

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

Public Workshop March 4, 2021

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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

Overview of PAR 1466

- Clarifications are needed for certain monitoring, fencing, and stockpiling requirements to ensure provisions are enforceable
- Enhanced dust control measures for sites adjacent to school-related properties and during periods of inactivity
- Enhanced monitoring requirements to align with current capabilities in instrument technology
- Additional options are incorporated to applicable provisions and alternative provisions are removed to streamline rule implementation

Public Process

- Two Working Group Meetings
 - January 14, 2021
 - February 5, 2021

Preliminary Draft Rule Language

Purpose & Applicability and Table I

Subdivisions (a) & (b) and Table I

Purpose

- Additional earth-moving activities were added to provide clarity
 - Added dredging, earth-cutting and filling, loading, unloading, and mechanized land clearing

Applicability

- Removed effective date for Hazardous Material
 Release sites as the date has passed
- Table I Applicable Toxic Air Contaminants
 - Added polychlorinated biphenyl (PCB) congener (more defined) names to PCBs listed for clarification
 - Removed effective date for certain toxic air contaminants as the date has passed



DefinitionsSubdivision (c)

 PAR 1466 includes new, modified, and removed definitions

New Definitions

Slag

Modified Definitions

- Chemical Stabilizers
- School
- Soil
- Dust Suppressants Stockpile
- Earth-Moving Activities
- Track-out
- Minor modifications and removal of other definitions are to align with modified definitions

Chemical Stabilizers, Dust Suppressants, and Stabilized Surface Paragraphs (c)(3), (c)(5), & (c)(16)

- Revised definitions of "Chemical Stabilizers" and "Dust Suppressants" to remove circular references
- To align with definition changes, incorporated "Chemical Stabilizers" into the definition of "Stabilized Surface"
- To align with definition changes, all provisions requiring stabilization or a "Stabilized Surface" will allow use of a chemical stabilizer or dust suppressant
- Definition of "Chemical Stabilizers" removes use criteria and incorporates criteria into paragraph (e)(13)



Earth-Moving Activities Paragraph (c)(6)

- For clarification, added additional types of activities to "Earth Moving Activities" definition, including:
 - Dredging, handling, mechanized land clearing, treating, transferring, and removing
 - Vehicular movement by equipment associated with earth-moving activities
 - Specific types of vehicular movement that would not fall under this definition
- (76)EARTH-MOVING ACTIVITIES aremeans, for the purpose of this rule, any activity on a site that meets the applicability requirements of subdivision (b) where soil with applicable toxic air contaminant(s) SOIL WITH APPLICABLE TOXIC AIR CONTAMINANT(S) are is being moved or uncovered, shall include including, but not be limited to the following: dredging, excavating, grading, earthcutting and filling operations, loading, or unloading, handling, mechanized land clearing, and treating, transferring, removing, and adding to or removing from STOCKPILESstockpiles, and vehicular movement of equipment associated with these activities. EARTH-MOVING ACTIVITIES do not include vehicular movement from: delivery vehicles; passenger vehicles transporting personnel to and from the site, vehicles used for administrative purposes, vehicles transporting personnel for the purposes of soil sampling and conducting ambient PM₁₀ monitoring requirements, watering trucks, and equipment used exclusively on a portion(s) of the site where there is no SOIL WITH APPLICABLE TOXIC AIR CONTAMINANT(S).

Early Education Center & School

Formerly Paragraph (c)(6) and Paragraph (c)(12)

- Deleted the "Early Education Center" definition and incorporated it into the "School" definition to be consistent with other South Coast AQMD rules that define "School"
 - All references to Early Education Centers are deleted, schools are already referenced in these instances

(1312) SCHOOL is—means any public or private education center, including juvenile detention facilities with classrooms and education centers serving as the students' place of residence (e.g., boarding schools), used for purposes of the education of more than 12 children at the school in kindergarten or anythrough grades 1 to 12, inclusive, but does not include any school in which education is primarily conducted in private homes. A SCHOOL also includes an Early Learning and Developmental Program by the U.S. Department of Education or any state or local early learning and development programs such as preschools, Early Head Starts, Head Start, First Five, and Child Development Centers. A school does not include any private school in which education is primarily conducted in private homes. A SCHOOL School includes any building or structure, playground, athletic field, or other areas of school property.

Slag and Soil Paragraphs (c)(13) & (c)(14)

- Added "Slag" to the definition of "Soil" to clarify questions regarding if slag is a soil
- "Slag" defined as the by-product material that is separated from metals during smelting or refining of ore



Stockpile & Track-Out

Paragraphs (c)(17) & (c)(18)

- Revised "Stockpile" definition to ensure that if a stockpile is covered or stabilized, that the covered or stabilized soil is still considered a stockpile for enforcement of stockpile measures
- Revised "Track-out" definition to clarify that road "staining" or other soil depositions on a paved road that cannot be removed by a vacuum sweeper are not considered track-out and will not be subject to track-out provisions
 - Aligns with Rule 403 enforcement of track-out



Monitoring Requirements Subdivision (d)

- Rule 1466 Approved PM₁₀ Monitors
- Installing PM₁₀ Monitors
- Conducting PM₁₀ Monitoring
- Calculating PM₁₀ Concentration
- Data Logging and PM₁₀ Calculation
 Failures

Rule 1466 Approved PM₁₀ Monitors

Subparagraph (d)(3)(A) and Paragraph (d)(7)

- Replaced provision that allows an alternative monitoring method to only allow use of a Rule 1466 Approved Monitor [(d)(3)(A)] to streamline monitoring method requirements
- Added provision specifying how to request a PM₁₀ monitor to be added to the Rule 1466 Approved PM₁₀ Monitor List [(d)(7)]
 - Requests for a monitor to be added to the approved list must include:
 - A description of the monitor, any accessories and all monitor specifications, and
 - Documentation demonstrating each specification listed in Appendix 1 Rule
 1466 Approved PM₁₀ Monitors



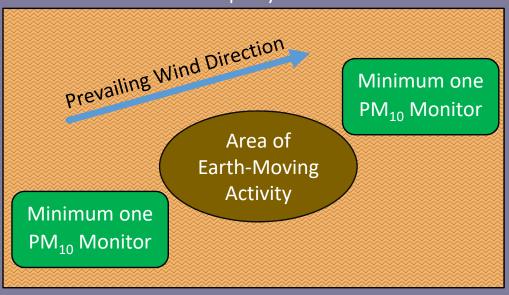




Installing PM₁₀ Monitors Subparagraph (d)(3)(B)

- Revised provisions to remove designation of monitors as an "upwind" or "downwind" monitor
 - Monitors will still be placed in the upwind and downwind locations based on seasonal prevailing wind direction

 Property Line



Conducting PM₁₀ Monitoring

Subparagraphs (d)(3)(C) & (d)(3)(E)-(F)

- Operation, maintenance, and calibration of PM₁₀ monitors as required in (d)(3)(D) may result in different calibration, correction, and correlation factors for each monitor
 - Removed "calibration" and "calibration, correction, and correlation factors" from requirement to use identical PM₁₀ settings to avoid contradictory results [(d)(3)(C)]
- Beginning January 1, 2022, added requirement of calibrating date and time of data logged to PST and adjusted data logging requirement to every one minute [(d)(3)(F)]
- Existing data logging requirement of every 10 minutes or less for data acquisition system (DAS) to continue until December 31, 2021 [(d)(3)(E)]



Conducting PM₁₀ Monitoring

Subparagraphs (d)(3)(G)-(I)

- Added requirement for operating monitors with heated sampler inlet on at all times to ensure no humidity interference [(d)(3)(G)]
- Added requirements for weekly intra-instrument precision tests and daily zero checks to ensure PM₁₀ measurement accuracy and precision [(d)(3)(H)-(I)]
- New requirements will be effective January 1, 2022

- (G) On and after January 1, 2022, operating PM₁₀ monitors with the heated sampler inlet on;
- (H) On and after January 1, 2022, prior to conducting any on-site earth-moving activities, and weekly thereafter, run intra-instrument precision tests with the PM₁₀ monitors in accordance with Appendix 2 Procedures to Demonstrate Intra-Instrument Precision, demonstrating an intra-instrument precision of no more than ± 2 micrograms per cubic meter or ± 5 percent; and
- (I) On and after January 1, 2022, each day prior to conducting on-site earthmoving activities, perform a manual or automatic zero test on each PM₁₀ monitor in accordance with manufacturer's instructions.

Calculating PM₁₀ Concentration

Subparagraphs (d)(4)(A)-(C), (d)(4)(G), & (d)(4)(H)

- Updated PM_{10} concentration calculation from a two-hour average to a 120-minute rolling average to reflect current DAS capabilities [(d)(4)]
 - Clarified that PM_{10} averaging starts when earth-moving activities commence instead of at the top of each hour [(d)(4)(A)]
 - Beginning January 1, 2022, added requirement that subsequent 120-minute rolling average PM_{10} concentration be calculated every one minute in alignment with new DAS requirements [(d)(4)(C)]
 - Specified that subsequent 120-minute rolling average calculation is every 10 minutes until December 31,
 2021 to retain existing DAS requirements [(d)(4)(B)]
- Added provisions to clarify the start of a new averaging period when resuming activities
 after an exceedance to ensure operators are not penalized for the previous exceedance in
 the current rolling average [(d)(4)(G)-(H)]

Calculating PM₁₀ Concentration

Subparagraph (d)(4)(D)

- Removed "absolute difference" in PM₁₀ calculation to ensure appropriate enforcement of PM₁₀ limit when there are dust emissions from upwind sources [(d)(4)(D)]
- Added provisions to re-designate upwind and downwind monitors if the seasonal wind direction changes by more than ± 90° [(d)(4)(D)(i) & (ii)]
 - If the upwind becomes downwind, then the PM₁₀ will be the difference of the true downwind minus the true upwind

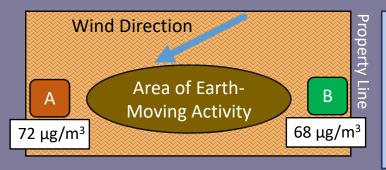
Before Wind Direction Change



PM₁₀ Calculation:

- Monitor B
 (downwind) –
 Monitor A (upwind)
- 70 μg/m³ 60 μg/m³
 10 μg/m³

After Wind Direction Change > 90°



PM₁₀ Calculation After Wind Direction Change:

- Monitor A (now downwind) – Monitor B (now upwind)
- $72 \mu g/m^3 68 \mu g/m^3$ = $4 \mu g/m^3$

Data Logging or PM₁₀ Calculation Failure Paragraph (d)(5)

 Added provision addressing data logging or concentration calculation failure due to technical issues beyond operator control, such as internet connection disruptions and

computer malfunctions

- (5) In the event that a DAS fails to log ambient PM₁₀ data pursuant to subparagraph (d)(3)(F) or that data management software integrated with the PM₁₀ monitor(s) and DAS(s) fails to calculate PM₁₀ concentrations pursuant to subparagraph (d)(4)(C) due to a technical issue beyond the reasonable control of an owner or operator, including, but not limited to, internet connection disruptions and computer malfunctions, the owner or operator shall:
 - (A) Restore the DAS or data management software to working condition as soon as practicable and no later than 24 hours after the end of the working day; and
 - (B) Manually record the PM₁₀ concentration from the monitor(s) associated with the non-operational DAS once every 10 minutes or less until the DAS is restored or calculate the PM₁₀ concentration pursuant to subparagraph (d)(4)(B) until the data management software is restored.

When a technical issue causes a DAS to stop logging data or data management software to stop calculating PM₁₀ concentrations, operator must:

As soon as possible but no later than the end of the next working day, have a working DAS or data management software, and

Manually record or calculate the PM₁₀ concentration every 10 minutes or less until the DAS or data management works again

Requirements to Minimize Fugitive Dust Emissions Subdivision (e)

- Fencing Windscreen
- Vehicular Movement & Egress
- Stockpiles
- Periods of Inactivity
- Sites Adjacent to School-Related Properties

Fencing Windscreen Paragraphs (e)(1)-(2)

- Added exclusion from fencing requirement [(e)(1)] if:
 - Physical barrier is present that is at least six feet tall but at least six inches taller than the tallest stockpile (e.g. wall, metal or fiberglass panels, storage or transport container); or
 - No earth-moving or vehicular movement within 300 feet from site perimeter
- Revised windscreen specifications to change the standard from porosity of 50 ± 5% to a
 mesh windscreen with shade value or opacity of 85 ± 5% and is at least six inches taller than
 the tallest stockpile [(e)(2)]
 - Shade value or opacity standard effective January 1, 2022



Vehicular Movement & Egress

Paragraph (e)(4)

- Aligned allowable track-out provision with Rule 403 to be maximum cumulative length instead of continuous length [(e)(4)(C)]
- Corrected 99.97% "control" to "capture" efficiency for vacuum required to remove trackout [(e)(4)(C)]
- Added that cleaning method of vehicle exterior and tires cannot be forced air cleaning [(e)(4)(D)]
- Increased widths of surface paving and wheel shaker/spreaders dividers to 30 feet to align with required width of egress pad [(e)(4)(E)]

Stockpile Measures

Paragraph (e)(5)

- (45) An owner or operator conducting <u>on-site</u> earth-moving activities <u>shall ensure</u> that <u>result in the development of stockpiles of with applicable toxic air contaminant(s) shall be:</u>
 - (A) Segregated from non-contaminated stockpiles from stockpiles with applicable toxic air contaminant(s); and
 - (B) <u>Labelled</u> with "South Coast AQMD Rule 1466 Control of Particulate Emissions from Soils with Toxic Air Contaminant(s) Applicable Soil";
 - (BC) Maintained stockpiles to avoid steep sides or faces that exceed the angle of repose;
 - (CD) Not create a stockpile that is No more than 400 cubic yards of soil; and greater in height than the perimeter fencing and windscreen;
 - (ĐE) Maintained to minimize fugitive dust emissions containing toxic air contaminants by applying chemical stabilizers pursuant to paragraph (e)(13) or Apply dust suppressant to stockpiles; and
 - (EF) At the end of each working day, eEither completely chemically stabilized pursuant to paragraph (e)(13) and/or completely covered at all times when earth-moving activities and ambient PM₁₀ monitoring are not occurring. If a cover is used, the cover shall be at least with 10 milliliter mil thick plastic sheeting that overlaps a minimum of 24 inches. The plastic sheeting shall be anchored and secured so that no portion of the soil is exposed to the atmosphere and shall be free of any holes or tears.; and

- · Removed height requirement for a stockpile
- No longer needed as there is existing height requirement for fencing
- Revised provision for stabilizing or covering stockpiles to at all times when work and monitoring are not being conducted
 - Minimizes exposure to surrounding community during nonworking hours
 - Does not apply to periods of no activity but ambient monitoring is still occurring (e.g. lunch breaks)
- Corrected thickness of plastic to "mil" and allow thicker covers
- Added requirement that covers be free of holes or tears to ensure covers are in good condition

Stockpile Inspections

Paragraph (e)(12)

- Moved daily inspection requirement of stockpiles from paragraph (e)(5) to paragraph (e)(12)
- (12) An owner or operator shall daily, including days when no on-site earth-moving activities are occurring, inspect stabilized or covered stockpiles pursuant to (e)(5)(F) and labeled stockpiles pursuant to subparagraph (e)(5)(B).
 - (A) For a stabilized stockpile, such inspections shall include a demonstration of stabilization by one or more of the applicable test methods contained in South Coast AQMD Rule 403 Fugitive Dust Implementation Handbook or Volumes I and II of South Coast AQMD's Dust Control in the Coachella Valley.
 - (B) For a covered stockpile, such inspections shall include a visual inspection of all seams and plastic cover surfaces.

- Clarified that the daily inspection of stockpiles includes nonworking days
 - Inspections on days when no earthmoving activities are occurring was original intent of daily inspection provision
- Clarified that daily inspection includes inspecting labelling on stockpiles
- Separated inspection requirements for stabilized and covered stockpiles
- Removed language of immediate restabilizing of stockpiles or repairing of holes or tears in covers
 - Align with stockpile measures of stabilization and covering with no holes or tears at all times when work and monitoring are not occurring

Periods of Inactivity

Paragraph (e)(11)

- Shortened timeframe from 3 days of inactivity to at all times when earth-moving activities and ambient PM₁₀ monitoring are not occurring when potential sources of fugitive dust must be stabilized
 - Minimizes exposure to surrounding community during nonworking hours
 - Requirement does not apply to periods of no activity but ambient monitoring is still occurring (e.g. lunch breaks)



Sites Adjacent to School-Related Properties Paragraph (e)(14)

- Extended enhanced dust control measures for schools, joint use agreement properties, and adjacent athletic areas to sites in physical contact with schools, joint use agreement properties, or adjacent athletic areas
 - Enhanced practices needed due to the toxic
 nature of the soil and the proximity to children



Notification Requirements

Subdivision (f)

Projects Exceeding 50 yd³ [(f)(1)(A)]

 Added an initial notification provision for sites that become applicable to Rule 1466 after the project exceeds the 50 yd³ threshold

Initial Notification Requirements [(f)(1)(B)]

 Added requirement to identify whether the site is adjacent to a school-related property for consistency with enhanced dust control provisions for sites adjacent to schools, joint use agreement properties, and adjacent athletic areas

Project Completion Date [(f)(2)(D)]

- Added a notification update for project completion
- Project completion information needed for inspection planning and complaint investigation purposes

Exceedance Notification Requirements [(f)(3)(E)]

- Added requirement to include wind monitoring results
- Wind monitoring results needed to ensure monitors are appropriately designated as upwind and downwind

Signage Requirements Subdivision (g)



- Added exclusion from signage requirement for when the property line and perimeter of the site is not visible or not accessible to the public to streamline additional signage measures
 - Does not apply to school-related properties or sites adjacent to school-related properties due to the toxic nature of the soil and the proximity to children
- Retained provision allowing alternative signage in case:
 - Signage continues to exceed 48 inches by 96 inches with smaller lettering for applicable toxic air contaminants
 - Alternate location(s) for installing signage is needed

Recordkeeping Requirements Subdivision (h)

 Added provisions and clarified types of data needed for existing recordkeeping requirements to ensure enforceability of new and existing rule provisions

- Added recordkeeping provisions for:
 - Inspections of stabilized stockpiles and restabilization, cover repair, and label maintenance activities conducted on stockpiles
 - Instrument maintenance activities
- Clarified additional instrument data and calculations needed for recordkeeping of wind and PM₁₀ monitoring results



Alternative Provisions Subdivision (j)

- Currently, Rule 1466 allows operators to request alternative provisions for a variety of provisions
- Rule 1466 has been implemented for over three years, staff now has more information on the implementation status of the rule
 - Over the three year implementation period, there are a number of provisions where no alternatives were requested
- Removed alternative provisions except for signage and incorporated additional provisions/exclusions into rule language
- Existing approved alternative provisions remain in effect for specific project and time period approved for, but cannot be renewed or extended

Appendix 1 – Rule 1466 Approved PM10 Monitors

Physical Requirements

- Removed "volumetric flow controller" requirement and added that sample pump must have an active flow control mechanism
 - Clarifies that monitors be equipped with some flow control mechanism and excludes monitors with no flow control mechanism and passive sampling devices
- Added requirement that any external tubing used to carry sampled air be conductive to minimize particle loss

Performance Requirements

- Added MCERTS certification as an option to demonstrate performance requirements
 - Monitors still need to meet all physical requirements
- MCERTS performance standard for indicative ambient particulate monitors was referenced to develop the instrument requirements for Rule 1466 monitoring



Appendix 2 – Procedures to Demonstrate Intra-Instrument Precision

 Added procedures and calculations necessary for conducting the intrainstrument precision test specified in subparagraph (d)(3)(H)

Appendix 2 - Procedures to Demonstrate Intra-Instrument Precision

An owner or operator shall perform the following procedures to demonstrate the intra-instrument precision of all PM_{10} monitors as required in subparagraph (d)(3)(H):

- Ensure monitors are identical in make and model, settings, and configuration.
- Ensure monitor inlets are at the same height and located within four meters of each other but no less than one meter apart for the duration of the test.
- 3. Power on the monitors and turn on the heated sampler inlet. Allow the monitors to warm-up per manufacturer's recommendations or when readings have stabilized.
- 4. For each monitor, perform a manual zero test by removing any size selective inlet and installing a filter, rated by the manufacturer to achieve a 99.97 percent control efficiency for 0.3 micron particles, on the inlet of the monitor for a minimum of ten minutes.
- 5. Log the PM₁₀ concentration reading every minute and calculate and record the average of the readings of the zero test. The average of the zero test readings shall be noted and used to correct for instrument bias for the readings obtained during the intra-instrument precision test.
- 6. Remove the filter and install the monitor inlet as required. Operate the monitors simultaneously for a minimum of 30 minutes.
- 7. Calculate the intra-instrument precision using either of the following equations:
 - a. Intra-instrument precision in relative percent (%):

$$P = \frac{S_t}{C_t} \times 100\%$$

b. <u>Intra-instrument precision in absolute value (micrograms per cubic meter):</u>

$$P = S_t$$

Record the results.

Scope of Socioeconomic Impact Assessment & CEQA Determination

Applicable Legal Requirements for PAR 1466

- California Health and Safety Code Section 40440.8
 - Requires socioeconomic impact assessment for proposed rule or rule amendment which "will significantly affect air quality or emissions limitations"
 - Socioeconomic impact assessment shall consider:
 - Type of affected industries, including small businesses
 - Range of probable costs, including costs to industry or business
 - Impact on employment and regional economy

Cost Considerations

- One-time compliance costs
 - Capital cost of new equipment (e.g. installation of additional electrical source or solar panels)
 - Monitoring equipment and components (e.g. data acquisition system and modem equipment)
- Recurring costs
 - Increased electricity and water consumption (e.g. to electrical power for monitoring with heated inlet on, DAS, and telemetry equipment, water for dust suppression)
 - Monitoring (e.g. DAS for minute PM₁₀ data, data management software for rolling average PM₁₀ calculation, data plan for telemetry)
 - Increased frequency of soil stabilization (e.g. water and dust suppressant)
- Staff is looking for input on these and/or other costs

California Environmental Quality Act (CEQA)

- PAR 1466 does not have any project elements requiring physical modifications that would cause a significant adverse effect on the environment
- PAR 1466 is exempt from CEQA and a Notice of Exemption will be prepared pursuant to CEQA Guidelines Section 15061 (b)(3) – Common Sense Exemption, which exempts actions where it can be seen with certainty that there is no possibility that the proposed project may have a significant adverse effect on the environment

Next Steps

Additional Working Group Meeting

• Early March, if needed

Written Comments Due

• March 18, 2021

Stationary Source Committee

• March 19, 2021

Set Hearing

• April 2, 2021

Public Hearing

• May 7, 2021

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