



# Proposed Amended Rule 1466 (PAR 1466) Control of Particulate Emissions from Soils with Toxic Air Contaminants

Working Group Meeting #1  
January 14, 2020

Join Zoom Meeting:

<https://scaqmd.zoom.us/j/93702008357>

Meeting ID: 937 0200 8357

Password: 353714

Teleconference Dial-In: 1-669-900-6833

# Agenda



- Meeting Format
- Rule Development Process
- General Overview of Rule 1466
- Proposed Revisions
- Next Steps

# Meeting Format



- South Coast AQMD acknowledges the challenges to businesses and stakeholders due to COVID-19
- Consistent with Governor Newsom's Executive Order N-29-20 (March 17, 2020) and to ensure safe social distancing, Working Group Meetings will be held via Zoom and telephone
- Although it is a different format, staff will take the time to listen to all stakeholder comments
- In addition to Working Group Meetings, staff is available for individual meetings

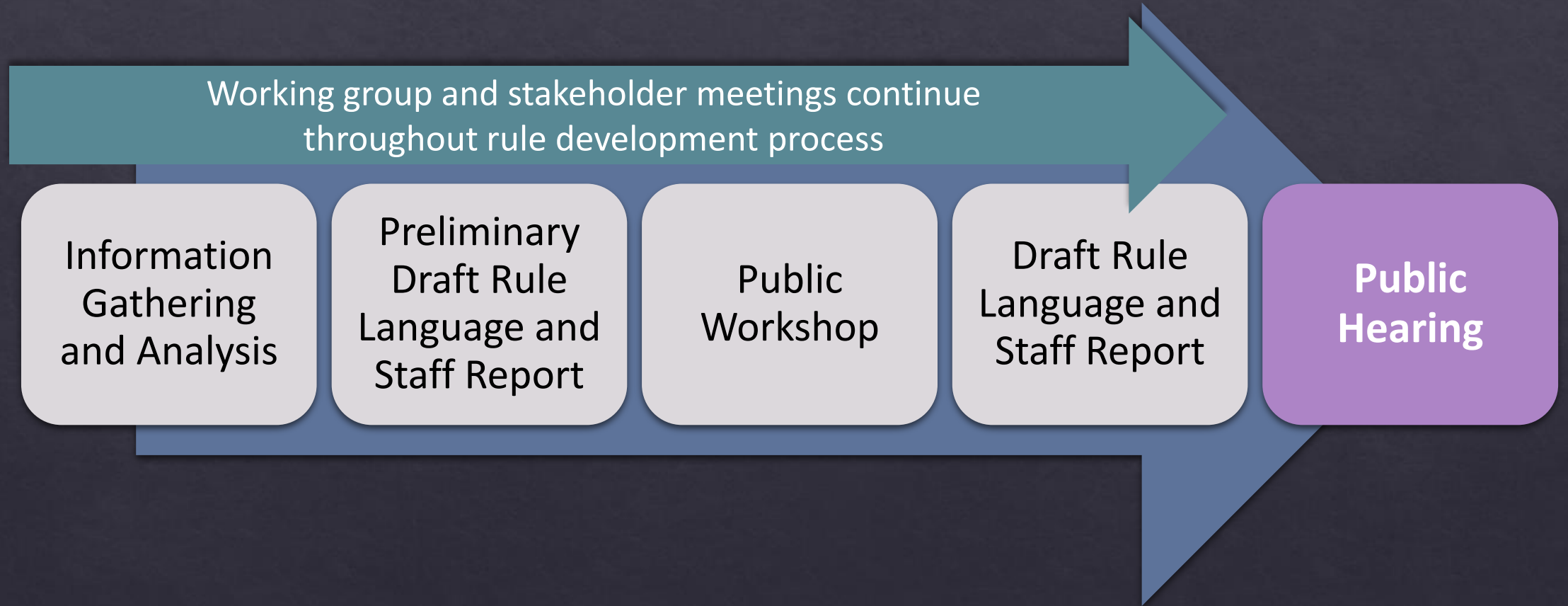
# Rule Development Process

# Rule 1466 Working Group

- Comprised of stakeholders including industry, environmental groups, community members, and public agencies
- Held throughout the rule development process and open to the public

- Objectives:
  - Build consensus and work through issues
  - Opportunity for early input by stakeholders
  - Develop a rule that affected sources can implement
- Assists staff in understanding:
  - Issues and concerns
  - Industry terms, industry practices, etc.
  - Applicable technologies and best management practices

# Overview of Rule Development Process



# Stakeholder Input

- Stakeholders can provide input throughout the rulemaking process
- Early input is strongly encouraged to help develop proposed rule amendments and to address issues
- Working Group Meetings, Individual Meeting, and Site Visits allow stakeholders to directly speak to staff to discuss individual issues



# General Overview of Rule 1466



# Rule 1466

## Background and Applicability

- Adopted on July 7, 2017
- Amended on December 1, 2017 to expand the list of toxic air contaminants
- Applies to earth-moving activities of soil containing applicable toxic air contaminants designated by either:
  - U.S. EPA, California Department of Toxic Substances Control (DTSC), or State or Regional Water Board;
  - A county, local, or state regulatory agency; or
  - Executive Officer
- Rule 1466 does not apply to soil moving activities that are less than 50 cubic yards or soil sampling

# Rule 1466 General Requirements



## Monitoring

- Conduct PM<sub>10</sub> monitoring
- If the PM<sub>10</sub> concentration exceeds 25 µg/m<sup>3</sup>, cease all earth-moving activity and implement dust control measures



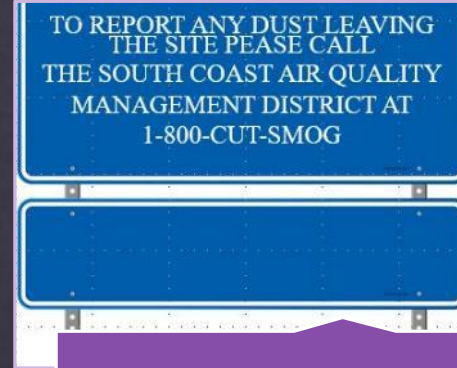
## Dust Control Measures

- General Measures
- Vehicle Measures
- Stockpiling Measures
- Truck Loading/Unloading
- On-site dust control supervisor
- Additional requirements for schools and related sites



## Notifications

- Allows South Coast AQMD compliance personnel to be present, if necessary, to ensure that the requirements are being followed



## Signage

- Lists the toxic air contaminants in the soil
- Requires a phone number for the facility contact and South Coast AQMD's 1-800-CUT-SMOG



## Recordkeeping

- Stockpiling inspections
- Monitoring results
- Earth-moving activities
- Transporting and receiving facilities
- Complaints

# Purpose of Amendments

- Amendments to Rule 1466 are needed to:
  - Update notification requirements
  - Update requirements for pre-approved PM<sub>10</sub> monitors
  - Exempt certain events
  - Remove certain alternative provisions
  - Clarify existing provisions
  - Address minor corrections
- Seeking stakeholder input for additional changes

# Proposed Revisions

# Enforcement of Stockpiling Measures

**Issue: Clarification needed to ensure that if a stockpile is covered or stabilized, that the treated or covered soil is still a stockpile**

- Stockpile is currently defined as any accumulation of soil, which is not **fully enclosed, covered, or chemically stabilized**, and which attains a height of three feet or more and a total surface area of 150 square feet or more
- To minimize fugitive dust, Rule 1466 requires the operator to:
  - Apply dust suppressants to stockpiles (e)(4)(D)
  - Chemically stabilize and/or completely cover stockpiles at the end of each working day (e)(4)(E)
  - Inspect stabilized or covered stockpiles daily (e)(4)(F)
- Based on the definition of “stockpile”, if the soil is covered or chemically stabilized ((e)(4)(E) and (e)(4)(F)), it is no longer a stockpile
- Definition of stockpile needs to be revised

# Revision to Stockpile Definition

Current Definition of Stockpile	Proposed Definition of Stockpile
<ul style="list-style-type: none"><li>• Paragraph (c)(17) – STOCKPILE is any accumulation of soil, which is not fully enclosed, covered, or chemically stabilized, and which attains a height of three feet or more and a total surface area of 150 square feet or more</li></ul>	<ul style="list-style-type: none"><li>• STOCKPILE is any accumulation of soil, which is not fully enclosed, <del>covered, or chemically stabilized,</del> and which attains a height of three feet or more and a total surface area of 150 square feet or more</li></ul>



# PM<sub>10</sub> Data Logging

**Issue: Clarification needed to ensure date and time calibration of logged PM<sub>10</sub> data**

- Subparagraph (d)(3)(F) requires that PM<sub>10</sub> data be collected using a data acquisition system that is:
  - Capable of direct reading near real-time
  - Provides date, time, and PM<sub>10</sub> concentration in ug/m<sup>3</sup> every 10 minutes or less
- This subparagraph does not require data acquisition system to be calibrated for date and time
  - Date and time important for data verification purposes

Current Rule 1466 Provision	Proposed Rule 1466 Provision
<ul style="list-style-type: none"><li>• Subparagraph (d)(3)(F) – Collect PM<sub>10</sub> data with a data acquisition system that provides date, time, and concentration every 10 minutes or less</li></ul>	<ul style="list-style-type: none"><li>• Collect PM<sub>10</sub> data with a data acquisition system that <u>is calibrated for date and time in Pacific Standard Time (PST)</u> and provides date, time, and concentration every 10 minutes or less</li></ul>

# PM<sub>10</sub> Calculation as a Rolling Average

**Issue: Revision is needed to make the 2-hour PM<sub>10</sub> concentration a rolling average starting at the commencement of activity**

- Paragraph (d)(4) requires the PM<sub>10</sub> concentration to be calculated as a two-hour average, starting at the top of each hour
- As written, the PM<sub>10</sub> calculation must start at the top of the hour, despite earth-moving activities or vehicular movement not starting at the top of the hour
  - The intent of the PM<sub>10</sub> calculation is to monitor during periods of activity, not periods of inactivity
- Two-hour PM<sub>10</sub> calculation should be revised to a rolling average starting at the commencement of activity
  - Removes need to monitor or calculate during periods of inactivity
  - Improves response to PM<sub>10</sub> limit exceedance and maintenance of fugitive dust mitigation



# Revision of PM<sub>10</sub> Averaging Schedule



## Current Rule 1466 Provision

- Paragraph (d)(4) – PM<sub>10</sub> concentration shall be calculated as an average over two hours, starting at the top of each hour

## Proposed Rule 1466 Provision

- PM<sub>10</sub> concentration shall be calculated as ~~an a~~ two-hour rolling average ~~over two hours, starting at the top of each hour~~ starting at the commencement of earth-moving activity or vehicular movement

# PM<sub>10</sub> Calculation after Addressing an Exceedance

**Issue: Clarification is needed that after an exceedance is addressed, a new 2-hour PM<sub>10</sub> concentration average begins when earth-moving activities commence**

- If the two-hour PM<sub>10</sub> concentration exceeds 25 ug/m<sup>3</sup>, the operator must cease earth-moving activities, apply dust suppressant, or implement other dust control measures until the PM<sub>10</sub> concentration is 25 ug/m<sup>3</sup> or less averaged over 30 minutes ((d)(2))
- As written, the calculation of the 2-hour PM<sub>10</sub> concentration ((d)(4)) is a continuous rolling average and does not reset after an exceedance is addressed
- After an exceedance is addressed, the 2-hour averaging of PM<sub>10</sub> concentration should be restarted when earth-moving activities resume
  - The intent of the PM<sub>10</sub> rolling average is to alert the operator when there is an exceedance of the limit to increase vigilance of implementing dust control measures

# Clarification to PM<sub>10</sub> Calculation Provision

<b>Current Rule 1466 Provision</b>	<b>Proposed Rule 1466 Provision</b>
<ul style="list-style-type: none"><li>• Paragraph (d)(4) – PM<sub>10</sub> concentration shall be calculated as an average over two hours</li></ul>	<ul style="list-style-type: none"><li>• Add provision stating PM<sub>10</sub> calculation will restart as a new average over two hours, when earth-moving activities resume after an exceedance is addressed</li></ul>



# PM<sub>10</sub> Calculation

**Issue: Clarification to PM<sub>10</sub> calculation is needed to ensure appropriate enforcement of PM<sub>10</sub> limit**

- Subparagraph (d)(4)(A) requires that the PM<sub>10</sub> concentration be calculated as the absolute difference between the upwind and downwind monitors
  - The intent was to account for a negative concentration difference when there is a change in wind direction
- As written, elevated upwind concentrations due to activities upwind of the site would trigger a PM<sub>10</sub> exceedance because the difference is based on the absolute value
- The intent of the rule is to implement dust control measures when there is a PM<sub>10</sub> exceedance due to earth-moving activities from the site
- Removing the absolute value of the upwind and downwind concentrations would better characterize PM<sub>10</sub> exceedances at the site, provided the upwind and downwind monitor shifted to reflect the current wind direction

# Revision to PM<sub>10</sub> Calculation



## Current Rule 1466 Provisions

- Subparagraph (d)(3)(C) – Place a minimum of one downwind monitor in the seasonal prevailing wind direction downwind of each area of earth-moving activity
- Subparagraph (d)(4)(A) – PM<sub>10</sub> concentration is the absolute difference between the upwind and downwind monitors

## Proposed Rule 1466 Provisions

- Place a minimum of one downwind monitor ~~in the seasonal prevailing wind direction~~ downwind of each area of earth-moving activity
- PM<sub>10</sub> concentration is ~~the absolute difference between~~ calculated by subtracting the simultaneous results of the upwind and downwind monitor(s) from the upwind monitor(s)

# Fencing Windscreen Specifications

**Issue: Revision of fencing requirements is needed to specify feasible windscreen specifications**

- Paragraph (e)(1) requires fencing that is a minimum of 6 feet tall and at least as tall as the height of the tallest stockpile, with a windscreen with a porosity of  $50 \pm 5\%$
- Operators have expressed difficulty in identifying commercially available temporary windscreens with stated porosity specifications
  - Staff has identified only one windscreen manufacturer that provides porosity specifications, but the windscreens offered are for permanent installation

# Revision of Windscreen Specification

Current Rule 1466 Provision	Proposed Rule 1466 Provision
<ul style="list-style-type: none"><li>• Paragraph (e)(1) – Earth-moving activities shall be surrounded with fencing that is a minimum of 6 feet tall and at least as tall as the height of the tallest stockpile, with a windscreen with a porosity of <math>50 \pm 5\%</math></li></ul>	<ul style="list-style-type: none"><li>• Considering adding alternative specifications equivalent to porosity, such as:<ul style="list-style-type: none"><li>• Visibility Blockage</li><li>• Shade Value</li><li>• Wind Speed Reduction</li><li>• Material Density</li></ul></li><li>• Seeking stakeholder input for this provision</li></ul>



# Stockpiling Measures – Coverings

**Issue: Minor correction is  
needed for stockpile  
covering thickness units**

- Subparagraph (e)(4)(E) specifies that at the end of each working day, either chemically stabilize and/or completely cover with 10 millimeter thick plastic sheeting that overlaps a minimum of 24 inches
- “Mil” is the appropriate measurement unit for sheeting thickness, not “millimeter”
  - One mil = one-thousandth of an inch

Current Rule 1466 Provision	Proposed Rule 1466 Provision
<ul style="list-style-type: none"><li>• Subparagraph (e)(4)(E) – At the end of each working day, either chemically stabilize and/or completely cover with 10 millimeter thick plastic sheeting that overlaps a minimum of 24 inches.</li></ul>	<ul style="list-style-type: none"><li>• At the end of each working day, either chemically stabilize and/or completely cover with 10 <del>millimeter</del> <u>mil</u> thick plastic sheeting that overlaps a minimum of 24 inches.</li></ul>



# Stockpiling Measures – Inspections

**Issue: Revisions to stockpile  
inspection requirements  
are needed to improve  
enforceability and enhance  
compliance**

- Subparagraph (e)(4)(F) requires operators to:
  - Daily inspect stabilized or covered stockpiles
  - Immediately re-stabilize or repair any holes, tears, or any other potential sources of fugitive toxic air contaminant emissions
- This provision does not specify:
  - Daily inspection also includes nonworking days (e.g. weekend)
  - “Immediate” is not defined for immediate re-stabilizing or repair of holes or tears for a stockpile after a daily inspection
  - “Immediate” is difficult to enforce if a hole or tear is identified by a South Coast AQMD Inspector

# Revisions to Stockpile Inspection Requirements



Current Rule 1466 Provision	Proposed Rule 1466 Provisions
<ul style="list-style-type: none"><li>• Subparagraph (e)(4)(F) – Daily, inspect stabilized or covered stockpiles... Immediately re-stabilize or repair any holes, tears, or any other potential sources of fugitive toxic air contaminant emissions.</li></ul>	<ul style="list-style-type: none"><li>• Daily, <u>including nonworking days</u>, inspect stabilized or covered stockpiles... <del>Immediately</del> <u>Within one hour</u>, re-stabilize or repair any holes, tears, or any other potential sources of fugitive toxic air contaminant emissions</li><li>• Add provision stating within one hour of discovery, stabilized or covered stockpiles shall be re-stabilized or repaired for any holes, tears, or any other potential sources of fugitive toxic air contaminant emissions</li></ul>

# Notification of Project Completion

**Issue: Notification of Rule 1466 project completion is needed to inform South Coast AQMD compliance staff**

- Currently, Rule 1466 does not require operators to notify the Executive Officer when a project is complete
- Project completion information is needed for inspection planning and complaint investigation purposes
- Staff is proposing to add a provision to notify the Executive Officer upon project completion – No fee required pursuant to Rule 301

Current Rule 1466 Provision	Proposed Rule 1466 Provision
<ul style="list-style-type: none"><li>• No provision for submitting notification for project completion</li></ul>	<ul style="list-style-type: none"><li>• Add a provision to paragraph (f)(2) to require notification of project completion within 48 hours of project completion</li></ul>

# Alternative Provisions

**Issue: The Alternative Provisions subdivision is no longer needed based on current Rule 1466 implementation status**

- Rule 1466 allows operators to request alternative provisions for a variety of provisions including the PM<sub>10</sub> limit, monitoring method, and calculation, signage, direct loading requirements, and dust control measures
- Since Rule 1466 was adopted in July 2017, there have been seven requests for alternative provisions
- Although there have been few requests for alternative provisions, they are resource intensive
- Staff believes it is more appropriate to address compliance issues through the Hearing Board
- Staff will incorporate any approved alternative measures into the applicable provisions and remove subdivision (j) which allows for requesting alternative provisions
- Staff is seeking stakeholder input for alternative measures to include

# Monitoring During Exceptional Events

**Issue: Provisions are needed to address monitoring during exceptional events**

- Some operators have expressed difficulty with obtaining accurate PM<sub>10</sub> readings due to exceptional events like heavy smoke from wildfires
- Smoky conditions can result in unreliable PM<sub>10</sub> measurements
  - Smoke particles are in the PM<sub>2.5</sub> size range and can get into the measurement chamber and affect the results – optical-based monitors are very susceptible to this interference
  - Instrument optics can get dirty and may result in need for cleaning, recalibrating, replacing filters, and re-zeroing
- Considering adding provisions to address exceptional events which may affect measurements

# Address Exceptional Events in Monitoring Requirements



Current Rule 1466 Provision	Proposed Rule 1466 Provision
<ul style="list-style-type: none"><li>• No provision to address measurements during exceptional events</li></ul>	<ul style="list-style-type: none"><li>• Add provision which requires the submittal of an email to <a href="mailto:Rule1466@aqmd.gov">Rule1466@aqmd.gov</a>, no later than 24 hours upon discovery of an exceptional event, a request for exemption from the PM<sub>10</sub> limit until the event passes</li><li>• The request shall contain information substantiating:<ul style="list-style-type: none"><li>• The exceptional event</li><li>• The event interferes with the PM<sub>10</sub> measurements (e.g. ambient PM<sub>10</sub> level is above the instrument range, instrument cannot re-zero)</li><li>• Attempts were made to fix the PM<sub>10</sub> monitor</li></ul></li></ul>

# Approval Requirements for PM<sub>10</sub> Monitors

**Issue: Requirements for pre-approved PM<sub>10</sub> monitors need to be updated to clarify and streamline the approval process**

- Appendix 1 provides the requirements for pre-approved Rule 1466 PM<sub>10</sub> monitors

Appendix 1			
Continuous direct-reading near real-time monitor that measures particulate matter less than 10 microns	<b>Equipped with:</b> <ul style="list-style-type: none"> <li>• Omni-directional inlet with water trap</li> <li>• Sample heater tube</li> <li>• Sample pump</li> <li>• Volumetric flow controller</li> <li>• Enclosure</li> <li>• Data logger that can log each data point with average concentration, time/date, and date point number</li> </ul>	<b>Meet the minimum performance standards:</b> <ul style="list-style-type: none"> <li>• Range: 0 – 10,000 ug/m<sup>3</sup></li> <li>• Accuracy: ±5% of reading ± precision</li> <li>• Resolution: 0.1 ug/m<sup>3</sup></li> <li>• Measurement Cycle: User selectable (30 min or 2 hr)</li> </ul>	<b>Quality Assurance/Quality Control Plans that include:</b> <ul style="list-style-type: none"> <li>• Periodic instrument calibration</li> <li>• Operator training</li> <li>• Daily instrument performance (span) checks</li> </ul>

- Based on pre-approval requests and industry feedback, staff sees the need to:
  - Revise requirement for a volumetric flow controller
  - Add an alternative for meeting an accuracy performance standard
  - Add option to use alternative certifications to demonstrate requirements

# Updates to Approval Requirements for Pre-Approved PM<sub>10</sub> Monitors

- Volumetric flow control requirement excludes monitors with different flow control mechanisms (e.g. mass) from being pre-approved
  - Intent was to require instruments be equipped with some flow control mechanism and exclude instruments with no flow control mechanism and passive sampling devices
- Manufacturers establish accuracy differently and it is not always included in their instrument specification materials
  - “Accuracy” is the difference between the instrument measured value and a true value obtained by a reference method
  - Precision (i.e. degree of variation) of all monitors on the same site is important since the results are relative to all the instruments on one site
- Revisions are needed to clarify these requirements

Current Rule 1466 Provisions	Proposed Rule 1466 Provisions
<ul style="list-style-type: none"> <li>• Appendix 1 – 2.c. – Approved PM<sub>10</sub> monitors must be equipped with a volumetric flow controller</li> </ul>	<ul style="list-style-type: none"> <li>• Approved PM<sub>10</sub> monitors must be equipped with a <u>volumetric flow controller sample pump with active flow control mechanism and stated flow control accuracy</u></li> </ul>
<ul style="list-style-type: none"> <li>• Appendix 1 – 3.b. – Approved PM<sub>10</sub> monitors must meet accuracy of ±5% of reading ± precision</li> </ul>	<ul style="list-style-type: none"> <li>• Considering adding an intra-instrument comparison precision test for monitors                             <ul style="list-style-type: none"> <li>• Staff is currently determining feasibility of this proposal in the field and acceptable limits</li> </ul> </li> </ul>



# Alternative Certification Option for Pre-Approved PM<sub>10</sub> Monitors

- Appendix 1 does not provide alternative options for manufacturers to demonstrate the PM<sub>10</sub> monitor approval requirements
- MCERTS certification is widely used by environmental monitor manufacturers to demonstrate instrument performance and reliability
  - Rule 1466 does not address monitors having MCERTS certification
  - MCERTS performance standard for indicative ambient particulate monitors\* was used as a reference to develop the instrument requirements for Rule 1466 monitoring

Current Rule 1466 Provision	Proposed Rule 1466 Provision
• No provision that allows alternative options to be used to demonstrate PM <sub>10</sub> monitor approval criteria	• Appendix 1 – Considering adding MCERTS certification as an option to demonstrate PM <sub>10</sub> monitor approval criteria

\* MCERTS (U.K. Environmental Agency Monitoring Certificate Scheme): performance standard for indicative ambient particulate monitors  
<https://www.gov.uk/government/publications/mcerts-performance-standard-for-indicative-ambient-particulate-monitors>

# Next Steps

## Working Group Meeting #2

- Early February

## Public Workshop

- Late February

## Stationary Source Committee

- March 19, 2021

## Set Hearing

- April 2, 2021

## Public Hearing

- May 7, 2021

# Contacts

## Rule Development

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## General Questions

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