-of-control". District rule requires corrective actions to be addressed within 96 hours.
(j)	Compliance Schedule	NA	NA	

Proposed amended Rule 19.2 is also similar with other California air district CEMS rules. The primary difference among many California air district CEMS rules is the level of detail included in their respective rules. Similar to other districts, amended Rule 19.2 is based on federal CEMS regulations. For comparison, brief summaries of the CEMS rules of South Coast AQMD (SCAQMD), San Joaquin Valley APCD (SJVAPCD), Bay Area AQMD (BAAQMD) and Ventura County APCD (VCAPCD) follow below. The District presents a full comparison of proposed amended Rule 19.2 to these other California air district CEMS rules/regulations in Table 2.

- SCAQMD Rules 218 through 218.3 regulate CEMS in the South Coast air basin. Rule 218 requires CEMS to be properly installed, operated, and maintained in good working order to measure the concentration and/or emission rates, as applicable, of air contaminants and diluent gases, flow rates, and other required parameters. Records and other data necessary to calculate air contaminant emission rates or concentrations are provided by the owner or operator. SCAQMD requires an application process and has procedures for certifying the CEMS. Reports of the collected data, emission results, any exceedance of permit limits and shutdown and failures are required to be submitted to SCAQMD. Rule 218.1 specifies the performance standards for CEMS. Rule 218.2 has provisions for alternative continuous emission monitoring systems (ACEMS) and semi-continuous emission monitoring systems (SCEMS). Rule 218.3 specifies the performance standards for ACEMS and SCEMS. Of note, the District's proposed amended Rule 19.2's requirement that CEMS data shall be reported for a minimum of 95% of time the emission unit is in operation was taken directly from SCAQMD's Rules 218.1(b)(4)(E) and 218.3(i)(5)(C).
- SJVAPCD Rule 1080 grants the district authority to require CEMS. Rule 1080 lists specific equipment required to have CEMS and what pollutants must be monitored by the CEMS. The CEMS shall be installed, calibrated, maintained and operated in accordance with the referenced Parts and Sections of 40 CFR. Rule 1080 also has record keeping and quarterly reporting requirements.
- BAAQMD Regulation 1-520 specifies which equipment are required to have CEMS for specific criteria pollutants. Regulation 1-521 grants BAAQMD authority to require CEMS for any other equipment not accounted for in Regulation 1-520 where there are reasons the emissions may result in potential violations. Regulation 1-522 has CEMS specifications for installation, testing, operation, calibration,

maintenance, reporting and record keeping. Regulation 1-602 requires CEMS to follow BAAQMD's Manual of Procedures.

- VCAPCD Rule 103 states equipment federally required to have CEMS shall comply with the applicable federal regulations. If CEMS are not federally required, VCAPCD requires CEMS for: (1) NO_x, CO and O₂ for boilers, steam generators and process heaters with a capacity between 40 to 250 million BTU/hour, and (2) NO_x, CO₂ or O₂ and opacity if not gas fired) for boilers, steam generators and process heaters with a capacity greater than 250 million BTU/hour. Upon written correspondence from VCAPCD, CEMS are required if the equipment emits a single pollutant greater than or equal to 5 pounds/hour or 40 pounds/day. Rule 103 specifies performance standards and reporting requirements as required by 40 CFR Parts 60 and 75.

Table 2. Detailed Comparison with Other California Air Districts
Proposed Amended Rule 19.2 with Other Air District CEMS rules

District	Rule	Title	Adoption/Revision	Summary
SCAQMD	218	Continuous Emission Monitoring	3/5/2021	Provides definitions and applicability. Requirements for new, modified and existing CEMS and SCEMS (semi-continuous emission monitoring system). Certification testing and QA/QC plans
SCAQMD	218.1	Continuous Emission Monitoring Performance Specification	5/4/2012	Provides definitions which includes some mathematical formulas. Provides operational requirements and performance standards for new, modified and existing CEMS.
SCAQMD	218.2	Continuous Emission Monitoring System: General Provisions	9/2/2022	Provides a purpose, applicability and definitions for CEMS, ACEMS (alternative CEMS) and SCEMS (semi-CEMS). Requires an implementation schedule, monitoring requirements, certification requirements, QA/QC plan, and recordkeeping and reporting requirements.
SCAQMD	218.3	Continuous Emission Monitoring System: Performance Specifications	9/2/2022	Rule 218.2 refers to 218.3 for requirements for certification and QA. Provides a purpose, applicability and definitions for CEMS, ACEMS (alternative CEMS) and SCEMS (semi-CEMS). Requires an implementation schedule, pre-certification requirements, certification tests and specifications, QA testing, calibration methods, data handling, moisture correction procedures and exemption
SJVUAPCD	1080	Stack Monitoring	12/17/1992	Allows SJVAPCD to request the installation, use, maintenance and inspection of continuous monitoring equipment. This rule is applicable to any owner or operator that emits. Definitions references the definitions in 40 CFR Part 51 or equivalent. Requirements continuous monitoring equipment for specific sources and pollutants. Rule has standards of performance and has references to 40 CFR Part 51, Appendix P and Part 60. Quarterly reports are required. Rule 1080 has provisions for violations, breakdowns and inspections to ensure the equipment is operating properly.
BAAQMD	1-520	Continuous Emission Monitoring	5/4/2011	Specifies what equipment shall have CEMs and what pollutants CEMS shall monitor.
BAAQMD	1-521	Monitoring May Be Required	5/4/2011	Allows District to require CEMS for any other equipment.
BAAQMD	1-522	Continuous Emission Monitoring and Recordkeeping Procedures	5/4/2011	Requires CEMS to have an approved plan and specifications, reporting requirements, calibration and maintenance requirements, and recordkeeping requirements.
BAAQMD	1-523	Parametric Monitoring and Recordkeeping Procedures	5/4/2011	Requires procedures in the event of in operation of monitors and recordkeeping requirements of this data.
BAAQMD	1-602	Area and Continuous Emission Monitoring Requirements	5/4/2011	Procedures are detailed in Manual of Procedures adopted by BAAQMD Board of Directors.
VCAPCD	103	Continuous Monitoring Systems	2/9/1999	Allows VCAPCD the authority to request continuous monitoring equipment. Rule is applicable to any owner or operator of a source that emits. Definitions references 40 CFR Part 51. Requires continuous monitoring equipment to be installed, operated, maintained as directed by the APCO. Requirements for specific pollutants from specific emission units. Standards of performance references 40 CFR Part 50/Appendix P, Part 60/Appendix B. Recordkeeping and quarterly report are required. Rule 1080 has provisions for violations, breakdowns and inspections to ensure the equipment is operating properly.

Existing District Rules 68, 69, 69.2, 69.3.1, 69.4.1 and 98 mention CEMS. The requirements of these rules do not conflict with any of the amendments made to Rule 19.2.

VI. EMISSION SOURCES AND IMPACTS

There are approximately 40 existing permits subject to Rule 19.2. The affected permit holders were mailed and emailed a Workshop Notice informing them of the proposed amendments and inviting them to provide comments. The Workshop Notice also encouraged the affected permit holders to share the Workshop Notice with their CEMS contractors and consultants.

Proposed amended Rule 19.2 does not specify which emissions shall be monitored by CEMS. Other local, state and/or federal rules and regulations specify which emissions shall be monitored by CEMS. In San Diego County, most of the equipment required to have CEMS are large combustion equipment used to generate electricity and are monitored for oxides of nitrogen (NO_x) and carbon monoxide (CO). Rule 19.2 ensures the emissions required to be monitored are properly determined using high quality data and procedures. The amendments to Rule 19.2 result in no emission impacts (i.e., no emission decrease and no emission increase).

There are existing District permits that require “continuous monitoring” but are not intended to be subject to Rule 19.2. After the adoption of the proposed amendments, if a facility believes their permit unintentionally appears to be subject to Rule 19.2, they may contact the District’s Engineering Division at apcdengineering@sdapcd.org for assistance. Additionally, the District will identify and correct such permits through the course of conducting annual permit inspections as needed or applicable. In either situation, the facility may be required to submit an application to the District to modify their permit accordingly.

Subsection (e)(3) states, “CEMS data shall be reported for a minimum of 95% of the time the emission unit is in operation.” In the scenario of a CEMS not being in operation, but the emission unit is in operation, the facility is nonetheless required to track and maintain records documenting both that the CEMS is not operating, and the operational state of the emission unit (either in operation or not). The proposed amendments to Rule 19.2 do not expressly require usage records for the specific emission unit. However, other specific District prohibitory rules and/or permit conditions typically do. For example, Rule 69.3.1 (Stationary Gas Turbine Engines) subsection (e)(1) requires continuous monitoring and recordkeeping of an emission unit to monitor/record the operational characteristics of the unit and of any NO_x emissions reduction system, as applicable. District Compliance staff are able to utilize any/all such District-required records by proposed amended Rule 19.2, as well as records obtained through public utilities or public agencies, to corroborate required CEMS records and the minimum 95% operational time requirement. As a result, the District will be able to enforce the operations requirement in Subsection (e)(3).

Subsection (i)(1) of proposed amended Rule 19.2 states, “If any of the above requirements are not met, the owner or operator shall take the necessary corrective action(s) to eliminate the problem as soon as practicable, but not to exceed 96 hours.” It is understood the 96 hours begins upon discovery of the problem by the facility. The facility should keep a record of when they discovered the occurrence. The District will include this information in a Compliance Advisory that will be released should the proposed amendments be adopted by the Governing Board.

VII. ECONOMIC IMPACTS & COST-EFFECTIVENESS

Statutory Requirements

California Health & Safety Code [40703](#) requires that in adopting any regulation, the district shall consider, pursuant to Section 40922, and make available to the public, its findings related to the cost effectiveness of a control measure, as well as the basis for the findings and the considerations involved. A district shall make reasonable efforts, to the extent feasible within existing budget constraints, to make specific reference to the direct costs expected to be incurred by regulated parties, including businesses and individuals. The District shall also comply with California Health & Safety Code [40920.6\(a\)](#) pertaining to cost-effectiveness of best available retrofit control technology as applicable.

Cost Effectiveness, Incremental Cost-Effectiveness, and Other Costs

Cost effectiveness accounts for the cost of emission reductions, typically expressed in dollars spent per pound or ton of emissions reduced. The District finds that a cost effectiveness evaluation (including an evaluation of incremental cost-effectiveness and other costs) is not applicable Rule 19.2 pursuant to Section 40920.6(a), since it is an administrative rule that neither requires emission reduction nor new or additional control equipment installation. Other regulations applicable to specific emission units, not the CEMS, require emission reductions and the installation of CEMS. The amendments proposed will not result in additional administrative costs to affected facilities.

As part of the District’s ongoing permit evaluation work, CEMS have already been required to be installed in accordance with various federal regulations. It is possible that there may be additional one-time costs in order to update some permits to harmonize permit conditions with the proposed amendments. However, this is not expected to be common since the District implemented the federal CEMS requirements through permit conditions as an on-going responsibility since 1979; thus, it is expected that most permits will not require modification.

Socioeconomic Impacts Analysis (SIA)

Per California Health & Safety Code [40728.5](#), (if applicable), whenever a district intends to propose the adoption, amendment, or repeal of a rule or regulation that will significantly affect air quality or emissions limitations, that agency shall, to the extent data are available, perform an assessment of the socioeconomic impacts of the adoption, amendment, or repeal of the rule or regulation. The Governing Board shall actively consider the socioeconomic impact of regulations and make a good faith effort to minimize adverse socioeconomic impacts. This section does not apply to the adoption, amendment, or repeal

of any rule or regulation that results in any less restrictive emissions limit if the action does not interfere with the district's adopted plan to attain ambient air quality standards or does not result in any significant increase in emissions.

The District finds that an assessment of the socioeconomic impacts of proposed amended Rule 19.2 is not required pursuant to Section 40728.5(a) of the California Health and Safety Code, as the proposed amendments will not significantly affect air quality or emissions limitations. The CEMS requirements are feasible and compliant CEMS are currently available. The proposed amendments will not impact any emissions as it is an administrative rule.

VIII. ENVIRONMENTAL ANALYSIS

California Environmental Quality Act (CEQA)

The California Environmental Quality Act (CEQA) requires environmental review of certain actions. District staff conducted a review of whether CEQA applies to the adoption of proposed amended Rule 19.2. The District finds that proposed administrative amendments to Rule 19.2 are categorically exempt from the provisions of CEQA pursuant to California Code of Regulations, Title 14, Section 15308, as an action taken to assure the protection of the environment, where the regulatory process involves procedures for protection of the environment, and Section 15061(b)(3), since it can be seen with certainty that there is no possibility that the activity in question may have a significant adverse effect on the environment.

Analysis of expected methods of compliance

The technology and equipment needed to comply with the proposed rule amendments are currently available. Since the District implemented the federal CEMS requirements through permit conditions as an on-going responsibility (despite the rule not being updated since 1979), most affected facilities are already in compliance with the federal requirements. Affected facilities are familiar with the cost to purchase, install, and maintain the CEMS hardware and software.

Environmental Justice

The proposed amendments to Rule 19.2 support the District's commitment to integrating environmental justice and equity in District operations, policies, and regulations. In addition to meeting federal requirements, the proposed amendments to Rule 19.2 ensure that facilities with CEMS adjacent to under-resourced communities are accurately capturing emission data to comply with federal regulation, for use in local emission inventories, and/or for enforcement purposes. For example, CEMS that are in compliance with proposed amended Rule 19.2 will ensure that their operation, maintenance, and gas samples are collected and analyzed at a high quality. With emissions being calculated accurately on an ongoing basis, the facility and the District will be informed of any potential emission violations more expediently than facilities without a functioning, high quality CEMS. Failure to adhere to stringent federal requirements will also prompt corrective actions, designed to bring the emission unit back in compliance in a more immediate manner.

IX. RULE DEVELOPMENT & PUBLIC PARTICIPATION PROCESS

A public notice regarding the proposed amendments was posted in a local newspaper, on the District's website, and sent via U.S. Mail on May 17, 2023, to approximately 54 recipients including each potentially affected facility with a CEMS and each chamber of commerce in the region. The public notice was also sent to over 10,000 subscribers to the District's email notification service, the EPA, and CARB.

The District invited affected facilities, their consultants, the public, and other interested parties to a virtual Workshop held on June 14, 2023, to present and provide input on the proposed rule amendments. The workshop was attended by 19 people. The EPA and CARB did not attend the workshop and did not provide any written comments. Three comments were received from the public. These comments were documented, responded to, and addressed in the Workshop Report along with other subsequent minor administrative changes made to the proposed amended Rule that are intended to further clarify specific sections being modified. The Workshop Report was sent to all attendees and also made available on-line.

The District received one additional public comment via email from an affected facility after the comment period closed on June 21, 2023. The District met with the affected facility and responded to the comment via virtual meeting shortly thereafter. The comment did not result and/or warrant further changes to the proposed amended rule for Governing Board consideration, nor the Workshop Report.

Additionally, a public notice regarding the Governing Board's public hearing to consider the proposed rule amendments was posted in a local newspaper for a 30-day review period, on the District's website, and sent to subscribers of the District's email notification service, the EPA and CARB.

X. OTHER RULE AMENDMENTS

District's Existing Rules

Currently, there are no other ongoing rule amendments that are directly tied to the proposed Rule 19.2 amendments. However, the District has existing rules that refer to "continuous emission monitors". These rules (Rules 68, 69, 69.2, 69.3.1, 69.4.1 and 98) were reviewed and determined that the proposed amendments to Rule 19.2 do not conflict with any of these existing rules. Since the existing permits were written in accordance with the applicable sections of 40 CFR Part 60 and Part 75, the review of the existing permits is not time sensitive and is likely to occur through the normal administrative actions of the District conducting annual permit inspections.

XI. CONCLUSION

Proposed amended Rule 19.2 is not expected to negatively impact affected residences or industries, including small businesses, nor to affect employment or the economy of San Diego County. Approximately 40 active permits are currently subject to Rule 19.2 requirements. The facilities that have CEMS are already familiar with existing federal CEMS requirements and are likely to have no concerns with complying with the proposed amendments to harmonize/update the rule with such regulations. The proposed amended rule will help ensure the rule meets all federal requirements, which through implementation, will help ensure emissions are continually monitored and assessed in a high quality and efficient manner. If proposed amendments are adopted by the Governing Board, the District will monitor its implementation and should additional amendments be needed, the District would return to the Governing Board for consideration of such amendments.

This Staff Report addresses all the requirements specified in Health and Safety Code Sections 40725 through 40728.5 for rule development.

XII. REFERENCES

There are no references to this report.

XIII. ATTACHMENTS

There are no attachments to this report.

**SAN DIEGO COUNTY
AIR POLLUTION CONTROL DISTRICT**

**DRAFT PROPOSED AMENDMENTS
RULE 19.2 – CONTINUOUS EMISSION MONITORING REQUIREMENTS**

WORKSHOP REPORT

The San Diego County Air Pollution Control District (District) held a virtual public workshop on June 14, 2023, to discuss and receive input on draft proposed amendments to Rule 19.2 – Continuous Emission Monitoring Requirements. A meeting notice was mailed to known owners or operators of continuous emission monitoring systems (CEMS) in San Diego County. The notice requested owners and operators to share the notice with their CEMS contractors and consultants. Additionally, the notice was posted on the District’s website, on social media, and distributed to interested parties via the District’s electronic mail service.

The virtual workshop was attended by 19 people. A summary of the comments and District responses are provided below:

1. WORKSHOP COMMENT

Is the standard in Subsection (e)(2) to have CEMS data collected for a minimum of 95% of the emission unit operating hours in each reporting period intended to be for a calendar quarter?

DISTRICT RESPONSE

Yes, the intent of the proposed amendments to Subsection (e)(2) is for CEMS data to be collected for each reporting period, which will typically be for each calendar quarter. Calendar quarterly reporting was already a District requirement pursuant to existing Rule 19.2, Subsection (d)(2), which is associated with the quarterly report required to be submitted to the District. The District has added clarifying language to Subsection (e)(2), as noted in District Comment #2 below, that further clarifies the cadence of this reporting.

2. PUBLIC COMMENT

The District should consider the applicability of Subsection (e)(2), Monitoring Requirements, for *qualifying* quarters (i.e., when a unit operates 168 hours in a quarter).

DISTRICT RESPONSE

The District agrees. Amended Subsection (e)(2) is modified as follows:

CEMS data shall be reported in the units of the applicable standard for a minimum of 95% of the emission unit operating hours for each reporting period as specified in Subsection (f)(2) of this rule.

3. **PUBLIC COMMENT**

Hours tallied in Subsections (f)(1)(i) and (f)(1)(ii), Record Keeping and Reporting Requirements, should be excluded in the demonstration that the CEMS is operating properly for a minimum of 95% of the time.

DISTRICT RESPONSE

The District's intent is to require CEMS to continuously operate properly for a minimum of 95% of the time when the emission unit is in operation. An emission unit is considered in operation when it is emitting. Therefore, the record keeping and reporting requirements of Subsections (f)(1)(i) and (f)(1)(ii) shall be included in the demonstration that the CEMS is operating properly for a minimum of 95% of the time pursuant to Subsection (e)(2). The time when the emission unit is not in operation (i.e., not emitting) is excluded from the minimum of 95% requirement. The 95% requirement is intended to allow the CEMS to have short periods of downtime for various reasons such as to perform required maintenance or rectify unexpected problems.

4. **DISTRICT COMMENT**

The following Subsections in proposed Rule 19.2 were modified for clarification purposes after the June 14 workshop. Post-workshop modifications are shown below using double-strikeout/double-underline:

Subsection (c)(1): ~~"40 CFR"~~ means Title 40 of the Code of Federal Regulations.

Subsection (c)(2~~4~~): ~~"Calibration Drift"~~ means the difference in the CEMS output readings from the established reference value after a stated period of operation during which no unscheduled maintenance, repair, or adjustment took place. The reference value may be supplied by a cylinder gas, gas cell, or optical filter and need not be certified.

Subsection (c)(2): ~~"CFR" means Code of Federal Regulations.~~

Subsection (d)(1): Each owner or operator shall develop and submit a quality assurance/quality control (QA/QC) program for the CEMS, except monitoring systems approved under Appendix D or E of 40 CFR Part 75 – Continuous Emission Monitoring, and alternative monitoring systems under Subpart E of 40 CFR Part 75, and their components. The QA/QC program shall be submitted to, reviewed by and approved in writing by the Air Pollution Control Officer. At a minimum, include in each QA/QC program, shall include a written protocol that describes in detail, complete, step-by-step procedures and operations for each of the following activities:

Subsection (d)(2)(iv): O₂ and/or CO₂ concentrations (% O₂ and/or % CO₂).

Subsection (e)(2): CEMS data shall be reported in the units of the applicable standard for a minimum of 95% of the emission unit operating hours for each reporting period as specified in Subsection (f)(2) of this rule.

Subsection (e)(3): CEMS data shall be reported for a minimum of 95% of the time the emission unit is in operation.

Subsection (f)(2)(iii): Time intervals and date of each period during which the ~~continuous monitoring system~~ CEMS was inoperative, except for ~~zero and span CD~~, calibration drift, cylinder gas audit (CGA) and converter checks, and the nature of system repairs and adjustments., and

Subsection (g)(3)(ii): Carbon monoxide (CO) analyzer – Performance Specification 4A

Subsection (g)(4): Nitrogen dioxide (NO₂) converter efficiency

5. CARB COMMENT

CARB has no official comments at this time.

6. EPA COMMENT

EPA has no official comments at this time.

NC:AQD:jl
07/25/23

RULE 19.2. CONTINUOUS EMISSION MONITORING REQUIREMENTS ~~(Effective 4/20/77: Rev. Effective 1/12/79)~~
~~(Rev. Adopted & Effective (date of adoption))~~

(a) **APPLICABILITY**

This rule shall apply to an owner or operator of any emission unit that is required to install and operate a continuous emission monitoring system (CEMS) by the San Diego County Air Pollution Control District (District), U.S. Environmental Protection Agency (EPA) or California Air Resources Board (CARB) and subject to gas concentration standard or emission rate standard.

(b) **RESERVED**

~~(a-c) DEFINITIONS. Definitions used shall be those given in CFR 40, Part 51, or equivalent ones established by mutual agreement of the Air Pollution Control District, Air Resources Board, and Environmental Protection Agency. "CFR" as used in this rule means Code of Federal Regulations.~~

For the purposes of this rule, the following definitions shall apply:

(1) **"40 CFR"** means Title 40 of the Code of Federal Regulations.

(2+) **"Calibration Drift"** means the difference in the CEMS output readings from the established reference value after a stated period of operation during which no unscheduled maintenance, repair, or adjustment took place. The reference value may be supplied by a cylinder gas, gas cell, or optical filter and need not be certified.

~~(2) **"CFR"** means Code of Federal Regulations.~~

(3) **"Continuous Emission Monitoring System (CEMS)"** means the total combined equipment and systems, including the sampling interface, analyzers, and data acquisition and handling system, required to continuously determine air contaminants and diluent gas concentrations and/or mass emission rate from an emission unit (as applicable).

(4) **"Data Recorder"** means that portion of the CEMS that provides a permanent record of the analyzer output. The data recorder may include automatic data reduction capabilities.

(5) **"Diluent Analyzer"** means that portion of the CEMS that senses the diluent gas (i.e., carbon dioxide (CO₂) or oxygen (O₂)) and generates an output proportional to the gas concentration.

(6) “Diluent Gas” means a major gaseous constituent in a gaseous pollutant mixture. For combustion sources, CO₂ or O₂ or combination of these two gases are the major gaseous constituents of interest.

(7) “NO_x” means the same as defined in Rule 2 – Definitions.

(8) “Pollutant Analyzer” means that portion of the CEMS that senses the pollutant gas and generates an output proportional to the gas concentration.

(9) “Relative Accuracy” means the absolute mean difference between the gas concentration or emission rate determined by the CEMS and the value determined by the reference method plus the 2.5% error confidence coefficient of a series of tests divided by either the mean of the reference method tests or the applicable emission limit. The 2.5% error confidence shall be determined in accordance with 40 CFR Part 60, Appendix B, Performance Specification 2.

(10) “Sample Interface” means that portion of the CEMS used for one or more of the following: sample acquisition, sample delivery, sample conditioning, or protection of the analyzer from the effects of the stack effluent.

(11) “Span Value” means the calibrated portion of the measurement range as specified in the applicable regulation or other requirement. If the span is not specified in the applicable regulation or other requirement, then it shall be a value approximately equivalent to two times the emission standard. For span values less than 500 parts per million (ppm), the span value may either be rounded upward to the next highest multiple of 10 ppm, or to the next highest multiple of 100 ppm such that the equivalent emission concentration is not less than 30% of the selected span value.

(12) “Zero, Low-Level, and High-Level Values” means the CEMS response values related to the source specific span value. Determination of zero, low-level, and high-level values is defined in 40 CFR Part 60 Standards of Performance for New Stationary Sources, Appendix B – Performance Specifications.

(b) ~~**SOURCES AND EMISSIONS TO BE MONITORED.** The owner or operator of any source listed below for which these Rules and Regulations require a permit shall provide, properly install, maintain in good working order, and operate continuous monitoring systems to measure and record the emissions from the source as follows:~~

~~(1) Fossil-fuel fired steam generators with a heat input of 250 million BTU (63 million kilogram calories) or more per hour with a use factor of at least 30 percent per year. The emissions to be monitored are:~~

~~(i) Oxides of nitrogen;~~

~~(ii) Carbon dioxide or oxygen;~~

~~(iii) Visible emissions, as opacity, except:~~

~~(A) when gaseous fuel is the only fuel burned, or~~

~~(B) when oil or a mixture of gaseous fuel and oil is the only fuel burned; and the source has a heat input of less than 1000 million BTU (252 million kilogram calories) per hour and is able to comply with all applicable particulate matter and visible emission rules herein without collection equipment; and the source has not been found since December 31, 1970, through administrative or judicial proceedings, to be in violation of Rule 50 or any other applicable visible emission standard.~~

~~(iv) Sulfur dioxide (SO₂), if SO₂ control equipment is used.~~

~~(2) All sulfur recovery plants. The emission to be monitored is sulfur dioxide.~~

~~(3) Carbon monoxide (CO) boilers of regenerators of fluid catalytic cracking units. The emissions to be monitored are:~~

~~(i) Sulfur dioxide;~~

~~(ii) Visible emissions, as opacity.~~

~~(4) Carbon monoxide (CO) boilers of fluid cokers if feed rate is greater than 10,000 barrels (1,500,000 liters) per day. The emissions to be monitored are:~~

~~(i) Sulfur dioxide;~~

~~(ii) Visible emissions, as opacity.~~

~~(e) **INSTALLATION AND STARTUP.** Owners or operators of sources required to have continuous emission monitors shall have installed all necessary monitoring and recording equipment and shall have begun monitoring and recording by October 6, 1978.~~

(d) REQUIREMENTS

(1) Each owner or operator shall develop and submit a quality assurance/quality control (QA/QC) program for the CEMS, except monitoring systems approved under Appendix D or E of 40 CFR Part 75 – Continuous Emission Monitoring, and alternative monitoring systems under Subpart E of 40 CFR Part 75, and their components. The QA/QC program shall be submitted to, reviewed by and approved in writing by the Air Pollution Control Officer. At a minimum, include in each QA/QC program, shall include a written protocol that describes in detail, complete, step-by-step procedures and operations for each of the following activities:

(i) Calibration of CEMS,

- (ii) Calibration drift determination and adjustment of CEMS.
- (iii) Preventive maintenance of CEMS (including spare parts inventory).
- (iv) Data recording, calculations, and reporting.
- (v) Accuracy audit procedures including sampling and analysis methods,
and
- (vi) Program of corrective action for malfunctioning CEMS.

(2) Data from monitored parameters required in 40 CFR Part 60 shall be recorded at least once every minute. Such parameters include, but are not limited to:

- (i) Air pollutant concentration (in ppm).
- (ii) Volumetric flow rate (in standard cubic feet per hour (scfh)).
- (iii) NO_x mass emissions (in pounds per million British thermal units (pounds per mmBtu)).
- (iv) O₂ and/or CO₂ concentrations (% O₂ and/or % CO₂).
- (v) Air pollutant mass emissions (in pounds per hour).
- (vi) CO₂ mass emissions (in tons per hour), and
- (vii) Fuel flow rate (in standard cubic feet per hour (scfh)).

(3) The data acquisition rate shall be set at a constant rate such that the data points are equally spaced.

(4) Each CEMS shall be installed, calibrated, *operated*, and maintained in good working order in accordance with the requirements of this rule.

(5) Utilize all valid data points to determine compliance with applicable limit(s), certification testing, and relative accuracy test audit(s) (RATA(s)).

(6) The District shall be notified at least two weeks prior to any replacement, modification, or change to the CEMS that affect the measurement, calculation or correction of data displayed and/or recorded by the CEMS.

(e) **MONITORING REQUIREMENTS**

- (1) Data Averaging

For CEMS used to demonstrate compliance for an hourly average, the hourly average shall cover the 60-minute period commencing on the hour. An hourly average shall contain at least 16 data points and be computed utilizing all valid data.

For CEMS used to demonstrate compliance for an interval greater than one hour, emission data may be averaged for the required interval utilizing hourly averages computed in accordance with this subsection. All hours used in the greater than one hour interval shall contain at least 16 data points and be computed utilizing all valid 12 data.

(2) CEMS data shall be reported in the units of the applicable standard ~~for a minimum of 95% of the emission unit operating hours for each reporting period as~~ specified in Subsection (f)(2) of this rule.

(3) CEMS data shall be reported for a minimum of 95% of the time the emission unit is in operation.

(d-f) RECORD KEEPING AND REPORTING: REQUIREMENTS

(1) File of Records:

~~Owners or operators subject to the provisions of these Rules and Regulations shall maintain for a period of at least two years a record in a permanent form suitable for inspection and shall make such record available upon request to the State Air Resource Board and the Air Pollution Control District. The record shall include~~ Each owner or operator shall maintain the following:

(i) Occurrence and duration of any startup, shutdown, maintenance, repairs, breakdown or malfunction in the operation of any ~~affected facility.~~ emission units required to have a CEMS,

(ii) Performance testing, evaluations, calibrations, checks, adjustments, and maintenance of any ~~continuous emission monitors~~ CEMS that have been installed pursuant to these rules, and

(iii) Emission measurements: shall be retained in electronic and/or hardcopy format on-site for at least five years and made available to the District upon request.

(2) Quarterly Report:

~~Owners or operators subject to provisions of these Rules and Regulations~~ Each owner or operator shall submit a written report for each calendar quarter to the Air Pollution Control Officer-District. The report is due by the 30th day following the end of the calendar quarter and shall include:

(i) Time intervals, date and magnitude of excess emissions, nature and cause of the excess (if known), corrective actions taken and preventive measures adopted;

(ii) Averaging period used for data reporting corresponding to averaging period specified in the emission test period used to determine compliance with an emission standard for the pollutant/source category in question;

(iii) Time intervals and date of each period during which the continuous monitoring system CEMS was inoperative, except for zero and span CD, calibration drift, cylinder gas audit (CGA) and converter checks, and the nature of system repairs and adjustments, and

(iv) Time intervals and date during which the emission unit was inoperative and the reason(s) the emission unit was inoperative.

(iv) A negative declaration when no excess emissions occurred.

~~(v) Reports on opacity monitors giving the number of three minute periods during which during the average opacity exceeded the standard for each hour of operation. The averages may be obtained by integration over the averaging period or by arithmetically averaging a minimum of four equally spaced instantaneous opacity measurements per minute. Any time period exempted shall be subtracted before determining the excess averages of opacity.~~

(3) Reports of Violations-

Any violation of any emission standard to which the stationary source is required to conform, as indicated by the records of the monitoring device CEMS, shall be reported by the owner or operator of the source to the District within 96 hours after such occurrence. The District shall, in turn, report the violation to the State Air Resources Board (CARB) within five working days after receiving the report of the violation from the owner or operator.

~~(4) Emission Reporting Units (Effective 1/12/79)~~

~~All emission data shall be reported in the units of the applicable standards.~~

(e) DATA REDUCTION

~~Data shall be reduced according to the procedure established in 40 CFR Part 51, Appendix P, paragraph 5.0 through 5.3.3, or by other methods deemed equivalent by joint decision of the Air Pollution Control Officer, Air Resources Board CARB and the U.S. Environmental Protection Agency.~~

(f) ~~STANDARDS OF PERFORMANCE FOR MONITORING SYSTEMS~~

~~(1) Systems shall be installed, calibrated, maintained and operated in accordance with the following sections of CFR 40.~~

~~(i) Fossil-fuel Fired Steam Generators: Section 60.45.~~

~~(ii) Petroleum Refineries: Section 60.105.~~

~~Equivalent standards may be used by mutual agreement of the Air Pollution Control District, Air Resources Board and Environmental Protection Agency.~~

~~(2) Calibration gas mixtures shall meet the specifications in CFR 40, Part 51, Appendix P, Section 3.3, and Part 60, Appendix B, Performance Specification 2, Section 2.1; or shall meet equivalent specifications established by mutual agreement of the Air Pollution Control District, Air Resources Board and Environmental Protection Agency.~~

~~(3) Cycling times shall be those specified in CFR 40, Part 51, Appendix P, Section 3.4, 3.4.1 and 3.4.2; or shall meet equivalent specifications established by mutual agreement of the Air Pollution Control District, Air Resources Board and Environmental Protection Agency.~~

~~(4) The continuous sulfur dioxide and oxides of nitrogen monitors shall meet the applicable performance specification requirements in CFR 40, Part 51, Appendix P, and Part 60, Appendix B; or shall meet equivalent specifications established by mutual agreement of the Air Pollution Control District, Air Resources Board and Environmental Protection Agency.~~

~~(5) The continuous carbon dioxide and oxygen (O₂) monitoring system shall meet the performance specification requirements in CFR 40, Part 51, Appendix P, and Part 60, Appendix B; or shall meet equivalent specifications established by mutual agreement of the Air Pollution Control District, Air Resources Board and Environmental Protection Agency.~~

~~(6) The continuous opacity monitoring system shall meet the performance specification requirements in CFR 40, Part 51, Appendix P, and Part 60, Appendix B; or shall meet equivalent specifications established by mutual agreement of the Air Pollution Control District, Air Resources Board and Environmental Protection Agency.~~

(g) TEST METHODS

Each owner or operator shall perform and meet all applicable requirements of the following test methods for each CEMS.

(1) Calibration Drift

Check the zero (or low-level value between 0 and 20 percent of span value) and span (or high-level value between 50 to 100 percent of span value) calibration drifts in

accordance with a written procedure. Analyzers that automatically adjust the data to the corrected calibration values (e.g., microprocessor control) shall be programmed to record the unadjusted concentration measured in the calibration drift prior to resetting the calibration, if performed, or record the amount of adjustment.

(2) Cylinder Gas Audit (CGA)

(i) Challenge the pollutant analyzer and diluent analyzer of the CEMS, if applicable, with an audit gas of known concentration at two points within the following ranges:

<u>Audit Point</u>	<u>Audit Range</u>		
	<u>Pollutant Analyzer</u>	<u>Diluent Analyzer</u>	
		<u>CO₂</u>	<u>O₂</u>
<u>1</u>	<u>20 to 30% of span value</u>	<u>5 to 8% by volume</u>	<u>4 to 6% by volume</u>
<u>2</u>	<u>50 to 60% of span value</u>	<u>10 to 14% by volume</u>	<u>8 to 12% by volume</u>

(ii) Introduce each of the audit gas three times each for a total of six challenges, if applicable. Introduce the gases in such a manner that the entire CEMS is challenged. The same gas concentration shall not be introduced to the CEMS twice in succession.

(iii) A separate audit gas cylinder for audit points 1 and 2 shall be used. Gas from audit gas cylinder shall not be diluted when challenging the CEMS.

(iv) The CEMS shall be challenged at each audit point for a sufficient period of time to assure adsorption-desorption of the CEMS sample transport surfaces has stabilized.

(v) Operate each CEMS in its normal sampling mode, i.e., pass the audit gas through all filters, scrubbers, conditioners, and other CEMS components used during normal sampling, and as much of the sampling probe as is practical. At a minimum, the audit gas should be introduced at the connection between the probe and the sample line.

(vi) Certified Reference Materials (CRMs) (See 40 CFR Part 60 Appendix F, Section 8, Citation 1) audit gases that have been certified by comparison to National Institute of Standards and Technology (NIST) Standard Reference Materials (SRMs) or EPA Protocol Gases following the most recent edition of the EPA Traceability Protocol for Assay and Certification of Gaseous Calibration Standards (See 40 CFR Part 60 Appendix F, Section 8, Citation 2) shall be used. Procedures for preparation of CRMs are described in Citation 1. Procedures for preparation of EPA Protocol Gases are described in Citation 2. If a suitable audit gas level is not commercially available, Method 205 (See 40 CFR Part 60 Appendix F, Section 8, Citation 3) may be used to dilute CRMs or EPA Protocol Gases to the required level. The difference between the actual concentration of the audit gas and the concentration indicated by the analyzer shall be used to assess the accuracy of the CEMS.

(3) Relative Accuracy Test Audit (RATA)

RATAs shall be performed using the following performance specifications, as specified in 40 CFR Part 60, Appendix B and the quality control limits in Section (h) – Quality Control Requirements:

(i) NO_x analyzer – Performance Specification 2

(ii) Carbon monoxide (CO) analyzer – Performance Specification 4A

(iii) O₂ and CO₂ analyzer – Performance Specification 3

(iv) Other analyzer – approved in writing by the Air Pollution Control Officer prior to use.

(4) Nitrogen dioxide (NO₂) converter efficiency

A check of the NO₂ to nitric oxide (NO) converter with the method prescribed the by manufacturer shall be performed. CRMs (See 40 CFR Part 60 Appendix F, Section 8, Citation 1) audit gases that have been certified by comparison to National Institute of Standards and Technology (NIST) Standard Reference Materials (SRMs) or EPA Protocol Gases following the most recent edition of the EPA Traceability Protocol for Assay and Certification of Gaseous Calibration Standards (See 40 CFR Part 60 Appendix F, Section 8, Citation 2) shall be used. Procedures for preparation of CRMs are described in 40 CFR Part 60 Appendix F, Section 8, Citation 1. Procedures for preparation of EPA Protocol Gases are described in 40 CFR Part 60 Appendix F, Section 8, Citation 2.

(h) **QUALITY CONTROL REQUIREMENTS**

Each owner or operator shall perform the following quality control checks and meet all applicable requirements for all analyzers and concentration ranges. To the extent possible, quality control checks shall be performed during normal operation and not during startup and shutdown.

(1) Calibration Drift

(i) Quality Control Frequencies

(A) For CEMS subject to 40 CFR Part 75, the calibration drift shall be checked, recorded, and quantified in the frequencies in accordance with the applicable regulation.

(B) For CEMS not subject to 40 CFR Part 75, the calibration drift shall be checked, recorded, and quantified at least once a day (approximately 24 hours) in accordance with the manufacturer's specifications.

(ii) Quality Control Limits

(A) For pollutant analyzers, the zero, low-level or high-level calibration drift result shall not exceed 5.0% of the span value.

(B) For diluent analyzers, the zero, low-level or high-level calibration drift result shall not exceed 1.0% O₂ or CO₂.

(2) Cylinder Gas Audit (CGA)

(i) Quality Control Frequencies

(A) For CEMS subject to 40 CFR Part 75, the CGA check frequency shall align with 40 CFR Part 75, Appendix B linearity check frequency.

(B) For CEMS not subject to 40 CFR Part 75, the CGA shall be checked, recorded, and quantified for three of four calendar quarters, but in no more than three quarters in succession. Successive quarterly CGA checks shall occur no closer than 2 months. CGA checks are not required for calendar quarters when the emission unit does not operate in the calendar quarter.

(C) For O₂ CEMS subject to 40 CFR Part 75, the linearity check may be performed in lieu of a CGA check in accordance with 40 CFR Part 75, Appendix B.

(ii) Quality Control Limits

(A) For pollutant analyzers, the CGA absolute accuracy shall not exceed 15%. Alternatively, the absolute value of the difference between the average response and the audit value shall not exceed 0.5 ppm.

(B) For diluent analyzers, the CGA absolute accuracy shall not exceed 15%.

(3) Relative Accuracy Test Audit (RATA)

(i) Quality Control Frequencies

(A) For CEMS subject to 40 CFR Part 75, the RATA frequency shall align with 40 CFR Part 75 RATA frequency.

(B) For CEMS not subject to 40 CFR Part 75, the RATA shall be at least once every four calendar quarters except when the emission unit does not operate in the fourth calendar quarter since the quarter of the previous RATA. In this case, the RATA check shall be performed in the quarter in which the emission unit recommences operation.

(ii) Quality Control Limits

(A) For NO_x analyzers, the relative accuracy shall be 20.0% or less when the reference method value is used to calculate relative accuracy or 10.0% or less when the applicable emissions standard is used to calculate relative accuracy.

(B) For CO analyzers, the relative accuracy shall be 10% or less when the reference method value is used to calculate relative accuracy or 5.0% or less when the applicable emissions standard is used to calculate relative accuracy. Alternatively, a de minimis value calculated as the absolute value of the difference between the reference method and CEMS in units of parts per million by volume, dry (ppmvd) corrected to 15% O₂ plus the confidence coefficient may be used in lieu of all relative accuracy calculations in the applicable emissions standards if the calculated de minimis value does not exceed 0.50 ppmvd.

(C) For O₂ and CO₂ analyzers, the relative accuracy shall be 20.0% or less when the reference method value is used to calculate relative accuracy or <1.0% absolute difference between the average reference method value and average CEMS value.

(D) For other monitors, in accordance with the applicable performance specification approved in writing by the Air Pollution Control Officer.

(4) NO₂ converter efficiency

(i) Quality Control Frequencies

NO₂ to NO converter efficiency shall be checked, recorded, and quantified at least once annually. Successive annual audits shall occur no closer than 4 months from each other.

(ii) Quality Control Limits

The converter efficiency shall be >90% of the certified audit gas concentration.

(i) **CORRECTIVE ACTIONS**

(1) If any of the above requirements are not met, the owner or operator shall take the necessary corrective action(s) to eliminate the problem as soon as practicable, but not to exceed 96 hours.

(2) If any quality control limits are exceeded, the CEMS is considered out of control from the time of completion of the failed audit, until the successful completion of a repeat audit.

(3) Whenever quality control limit exceedances occur for two consecutive quarters, excluding calibration drift, the current QA/QC CEMS program shall be modified or the CEMS shall be modified or replaced to correct the deficiency causing the quality control limit exceedances as soon as practical, but not to exceed 96 hours. The modified written procedures shall then replace the previous written procedures upon approval of the Air Pollution Control Officer.

(j) COMPLIANCE SCHEDULE

(1) Each owner or operator of new CEMS shall comply with all applicable requirements of this rule upon initial start up.

(2) Each owner or operator of an existing CEMS shall submit to the Air Pollution Control Officer current documentation which demonstrates the CEMS is in compliance with all applicable requirements of this rule by June 30, 2024.