SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Preliminary Draft Staff Report
Proposed Amended Rule 1466 – Control of Particulate Emissions from Soils with Toxic Air Contaminants

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INTRODUCTION

Rule 1466 – Control of Particulate Emissions from Soils with Toxic Air Contaminants (Rule 1466) minimizes fugitive dust emissions containing toxic metals, pesticides, herbicides, polychlorinated biphenyls, and other toxic air contaminants from sites that meet the rule's applicability requirements by establishing dust control measures that can be implemented during earth-moving activities. Applicable sites are those that are determined to have soil that contains one or more applicable toxic air contaminants and designated as cleanup sites by the U.S. Environmental Protection Agency (U.S. EPA), California Department of Toxics Substances Control (DTSC), State Water Resources Control Board (State Water Board), Regional Water Quality Control Board (Regional Water Board), or county, local or state regulatory agency. Additionally, Rule 1466 has a provision for the Executive Officer to identify sites, based on a set of criteria, to be subject to the requirements of the rule. The rule establishes a PM_{10} ambient dust concentration limit and dust control measures. Notification to the Executive Officer is required prior to beginning earth-moving activities as well as when ambient PM_{10} dust concentration limits are exceeded. Additional requirements include recordkeeping and signage. Currently, Rule 1466 allows alternative dust control measures, ambient dust concentration limits, signage, and other alternative provisions upon Executive Officer approval.

Proposed Rule 1466 – Control of Particulate Emissions from Soils with Toxic Air Contaminants (PAR 1466) will clarify existing provisions; update requirements for pre-approved monitors, and PM_{10} monitoring and calculation; enhance dust control measures for vehicles, stockpiling, periods of inactivity, and sites in physical contact with schools, joint use agreement properties, and athletic areas; remove alternative provisions for dust control measures, ambient dust concentration limits, and other requirements; streamline provisions for existing fencing and signage; and add additional requirements for notifications and recordkeeping.

REGULATORY BACKGROUND

South Coast AQMD's regulatory structure for fugitive dust and particulate matter includes rules that address fugitive dust (Rule 403 – Fugitive Dust); volatile organic compounds (VOCs) contaminated soil (Rule 1166 – Volatile Organic Compound Emissions from Decontamination of Soil); and soil containing toxic air contaminant(s) (Rule 1466).

Rule 1466

Rule 1466 was adopted in July 2017 and filled a regulatory gap in controlling fugitive dust from soil containing non-VOC toxic air contaminants, requiring continuous ambient dust monitoring and implementation of enhanced dust control measures. The rule was amended in December 2017 to expand the list of applicable toxic air contaminants to include pesticides, herbicides, other metals, persistent bioaccumulative toxics, and semi-volatile organic compounds. The amendment also expanded the rule's applicability to other government designated sites and clarified existing provisions.

Rule 1166

Rule 1166 was adopted in August 1988 and established requirements to control VOC emissions from excavating, grading, handling and treating VOC-contaminated soil as a result of leakages from storage or transfer operations, accidental spillage or other deposition. Although Rule 1166 targets VOC emission reductions, implementation of the rule also results in concurrent reductions in toxic-VOCs such as benzene, toluene, xylene, and ethylbenzene, which are generally associated

with petroleum products. The rule includes provisions for mitigation plans to limit VOC emissions, notification to the SCAQMD, and monitoring requirements; as well as measures to reduce VOC emissions during stockpiling and truck loading. Rule 1166 does not apply to sites with soils containing non-VOC toxics, such as metal toxic particulates and the toxic air contaminants covered under Rule 1466.

Rule 403

Rule 403 was adopted on May 7, 1976. The purpose of Rule 403 is to reduce particulate matter entrained in ambient air as a result of man-made fugitive dust sources by requiring actions to prevent, reduce, or mitigate fugitive dust emissions. Rule 403 limits particulate matter concentrations, when monitored, and contains control measures to limit fugitive dust. Rule 403 provides a menu of dust control guidance and options for the operator to select. Additional provisions, including more specific dust control measures, are included for large operations (> 50 acres) and for operations where fugitive dust concentrations exceed performance standards. Many sites with toxic air contaminant(s) in the soil are less than 50 acres, and therefore are not required to implement these additional and more specific dust control measures. Also, ambient dust monitoring is not always required under Rule 403. Even when monitoring is required, the 50 $\mu g/m^3$ PM_{10} ambient dust concentration limit may not be sufficiently health protective for toxic air contaminants.

NEED FOR PROPOSED AMENDED RULE 1466

Clarifications are needed for certain monitoring, fencing, and stockpiling requirements to ensure provisions are enforceable. Enhanced monitoring requirements are needed to align with instrument advances. Instrumentation advances in PM_{10} monitoring methods have demonstrated that PM_{10} concentrations can be calculated on a continuous, real-time basis, which can improve the response to a PM_{10} limit exceedance and maintain fugitive dust mitigation. Between 2019 and 2020, there were 23 notified exceedances of the 25 $\mu g/m^3$ PM_{10} concentration limit. These exceedances occurred at eight out of approximately seventy sites. Alternative provisions are removed to streamline rule implementation. Rule provisions including the PM_{10} limit, monitoring method, and calculation, dust control measures, signage, and direct loading requirements have been demonstrated to be achievable with few requests for alternative provisions.

PUBLIC PROCESS

PAR 1466 is being developed through a public process. South Coast AQMD has held two Working Group Meetings remotely on January 14, 2021 and February 5, 2021. The Working Group is composed of representatives from businesses, environmental groups, public agencies, and consultants. The purpose of the Working Group meetings is to discuss the proposed rule amendments and allow stakeholders the opportunity to provide input during the rule development process. A Public Workshop is scheduled for March 4, 2021.

CHAPTER 2: SUMMARY OF PROPOSAL

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PROPOSED AMENDED RULE 1466

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INTRODUCTION

PAR 1466 will clarify and streamline existing provisions, update monitoring requirements, enhance specific dust control measures, remove alternative provisions for most requirements, and add additional requirements for notifications and recordkeeping.

PROPOSED AMENDED RULE 1466

Purpose (Subdivision (a))

For consistency with the revised definition of "Earth-Moving Activities" in paragraph (c)(6) of the proposed amended rule, additional earth-moving activities of "dredging," "earth-cutting and filling," "loading," "unloading," and "mechanized land clearing" are added.

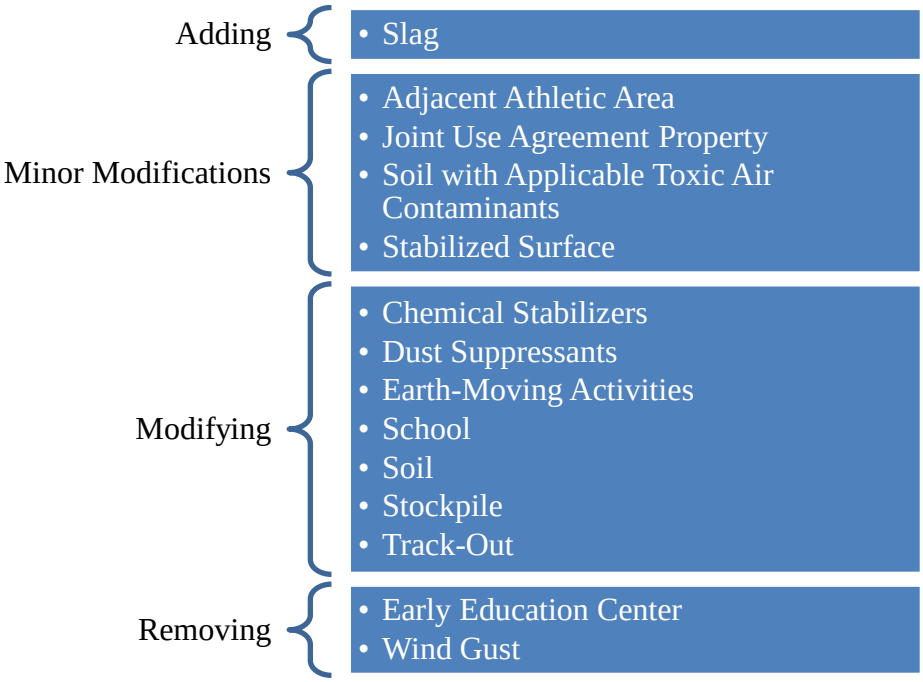
Applicability (Subdivision (b))

In December 2017, Rule 1466 was amended to expand the applicability of the rule to include Hazardous Material Release Sites designated and notified by county, local, or state regulatory agencies. The expanded applicability would be effective January 1, 2018. As this effective date has passed, PAR 1466 will remove this effective date.

Definitions (Subdivision (c))

PAR 1466 includes new, modified, and removed definitions, as listed in Figure 1.

Figure 1: Proposed Definition Revisions



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

The definitions for "Chemical Stabilizers" and "Dust Suppressants" are revised to remove circular references. To align with these changes, "Chemical Stabilizers" are incorporated into the definition of "Stabilized Surface" to indicate that a stabilized surface could be achieved through either use

of dust suppressants or through chemical stabilization. Due to the proposed amendments to the definitions of chemical stabilizer, dust suppressant, and stabilized surface, all provisions requiring stabilization or a stabilized surface will now allow for the use of chemical stabilizer or dust suppressant to control dust from these sources. Additionally, requirements for how to use chemical stabilizers are removed from the "Chemical Stabilizers" definition and incorporated into paragraph (e)(13).

Earth-Moving Activities (paragraph (c)(6))

The definition for "Earth-Moving Activities" is clarified by removing "but not limited to" and adding additional earth-moving activities of "dredging," "handling," "mechanized land clearing," "treating," "transferring," "removing," and "vehicular movement by equipment associated with these activities." This definition also specifies vehicular movement that would not fall under the "Earth-Moving Activities" definition, including 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 PM_{10} monitoring requirements, watering trucks, and equipment used exclusively on an area(s) of the designated site that does not contain soil with applicable toxic air contaminant(s). Vehicular movement associated with activities to prepare the site prior to commencing a cleanup project, such as installing fencing and PM_{10} monitors, also do not fall under this definition. Filling operations with soil that is designated to have applicable toxic air contaminants but has been certified as clean by the designating agency after remediation would not fall under the "Earth-Moving Activities" definition.

Early Education Center and School (formerly paragraph (c)(6) and paragraph (c)(12))

For purposes of achieving consistency with recently adopted and amended South Coast AQMD rules, the definition of "School" is revised. The revised definition incorporates the definition of "Early Education Center" from paragraph (c)(6) in the current rule. As a result of this incorporation, the "Early Education Center" definition is deleted along with all references to "Early Education Center" in the rule provisions and definitions of "Adjacent Athletic Area" and "Joint Use Agreement Property."

Slag and Soil (paragraphs (c)(13) and (c)(14))

A definition for "slag" is added in paragraph (c)(13) and is defined as the by-product material separated from metals during smelting or refining of ore. "Slag" was also added to the list of substances describing "Soil" in paragraph (c)(14) to clarify that soil includes this substance.

Stabilized Surface (paragraph (c)(16))

"Chemical Stabilizers" is added to indicate that a stabilized surface could be achieved through either dust suppressants or chemical stabilization.

Stockpile (paragraph (c)(17))

The current definition of "Stockpile" excludes soil which has been covered or stabilized. This impacts the ability to enforce stockpiling requirements. The exclusion has been corrected.

Track-Out (paragraph (c)(18))
The definition of "Track-out" is amended to clarify that road "staining" or other depositions of soil onto a roadway that cannot be removed by a vacuum sweeper are not subject to the track-out provisions.

Wind Gust (formerly paragraph (c)(20))
This definition is removed as the rule's various provisions for high winds do not reference wind gust.

Monitoring Requirements (Subdivision (d))

PAR 1466 will clarify existing monitoring and concentration calculation provisions to ensure appropriate enforcement of the PM_{10} limit and enhance monitoring requirements to minimize monitoring data gaps and ensure accurate and precise PM_{10} measurements.

Rule 1466 currently requires that the two-hour PM_{10} concentration calculation starts at the top of each hour, despite earth-moving activities not starting at the top of the hour. The intent of the PM_{10} calculation is to monitor the PM_{10} concentration during periods of activity, not periods of inactivity. To clarify this intent, the start of the two-hour PM_{10} concentration calculation is revised to begin when earth-moving activities commence and not at the top of the hour.

Also, as currently written, the PM_{10} does not reset after an exceedance of the 25 $\mu g/m^3$ PM_{10} concentration limit is addressed. After an exceedance is addressed, the two-hour averaging of the PM_{10} concentration should be reset when earth-moving activities resume. If the cause of exceedance was addressed by applying dust suppressants or other mitigation measures, work could not resume until sufficient time had elapsed to allow the two-hour average to be below the standard. The intent of the PM_{10} limit is to alert the operator when there is an exceedance of the limit to increase vigilance of implementing dust control measures; once those measure have been implemented, the operator should not be penalized for the previous exceedance in the current rolling average. To clarify this intent, a provision is added requiring that the two-hour averaging of the PM_{10} concentration be reset when earth-moving activities resume.

Additionally, Rule 1466 currently requires that the PM_{10} concentration be calculated as an absolute difference of the results between the upwind and downwind monitors at the site, regardless of wind direction. This has led to unnecessary delays or stoppages in earthmoving activities. If concentrations at the upwind monitor are elevated due to activities upwind of the site, the absolute difference methodology could result in an exceedance of the 25 $\mu g/m^3$ PM_{10} concentration limit even though the cause of the exceedance is not earth-moving activities on the site. To clarify this intent, provisions are added for designation of upwind monitors and downwind monitors.

Paragraph (d)(2)
PAR 1466 removes the provision which allows use of an alternative PM_{10} limit. Based on rule implementation over the past three years, the 25 $\mu g/m^3$ PM_{10} limit is achievable, and only two sites have requested a higher PM_{10} limit.

Paragraph (d)(3)
Paragraph (d)(3), which required that the PM10 monitoring be conducted using a federal approved equivalent method or an alternative method approved by the Executive Officer, now removes the

alternative method and specifies that the PM_{10} monitoring must be conducted using a Rule 1466 Approved PM_{10} Monitor.

Also, paragraph (d)(3) now specifies the requirements for placement and specifications of the PM_{10} monitors. The monitors will continue to be placed in the seasonal prevailing wind direction upwind and downwind of the site and as close to the property line as feasible. However, as clarified in the proposed changes to subparagraph (d)(3)(B), the monitors will no longer be referred to as "upwind" and "downwind" monitors to allow for re-designation of the monitors corresponding to the wind direction when the direction of the wind shifts. Requirements for re-designating the monitors based on the wind direction change are also added in subparagraph (d)(4)(D).

Subparagraph (d)(3)(C) (formerly subparagraph (d)(3)(D)) contained the requirement for PM_{10} monitors to be identical in make and model, settings, calibration, configuration, and calibration, correction, and correlation factors. The term "settings" in subparagraph (d)(3)(C) refers to the run parameters entered into the instrument such as: flow rate, humidity control, conditioning of sample air stream, logging mode and averaging period, run times, zeroing, and correction factor. "Configuration" refers to any of the accessories on the PM_{10} monitor such as the: inlet (omni directional, heated, cyclone, etc.), water trap, zero module, pump, and filter. The phrase "calibration, correction, and correlation factors" refers to any value that scales the concentration output. At the same time, subparagraph (d)(3)(D) (formerly subparagraph (d)(3)(E)) currently requires that each PM_{10} monitor be operated, maintained, and calibrated in accordance with EPA documents for federal equivalent methods for PM_{10} or manufacturer's instructions, which may actually result in different calibration, correction, and correlation factors for each monitor. To avoid this contradictory result and to ensure that these factors determined pursuant to subparagraph (d)(3)(D) are applied as determined individually for each monitor, it is proposed that the term "calibration" and the phrase "calibration, correction, and correlation factors" be removed from subparagraph (d)(3)(C).

To align with changing the two-hour average from a ten-minute rolling average to a one-minute rolling average, subparagraph (d)(3)(F) will require a data acquisition system (DAS) capable of logging direct-reading near real-time data every minute. Additionally, the date and time will need to be calibrated to Pacific Standard Time.

A provision is proposed to be added to subparagraph (d)(3)(G), which will require monitors to be operated with the heated sample on. This ensures that humidity will not affect the results of the PM_{10} reading and that all instruments on-site are operating in the same manner, producing results that are as accurate as possible.

Two additional provisions are proposed to ensure accuracy and precision of the PM_{10} measurements. These include the requirements of performing an intra-instrument precision test and a zero test on the monitors. An initial intra-instrument precision test, which is to be conducted before earth-moving activities occur and each week thereafter ((subparagraph (d)(3)(H)), will ensure more precise results. A zero test in accordance with the monitor manufacturer's instructions, to be conducted daily (subparagraph (d)(3)(I)), will ensure that the instrument is clean and there are no interferences. In order to allow time for stakeholders to prepare for implementation

of new provisions, subparagraphs (d)(3)(F) through (d)(3)(I) will become effective January 1, 2022.

Paragraph (d)(4)

The calculation methodology currently used to determine the 120-minute rolling average PM_{10} concentration is found in paragraph (d)(4). The average is now proposed to begin as work commences instead of at the top of the hour (subparagraph (d)(4)(A)) to ensure monitoring of PM_{10} is conducted during periods of activity and minimize gaps in monitoring data.

Until December 31, 2021, the average will continue to be calculated every ten minutes (subparagraph (d)(4)(B)). Beginning January 1, 2022, subparagraph (d)(4)(C) requires that the average be calculated each minute covering the previous 120-minute period. Changing the two-hour average from a ten-minute rolling average to a one-minute rolling average updates the requirements to reflect current capabilities of DAS. This is intended to provide stakeholders with sufficient time to prepare for implementation of the new provisions.

Currently, to calculate the PM_{10} concentration, Rule 1466 uses the absolute difference between the two monitors. PAR 1466 proposes to designate a monitor(s) as the "upwind" monitor(s) while the other monitor(s) will be designated as the "downwind" monitor(s) depending on the wind direction. The concentration will be determined by subtracting the results of the downwind monitor(s) from the upwind monitor(s). Once the wind direction shifts to greater than ± 90 degrees from the seasonal prevailing wind direction, then the designation of monitors change and upwind becomes downwind and downwind becomes upwind (subparagraph (d)(4)(D)). Current Rule 1466 requires PM_{10} to be calculated using absolute value, but that may trigger a PM_{10} exceedance if there are activities upwind of the site elevating upwind concentrations. Removing the absolute value would better characterize PM_{10} exceedances at the site.

Subparagraphs (d)(4)(G) and (d)(4)(H) will allow the rolling average to restart once work recommences after having ceased because of an exceedance. Specifically, the rolling average will restart after ceasing operations and applying dust suppressant or implementing other dust control measures until PM10 concentration falls to or below 25 $\mu g/m^3$ averaged over 30 minutes. The intent of the PM_{10} limit is to alert the operator when there is an exceedance of the limit to increase vigilance of implementing dust control measures; once those measure have been implemented, the operator should not be penalized for the previous exceedance in the current rolling average.

PAR 1466 removes the provision which allows use of an alternative PM_{10} concentration calculation method (previously subparagraph (d)(4)(D)). Based on rule implementation over the past three years, no sites have requested an alternative calculation method.

Paragraph (d)(5)

If a DAS fails to log ambient PM_{10} data or the data management software fails to calculate PM_{10} concentrations due to circumstances, such as internet issues or computer malfunctions, beyond the reasonable control of the owner or operator, earth-moving activities may continue provided that the PM_{10} concentration at each monitor is manually recorded once every ten minutes or the PM_{10} concentration is calculated manually once every 10 minutes.

Paragraph (d)(7)

A request to be added as a Rule 1466 Approved PM_{10} Monitor shall be submitted to Rule1466ApprovedMonitors@aqmd.gov and must include a description of the monitor, any accessories, and all monitor specifications and include documentation demonstrating compliance with each specification listed in *Appendix 1 – Rule 1466 Approved PM_{10} Monitors* of the rule.

Requirements to Minimize Fugitive Dust Emissions (Subdivision (e))

The control measures to minimize fugitive dust are contained in subdivision (e) and include requirements for fencing, dust suppression, vehicular movement, stockpiles, truck loading, and others.

Paragraph (e)(1)

PAR 1466 incorporates a fencing alternative provision which excludes the fencing requirement for sections of the perimeter that either have a solid physical barrier or have earth-moving activities occurring far away from fence line. The first proposed alternative fencing provision (subparagraph (e)(1)(A)) allows a section of the perimeter to be exempt from fencing if that section has a solid physical barrier with the same height requirements as the fencing requirement. A solid physical barrier is a solid feature that minimizes air flow, such as a wall, metal or fiberglass panels, and storage or transport container. Commercial, industrial, or residential buildings with occupants and windows, trees, and vegetation are not considered solid physical barriers. Having a solid physical barrier with the same height requirements as the fencing, will be as effective as installing fencing meeting the specified windscreen porosity of 50 ± 5 percent or mesh windscreen meeting the specified shade value or opacity of 85 ± 5 percent (paragraph (e)(2)) in minimizing dust crossing the property line. Subparagraph (e)(1)(B) allows a section of the perimeter to be exempt from fencing if that section is more than 300 feet away from any earth-moving activity. If the property line is far enough away from the earth-moving activities, then it is less likely that fugitive dust will cross the property line. These are exemptions from the fencing requirement and do not exempt any other provisions in the rule.

Paragraph (e)(2)

Currently, Rule 1466 requires fencing that consists of a windscreen with a porosity of 50 ± 5 percent. Throughout implementation of Rule 1466, site operators have commented that it is difficult to find commercially available windscreens that state a porosity specification. Staff has identified only one windscreen manufacturer that states porosity specifications, but the windscreens offered are for permanent installation. Therefore, to address the availability of windscreens that can comply with Rule 1466, PAR 1466 proposes, effective January 1, 2022, to change the specification to 85 ± 5 percent shade value or opacity. The proposed rule also adds "mesh" windscreens to add clarity to the type of windscreen the rule requires. Additionally, the height of the fencing must now be at least six inches taller than the height of the tallest stockpile.

Paragraph (e)(4)

Currently, Rule 1466 does not allow track-out to extend beyond 25 feet of the property line and requires track-out to be cleaned with a vacuum equipped with a filter rated to achieve 99.97 percent capture efficiency for 0.3 micron particles. PAR 1466 proposes to revise the provision to not allow track-out that is 25 feet or more in cumulative length instead of continuous length, in an effort to more closely align the provision with Rule 403. Additionally, the proposal will correct the

language regarding the filter efficiency to require 99.97 percent "control" efficiency, as opposed to "capture" efficiency; "control" efficiency refers to the percentage of particles in the air stream that can be trapped by the filter at a minimum particle size whereas "capture" efficiency refers to the percentage of particles in the air stream that can reach the filter.

Subparagraph (e)(4)(D) adds language to clarify that forced air cannot be used to clean soil from the exterior of trucks, trailers, and tires prior to the truck leaving the site as the use of forced air will create fugitive dust emissions. For the vehicle egress measures in subparagraph (e)(4)(E), PAR 1466 increases the width requirement of paving and wheel shaker/wheel spreading device to be 30 feet wide to align with the width requirement of the gravel pad.

Paragraph (e)(5)

PAR 1466 clarifications and enhancements related to stockpiles with soil containing applicable toxic air contaminant(s) are currently included in paragraph (e)(5). Subparagraph (e)(5)(B) is separated from subparagraph (e)(5)(A) to clarify that labeling only applies to stockpiles containing soils with toxic air contaminants. Paragraph (e)(5)(D) removes the height requirement for a stockpile. This provision is no longer needed since paragraphs (e)(1) and (e)(2) have a fencing height requirement based on the height of the tallest stockpile.

Due to the proposed amendments to the definition of chemical stabilizer and dust suppressant, subparagraph (e)(5)(E) will now allow for the use of chemical stabilizer or dust suppressant to control dust from a stockpile.

To minimize fugitive dust emissions to the surrounding community, subparagraph (e)(5)(F) now specifies that the provisions to stabilize or cover stockpiles apply whenever both earth-moving and ambient monitoring are not occurring. The stockpiles do not have to be covered or stabilized during periods of inactivity (breaks, lunch, etc.) if ambient monitoring continues. The requirement for stockpile covers in subparagraph (e)(5)(F) is corrected to say that the unit of measurement for thickness is "mil" not "millimeter". Additionally, language is added to allow covers thicker than 10 mil. A provision is added which requires covers to be free of holes or tears at all times to ensure that covers in good condition are being utilized and not exposing soil containing toxic air contaminants. The daily inspection provision for stabilized and covered stockpiles, which was required formerly in subparagraph (e)(5)(F), is moved to paragraph (e)(12).

Paragraph (e)(11)

Similar to subparagraph (e)(5)(F), sources of fugitive dust must be stabilized whenever both earth-moving and ambient monitoring are not occurring. This provision will minimize exposure of soil with toxic air contaminants to the surrounding community during non-working hours.

Paragraph (e)(12)

The daily inspection provision for stabilized and covered stockpiles is moved to this paragraph. Daily inspections are clarified to include days when no earth-moving activities are occurring, which is the original intent of the provision. Lastly, language that implied that re-stabilizing stockpiles or repairing holes or tears in covers is only necessary after inspections is now removed.

Paragraph (e)(13)

The specifications for use of a chemical stabilizer that were previously contained in the definition of the term "chemical stabilizer" are now included as requirements set forth in paragraph (e)(13).

Paragraph (e)(14)

PAR 1466 expands the enhanced fugitive dust control measures that apply to schools, to sites that are in physical contact with a school, joint use agreement property, or adjacent athletic area. This will further protect children from a clean-up operation that is in physical contact with a school.

PAR 1466 removes the general provision to allow use of alternative dust control measures. Alternatives previously identified over the past three years of rule implementation are instead included within the language of the rule where appropriate.

Notification Requirements (Subdivision (f))

Operators have provided input to staff about the lack of a provision addressing notifications of earth-moving activities of soils with applicable toxic air contaminant(s) that exceed 50 cubic yards after the activities have started. Staff has also requested that a notification be provided when earth-moving operations have concluded for the project.

Paragraph (f)(1)

PAR 1466 includes notification requirements for sites that exceed 50 cubic yards after the activities have started in clause (f)(1)(A)(ii). Those sites will be required to notify South Coast AQMD as soon as the information becomes available, but no later than 48 hours after the 50 cubic yard threshold has been exceeded. To be consistent with the enhanced provisions at properties in physical contact with schools, joint use agreement properties, and adjacent athletic areas, clause (f)(1)(B)(v) now includes notification if the site is in physical contact with a school, joint use agreement property, or adjacent athletic area.

Paragraph (f)(2)

PAR 1466 subparagraph (f)(2)(D) is added to require notification when the project's earth-moving activities are completed. Clean-up is deemed complete when there will be no further earth-moving activities and not necessarily when the designating agency removes the designation from the site. Notifying staff of project completion assists staff in inspection planning and complaint investigations.

Paragraph (f)(3)

When an exceedance occurs, subparagraph (f)(3)(E) will now require that the wind direction and speed be provided as part of the notification. This will ensure that the monitors are appropriately being designated as upwind and downwind.

Signage Requirements (Subdivision (g))

Signage is required to inform the community that the site may contain soils with toxic air contaminants. PAR 1466 retains the provision to allow requests for alternative signage, and several alternative provisions are proposed to be incorporated into this subdivision.

Paragraph (g)(1)

The requirement for Executive Officer approval is moved to paragraph (g)(3).

Paragraph (g)(4)

PAR 1466 paragraph (g)(5) includes an exclusion for signage that would not require Executive Officer approval. Signage is not required along any section of the perimeter that is not visible and not accessible to the public. This exclusion does not apply to a perimeter that is a school, joint use agreement property, or adjacent athletic area or to a perimeter that shares a property line with a school, joint use agreement property, or adjacent athletic area.

Recordkeeping Requirements (Subdivision (h))

Records are required to assist in the enforcement of the provisions of the rule.

Paragraph (h)(1)

Additional records are required to note that re-stabilization, cover repair, and label maintenance have been conducted.

Paragraph (h)(2)

Ambient PM_{10} data, rolling averages, wind direction and speed, intra-instrument precision test results, and instrument logs will be required.

Paragraph (h)(3)

Records of all instrument maintenance activities will be required.

Alternative Provisions (Subdivision (j))

Currently, Rule 1466 allows alternative dust control measures, ambient dust concentration limits, signage, and other alternative provisions upon Executive Officer approval. Over the three-year implementation period, no alternative measures were requested for a number of these provisions. PAR 1466 will incorporate additional measures as appropriate into the applicable provisions and remove alternative provisions for dust control measures, ambient dust concentration limits, and other requirements to streamline requirements. Alternative provision requests for signage requirements are retained. To align with the removal of alternative provisions for dust control measures, *Appendix 2 – Objectives and Effectiveness of Dust Control Measures Set Forth in Subdivision (D)* is proposed to be deleted. Paragraph (j)(5) allows projects that currently have an approved alternative provision to continue using the alternative provision until the expiration date of that alternative provision, which will not be allowed to be renewed or extended.

Exemptions (Subdivision (k))

Exemptions provide regulatory flexibility for smaller or specialized clean-up operations. Currently, exemptions are provided for operations facilities vented to air pollution control, linear trenching, excavations of less than 500 cubic yards, emergencies, and utility outages.

Paragraphs (k)(3) and (k)(4)

The alternative provisions for direct truck loading have been removed. Over the three-year implementation period, no alternative measures were requested for these provisions.

Paragraphs (k)(5) and (k)(6)

"Active operations" is replaced with "on-site earth-moving activities" for consistency with the applicability of the rule to earth-moving activities on cleanup sites.

Table I - Applicable Toxic Air Contaminants

Table I lists the substances that applicable to Rule 1466. For clarification, congener names of the polychlorinated biphenyls (PCBs) listed in Table I – Applicable Toxic Air Contaminants are added. To clarify questions regarding whether or not Aroclors are included in Table I, the PCB with Chemical Abstract Service (CAS) 1336-36-3 does include Aroclors. Additionally, the effective date for certain toxic air contaminants is removed as this effective date has passed.

Appendix 1 – Rule 1466 Approved PM_{10} Monitors

Rule 1466 Appendix 1 provides alternative Executive Officer approved PM_{10} monitor requirements. PAR 1466 separates current requirements into additional physical and performance requirements for monitor approval. The requirement for volumetric flow controller is removed and replaced with the requirement for a sample pump with an active flow control mechanism and stated flow control accuracy of ± 5 percent of factory setpoint. The requirement for a volumetric flow controller excludes instruments with different flow control mechanisms (e.g. mass) from being pre-approved. This clarifies the requirement that monitors need to be equipped with a flow control mechanism and excludes monitors with no flow control mechanism and passive sampling devices. A requirement for external tubing is added and requires any external tubing used to carry sampled air must be conductive to minimize particle loss. Additionally, a provision is added and allows monitors that have a valid Monitoring Certification Scheme certification meeting the latest version of *Monitoring Certification Scheme* (*MCERTS): Performance Standard for Indicative Ambient Particulate Monitors* to be exempt from meeting the performance requirements. These performance standards were used as a reference to develop the instrument requirements for this rule. Additionally, MCERTS certification is widely used by manufacturers to demonstrate instrument performance and reliability.

Appendix 2 – Procedures to Demonstrate Intra-Instrument Precision

Appendix 2 includes the procedure and calculations necessary to demonstrate Intra-Instrument Precision as required by subparagraph (d)(3)(H).

CHAPTER 3: IMPACT ASSESSMENT

POTENTIALLY IMPACTED SITES

A review of Rule 1466 initial notifications submitted between 2019 and 2020 indicate approximately 35 sites per year have been subject to Rule 1466. Many of the initial notifications were submitted for multiple projects stemming from the Exide Cleanup Site. The number of applicable sites can fluctuate based on sites that meet the applicability provisions. The proposed amendments in PAR 1466 will not increase the number of affected sites.

COMPLIANCE COSTS

Proposed additional requirements for PM_{10} monitoring, stabilization of soil, and dust control measures for sites in physical contact with schools, joint use agreement properties, and adjacent athletic areas will add some compliance costs to owners or operators. The costs are estimated by actual costs provided by facilities, instrument vendors, and cost estimates from previous rulemaking efforts for Rule 1466.

The requirement to have the heated inlet on at all times when operating the PM_{10} monitors will increase power usage by approximately 200 watts per hour. While the electricity usage and cost is negligible, some sites may have to provide an electrical connection or additional solar panels. The cost to provide the electrical connection is estimated to be $500 and the cost of additional solar panels is estimated to be $1,000 to $2,000 per site. In sum, the additional cost to have the heated inlet on at all times when operating the monitors will be between $18,000 to $70,000 per year.

The DAS required to record PM_{10} concentration every minute, as well as the data management software needed to calculate the rolling 120-minute average will cost approximately $2,100 for modem and data plan per site. Conservatively estimating that all of the sites will require an electrical connection and a data management system, the total annual cost increase will be approximately $91,000.

Increasing the frequency of stabilizing the soil daily rather than when activity stops for three or more days will add approximately $500 for water and dust suppressants per site. The estimated annual increase is $18,000.

An estimated one site per year will share a property line with a school and be required to meet more stringent standards. From the Socioeconomic Assessment in June 2017 Final Staff Report for Proposed Rule 1466, the site sharing the property line is expected to transition from a low-cost site with estimated costs of $31,000 to a high-cost site with estimated costs of $162,000, an increase of $131,000.

The total cost increase resulting from PAR 1466 is estimated to be between $258,000 and $310,000, annually.

SOCIOECONOMIC ASSESSMENT

A socioeconomic analysis will be conducted and released for public review and comment at least 30 days prior to the South Coast AQMD Governing Board Hearing on PAR 1466, which is anticipated to be heard on May 7, 2021.

CALIFORNIA ENVIRONMENTAL QUALITY ACT

Pursuant to the California Environmental Quality Act (CEQA) and South Coast AQMD's certified regulatory program (Public Resources Code Section 21080.5, CEQA Guidelines Section 15251(l) and South Coast AQMD Rule 110), the South Coast AQMD, as lead agency, is currently reviewing the proposed project (PAR 1466) to determine if it will result in any potential adverse environmental impacts. Appropriate CEQA documentation will be prepared based on the analysis.

DRAFT FINDINGS UNDER CALIFORNIA HEALTH AND SAFETY CODE SECTION 40727

Requirements to Make Findings

California Health and Safety Code Section 40727 and 40001(c) requires that prior to adopting, amending or repealing a rule or regulation, the South Coast AQMD Governing Board shall make findings of necessity, authority, clarity, consistency, non-duplication, and reference, and the problem alleviated, respectively, based on relevant information presented at the public hearing, and in the staff report in the rulemaking record and presented at the hearing.

Necessity

Proposed Amended Rule 1466 is needed clarify, update, and enhance provisions addressing monitoring, PM_{10} calculation, dust control measures, signage, and notifications to ensure the provisions are enforceable, eliminate areas of confusion, and further minimize fugitive dust emissions to the surrounding community.

Authority

The South Coast AQMD Governing Board has authority to adopt amendments to Rule 1466 pursuant to the California Health and Safety Code Sections 39002, 39650 et. seq., 40000, 40001, 40440, 40441, 40702, 40725 through 40728, 41508, 41511, 41700, and 41706.

Clarity

Proposed Amended Rule 1466 is written or displayed so that its meaning can be easily understood by the persons directly affected by it.

Consistency

Proposed Amended Rule 1466 is in harmony with and not in conflict with or contradictory to, existing statutes, court decisions, or state or federal regulations.

Non-Duplication

Proposed Amended Rule 1466 will not impose the same requirements as any existing state or federal regulations. The proposed amended rule is necessary and proper to execute the powers and duties granted to, and imposed upon, the South Coast AQMD. South Coast AQMD Rule 403 has some similar provisions but there is minimal overlap between the two rules for applicable sites. Where there is overlap in provisions between Proposed Amended Rule 1466 and Rule 403, the more stringent provision applies.

Reference

By adopting Proposed Amended Rule 1466, the South Coast AQMD Governing Board will be implementing, interpreting or making specific the provisions of the California Health and Safety

Code Section 41700 (nuisance), and Federal Clean Air Act Section 112 (Hazardous Air Pollutants), and Section 116 (Retention of State authority).

Rule Adoption Relative to Cost-Effectiveness

On October 14, 1994, the Governing Board adopted a resolution that requires staff to address whether rules being proposed for amendment are considered in the order of cost-effectiveness. The 2016 Air Quality Management Plan (AQMP) ranked, in the order of cost-effectiveness, all of the control measures for which costs were quantified. It is generally recommended that the most cost-effective actions be taken first. Although TXM-04 is a control measure that was included in the 2016 AQMP, Proposed Amended Rule 1466 was included in the 2016 AQMP as a toxic control measure and was not ranked relative to other criteria pollutant control measures in the 2016 AQMP.

Incremental Cost-effectiveness

Health and Safety Code Section 40920.6 requires an incremental cost effectiveness analysis for Best Available Retrofit Control Technology (BARCT) rules or emission reduction strategies when there is more than one control option which would achieve the emission reduction objective of the proposed amendments, relative to ozone, carbon monoxide, sulfur oxides, oxides of nitrogen, and their precursors. Since Proposed Amended Rule 1466 is a toxic rule that is designed to reduce toxic air contaminants, the incremental cost effectiveness analysis requirement does not apply.

COMPARATIVE ANALYSIS

Health and Safety Code Section 40727.2 requires a comparative analysis of the proposed amended rule with any Federal or District rules and regulations applicable to the same source.

	Proposed Amended Rule 1466	Rule 403	Rule 1166	Rule 1157	Rule 1403	Rule 1156
Purpose	Control fugitive toxic air contaminant emissions during earth-moving activities	Reduce anthropogenic fugitive dust	Control of VOC emissions (including toxic VOCs) from earth-moving activities	Control PM_{10} emissions from aggregate activities	Limit asbestos emissions	Reduce particulate matter and hexavalent chromium emissions
Applicability	Designated cleanup sites with specified toxic air contaminants; Executive Officer designated cleanup sites based on a set of criteria	Any activity or anthropogenic condition capable of generating dust	VOC contaminated soils	Sand, gravel, quarried rock operations	Building demolition and renovation activities	Cement manufacturing operations and the property
Monitoring	120-minute rolling average 25 $\mu g/m^3$ differential limit for PM_{10} emission; Meteorological monitoring	If monitored, five-hour 50 $\mu g/m^3$ differential limit for PM_{10} emission	Fifteen minute monitoring of VOC emissions	None	None	Hexavalent chromium monitoring, wind monitoring, and PM_{10} monitoring if owner/operator accrues three or more notices of violation for Rule 403 exceedance within 36-month period

	Proposed Amended Rule 1466	Rule 403	Rule 1166	Rule 1157	Rule 1403	Rule 1156
General Controls	Perimeter fencing and windscreen	Perimeter fencing and windscreen	None	None	Removal procedures	None
	Application of chemical stabilizers or dust suppressants during earth-moving activities	Adequately wet during earth-moving activities	Water or vapor suppressants for VOC concentrations greater than 1000 ppmv	None	Handling procedures	Application of dust suppressants
	Cease earth-moving operations during high wind conditions	During high wind conditions some requirements do not apply	None	None	None	Cease open handling of clinker material during high wind conditions
	Onsite compliance supervisor	Onsite compliance supervisor (large sites only)	None	None	Onsite compliance supervisor	None
	Earth-moving not allowed during hours of operation or facility-sponsored activities when conducted on or adjacent to school, early education center, or joint use agreement properties	None	None	None	None	None
Vehicle Controls	Vehicle speed limit	Vehicle speed limit (large sites only)	None	Vehicle speed limit	Vehicle marking	Vehicle speed limit
	Stabilize road and parking surfaces	Stabilize road and parking surfaces	None	Stabilize road and parking surfaces	None	Stabilize or apply gravel pad to roads
	Clean departing vehicles	None	None	None	None	Truck cleaning on site
	Limited track out	Limited track out	None	Limited track out	None	No track out
	Vehicle egress	Vehicle egress	None	Vehicle egress	None	Vehicle egress
	No internal paved road sweeping provision	None	None	None	None	Sweep internal paved roads

	Proposed Amended Rule 1466	Rule 403	Rule 1166	Rule 1157	Rule 1403	Rule 1156
Stockpile Controls	Limited size	None	None	Limited size	Leak-tight containers	None
	Adequately wet or chemically stabilized	Adequately wet or chemically stabilized	Wet or apply vapor suppressant	Adequately wet or chemically stabilized	None	Apply chemical dust suppressant
	Covered during inactivity	None	Covered during inactivity	Apply chemical stabilizer during inactivity	None	Covered
	Daily inspection	None	Daily inspection	None	None	Records of status of inactive clinker stockpiles
	Segregate	None	Segregate	None	None	None
	Limited at or adjacent to schools, early education centers and joint use agreement properties	None	None	None	None	None
	No freeboard requirement	None	None	None	None	Freeboard requirements
	No wind fence	None	None	None	None	Wind fence
Loading, Unloading and Transferring Controls	Adequately wet	Adequately wet	Moisten with additional water for VOC concentrations greater than 1000 ppmv	None	None	Apply dust suppressants as necessary
	Loading techniques	Loading techniques	Loading as soon as possible for VOC concentrations greater than 1000 ppmv	None	None	Minimize height of drop
	Cover loads	Cover loads (contingency only)	Cover loads	None	None	Close cement truck hatches
	No requirement for enclosed system	None	None	None	None	Conducted in enclosed system that is vented to SCAQMD permitted air pollution control device
	No requirement for enclosed conveying systems and transfer points	None	None	None	None	Cover or enclose all conveying systems and enclose all transfer points
	No requirement for belt conveying system	None	None	None	None	Dust curtains, shrouds, belt scrapers, and gaskets along belt conveying system

	Proposed Amended Rule 1466	Rule 403	Rule 1166	Rule 1157	Rule 1403	Rule 1156
Notification	**Prior to commencing earth-moving activities**	Prior to commencing earth-moving activities (large sites only)	Prior to commencing earth-moving activities	None	Prior to commencing asbestos handling	None
	Exceedances of PM10 limit	None	None	None	Changes in quantity or schedule	Exceedance of hexavalent chromium, failing source testing compliance limits
	No advisory flyer requirement	None	None	None	None	Fugitive Dust Advisory flyer
Signage	**Entrances and along perimeter**	Entrances and along perimeter (large sites only)	None	None	Entrances and along perimeter	None
Recordkeeping	**Monitoring results, dust control actions taken, stockpile inspections, volume of soil removed, transport information, complaints, intra-instrument precision testing, instrument maintenance**	Dust control actions taken (large sites only)	VOC concentration readings; stockpile inspections, transport information	Dust control actions, transport information	Control actions, survey data, notifications, training information, transport information	Dust control and cleaning activities, operation and production records, test reports, equipment records, material handling, monitoring data, maintenance activities, clinker pile reclamation, vehicle traffic