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
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

- 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

- Comprised of stakeholders including industry, environmental groups, community members, and public agencies

- Held throughout the rule development process and open to the public
Overview of Rule Development Process

- Information Gathering and Analysis
- Preliminary Draft Rule Language and Staff Report
- Public Workshop
- Draft Rule Language and Staff Report
- Public Hearing

Working group and stakeholder meetings continue throughout 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

- Conduct PM$_{10}$ monitoring
- If the PM$_{10}$ concentration exceeds 25 µg/m$^3$, cease all earth-moving activity and implement dust control measures

**Monitoring**

**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
Amendments to Rule 1466 are needed to:

- Update notification requirements
- Update requirements for pre-approved PM$_{10}$ 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

<table>
<thead>
<tr>
<th>Current Definition of Stockpile</th>
<th>Proposed Definition of Stockpile</th>
</tr>
</thead>
<tbody>
<tr>
<td>• 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</td>
<td>• STOCKPILE is any accumulation of soil, which is not fully enclosed, <em>covered</em>, or chemically stabilized, and which attains a height of three feet or more and a total surface area of 150 square feet or more</td>
</tr>
</tbody>
</table>
PM$_{10}$ Data Logging

Issue: Clarification needed to ensure date and time calibration of logged PM$_{10}$ data

• Subparagraph (d)(3)(F) requires that PM$_{10}$ data be collected using a data acquisition system that is:
  ▪ Capable of direct reading near real-time
  ▪ Provides date, time, and PM$_{10}$ concentration in ug/m$^3$ 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

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<tr>
<td>• Subparagraph (d)(3)(F) – Collect PM$_{10}$ data with a data acquisition system that provides date, time, and concentration every 10 minutes or less</td>
<td>• Collect PM$_{10}$ data with a data acquisition system that is calibrated for date and time in Pacific Standard Time (PST) and provides date, time, and concentration every 10 minutes or less</td>
</tr>
</tbody>
</table>
PM$_{10}$ Calculation as a Rolling Average

Issue: Revision is needed to make the 2-hour PM$_{10}$ concentration a rolling average starting at the commencement of activity

- Paragraph (d)(4) requires the PM$_{10}$ concentration to be calculated as a two-hour average, starting at the top of each hour
- As written, the PM$_{10}$ 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$_{10}$ calculation is to monitor during periods of activity, not periods of inactivity
- Two-hour PM$_{10}$ 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$_{10}$ limit exceedance and maintenance of fugitive dust mitigation
# Revision of PM$_{10}$ Averaging Schedule

<table>
<thead>
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<tr>
<td>• Paragraph (d)(4) – PM$_{10}$ concentration shall be calculated as an average over two hours, starting at the top of each hour</td>
<td>• PM$_{10}$ 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</td>
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</table>
PM$_{10}$ Calculation after Addressing an Exceedance

Issue: Clarification is needed that after an exceedance is addressed, a new 2-hour PM$_{10}$ concentration average begins when earth-moving activities commence.

- If the two-hour PM$_{10}$ concentration exceeds 25 ug/m$^3$, the operator must cease earth-moving activities, apply dust suppressant, or implement other dust control measures until the PM$_{10}$ concentration is 25 ug/m$^3$ or less averaged over 30 minutes ((d)(2))

- As written, the calculation of the 2-hour PM$_{10}$ 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$_{10}$ concentration should be restarted when earth-moving activities resume.
  - The intent of the PM$_{10}$ 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$_{10}$ Calculation Provision

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<tr>
<td>• Paragraph (d)(4) – PM$_{10}$ concentration shall be calculated as an average over two hours</td>
<td>• Add provision stating PM$_{10}$ calculation will re-start as a new average over two hours, when earth-moving activities resume after an exceedance is addressed</td>
</tr>
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PM\textsubscript{10} Calculation

Issue: Clarification to PM\textsubscript{10} calculation is needed to ensure appropriate enforcement of PM\textsubscript{10} limit

- Subparagraph (d)(4)(A) requires that the PM\textsubscript{10} 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\textsubscript{10} 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\textsubscript{10} exceedance due to earth-moving activities from the site

- Removing the absolute value of the upwind and downwind concentrations would better characterize PM\textsubscript{10} exceedances at the site, provided the upwind and downwind monitor shifted to reflect the current wind direction
## Revision to $PM_{10}$ Calculation

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<tbody>
<tr>
<td>• 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</td>
<td>• Place a minimum of one downwind monitor in the seasonal prevailing wind direction downwind of each area of earth-moving activity</td>
</tr>
<tr>
<td>• Subparagraph (d)(4)(A) – $PM_{10}$ concentration is the absolute difference between the upwind and downwind monitors</td>
<td>• $PM_{10}$ concentration is the absolute difference between the upwind and downwind monitors calculated by subtracting the simultaneous results of the upwind and downwind monitors from the upwind monitor(s)</td>
</tr>
</tbody>
</table>
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 ± 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

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</table>
| • 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 50 ± 5% | • Considering adding alternative specifications equivalent to porosity, such as:  
  • Visibility Blockage  
  • Shade Value  
  • Wind Speed Reduction  
  • Material Density  
  • Seeking stakeholder input for this provision |
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

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<tr>
<td>• 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.</td>
<td>• At the end of each working day, either chemically stabilize and/or completely cover with 10 millimeter mil thick plastic sheeting that overlaps a minimum of 24 inches.</td>
</tr>
</tbody>
</table>
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

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<tbody>
<tr>
<td>• 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.</td>
<td>• Daily, <strong>including nonworking days</strong>, inspect stabilized or covered stockpiles... <strong>Immediately Within one hour</strong>, re-stabilize or repair any holes, tears, or any other potential sources of fugitive toxic air contaminant emissions.</td>
</tr>
<tr>
<td></td>
<td>• 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.</td>
</tr>
</tbody>
</table>
### 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

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<tr>
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<tbody>
<tr>
<td>• No provision for submitting notification for project completion</td>
<td>• Add a provision to paragraph (f)(2) to require notification of project completion within 48 hours of project completion</td>
</tr>
</tbody>
</table>
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$_{10}$ 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$_{10}$ readings due to exceptional events like heavy smoke from wildfires
- Smoky conditions can result in unreliable PM$_{10}$ measurements
  - Smoke particles are in the PM$_{2.5}$ 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

<table>
<thead>
<tr>
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<th>Proposed Rule 1466 Provision</th>
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</thead>
<tbody>
<tr>
<td>• No provision to address measurements during exceptional events</td>
<td>• 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$_{10}$ limit until the event passes</td>
</tr>
<tr>
<td></td>
<td>• The request shall contain information substantiating:</td>
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<td></td>
<td>• The exceptional event</td>
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<td>• The event interferes with the PM$<em>{10}$ measurements (e.g. ambient PM$</em>{10}$ level is above the instrument range, instrument cannot re-zero)</td>
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<tr>
<td></td>
<td>• Attempts were made to fix the PM$_{10}$ monitor</td>
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Approval Requirements for PM$_{10}$ Monitors

**Issue:** Requirements for pre-approved PM$_{10}$ monitors need to be updated to clarify and streamline the approval process.

- Appendix 1 provides the requirements for pre-approved Rule 1466 PM$_{10}$ monitors

<table>
<thead>
<tr>
<th>Continuous direct-reading near real-time monitor that measures particulate matter less than 10 microns</th>
<th>Equipped with:</th>
<th>Meet the minimum performance standards:</th>
<th>Quality Assurance/Quality Control Plans that include:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Omni-directional inlet with water trap</td>
<td>• Periodic instrument calibration</td>
<td>• Range: 0 – 10,000 ug/m$^3$</td>
<td>• Operator training</td>
</tr>
<tr>
<td>• Sample heater tube</td>
<td>• Operator training</td>
<td>• Accuracy: ±5% of reading ± precision</td>
<td>• Daily instrument performance (span) checks</td>
</tr>
<tr>
<td>• Sample pump</td>
<td>• Resolution: 0.1 ug/m$^3$</td>
<td>• Volumetric flow controller</td>
<td></td>
</tr>
<tr>
<td>• Volumetric flow controller</td>
<td>• Measurement Cycle: User selectable (30 min or 2 hr)</td>
<td>• Enclosure</td>
<td></td>
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<tr>
<td>• Enclosure</td>
<td></td>
<td>• Data logger that can log each data point with average concentration, time/date, and date point number</td>
<td></td>
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</tbody>
</table>

- 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$_{10}$ 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

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<tbody>
<tr>
<td>• Appendix 1 – 2.c. – Approved PM$_{10}$ monitors must be equipped with a volumetric flow controller</td>
<td>• Approved PM$_{10}$ monitors must be equipped with a sample pump with active flow control mechanism and stated flow control accuracy</td>
</tr>
<tr>
<td>• Appendix 1 – 3.b. – Approved PM$_{10}$ monitors must meet accuracy of ±5% of reading ± precision</td>
<td>• Considering adding an intra-instrument comparison precision test for monitors</td>
</tr>
<tr>
<td></td>
<td>• Staff is currently determining feasibility of this proposal in the field and acceptable limits</td>
</tr>
</tbody>
</table>
Alternative Certification Option for Pre-Approved PM$_{10}$ Monitors

- Appendix 1 does not provide alternative options for manufacturers to demonstrate the PM$_{10}$ 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

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<tbody>
<tr>
<td>• No provision that allows alternative options to be used to demonstrate PM$_{10}$ monitor approval criteria</td>
<td>• Appendix 1 – Considering adding MCERTS certification as an option to demonstrate PM$_{10}$ monitor approval criteria</td>
</tr>
</tbody>
</table>

* MCERTS (U.K. Environmental Agency Monitoring Certificate Scheme): 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

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For more information, visit: PAR 1466 Proposed Rules Page
To receive e-mail notifications for Proposed Rule 1466, sign up at: www.aqmd.gov/sign-up