

# Requirements for Continuous Emission Monitoring Systems

**Proposed Amended Rules (PAR) 218 and 218.1**

**Proposed Rules (PR) 218.2 and 218.3**

**Working Group Meeting #9**

**July 16, 2020 10:00 am**

**Join Zoom Meeting**

**<https://scaqmd.zoom.us/j/91211206141?pwd=UDJPWIVoaDk2WkJTZE1rSGloRERHZz09>**

**Meeting ID: 912 1120 6141**

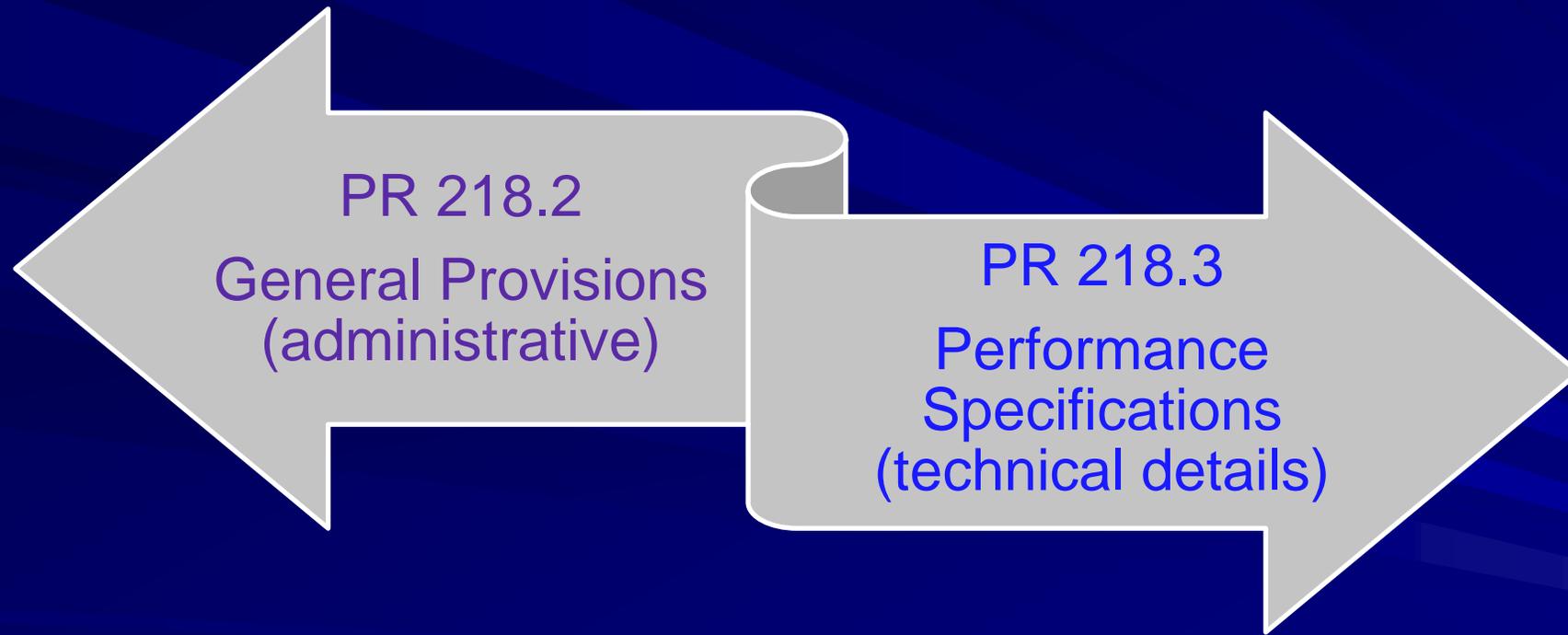
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# Agenda

- PR 218.2 Rule Structure
- Comments Received at the Last Meeting
- PR 218.2 Preliminary Draft Rule Overview for Provisions (f) through (j)
  - Overview for Provisions (a) through (e) conducted at the last Working Group meeting
- Next Steps

# PR 218.2 Rule Structure

# How are PR 218.2 and PR 218.3 related?



Both rules reference each other

# Rule Structure - PR 218.2

(a) Purpose

(b) Applicability

(c) Definitions

(d) Implementation Schedule

(e) Monitoring Requirements

(f) Certification Requirements

(g) Quality Assurance/Quality Control Plan

(h) Recordkeeping Requirements

(i) Reporting Requirements

(j) Certification Posting

Presented at the  
last Working  
Group meeting  
(WG #8)

- Application process
- Alternative application process for modifications
- Certification tests
- SCEMS and ACEMS certification

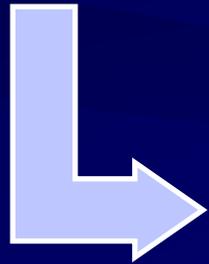
PR 218.2 (a) – (e)  
Comments and Responses

# Comments on PR 218.2 (a) - Applicability

Question

Will PR 218.2 apply to special cases such as:

- Stack flow monitor only (i.e., RECLAIM Large Source monitoring stack flow in conjunction with the concentration limit to determine mass emissions)
- Mass emission (e.g., R1117 has established a mass emission limit)



Response

- RECLAIM Large Source stack flow monitor would not be required after the source exits the RECLAIM program
- Staff is contemplating on ways to address mass emission calculation

# Comments on PR 218.2 (c) - Definitions

Draft Rule Language

## 218.2(c)(6):

CEMS FINAL CERTIFICATION LETTER means the final approval of CEMS certification or recertification, which at a minimum includes:  
*(Required information for CEMS components are listed)*



Concern

Serial number change for the following should not trigger a full certification process and thus should not be listed on the CEMS final certification letter:

- Sample conditioning system
- Data acquisition and handing system and programmable logic controller



Response

- Staff will remove the serial number requirement for the components discussed
- Any serial number change of those components would be subject to the technical guidance document R-002 for testing requirements

# Comment on PR 218.2 (e)(3) – Clarification of the Term “Calibration”

Draft Rule  
Language

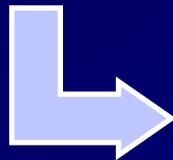
218.2(e)(3)(D):

Conduct a *calibration* of all analyzers of the CEMS before any emissions are detected



Concern

It is not clear if the “calibration” is referencing the analyzer or also includes the sampling line



Suggested  
Solution

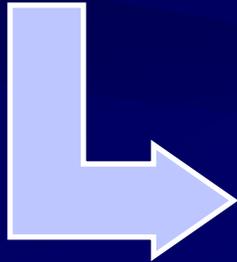
- Added a definition for “calibration error test” that will include sampling line
- CALIBRATION ERROR TEST means a procedure performed to determine CEMS response to a given gaseous compound concentration by means of injecting a certified calibration gas mixture into the CEMS as close to the probe tip as practical

# Comment on PR 218.2 (e)(4) – Demonstration Unit Non-Operation

Request

Consider the following to provide more flexibility on demonstrating unit non-operation

- CEMS status code on unit non-operation
- O2 analyzer
- Placing a blind in between for short-term gas shutdown



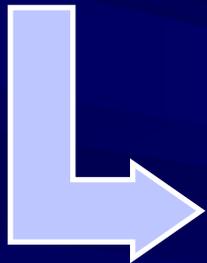
Response

See next slide

# Comment on PR 218.2 (e)(4) – Demonstration Unit Non-Operation

Request

See the previous slide



Response

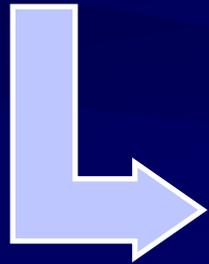
PR 218.2 (e)(4)(A)(iv):  
“.....or any other monitoring  
system that is approved by  
the Executive Officer.”

- CEMS status code
  - Demonstration of non-operation needs to substantiate the CEMS status code
  - PR 218.2 (e)(4) specifies the criteria to physically substantiate the non-operation
- O2 analyzer
  - O2 analyzer is not a reliable indicator to demonstration non-operation of the unit
- Blind for short-turn gas shutdown
  - Blind can easily be put in and taken out, which is not a reliable source for non-operation
- PR 218.2 (e)(4)(A)(iv) (*previously as (e)(4)(D)*) allows other mechanisms to demonstrate unit is non-operational with Executive Officer approval

## Comment on PR 218.2 (e)(4) – Demonstration Unit Non-Operation – cont.

Request

Provide clarification on “unit is not operating or generating emission” under 218.2 (e)(4)



Response

- Staff has revised PR 218.2 (e)(4) rule language to clarify the concept (See next slide for the revised language)

## 218.2 (e)(4) – Demonstrating a Unit is Not Operating and No Emissions are Generated

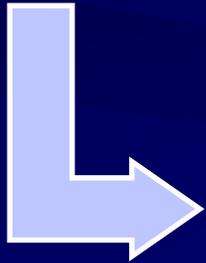
- (4) Demonstrating a unit is not operating and no emissions are generated
- (A) For a unit in which fuel combustion is the only source for the CEMS monitored emissions the owner or operator of the CEMS shall meet one or more of the following provisions for the entire duration:
- (i) Disconnect the fuel line to the unit and place flanges at both ends of the fuel line;
  - (ii) Demonstrate there is no fuel flow to the unit based on a dedicated fuel flow meter that is quality assured according to manufacturer's recommendation;
  - (iii) Provide one or more gas bills indicating zero fuel consumption for the unit or the fuel line associated with the unit that is not operating; or
  - (iv) Demonstrate the unit is not operational based on a stack flow monitoring system certified according to subdivision (f) or any other monitoring system that is approved by the Executive Officer.
- (B) For a unit in which fuel combustion is not the only source for the CEMS monitored emissions, the owner or operator of the CEMS:
- (i) Shall request for the Executive Officer's written approval of the method(s) to demonstrate that the unit is not operating, and that no emissions are generated.
  - (i) May elect to include the method(s) specified in clause (e)(4)(B)(i) in the QA/QC plan.

- Revised since last meeting
- Emphasizes that the unit is not operating AND no emissions are generated
- Also addresses special cases when emissions can also be generated from the production process when there is no fuel combustion (e.g., glass manufacturing)

## Comment for PR 218.2 (f) – CEMS Certification and Recertification Application

Request

Is a recertification needed for non-RECLAIM CEMS where no modification is made?



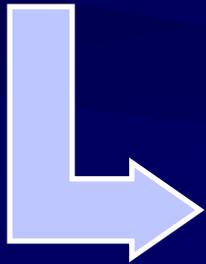
Response

- PR 218.3 will include a provision on data handling with changes to data acquisition and handling system (DAHS)
- Staff will be consider a streamlined process to incorporate the DAHS requirements under PR 218.3 for non-RECLAIM CEMS

# Comment on PR 218.2 and 218.3

Request

Combine PR 218.2 and 218.3 into one rule



Response

- PR 218.2 and 218.3 are using a similar approach as Rules 218 and 218.1, focusing on administrative and technical details, respectively
- Will consider combining the rules, provided rule is not too complicated or hard to follow

PR 218.2 (f) – (j)  
Rule structure and language

# PR 218.2 (f)

## Certification Requirements

### ■ Overview of all provisions under subdivision (f)

### PR 218.2

- ✓ New provision
- ✓ Existing concept for RECLAIM CEMS

**PR 218.2 (f)(1):** When a CEMS must be certified or recertified



**PR 218.2 (f)(2):** Summary of the application process for a CEMS certification or recertification

**PR 218.2 (f)(3):** Application submittal

**PR 218.2 (f)(4):** Initial approval

**PR 218.2 (f)(5):** Certification tests

**PR 218.2 (f)(6):** Final approval

**PR 218.2 (f)(7):** Process for modification of component listed in R-002

**PR 218.2 (f)(8):** When the alternative application process would be disapproved

**PR 218.2 (f)(9):** Process for modification of component listed in QA/QC plan

**PR 218.2 (f)(10):** Emission data handling during the interim period

**PR 218.2 (f)(11):** Operation of CEMS during certification testing

**PR 218.2 (f)(12):** SCEMS and ACEMS certification and recertification

No concept change to Rule 218 for all paragraphs, except for paragraph (f)(10)

# PR 218.2 (f)(1)

PR 218.2

## When a CEMS must be certified or recertified

PR 218.2 (f)(1): When a CEMS must be certified or recertified

(f)(1)(A): New installation

(f)(1)(B): Modification

(f)(1)(C):  
When the CEMS accuracy and  
precision cannot be satisfied

Existing  
Requirement  
under Rule 218

# PR 218.2 (f)(2) through (f)(6)

PR 218.2

## Application Process for CEMS Certification or Recertification

### PR 218.2 (f)(2): Application Process

No concept change to  
Rule 218 application  
process

(f)(2)(A): Submit an application form

PR 218.2 (f)(3): Application submittal

(f)(2)(B): Obtain initial approval

PR 218.2 (f)(4): Initial approval

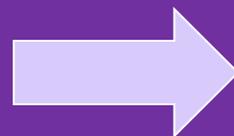
(f)(2)(C): Conduct certification tests

PR 218.2 (f)(5): Certification tests

(f)(2)(D): Obtain final approval

PR 218.2 (f)(6): Final approval

PR 218.2 (f)(2)  
establishes the  
“roadmap”



PR 218.2 (f)(3)  
through (f)(6)  
provide details

# PR 218.2 (f)(7) through (f)(9) Alternative Recertification Process for CEMS Modifications

For modification of  
CEMS components  
listed in R-002

**PR 218.2 (f)(7):**  
Alternative recertification  
process

**PR 218.2 (f)(8):**  
When the alternative process  
would be disapproved

For modification of  
CEMS components  
listed in QA/QC plan

**PR 218.2 (f)(9):**  
Alternative  
process for this  
type of CEMS  
modification

- Existing approach under Rule 218 in practice
- But not in rule language

## PR 218.2 (f)(7) and (f)(8) Alternative Process for Modification of CEMS Component Listed in Guidance Document R-002

- (7) **Modification of CEMS Component Listed in Guidance Document R-002**  
For a CEMS modification on a component that is not identified on the CEMS final certification letter but is listed on the South Coast AQMD Technical Guidance Document R-002, the owner or operator of the CEMS shall either meet the requirements specified in paragraph (f)(2) or the alternative CEMS certification requirements. The owner or operator of the CEMS that elects to meet the alternative CEMS certification requirements shall:
- (A) Submit a notification of CEMS modification and obtain the Executive Officer's written approval prior to the modification;
  - (B) Conduct the required quality assurance tests, in accordance with the South Coast AQMD Technical Guidance Document R-002, within 60 days following the CEMS modification; and
  - (C) Submit the test reports to the Executive Office within 30 days after completing the tests.
- (8) The owner or operator of the CEMS that receives written notification from the Executive Officer that an alternative CEMS certification submitted pursuant to subparagraph (f)(7) is disapproved, shall meet the requirements specified in paragraph (f)(2) for that specific CEMS modification.

The modification for components:

- Not listed on the certification letter; but
- Identified in the guidance document

- ✓ New provision
- ✓ Existing approach as compared to Rule 218 (utilized in practice)

## PR 218.2 (f)(9)

# Alternative Process for Modification of CEMS Component listed in Quality assurance/Quality Control Plan

PR 218.2

### (9) Modification of CEMS Component Listed in Quality Assurance/Quality Control Plan

For a CEMS modification on a component that is not identified on the CEMS final certification letter or listed in the South Coast AQMD Technical Guidance Document R-002, but is listed in the Quality Assurance/Quality Control Plan, the owner or operator of the CEMS shall, prior to the modification:

- (A) Submit a modified Quality Assurance/Quality Control Plan to the Executive officer;
- (B) Obtain a written approval from the Executive officer; and
- (C) Subject to any testing requirement instructed by the Executive Officer if the modification is deemed to affect the reliability and accuracy of the CEMS.

The modification for components:

- Not listed on the certification letter
- Not identified on the guidance document
- But listed in the Quality assurance/Quality Control Plan

- ✓ New provision
- ✓ Existing approach as compared to Rule 218 (utilized in practice)
- ✓ Staff and the owner or operator of the CEMS generally maintain close communication on making this type of determination

# PR 218.2 (f)(10) How to Handle Emission Data Recorded During the Certification Process

PR 218.2 (f)(10): Emission data recorded during the certification or recertification application process

(f)(10)(A):

Data validity during this interim period

(f)(10)(B):

Data reconciliation if the application is later disapproved

PR218.2 (f)(10)(A) & (f)(10)(B):  
New provisions based on Rule 2012 requirements

## PR 218.2 (f)(10)

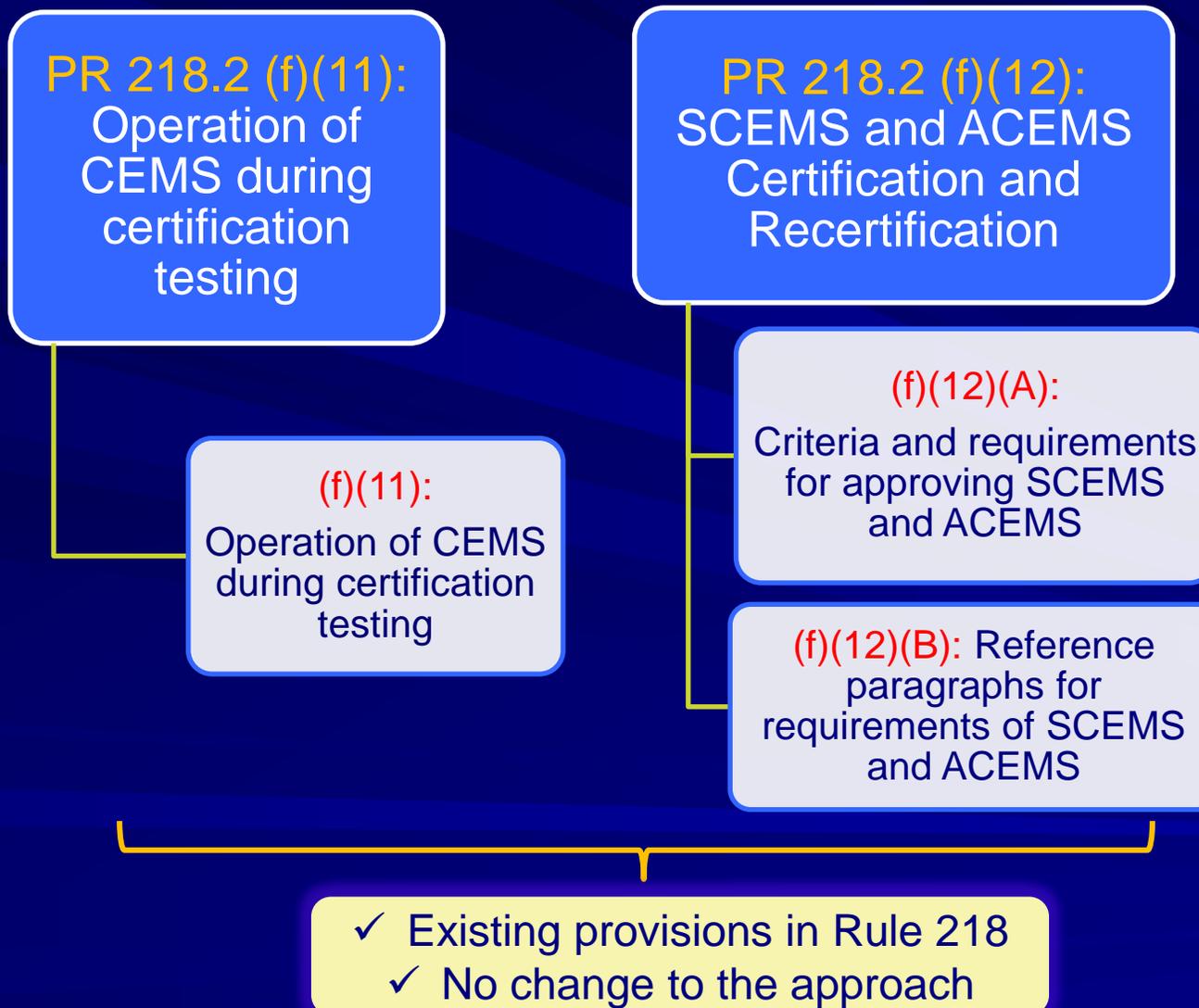
## How to Handle Emission Data Recorded During the Certification Process

## (10) Emission Data During CEMS Certification or Recertification

- (A) Upon completion of all the required certification tests pursuant to paragraph (f)(5) and prior to the Executive Officer's approval of final CEMS certification or recertification, all the emission data measured and recorded by the CEMS shall be considered valid quality assured data, beginning at the hour of completing all the required certification tests pursuant to paragraph (f)(5).
- (B) If the Executive Officer disapproves the final CEMS certification or recertification, the valid emission data pursuant to subparagraph (f)(10)(A) shall be retroactively considered invalid data that shall not be utilized for compliance demonstration or considered as available for CEMS data availability calculation, until the hour of the next time completing all the required certification tests pursuant to paragraph (f)(5).

- ✓ New provision
- ✓ Existing requirement under Rule 2012 for RECLAIM CEMS
- ✓ Initially consider emission data collected during the certification process as valid data
- ✓ Retroactively consider those data as invalid if the application is disapproved

# PR 218.2 (f)(11) for and (f)(12) Other Requirements for Certification and Recertification



# PR 218.2 (g) Quality Assurance/Quality Control (QA/QC) Plan

PR 218.2

## ■ Overview of all provisions under subdivision (g)

PR 218.2  
(g)(1):  
What to  
include for a  
QA/QA plan

PR 218.2  
(g)(2):  
Submittal  
timeline for a  
new AQ/QC  
plan

PR 218.2 (g)(3):  
Submittal timeline  
for a revised  
AQ/QC plan

PR 218.2  
(g)(4):  
Alternative  
quality  
assurance  
practices

- ✓ Existing provisions in Rule 218
- ✓ No change to the approach

# PR 218.2 (h) Recordkeeping Requirements

**PR 218.2 (h)(1):** Maintain records for CEMS data measured and calculated

**(h)(1)(A):**

Maintain records for data recorded and processed by Data Acquisition and Handling System (DAHS)

**(h)(1)(B):**

Maintain records for any measurement or calculation utilized for compliance demonstration

**PR 218.2 (h)(2):** Maintain records for the following files

**(h)(2)(A):** CEMS non-operation

**(h)(2)(B):** reports required by PR 218.2 (h)

**(h)(2)(C):** Out-of-Control period

**(h)(2)(D):** Repair, adjustment, or maintenance to the CEMS

**(h)(2)(E):** certification tests

**(h)(2)(F):** QAQC activities

**PR 218.2 (h)(3):** The approach to maintain the records

**(h)(3)(A):**

Maintain the records for a minimum two years or specified otherwise

**(h)(3)(B):**

Make the records available

✓ Existing provisions in Rule 218  
✓ No change to the approach

# PR 218.2 (i) Reporting Requirements

- Overview of all provisions under subdivision (i) – five types of reporting requirements

PR 218.2  
(i)(1):  
Semi-  
annual  
emission  
summary

PR 218.2  
(i)(2):  
Excess  
emission

PR 218.2  
(i)(3):  
CEMS non-  
operation due  
to  
maintenance  
or damage

PR 218.2  
(i)(4):  
Scheduled  
CEMS  
shutdown

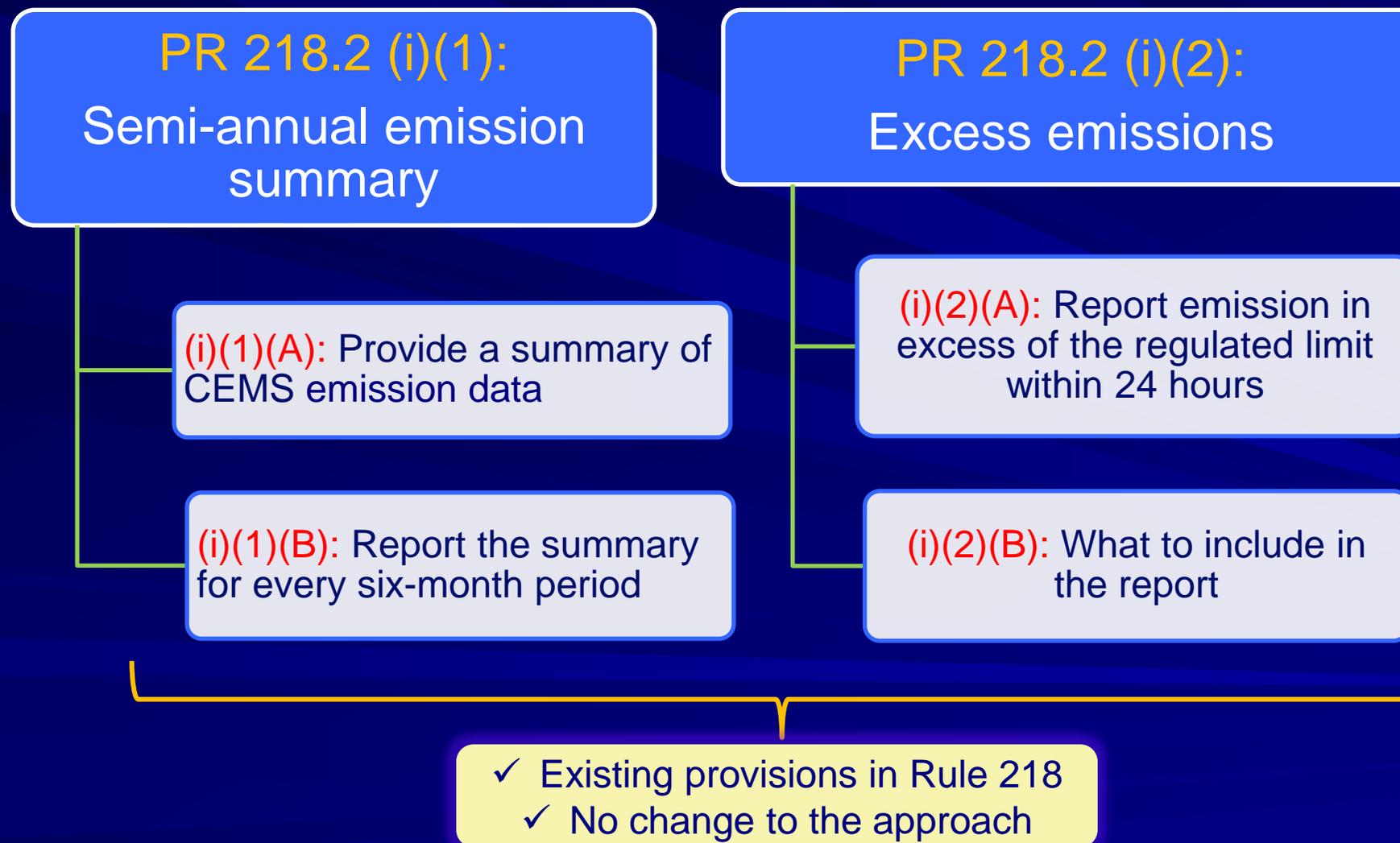
PR 218.2  
(i)(5):  
Relative  
Accuracy  
Test Audit  
(RATA)

Electronic reporting will be developed through CROMERR\* using streamlined reporting forms

\* CROMERR - Cross-Media Electronic Reporting Rule by EPA to provide the legal framework for electronic reporting (<https://www.epa.gov/cromerr>)

## PR 218.2 (i)(1) and (i)(2)

## Reporting Semi-Annual Emission Summary and Excess Emissions



# PR 218.2 (i)(3) through (i)(5) Other Three types of Reporting

**PR 218.2 (i)(3):**  
CEMS non-operation  
due to maintenance or  
damage

**(i)(3) (A):** When to report

**(i)(3)(B):** What information to  
include

✓ (i)(3): Revision from the  
R218 requirement

**PR 218.2 (i)(4):**  
Scheduled CEMS  
shutdown

**(i)(4)(A):** Initial notification

**(i)(4)(B):** Written report

**(i)(4)(C):** Final notification

✓ (i)(4) and (i)(5): New  
provisions

**PR 218.2 (i)(5):**  
Relative Accuracy Test  
Audit (RATA)

**(i)(5):** When and what to  
report

## PR218.2 (i)(3) Reporting CEMS Failure

### (3) CEMS Failure Reporting

- (A) If there is a CEMS failure pursuant to paragraphs (e)(2) that lasts more than 24 hours, the owner or operator of the CEMS shall submit a report to the Executive Officer within 96 hours after CEMS failure occurs.
- (B) The report shall include, at a minimum, the following information:
- (i) The cause of the CEMS failure;
  - (ii) The time or estimated time when the monitoring device became non-operational;
  - (iii) The time or estimated time the monitoring device returned (or will return) to normal operation; and
  - (iv) The maintenance performed or corrective and preventative actions taken to prevent future non- operational conditions.

- ✓ Revised from the R218
- ✓ Added more specificity on information to report
- ✓ This requirement is contingent on PR 218 (e)(2) which allows CEMS failure for repair or maintenance for up to 96 hours and additional 96 hours if the unit is offline

# PR218.2 (i)(4)

## Reporting a scheduled CEMS Shutdown

### (4) Scheduled CEMS Shutdown Reporting

In the event of a scheduled CEMS shutdown pursuant to paragraph (e)(3), the owner or operator of the CEMS shall submit:

- (A) An initial notification, at least 96 hours prior to the scheduled CEMS shutdown, specifying the scheduled date and time for unit non-operation and CEMS shutdown;
- (B) A written report, within 24 hours of CEMS shutdown that the unit is non-operational and there are no emissions during the period of unit shutdown pursuant to paragraph (e)(4); and
- (C) A final notification, 96 hours prior to the scheduled CEMS restart, specifying the scheduled time for the CEMS restart and unit restart.

### (5) CEMS Relative Accuracy Test Audit (RATA) Reporting

The owner or operator of the CEMS shall submit the RATA report within 60 days upon completion of the test and shall include all measured data for each run, and relative accuracy or *de minimis* value being calculated.

- ✓ New requirement
- ✓ Contingent on PR 218(e)(3) which allows a scheduled CEMS shutdown when the unit is offline for a minimum 168 consecutive hours
- ✓ Ensures that operator notifies the Executive Officer and provide a report to the Executive Officer

# PR218.2 (i)(5)

## Reporting Relative Accuracy Test Audit

### (5) CEMS Relative Accuracy Test Audit (RATA) Reporting

The owner or operator of the CEMS shall submit the RATA report within 60 days upon completion of the test and shall include all measured data for each run, and relative accuracy or *de minimis* value being calculated.

- ✓ New requirement for non-RECLAIM CEMS
- ✓ For RECLAIM CEMS, the relative accuracy test audit report summary is submitted by Electronic Data Reporting (EDR) as required by Rule 2012

# PR218.2 (j) – Posting CEMS Certification

**PR 218.2  
(j):**

Posting of  
Written  
Approval of  
CEMS  
Certification

- (j) Posting of Written Approval of CEMS Certification
- The owner or operator of a certified CEMS shall affix a written notice of approval or copy thereof, upon the unit or within 26 feet of the unit as prescribed in Rule 206 – Posting of Permit to Operate, in a manner such that it is clearly visible, legible, and safely accessible. In the event that the unit is constructed or operated that the notice of approval or copy cannot be so placed, such notice or copy shall be mounted on a location approved by the Executive Officer.

Existing  
Requirement  
under Rule 218

# Next Steps – Rulemaking Process

- Next Working Group Meeting – August, 2020
  - PR 218.3 Preliminary Draft Rule Overview by Provisions
- Public Workshop – 3<sup>rd</sup> quarter 2020
- Public Hearing – 4<sup>th</sup> quarter 2020

# Staff Contacts

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