

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

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

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INTRODUCTION

The South Coast Air Quality Management District (SCAQMD) is the lead air pollution agency in the South Coast Air Basin (SCAB) and has jurisdiction over all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties. The SCAQMD performs inspections of more than 27,000 facilities in the SCAB and Coachella Valley, in addition to responding to thousands of public complaints regarding air quality.

Soil, including dirt, sand, gravel, clay, and aggregate material, with toxic air contaminants have the potential to become airborne during earth-moving activities such as excavation, grading, and stockpiling. The purpose of Proposed Rule 1466 – Control of Particulate Emissions from Soils with Toxic Air Contaminants (Proposed Rule 1466) is to minimize off-site fugitive dust emissions containing toxic air contaminants by establishing dust control measures that can be implemented during earth-moving activities at sites that contain certain toxic air contaminants. Proposed Rule 1466 will focus on the following toxic air contaminants: arsenic, asbestos, cadmium, hexavalent chromium, lead, mercury, nickel, and polychlorinated biphenyls. The provisions in Proposed Rule 1466 include ambient PM₁₀ monitoring, dust control measures, notification, signage, and recordkeeping requirements.

BACKGROUND

Proposed Rule 1466 – Control of Particulate Emissions from Soils with Toxic Air Contaminants will reduce fugitive non-volatile toxic air contaminant emissions from sites conducting earth-moving activities. It will apply to sites conducting earth-moving activities where soils contain applicable toxic air contaminants as determined and designated by the U.S. Environmental Protection Agency (U.S. EPA), California Department of Toxic Substances Control (DTSC), State Water Resources Control Board (State Water Board), or Regional Water Quality Control Board (Regional Water Board). Additionally, the proposed rule allows the Executive Officer to identify sites, based on a set of criteria, to be subject to the requirements of Proposed Rule 1466. For sites that meet the applicability requirements, the proposal will establish a PM₁₀ ambient dust concentration limit, dust control measures, and will require notification to the Executive Officer prior to beginning earth-moving activities as well as when ambient PM₁₀ dust concentration limits are exceeded. Sites will be required to install and maintain signage to inform the community and discourage unauthorized access. Records of monitoring readings and other site activities will be required. The proposal will also include additional requirements for sites that are located at schools, early education centers, or joint use agreement properties.

Proposed Rule 1466 provides requirements for regulatory agencies and entities that are conducting earth-moving activities at sites that contain soil levels of arsenic, asbestos, cadmium, hexavalent chromium, lead, mercury, nickel, and polychlorinated biphenyls that exceed the designating agencies' threshold for action. The regulatory agencies that typically oversee these types of operations will normally require an action plan and the provisions in this proposed rule are designed to be incorporated into such plans. Proposed Rule 1466's PM₁₀ emission limit and dust control measures are intended to be base requirements and do not preclude the designating agency from implementing more stringent limits or measures. In situations where additional regulatory flexibility is necessary, the proposed rule allows alternative dust control measures, ambient dust concentration limits, and other provisions upon Executive Officer approval.

REGULATORY BACKGROUND

SCAQMD has existing rules that address various aspects of fugitive dust (Rule 403 – Fugitive Dust), volatile organic compounds (VOCs) contaminated soil (Rule 1166 – Volatile Organic Compound Emissions from Decontamination of Soil), and particulate matter and hexavalent chromium emissions from cement manufacturing facilities (Rule 1156 – Further Reductions of Particulate Emissions from Cement Manufacturing Facilities). However, these existing SCAQMD rules do not specifically address soils containing particulate toxic air contaminants.

Rule 1166

Rule 1166 was adopted on August 5, 1988 and establishes requirements to control the emissions of VOCs from excavating, grading, handling and treating VOC-contaminated soil as a result of leakage 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 Proposed Rule 1466.

Rule 403

Rule 403 was adopted on May 7, 1976 and has been amended six times. The purpose of Rule 403 is to reduce the amount of particulate matter entrained in the 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 contaminants in the soil are less than 50 acres, and would not be required to implement these additional and more specific dust control measures required of large sites. Also, ambient dust monitoring is not always required under Rule 403. Even when monitoring is required, the $50 \mu\text{g}/\text{m}^3$ PM_{10} ambient dust concentration limit may not be sufficiently health protective for toxic air contaminants.

Rule 1156

Rule 1156 was adopted on November 4, 2005 and establishes requirements to reduce particulate matter emissions and minimize hexavalent chromium emissions from cement manufacturing operations and properties. The rule includes provisions for visible emissions; material loading, unloading and transferring; cement manufacturing operations; material storage; air pollution control devices; internal roadways and areas; and track-out. Rule 1156 also has provisions for a Compliance Monitoring Plan; hexavalent chromium, PM_{10} , and wind monitoring; and source testing. Additional provisions include Operation and Maintenance procedures; reporting and recordkeeping; and requirements after facility closure. Rule 1156 is applicable to only cement manufacturing facilities, addresses only hexavalent chromium, and does not apply to all earth-moving activities.

Existing Regulatory Framework

Proposed Rule 1466 fills a regulatory gap in the SCAQMD's existing regulatory framework for addressing non-volatile toxic air contaminants from earth-moving activities. Existing Rules 1166 and 403 address VOC emissions and ordinary dust caused by earth-moving activities, but do not address exposure to metal or other particulate toxic air contaminants caused by such activities. Existing Rule 1156 addresses particulate matter and hexavalent chromium from cement manufacturing facilities, but does not address earth-moving activities outside of cement manufacturing facilities nor additional toxic air contaminants. Soils with non-volatile toxic air contaminants such as arsenic, asbestos, cadmium, hexavalent chromium, lead, mercury, nickel, and polychlorinated biphenyls pose much greater health risks than ordinary dust. Fugitive dust with non-volatile toxic air contaminants have the potential to settle in the neighborhoods around contaminated sites and expose nearby receptors long after the earth-moving activities conclude. Fugitive toxic particulates subsequently may be absorbed into the body through inhalation, ingestion, and dermal contact. Therefore, additional provisions are necessary to minimize the re-entrainment of toxic particulates into the air from sites that contain soils with toxic air contaminants.

Oversight Agencies for Investigation and Cleanup of Contaminated Sites

In addition to SCAQMD rules, federal, state, and local regulatory agencies have programs that oversee the investigation and cleanup of contaminated sites. The U.S. EPA program is referred to as the Federal Superfund National Priorities List. DTSC's cleanup program is the Brownfields and Environmental Restoration Program (Cleanup Program). The State Water Board and Regional Water Board refer to their programs as Site Cleanup Programs. Investigations performed by oversight agencies typically begin with a preliminary assessment of the potentially contaminated site. A more detailed site assessment will be conducted if the preliminary assessment shows the possibility of contamination and threat to human health and/or the environment, which determines which sites are designated as requiring some type of cleanup activity. The designating agency will then require a remedial or removal action plan. The plans typically contain an introduction with the cleanup objective, background on the site with the description and geology, the contaminants of concern, a risk evaluation, an overview of the actions that will be taken to clean the site, and the schedule for activities, among other topics. For sites within SCAQMD's jurisdiction, these cleanup actions often contain a dust mitigation component that includes selected measures from SCAQMD Rule 403 and Rule 1166, which were not designed to address earth-moving activities of soils with toxic particulates. The designating agency or owner or operator implement the dust mitigation portion of the action plan by applying water or chemical stabilizers, limiting operations during high-wind conditions, and generally complying with the basic provisions of Rule 403. Cleanup actions are generally completed within three months, but may take one year or longer on larger sites.

PUBLIC PROCESS

Development of Proposed Rule 1466 is being conducted through a public process. SCAQMD has held four working group meetings at the SCAQMD Headquarters in Diamond Bar on March 16, 2017, April 13, 2017, May 3, 2017, and May 18, 2017. 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 proposed concepts and to work through the details of staff's proposal. In addition, a Public Workshop was held on May 10, 2017.

PROPOSED RULE 1466

Proposed Rule 1466 establishes basic provisions that must be implemented by owners or operators that are conducting earth-moving activities at sites that contain certain toxic air contaminants. Proposed Rule 1466 is designed to provide additional health protection, but not impede the actions that are being taken by designating agencies such as U.S. EPA, DTSC, and the State or Regional Water Board to complete work at sites they have designated. There are a number of areas within the proposed rule, where the designating agency or an owner or operator may utilize alternative dust control measures provided they are approved by the Executive Officer

Purpose (Subdivision (a))

The purpose of Proposed Rule 1466 is to minimize the amount of off-site fugitive dust emissions containing arsenic, asbestos, cadmium, hexavalent chromium, lead, mercury, nickel, and polychlorinated biphenyls from sites that meet the applicability requirements. Off-site fugitive dust emissions will be minimized by reducing particulate emissions as a result of earth-moving activities of soils that contain these toxic air contaminants.

Applicability (Subdivision (b))

The proposed rule will become effective thirty days after adoption and be applicable to any owner or operator conducting earth-moving activities at cleanup sites designated by the U.S. EPA, DTSC, State Water Board, or Regional Water Board that contain arsenic, asbestos, cadmium, hexavalent chromium, lead, mercury, nickel, and polychlorinated biphenyls. While many sites contain these compounds at background levels, only sites with these compounds listed as a contaminant of concern would be subject to the proposed rule. For example, if a Superfund site identified perchloroethylene as a contaminant of concern, but soil samples showed arsenic present below background levels, then Proposed Rule 1466 would not be applicable. Another example in which Proposed Rule 1466 would not apply is where a preliminary assessment by the Regional Water Board revealed that lead was present but determined that it was at concentrations below action levels.

Sites may also be designated by the Executive Officer based on a set of criteria, pursuant to subdivision (i) of the proposed rule. The criteria for designation by the Executive Officer includes consultation with other regulatory agencies, the concentration and volume of contaminants, the proximity to nearby residences, parks, and schools, meteorological data, any health risk, ambient monitoring data, or other data, if available. The Executive Officer would make such a designation when a site has not yet been declared a cleanup site by another regulatory agency. The purpose of this provision is to allow the SCAQMD to take action at a site conducting earth-moving activities that is not yet designated by another agency and is known to have soil with applicable toxic air contaminants where Rule 403 is not sufficiently health protective.

The rule will not apply to earth-moving activities of less than 50 cubic yards of soil or to soil removal for sampling purposes.

In general, the dust control measures for the proposed rule are effective once earth-moving activities commence. For example, a cleanup site certified as clean by DTSC remediated contaminated soil by capping the contaminated area. If the site wants to move forward with earth-

moving activities on the clean soil above the cap, Proposed Rule 1466 would not apply because the activities would not disturb the contaminated area.

Definitions (Subdivision (c))

Most of the definitions in the proposed rule are taken from Rule 403, Rule 1403 – Asbestos Emissions from Demolition/Renovation Activities, and Rule 102 – Definition of Terms with slight modifications to maintain consistency and to address toxic air contaminants rather than dust or asbestos, respectively.

Rule 403

Chemical Stabilizers
Disturbed Surface Area
Dust Suppressant
Earth-Moving Activities
Fugitive Dust
Paved Road
Property Line
Soil (Includes “Bulk Material”)
Stabilized Surface
Stockpile (Formerly “Open Storage Pile”)
Track-Out
Wind-Driven Fugitive Dust
Wind Gust

Rule 1403

Adequately Wet

Rule 102

Owner or Operator (Adapted from “Person”)

The following provides a summary of definitions that are specific to Proposed Rule 1466 and are not included in existing Rules 403, 1403, or 102.

Applicable Toxic Air Contaminants include arsenic, asbestos, cadmium, hexavalent chromium, lead, mercury, nickel, and polychlorinated biphenyls. The applicable toxic air contaminants were selected from those commonly found at contaminated sites above background levels that have negative health effects. Proposed Rule 1466 does not include VOC related toxic air contaminants as those are covered under Rule 1166.

Early Education Center is any public or private property, used for purposes of education as defined as an Early Learning and Developmental Program by the U.S. Department of Education. Early education center includes any building or structure, playground, athletic field, or other areas of early education center property, but does not include any property in which education is primarily conducted in private homes.

Joint Use Agreement Property is a shared public facility in which a formal agreement exists between a school or early education center and another government entity setting forth the terms and conditions for shared use. Joint use agreement properties were included because they are extensively used by children for school sponsored activities.

School is any public or private education center, used to educate children from kindergarten through grade 12. School includes any building or structure, playground, athletic field, or other areas of school property, but does not include any school in which education is primarily conducted in private homes.

Soil with Applicable Toxic Air Contaminant(s) are soils that have been identified by the designating agency or Executive Officer as containing an Applicable Toxic Air Contaminant at concentrations exceeding action levels as specified by the designating agency.

Monitoring Requirements (Subdivision (d))

Due to the toxic nature of the applicable toxic air contaminants, the requirements set forth in Proposed Rule 1466 are more stringent than the requirements contained in Rule 403. Under the proposed rule, the absolute difference in ambient PM₁₀ concentrations between upwind and downwind monitors, averaged over two hours, must be 25 µg/m³ or less, as compared to Rule 403 where dust concentrations are limited to 50 µg/m³ averaged over five hours. If the ambient dust concentration limit is exceeded, the owner or operator must immediately stop all earth-moving activities and apply dust suppressant to all fugitive dust sources or employ necessary dust control measures until the PM₁₀ concentration drops below 25 µg/m³, averaged over 30 minutes. The PM₁₀ concentration limit is intended to alert the owner or operator to increase vigilance of implementing dust control measures. An exceedance requires a temporary interruption in operations to allow the owner or operator to ensure dust emissions are well controlled while minimizing disruption to the overall schedule to complete the actions of the designating agency. Proposed Rule 1466 also allows the owner or operator to request an alternative ambient PM₁₀ concentration limit. The request must be submitted to the Executive Officer pursuant to subdivision (j) and must substantiate that the new limit is health protective by providing the concentration(s) of the applicable toxic air contaminant(s) in the soil; the background concentration(s) of the applicable toxic air contaminant(s); the volume of the soil with applicable toxic air contaminant(s); the distance to a residence, park, or school; meteorological data; risk data, if available; ambient monitoring data, if available, and the proposed limit. The owner or operator must have written approval by the Executive Officer prior to using a higher ambient PM₁₀ concentration limit. A lower ambient PM₁₀ concentration limit may be desired when there are high concentrations of applicable toxic air contaminants in the soil. Conversely, a higher ambient PM₁₀ concentration limit may be appropriate when there are lower concentrations of toxic air contaminants in the soil or nearby receptors are further away.

Proposed Rule 1466 establishes an ambient PM₁₀ concentration limit, which requires specific actions to be taken if exceeded. The monitoring requirement for Proposed Rule 1466 is for total ambient PM₁₀ concentration and does not require monitoring for individual toxic air contaminants. PM₁₀ acts as a surrogate for all the applicable toxic air contaminants. During the development of Proposed Rule 1466, staff considered monitoring individual toxics, but decided to use PM₁₀ as a surrogate for individual toxics as PM₁₀ can be monitored in real-time. Concentrations of individual

toxic air contaminants in the air can be back-calculated using the PM₁₀ concentration and the concentration of the toxic air contaminant in the soil. Direct-reading near real-time monitoring of PM₁₀ allows the use of real-time data, whereas analyzing for specific toxic air contaminants will take several days before information becomes available. Additionally, testing for individual toxic air contaminants may require more than one type of monitor and several different laboratory test methods. Having near real-time data allows for sites to take immediate action once the PM₁₀ concentration exceeds the threshold and provides continuous public health protection by minimizing exposure of toxic air contaminants from any fugitive dust that can occur from earth-moving activities at the site.

Under Proposed Rule 1466, PM₁₀ monitoring must occur at all times when earth-moving activities are conducted and during any vehicle movement on the site. PM₁₀ monitoring must be continuous direct-reading near real-time and the method must be a federal equivalent method or an Executive Officer approved method pursuant to subdivision (j) and Appendix 1 of the rule. Appendix 1 provides the requirements for alternative PM₁₀ monitors. The alternative PM₁₀ monitor must meet the following requirements:

1. PM₁₀ monitors must be continuous direct-reading near-real time monitors and shall monitor particulate matter less than 10 microns.
2. PM₁₀ monitors must be equipped with:
 - a. Omni-directional inlet with water trap;
 - b. Sample heater tube;
 - c. Sample pump;
 - d. Volumetric flow controller;
 - e. Enclosure; and
 - f. Data logger capable of logging each data point with average concentration, time/date, and data point number.
3. PM₁₀ monitors must have the following minimum performance standards:
 - a. Range: 0 - 10,000 µg/m³
 - b. Accuracy: ±5% of reading ± precision
 - c. Resolution: 0.1 µg/m³
 - d. Measurement Cycle: User selectable (30 minute and 2 hour)
4. In order to ensure the validity of the PM₁₀ measurements performed, there must be appropriate Quality Assurance/Quality Control (QA/QC). It is the responsibility of the owner or operator to adequately supplement QA/QC Plans to include the following critical features: periodic instrument calibration, operator training, and daily instrument performance (span) checks.

There must be a minimum of one upwind monitor located in an area that is not generally influenced by any of the fugitive dust sources from the site and that is indicative of background PM₁₀ levels in the area. There must be a minimum of one downwind monitor for each area of active earth-moving activity where the downwind monitor is located as close to the property line as possible and in the prevailing downwind direction of the earth-moving activity. Prevailing seasonal wind direction is based on seasonal data predicting the wind direction. For days with shifting winds, the site should determine the predicted wind direction when the majority of earth-moving activity will occur and place the downwind monitor accordingly. There are no requirements for moving

monitors in response to shifting wind directions once the seasonal prevailing wind direction is determined.

The monitors must be operated, maintained, and calibrated according to federal regulations, federal equivalent methods, or the Executive Officer approved method and comply with manufacturer's instructions. In order to ensure the validity of the PM₁₀ measurements performed, there must be appropriate Quality Assurance/Quality Control (QA/QC). Additionally, the monitors must be equipped with a data acquisition system that is able to record direct-reading near real-time continuous data, including the date, time, and ambient PM₁₀ concentration in $\mu\text{g}/\text{m}^3$ every 10 minutes or less. There is also a requirement to monitor wind direction and speed as specified in *U.S. EPA Quality Assurance Handbook for Air Pollution Measurement Systems, Volume IV: Meteorological Measurements*.

PM₁₀ is calculated by taking the absolute difference between the two-hour average of the upwind and downwind monitors. The average PM₁₀ concentration will start at the top of every other hour. If there are multiple upwind monitors, the value for the two-hour average upwind PM₁₀ concentration is the average of the two-hour average PM₁₀ concentration of all the upwind monitors. If there are multiple downwind monitors, the value for the two-hour average downwind PM₁₀ concentration is the two-hour average of the downwind monitor with the maximum PM₁₀ concentration. For example, if a site has two upwind monitors with average PM₁₀ concentrations of 68 and 72 $\mu\text{g}/\text{m}^3$ and three downwind monitors with average PM₁₀ concentrations of 83, 77, and 81 $\mu\text{g}/\text{m}^3$, the upwind average would be 70 $\mu\text{g}/\text{m}^3$ and the downwind average would be 83 $\mu\text{g}/\text{m}^3$, for a difference of 13 $\mu\text{g}/\text{m}^3$.

If the owner or operator believes that there is an external factor contributing to the PM₁₀ concentration, the owner or operator may submit, pursuant to subdivision (j), a request to the Executive Officer to use a different calculation methodology and providing proof that some or all of the PM₁₀ is the result of another source and cannot be attributed to the earth-moving activities of the site.

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

The dust control measures in Proposed Rule 1466 are primarily adaptations of measures from Rules 403, 1166, and 1403. Proposed Rule 1466 uses a more prescriptive approach of specifying the dust control measures than Rule 403 in order to be more health protective since the soils contain toxic air contaminants. These dust control measures are to be performed only during earth-moving activities of soil with applicable toxic air contaminants and any vehicle movement on the site.

Proposed Rule 1466 paragraph (e)(12) allows the owner or operator to utilize alternative dust control measures, with the exception of (e)(7) and (e)(11), provided they are approved by the Executive Officer pursuant to subdivision (j) and meet the same objectives and effectiveness as the dust control measure they are replacing as listed in Appendix 2 of the rule. Appendix 2 includes a table for each of the major categories of dust control measures and the general objective and effectiveness of the measure to provide guidance to the owner or operator if an alternative measure is selected. The Executive Officer will use this same information regarding the general objective and effectiveness to approve or disapprove an alternative measure. The owner or operator should provide a brief written description of the measure, how the alternative measure meets the same

objective of the replacement measure, and a qualitative description of how the alternative measure is equally or more effective.

Dust Control Measures

- Paragraph (e)(1) A windscreen shall surround the area of the earth-moving activities to provide a wind break, act as containment, provide security, and limit access to unauthorized persons. The windscreen must be at least 6 feet tall and must be as tall as the highest stockpile and must have a porosity of $50 \pm 5\%$.
- Paragraph (e)(2) All earth-moving activities of soil with toxic air contaminants, shall only be conducted when adequately wet and given enough time for the water to penetrate. The wet soil will prevent the generation of visible dust plumes and limit fugitive dust.
- Paragraph (e)(3) To minimize fugitive dust from vehicle movement, the site shall post signs at all entrances and limit vehicle speeds to 15 miles per hour and stabilize roads and parking areas by applying gravel, paving, or dust suppressant. The following measures prevent soil with applicable toxic air contaminants leaving the site. Prior to leaving the site, trucks must clean the soil from their trucks, including the trailer and tires. Each vehicle egress from the site to a paved public road shall employ at least one of the following measures: 1) install a pad that consists of washed gravel with a minimum-size of one inch to a depth of at least six inches, a width of at least 30 feet wide, and a length of at least 50 feet; 2) pave the surface so that it extends at least 100 feet from the property line and is at least 20 feet wide; 3) utilize a wheel shaker or wheel spreading device that consists of raised dividers, such as rails, pipes, or grates, at least 24 feet long and 10 feet wide; or 4) install and utilize a wheel washing system to remove soil from tires and vehicle undercarriages. Any track out created shall not extend more than 25 feet from the property line and must be removed using a HEPA vacuum at the end of each day.
- Paragraph (e)(4) Several dust control measures are proposed for stockpiles containing soil with applicable toxic air contaminants. Those stockpiles shall be segregated from uncontaminated soil, labeled “SCAQMD Rule 1466 – Control of Particulate Emissions from Soils with Toxic Air Contaminants Applicable Soil”, and shaped so that there are no steep sides or faces that exceed the angle of repose. The stockpiles shall not be greater than 400 cubic yards or exceed the height of the perimeter fencing and windscreen. Stockpiles shall be kept adequately wet and/or chemically stabilized. At the end of the work day, the stockpiles must be chemically stabilized or completely covered. If the stockpile is being covered, the cover must be 10 millimeter thick plastic sheeting, the seams must have a minimum overlap of 24 inches, and the cover must be anchored and secured. Stabilized or covered stockpiles shall be inspected daily and immediately re-stabilized or repaired as necessary. For chemically stabilized stockpiles, inspections should include a demonstration of stabilization as described in *SCAQMD Rule 403 Fugitive Dust Implementation Handbook*.
- Paragraph (e)(5) When loading trucks with soil with applicable toxic air contaminants, apply dust suppressant to the soil and empty the loader bucket slowly and with a minimal drop height so that no visible dust plumes are generated. When moving within the site, the trailer must maintain at least six inches of freeboard and shall be completely covered with a tarp prior to leaving the site. Completely covered means that the tarp is to not have any holes and the tarp must not leave any gaps between the trailer and the tarp.

- Paragraph (e)(6) When unloading soil with applicable toxic air contaminants, apply dust suppressant to the soil and empty the loader bucket slowly so that no visible dust plumes are generated.
- Paragraph (e)(7) All spills of soil with applicable toxic air contaminants must be immediately cleaned up. This will ensure that all soil is handled appropriately and not leftover on the site or vulnerable to become airborne.
- Paragraph (e)(8) If wind speeds exceed 15 miles per hour (mph) averaged over a 15-minute period or instantaneous wind speeds exceed 25 mph, all earth-moving activities of soil with applicable toxic air contaminants must stop. The high winds will create wind-driven fugitive dust, ceasing activity will ensure that the owner or operator is not adding fugitive dust with applicable toxic air contaminants.
- Paragraph (e)(9) All sites conducting earth-moving activity of soil with applicable toxic air contaminants must employ an on-site dust control supervisor. The on-site dust control supervisor must be on the site during working hours, ensure compliance with all Rule 1466 requirements, and have completed the SCAQMD Fugitive Dust Control Class with a valid Certificate of Completion. If one of the applicable toxic air contaminants is asbestos, the on-site dust control supervisor shall also be trained according to Rule 1403 requirements for the on-site representative. The on-site dust control supervisor will be responsible for keeping the site below $25 \mu\text{g}/\text{m}^3$ PM_{10} and will specify which dust control measures to employ if the site does exceed $25 \mu\text{g}/\text{m}^3$ PM_{10} .
- Paragraph (e)(10) To prevent wind-driven fugitive dust, if a site will be inactive for three or more consecutive days, all potential sources of fugitive dust will need to be stabilized. The areas must be stabilized with a chemical stabilizer in the concentration required to maintain a stabilized surface for the period of inactivity and re-stabilized as necessary.
- Paragraph (e)(11) Additional requirements for sites that are schools, early education centers, or joint use agreement properties conducting earth-moving activities of soil with applicable toxic air contaminants include:
 - Only conducting earth-moving activities when the school or the early education center is not in session or when there is no school sponsored activity at a school, early education center, or joint use agreement property;
 - Requiring the soil to be placed in leak-tight containers, directly loaded into trucks and hauled off site, or stockpiled in a fenced and locked area; and
 - Removing excavated soil within five days.

Notification Requirements (Subdivision (f))

These provisions allow compliance personnel to be present, if necessary, to ensure that the requirements are being followed.

Notification of Intent to Conduct Earth-Moving Activities

At least 72 hours, but no more than 30 days prior to commencement of earth-moving activities, the owner or operator must provide notification to the Executive Officer. The notification shall contain:

- Name, address, telephone number, and e-mail address of the owner or operator
- Name, telephone number, and e-mail address of the on-site dust control supervisor
- Project name and the project identification number from the designating agency (if applicable)

- Project location (address and/or coordinates)
- Identify whether the site is a school, early education center, or joint use agreement property
- A map indicating the specific location(s) of each earth-moving activity and the concentrations of the applicable toxic air contaminant(s)
- A description of the earth-moving activities and a schedule that includes the anticipated start and completion dates of earth-moving activities
- Current and/or previous type of operation(s) and use(s) at the site
- An indication if the notice is a revised notification

Notification of Exceedance of PM₁₀ Limit

Additionally, an owner or operator must provide notification to the Executive Officer within 72 hours whenever the absolute difference between the upwind and downwind ambient dust concentration exceeds 25 µg/m³. The notification for exceeding the ambient dust concentration limit must include:

- Name, address, telephone number, and e-mail address of the owner or operator
- Name, telephone number, and e-mail address of the on-site dust control supervisor
- Project name and the project identification number from the designating agency (if applicable)
- Project Location (address and/or coordinates)
- PM₁₀ monitoring results, including result, date, and time of: exceedance(s), 12 hours before first exceedance, and 12 hours after last exceedance. If the site is not operating at any of the hours, then that should be indicated as the result for that specific timeframe.
- Earth-moving activities occurring at the date and time of exceedance(s)
- Dust control measure(s) taken to mitigate fugitive dust

Signage Requirements (Subdivision (g))

The signage around the property will inform the surrounding community that the site contains hazardous materials and let them know where to obtain more information or how to make a complaint. Unless the Executive Officer authorizes an alternative sign, signage shall follow these requirements:

- Installed at all entrances and at intervals of 1,000 feet or less along the perimeter of the site, with at least one sign along each side
- Located between 6 and 8 feet above grade from the bottom of the sign
- Displays lettering at least 4 inches tall with text contrasting with the sign background
- Displays the following information:
 - Local or toll-free phone number for the site contact or pre-recorded notification center that is accessible 24 hours a day
 - Warning statement:

“THIS SITE CONTAINS SOILS THAT CONTAIN THE FOLLOWING
CHEMICALS: [LIST APPLICABLE TOXIC AIR CONTAMINANTS]
TO REPORT ANY DUST LEAVING THE SITE PLEASE CALL
[FACILITY CONTACT] OR THE SOUTH COAST AIR QUALITY
MANAGEMENT DISTRICT AT 1-800-CUT-SMOG”

The owner or operator may use alternative signage approved by the Executive Officer. The purpose of the alternative signage provision is to allow modifications to the sign to address inconsistencies from local ordinances or other agencies or jurisdictions. At a minimum, alternative signs, pursuant to subdivision (j), must display the warning statement above in lettering at least 4 inches tall with text contrasting with the sign background. The request for alternative signs must include the proposed locations of the signs.

Recordkeeping Requirements (Subdivision (h))

Records will allow compliance personnel to track the on-goings of a site without having to be present at all times. Records will be required to be made available to the Executive Officer upon request and must be maintained for at least three years. Records must be maintained on site only during earth-moving activities. Once earth-moving activities are complete, records do not need to be maintained on site, but still must be maintained and made available to the Executive Officer upon request. Daily records must include:

- Inspection of all covered or stabilized stockpiles containing soils with applicable toxic air contaminants
- Wind and PM₁₀ monitoring results, including instrument calibration, maintenance, operator training, and daily instrument performance check records for all monitoring equipment.
- Earth-moving activities conducted and the volume of soil with applicable toxic air contaminant
- Information regarding the transporting and receiving facilities, and a copy of the shipping manifest
- Complaints called in, including the name of complainant and contact information, date and time, earth-moving activities occurring at the date and time, complaint, and action taken to mitigate the source of the complaint.

Executive Officer Designated Sites (Subdivision (i))

In order to determine whether or not a site is applicable to the rule, the Executive Officer will consult with U.S. EPA, DTSC, the State or Regional Water Boards, and/or local or state health agencies and take into consideration:

- The concentration(s) of the applicable toxic air contaminant(s) in the soil
- The background concentration(s) of the applicable toxic air contaminant(s)
- The volume of the soil with applicable toxic air contaminant(s)
- The distance to a residence, park, or school
- Meteorological data
- Data provided by the owner or operator, including health risk data, if available
- Additional data, including ambient monitoring, if available

Prior to making a determination of applicability, the Executive Officer will notify the owner or operator. The owner or operator has up to 14 days from the date the Executive Officer notifies the owner or operator that it is potentially subject to Proposed Rule 1466 to provide additional data to the Executive Officer to demonstrate that the site should not be applicable to the rule. The Executive Officer will notify the owner or operator in writing of the final determination. If the owner or operator does not provide information to the Executive Officer within 14 days, the Executive Officer can deem the site subject to Proposed Rule 1466. During the determination

period, the owner or operator must comply with the provisions of this rule or cease all earth-moving activities.

Alternative Provisions (Subdivision (j))

If an owner or operator elects to request an alternative provision, the owner or operator must submit all the information necessary to substantiate their reasoning that an alternative provision is needed. For requests for alternative provisions for PM₁₀ limit, PM₁₀ monitoring method, or signage, requests must be submitted at least thirty days prior to conducting earth-moving activities. For alternative PM₁₀ calculation, submit the request within two days of the exceedance.

The Executive Officer may request additional information from the owner or operator, which must be provided within 14 days of the request. The Executive Officer will notify the owner or operator of the rejection or approval in writing. The alternative provisions, if approved, may not be used retroactively.

Exemptions (Subdivision (k))

The owner or operator of a site may be exempt from certain provisions of this rule. The designating agency must consult with the Executive Officer and take into consideration: the concentration(s) of the applicable toxic air contaminant(s) in the soil; the background concentration(s) of the applicable toxic air contaminant(s); the volume of the soil with applicable toxic air contaminant(s); the distance to a residence, park, or school; meteorological data; data provided by the owner or operator, including risk data, if available; and additional data, including ambient monitoring, if available.

Earth-moving activities performed within enclosures vented to approved air pollution control equipment shall be exempt from all requirements except:

- Subparagraph (e)(3)(C), the track-out provision
- Subparagraph (e)(3)(D), cleaning the trucks prior to leaving the site
- Subparagraph (e)(3)(E), vehicle egress measures
- Subparagraph (e)(5)(D), on-site freeboard
- Subparagraph (e)(5)(E), tarping truck and trailer
- Subdivision (g), signage requirements
- Subdivision (h), recordkeeping requirements

Earth-moving activities conducted during emergency life-threatening situations, or in conjunction with any officially declared disaster or state of emergency as declared by an authorized health officer, agricultural commissioner, or fire protection officer shall be exempt for all requirements. The Executive Officer must be notified within 48 hours of emergency earth-moving activities and the notification must include a written emergency declaration from the authorized officer. Similarly, earth-moving activities conducted by essential service utilities to provide electricity, natural gas, telephone, water or sewer during periods of service outages and emergency disruptions are also exempt for all requirements. The Executive Officer shall be notified within 48 hours following such earth-moving activities.

POTENTIALLY IMPACTED SITES

A review of notifications of hazardous site cleanup actions by responsible regulatory agencies between 2014 and 2016 indicates that approximately 25 sites would have been subject to Proposed Rule 1466 had it been in place during that time period. Table 1 below provides the facility usage, acreage, and contaminants of concern including the maximum concentration, when available, for each site.

Table 1 – 2014-2016 Designated Sites with Applicable Toxic Air Contaminants

Facility Usage	Contaminants of Concern (ppm)	Size (acres)
Military	Lead (not specified)	2
School	Arsenic (80), Lead (1,300), Cadmium (2)	9
Power Generation	Hexavalent chromium (50)	11
Metal Melting	Cadmium (8)	1
Metal Melting	Arsenic (154), Cadmium (10)	1
Metal Finishing	Cadmium (2,400), Hexavalent chromium (96), Nickel (3,800), Lead (320)	1
School	Arsenic (91), Lead (124)	8
Waste Management	Polychlorinated biphenyls (23)	9
Aerospace	Cadmium (5), Lead (236)	1
School*	Polychlorinated biphenyls (50)	1
Metal Finishing	Arsenic (33), Lead (189)	1
Manufacturing and Trucking	Arsenic (8), Cadmium (25), Lead (613), Polychlorinated biphenyls (<1)	21
Metal Finishing	Cadmium (980), Hexavalent chromium (6)	2
Chemicals	Arsenic (40), Lead (770)	4
School	Arsenic (90)	3
Railway	Arsenic (50)	2
Manufacturing	Hexavalent chromium (2), Lead (321)	3
Metal Melting	Hexavalent chromium (1)	12
School	Arsenic (840), Lead (8,100)	1
Metal Finishing	Lead (unspecified), Hexavalent chromium (unspecified)	1
Vacant	Polychlorinated biphenyls (0.9)	1
Manufacturing	Arsenic (120), Cadmium (69), Mercury (116), Nickel (19,000), Lead (60,000), Polychlorinated biphenyls (130)	25
Military	Polychlorinated biphenyls (0.3)	62
School	Asbestos (35%)	1
Metal Melting	Arsenic (unspecified), Lead (unspecified)	15

Over the 2014-2016 period, the highest number of active sites at one time was six. The total size of the six facilities was 27 acres. Of those six sites, two were on school property. In terms of total acreage undergoing cleanup at any one time, the most active period of time had three sites

performing cleanup over 88 acres. Preliminary indications estimate current water usage of roughly 1,000 gallons per acre per day to mitigate fugitive dust. Staff estimates that water usage would increase to 2,600 gallons per acre per day under the proposed rule. On a daily basis, the maximum water increase would be approximately 141,000 gallons. Upon reviewing the cleanup action plans of the above facilities, it was noted that some of the proposed provisions of the rule are already incorporated into several of the plans. The specific measures and the rate of frequency found in existing plans has been included in the Socio-Economic report.

COMMENTS AND RESPONSES

Comment Letter #1
DTSC
May 10, 2017

TO: Uyen-Uyen Vo, Air Quality Specialist
FROM: Coby Graham, Senior Industrial Hygienist 
DATE: May 10, 2017
RE: SCAQMD Proposed Rule 1466 – Control of Particulate Emissions from Soils with Toxic Air Contaminants

DTSC Health and Safety Program (HSP) would like to take this opportunity to thank the District for its dedication to protect southern California’s communities through its promulgation of Proposed Rule 1466—Control of Particulate Emissions from Soils with Air Toxic Contaminants (Proposed Rule or PR1466). Overall, the Proposed Rule is a good first step towards the goal of controlling the potential release of fugitive dust from sites with soils known to contain regulated toxic compounds. In an effort of collaboration towards this same goal, DTSC HSP would like to provide its comments from its review of the Proposed Rule’s language.

In general, due to its similarity to the District’s Rule 403—Fugitive Dust—DTSC HSP would like to know whether the proposed rule would supersede the requirements of Rule 403 at applicable PR1466 sites. } 1-1

Additionally, HSP finds that PR1466 does not provide an adequate method to monitor asbestos emissions from cleanup sites with known asbestos contamination or asbestos containing soils. PR1466 would benefit from additional detail pertaining to the control and abatement of asbestos. } 1-2

Please find DTSC’s comments on specific subdivisions of the Proposed Rule in the following table.

SCAQMD Proposed Rule 1466
Review – Comments and Questions

Cal/EPA DTSC
Health & Safety Program

DTSC Specific Comments on SCAQMD's Proposed Rule 1466

Subdivision	Comment/Question	
Subdivision (b)	1. What is the basis for this selection of seven chemicals? How would other compounds (e.g., PAHs and pesticides) be added to this list in the future?	1-3
Subdivision (b) Paragraph (4)	2. The OEHHA's CHHSLs may not be the best available screening levels. Some CHHSL values (e.g. PCB) are outdated. The District should include USEPA's Regional Screening Levels (RSLs) and DTSC-modified screening levels (DTSC-SLs) (found in DTSC HHRA Note 3) to this list. Additionally, will the District indicate whether, and under what circumstances, residential or commercial screening levels should be used?	1-4
Subdivision (c) Paragraph (14)	3. Please add a qualification, "that exceed levels of concern and require soil excavation," to clarify which soils with applicable toxic air contaminants would be covered by the rule.	1-5
Subdivision (d) Paragraph (2)	4. Please explain from where the PM10 concentration limit of 25 $\mu\text{g}/\text{m}^3$ was derived? DTSC sites with the potential for release of toxic air contaminants predominantly have allowable risk-based, surrogate particulate concentrations of greater than 50 $\mu\text{g}/\text{m}^3$ for PM10; in these cases the PM10 limit from Rule 403 has been adequate.	1-6
Subdivision (d) Sub-paragraph (3)(B)(ii)	5. Please define "predominant". Is the predominant wind direction based on seasonal, monthly, weekly, or daily data? Will there be any guidance, or reference to available guidance, for sites with daily shifting wind directions?	1-7
Subdivision (d) Sub-paragraph (3)(D)	6. The rule should be clear that it requires direct-reading, real-time monitoring equipment to measure PM10 concentrations.	1-8

DTSC Specific Comments on SCAQMD's Proposed Rule 1466 (continued)

Subdivision	Comment/Question	
Subdivision (d) Sub-paragraph (3)(D) (continued)	7. DTSC HSP recommends SCAQMD create its own list of approved PM10 monitoring equipment—including portable, battery operated particulate monitoring devices—beyond what is listed in the EPA alternate methods table.	1-9
	8. The Executive Officer's list of PM10 monitoring equipment should include equipment previously approved by the controlling agency. This list from the Executive Officer should be completed and published concurrently with the final rule.	1-10
Subdivision (e) Subparagraph (4)(D)	9. The District should provide a list of dust suppressant materials (chemical stabilizers) approved for use at applicable sites with consideration given to potential impacts to human health and environment.	1-11

Thank you, in advance, for your attention to this letter. If you have any questions or concerns, please feel free to contact me at 510-540-3934 or coby.graham@dtsc.ca.gov.

Response to Comment 1-1:

If the requirements are not related, then both rules would apply. If the requirements overlap, then the provisions in Proposed Rule 1466 supersede those in Rule 403.

Response to Comment 1-2:

Proposed Rule 1466 does not have requirements for monitoring asbestos because there is no direct reading real-time monitoring available for asbestos. Proposed Rule 1466 requires direct-reading near real-time monitoring for ambient PM₁₀, which provides an immediate indication if more dust control measures are needed to minimize exposure. Also, staff understands that asbestos has different handling requirements than other toxic air contaminants, but staff feels that including asbestos in the rule is necessary to be health protective with regard to earth-moving activities. Furthermore, the provisions in Proposed Rule 1466 do not preclude the lead agency from requiring additional measures with regard to the control and abatement of asbestos.

Response to Comment 1-3:

While the original proposal referred to by the commenter included seven chemicals applicable to the rule, during the rule development process, polychlorinated biphenyls were added. The basis for the selection of these chemicals is that they were commonly found at contaminated sites above background levels and have negative health effects. Proposed Rule 1466 does not include volatile toxic air contaminants as those are covered under Rule 1166.

Response to Comment 1-4:

Staff has removed references to OEHHA's California Human Health Screening Levels. Instead of using the California Human Health Screening Levels, when determining the applicability of Proposed Rule 1466 for a site, the Executive Officer consult with other governmental agencies and take into consideration the concentration(s) of the applicable toxic air contaminants, the background concentrations, volume of soil with applicable toxic air contaminant(s), distance to a residence park or school, meteorological data, health risk data and additional data provided by the owner or operator, and other applicable data including ambient monitoring data. Staff has also added a mechanism for sites to provide additional information to the Executive Officer prior to determination.

Response to Comment 1-5:

Thank you for the suggestion, staff has clarified the rule language in paragraph (b)(1).

Response to Comment 1-6:

Staff initially considered requiring ambient monitoring for each contaminant of concern. However, the limitation that the results would not be available in near-real time led staff to use the overall PM₁₀ concentration approach. Similar to the approach DTSC uses currently, staff back-calculated the concentrations in soil that would meet a chronic hazard index of one if ambient downwind PM₁₀ difference was either 50 µg/m³ or 25 µg/m³. Using the 2015 OEHHA Guidelines to determine health impacts, some compounds, notably arsenic, asbestos, and PCBs, would not necessarily meet health protective goals if an ambient concentration of 50 µg/m³ were allowed in all instances. Even at 25 µg/m³ health protective goals may not be met in a few cases at sites with higher concentrations of contaminants of concern or the presence of multiple contaminants of concern. However, staff was reluctant to further lower the ambient PM₁₀ concentration as that may unduly delay cleanup operations. In the cases where a contaminant of concern can be shown to be in such low concentrations or other circumstances as to be able to meet health protective goals, staff has added a provision in the rule language that allows the owner or operator to submit a request to the Executive Officer for an alternative PM₁₀ limit.

Response to Comment 1-7:

Prevailing seasonal wind direction is based on seasonal data predicting the wind direction. For days with shifting winds, the site should determine the predicted wind direction when the majority of earth-moving activity will occur and place the downwind monitor accordingly. There are no requirements for moving monitors in response to shifting wind directions once the daily predominant wind direction is determined.

Response to Comment 1-8:

Thank you for the suggestion, staff has clarified the rule language in subparagraph (d)(3)(E).

Response to Comment 1-9:

The rule has a provision that allows an owner or operator to use a non-U.S. EPA-approved equivalent method that is approved by the Executive Officer. Before the effective date of the rule, staff will have a list of SCAQMD approved PM₁₀ monitoring equipment on the SCAQMD website. At this time, staff is aware of two monitors that the Executive Officer will approve – the TSI Dusttrak 8530 and Thermo ADR 1500 Area Dust Monitor. Staff has included specifications for other monitoring equipment for Executive Officer approval in Appendix 1 of the rule.

Response to Comment 1-10:

There is no previously approved PM₁₀ monitoring equipment, but before the effective date of the rule, staff will have a list of SCAQMD approved PM₁₀ monitoring equipment on the SCAQMD website. At this time, staff is aware of two monitors that the Executive Officer will approve – the TSI Dusttrak 8530 and Thermo ADR 1500 Area Dust Monitor. Staff has included specifications for other monitoring equipment for Executive Officer approval in Appendix 1 of the rule.

Response to Comment 1-11:

SCAQMD Rule 403 Fugitive Dust Implementation Handbook (Handbook) has a Resource List of Vendors for chemical dust suppressants. The Handbook can be obtained by completing the Controlling Fugitive Dust Compliance Training course. Before the effective date of the rule, staff will post the list from The Handbook of approved chemical dust suppressant vendors on the SCAQMD website.

Comment Letter #2
Alta Environmental
May 17, 2017



May 17, 2017

Ms. Uyen-Uyen Vo
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, California 91765

Re: **Comment on Proposed Rule 1466 "CONTROL OF PARTICULATE EMISSIONS FROM SOILS WITH TOXIC AIR CONTAMINANTS"**

Dear Ms. Vo,

During closure of the Exide Vernon site, various earth-moving activities will be completed within enclosures (permanent or temporary). The purpose of the enclosures is to prevent fugitive dust while moving soil that may contain toxic air contaminants (i.e. lead).

After reviewing the Proposed Rule 1466, we could not see special provisions for earth-moving activities conducted within enclosures. We would like to clarify the requirements under this scenario, and to discuss the addition of an exemption or special provisions to avoid enforcement issues down the road. The exemption/special provisions may be for earth-moving activities completed within an enclosure (permanent or temporary), or for sites that have an AQMD-approved Compliance Plan for Closure (i.e. under R1420.1(p)).

Thank you for the opportunity to provide this comment.

Sincerely,

A handwritten signature in black ink, appearing to read "Nicolas Serieys", is written over a light blue horizontal line.

Nicolas Serieys, PE, CPP
Vice President, Air & EHS Compliance

Alta Environmental
3777 Long Beach Boulevard Annex Building Long Beach CA 90807 United States of America
T (562) 495 5777 F (562) 495 5877 Toll-free (800) 777-0605 altaenviron.com

} 2-1

Response to Comment 2-1:

Thank you for the suggestion, staff has clarified the rule language to include an exemption for earth-moving activities conducted inside a controlled enclosure in paragraph (k)(2).

Comment Letter #3
County Sanitation Districts of Los Angeles County
May 22, 2017



The Boeing Company
4000 Lakeview Blvd
Long Beach, CA 90808

May 17, 2017

SCAQMD
21865 E. Copley Drive
Diamond Bar, CA 91765

ATTN: Uyen-Uyen Vo
Air Quality Specialist

Re: SCAQMD Proposed Rule 1466

Thank you for the opportunity to provide comments relating to the Proposed Rule 1466 (Control of Particulate Emissions from Soils with Toxic Air Contaminants). Boeing requests that the following changes/clarifications be incorporated into the proposed rule:

(b) Applicability

This rule shall apply to any owner or operator conducting earth-moving activities of soils that contain one or more of the following toxic air contaminants **that have been identified** as contaminants of concern: arsenic, asbestos, cadmium, hexavalent chromium, lead, mercury, nickel, and/or polychlorinated biphenyls at a site that has been designated by the:

} 3-1

(b)(4) Executive Officer as a site containing soil contaminated with cadmium, hexavalent chromium, lead, mercury, nickel and/or polychlorinated biphenyls in concentrations above the Office of Environmental Health Hazard Assessment's California Human Health Screening Level, **arsenic in concentration above 12 ppm**, and/or asbestos in concentrations above 2,500 ppm, where the Executive Officer has notified the owner or operator that earth-moving activities are subject to the provisions of this rule. **Please note that the screening number for arsenic is for contamination resulting from human activity only. Concentrations of naturally occurring arsenic may be far above the screening number and should not be considered a contaminant of concern.**

} 3-2

(c)(2) APPLICABLE TOXIC AIR CONTAMINANTS, **for the purposes of this rule**, include arsenic, asbestos, cadmium, hexavalent chromium, lead, mercury, nickel, and polychlorinated biphenyls.

} 3-3

In addition, Boeing requests that an exemption level of 500 cubic yards be established in Section (i) for excavation activities only and be subject to the requirements listed in (e)(2), (e)(3), (e)(4), (e)(5), and (e)(7) only.

} 3-4



The Boeing Company
4000 Lakewood Blvd
Long Beach, CA 90808

Boeing looks forward to continuing to work with District staff in the development of Proposed Rule 1466. If you should have any questions or require additional information, please do not hesitate to contact me.

A handwritten signature in black ink, appearing to read 'W Pearce'.

William Pearce
Senior Environmental Engineer
Environmental Services
Environment, Health & Safety

Response to Comment 3-1:

Thank you for the suggestion, staff has clarified the rule language in paragraph (b)(1).

Response to Comment 3-2:

See Response to Comment 1-4 above.

Response to Comment 3-3:

Thank you for the suggestion, staff has clarified the rule language in paragraph (c)(2).

Response to Comment 3-4:

Proposed Rule 1466 allows alternative dust control measures (paragraph (e)(12)), ambient monitoring limits (subparagraph (d)(2)(A)), and other provisions upon Executive Officer approval. Additionally, staff has added a provision, paragraph (k)(1), which allows the designating agency to consult with the Executive Officer and allow for exemptions from certain provisions or for the rule to not be applicable.

Comment Letter #4
County Sanitation Districts of Los Angeles County
May 22, 2017



COUNTY SANITATION DISTRICTS
OF LOS ANGELES COUNTY

1955 Workman Mill Road, Whittier, CA 90601-1400
Mailing Address: P.O. Box 4998, Whittier, CA 90607-4998
Telephone: (562) 699-7411, FAX: (562) 699-5422
www.lacsd.org

GRACE ROBINSON HYDE
Chief Engineer and General Manager

May 22, 2017
File No.: 31-380.10B

Ms. Susan Nakamura
Assistant Deputy Executive Officer
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, California 91765

Dear Ms. Nakamura:

**Comments on Proposed Rule 1466
Control of Particulate Emissions from Soils with Toxic Air Contaminants**

The County Sanitation Districts of Los Angeles County (Sanitation Districts) appreciate the opportunity to comment on the proposed rule to South Coast Air Quality Management District (SCAQMD) Rule 1466 – Control of Particulate Emissions from Soils with Toxic Air Contaminants (PR 1466). The Sanitation Districts provide environmentally sound, cost-effective wastewater and solid waste management for about 5.5 million people in Los Angeles County and, in the process, convert wastes into resources such as reclaimed water, energy, and usable recycled materials. The Sanitation Districts' service area covers approximately 800 square miles and encompasses 78 cities and unincorporated territory within the County through a partnership agreement with 24 independent special districts.

Although the Sanitation Districts currently have no site cleanups subject to the proposed rule, future projects could be affected. Accordingly, we are concerned that the proposed rule does not explicitly differentiate between cleanup sites and cleanup sites with an approved Health Risk Assessment (HRA). From the Department of Toxic Substance Control's (DTSC) website¹, "Human and Ecological Risk Office (HERO) provides DTSC program staff with world-class technical assistance and training on toxicity of chemicals and the health risks of chemicals to human and ecological receptors. HERO's objective is to ensure that contaminants are accurately characterized, health risks are accurately estimated, and any residual contamination does not pose a risk to human and ecological health". We believe if a site does not pose a health risk, which has been evaluated and approved by a lead agency, then it should not be subject to PR 1466. The proposed rule language does not make this distinction clear. Instead, these types of sites are lumped together in the overall category subject to the proposed rule of "Site Cleanup Program site" and then the owner/operator is required to provide justification as to why their site is not subject to the rule. As a result of these challenges, it seems duplicative and inefficient to minimize toxic emissions if there is no health risk associated with the subject activity. The Sanitation Districts believe that SCAQMD should exempt projects with an approved HRA and/or Certification of Completion issued by the lead agency.

} 4-1

¹ <http://www.dtsc.ca.gov/AssessingRisk/>

DM# 4159315



Ms. Susan Nakamura

-2-

May 22, 2017

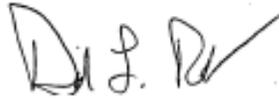
For these reasons, the Sanitation Districts respectfully request that the SCAQMD consider the need for operational flexibility without duplicative regulatory efforts. Specifically, we propose the following exemption provision be included in the final rule:

- (l)(6) *Site(s) that have an approved Health Risk Assessment that does not pose a risk to human and ecological health and/or Certificate of Completion issued by the lead agency.*

} 4-1 (Cont.)

If you have any questions regarding this transmittal, please do not hesitate to contact the undersigned. Thank you again for the opportunity to provide comments on the proposed amended rule.

Very truly yours,



David L. Rothbart
Supervising Engineer
Air Quality Engineering
Technical Services Department

DLR:CAC:hb

cc: Mr. Michael Morris - SCAQMD
Ms. Uyen-Uyen Vo - SCAQMD

Response to Comment 4-1:

The proposed rule includes in a provision, subparagraph (i)(1)(F), for consideration of available health risk assessment data by the Executive Officer when making a determination of applicability of the rule.

Comment Letter #5
DTSC
May 23, 2017

To: Uyen-Uyen Vo, Air Quality Specialist

From: Ryan Kinsella, Senior Industrial Hygienist



Date: May 23, 2017

RE: SCAQMD Proposed Rule 1466- Control of Particulate Emissions from Soils with Toxic Air Contaminants

This comment is regarding the revised version of PR1466 presented at Working Group Meeting 4 on May 18, 2017. Section (e)(11) refers to RCRA hazardous waste. Since this rule will apply to locations within the state of California, I recommend adding California designated hazardous waste to this statement as well.

} 5-1

Thank you for considering this comment. If you have any questions or concerns, please contact me at 818.717.6590 or ryan.kinsella@dtsc.ca.gov

Response to Comment 5-1:

Thank you for the suggestion, staff has removed the reference to hazardous waste in paragraph (e)(11) and the provision is now applicable to earth-moving activities of soils with applicable toxic air contaminants at schools, early education centers, and joint use agreement properties when school or early education centers are in session or during school or early education center sponsored activities.

Comment Letter #6
Various Organizations
June 1, 2017

Executive Officer Wayne Nastri
Chairman Burke & Honorable Boardmembers
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, California 91765

Re: Rule 1466 – Toxic Air Contaminates & Earthmoving Activities

Dear Executive Officer Nastri, Chairman Burke & Honorable Boardmembers,

On behalf of the undersigned organizations, we are writing to request that the South Coast Air Quality Management District stand firm in not allowing earthmoving of soils contaminated with toxic chemicals on school property, even when below monitored thresholds applicable to other sites, or when children are present prior to, or during school hours. Especially in areas where activities include, but are not limited to: after school programs, athletic events or school initiated activities with children present.

Given the extensive activities that take place in areas where partnerships aka "Joint Use Agreements" between schools and parks exist, we respectfully request that these areas also be included in this rule.

Thank you for your consideration, and ongoing efforts to protect all Southern Californians and especially the most vulnerable, our children.

Respectfully,

Robina Suwol
Executive Director
California Safe Schools

Jane Williams
Executive Director
California Communities Against Toxics

Cynthia Babich
Executive Director
DeLamo Action Committee

Jesse Marquez
Executive Director
Coalition for a Safe Environment

Dr. Rhonda Jessum
Executive Director
Our Right to Know

Mitzi Shpak
Executive Director
Action Now

} 6-1

Shabaka Heru
Executive Director
Society for Positive Action

cc:
Susan Nakamura
Michael Morris
Uyen-Uye Vo

Response to Comment 6-1:

See Response to Comment 5-1 above.

Comment Letter #7
Los Angeles Department of Water and Power
June 1, 2017



ERIC GARCETTI
Mayor

Commission
MEL LEVINE, President
WILLIAM H. FUNDERBURK III, Vice President
JILL BARNES BARAD
CHRISTINA E. NODDAN
AURKA VASQUEZ
BARBARA E. MOSCHOS, Secretary

DAVID H. WRIGHT
General Manager

June 1, 2017

South Coast Air Quality
Management District
PO Box 4830
Diamond Bar, CA 91765-0830

Attention: Ms. Uyen-Uyen Vo

Dear Ms. Vo:

Subject: Los Angeles Department of Water and Power's Comments on Proposed Rule 1466

Thank you for discussing the rule applicability language for the Proposed Rule 1466 this morning with the Los Angeles Department of Water and Power (LADWP). During the discussion we proposed to add a notification requirement by South Coast Air Quality Management District (AQMD) to the owner or operator of a designated site defined in Section (b) of Proposed Rule 1466 dated May 18, 2017.

The proposed changes to section (b) are indicated in bold and underlined:

(b) Applicability

This rule shall apply to any owner or operator conducting earth-moving activities of soils bulk materials that contain one or more of the following toxic air contaminants that **have been identified** as a contaminants of concern; arsenic, asbestos, cadmium, hexavalent chromium, lead, mercury, nickel, and/or polychlorinated biphenyls at a site that has been designated **and notified** by the:..."

This recommended change would provide certainty to the owners and operators that their sites are affected by the rule.

Additionally, we have the following comments:

Section (c)(13)

In this section, AQMD defines bulk materials as follows:

"BULK MATERIALS WITH APPLICABLE TOXIC AIR CONTAMINANT(S) means, for the purpose of this rule, soils bulk materials that have been identified by U.S. EPA,

} 7-1
}
} 7-2



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DTSC, State Water Board, Regional Water Board, or the Executive Officer to contain one or more of the following toxic air contaminants: arsenic, asbestos, cadmium, hexavalent chromium, lead, mercury, nickel, or polychlorinated biphenyl(s) that exceed levels of concern and require earth-moving activities."

} 7-2 (Cont.)

The phrase "that exceed levels of concern" was added in this latest rule draft but the levels of concern are not defined which introduces uncertainty with respect to an owner's or operator's compliance with the rule. LADWP requests that AQMD define/specify "levels of concern."

Section (i)(1)(F)

In this section AQMD indicates that a site will be designated a contaminated site after considering several factors including "Meteorological data." LADWP recommends that AQMD specify the period of "meteorological data" that will be considered in its determination (e.g. one year).

} 7-3

Section (i)(2)(B)

In this section, AQMD requires the owner or operator to cease operations while AQMD is in the process of making a determination to designate a site as containing bulk materials with toxic air contaminants at levels of concern. However, the proposed rule language does not provide a time frame for AQMD final determination that the site is subject to the rule. This open-ended provision introduces uncertainty with respect to the owner's or operator's project schedule. LADWP recommends that AQMD define a maximum "determination period" such that it would not impact a project schedule.

} 7-4

If you have any questions or would like additional information, please contact me at (213) 367-0409.

Sincerely,



Jodean Giese
Manager of Air Quality

DP:ict
c: Ms. Jodean Giese

Response to Comment 7-1:

The applicability has been clarified in subdivision (b) of the proposed rule and includes "and notified".

Response to Comment 7-2:

Bulk Materials with Applicable Toxic Air Contaminants(s), is now Soil with Applicable Toxic Air Contaminant(s). The rule language no longer includes the phrase “levels of concern” and is instead replaced with “action levels as specified by the designating agency”.

Response to Comment 7-3:

Meteorological data generally refers to seasonal prevailing wind direction. However, there may be other factors that can be considered including precipitation, wind speed, or others.

Response to Comment 7-4:

Paragraph (i)(3) indicates that, when notified by the Executive Officer that Rule 1466 may be applicable, the owner or operator of a site may continue earth-moving activities and comply with all provisions of the rule while the Executive Officer is making a final determination.

SOCIOECONOMIC ASSESSMENT

Affected Industries

Proposed Rule 1466 sets requirements for earth-moving activities at sites containing certain toxic air contaminants and the potentially impacted sites may belong to various industry sectors in the four-county region. As described in the previous section, a list of potentially impacted sites was developed based on a review of notifications of cleanup actions at sites with applicable toxic air contaminants in the soil by responsible regulatory agencies between 2014 and 2016. At sites where there is no longer any industrial operations there, the industries associated with them would not be directly affected in terms of production or output. However, based on the North America Industry Classification System (NAICS), the industry classification of previously operating facilities is used to categorize the sites to estimate the potentially affected industries.

To estimate potential impacts, data from past sites with soil containing applicable toxic air contaminants was evaluated. Table 2 summarizes the industries associated with past sites with applicable toxic air contaminants in the soil in the region. Over a three year period (2014-2016), 25 sites with applicable toxic air contaminants in the soil, totaling 198 acres, would have been subject to Proposed Rule 1466 had it been in place during that time period. The greatest number of sites are associated with Elementary and Secondary Schools (NAICS: 611110) with six sites, while the largest land area for cleanup sites is associated with National Security (NAICS: 928110), with 64 acres. Aggregating all manufacturing industries together (NAICS: 31-33) corresponds to 13 sites, comprising a total of 88 acres.

Table 2: Affected Industries Based on Previous Toxic Cleanup Sites (2014-2016)

Industry Classification (6-digit Industry NAICS)	# of Sites	Total Acres
Manufacturing (31-33)	13	88
Nonferrous Metal (except Aluminum) Smelting and Refining (331410)	3	28
Steel Foundries (except Investment) (331513)	1	1
Electroplating, Plating, Polishing, Anodizing, and Coloring (332813)	5	9
All Other Miscellaneous Fabricated Metal Product Manufacturing (332999)	2	24
Aircraft Manufacturing (336411)	1	1
Ship Building and Repairing (336611)	1	25
Fossil Fuel Electric Power Generation (221112)	1	11
Line-Haul Railroads (482111)	1	2
Hazardous Waste Collection (562112)	1	9
Elementary and Secondary Schools (611110)	6	23
National Security (928110)	2	64
Unclassified ¹	1	1
Total	38	198

Among the potentially impacted sites, some were previously operated by small business owners or operators. Information on employees and sales for six out of the 12 sites associated with private companies is available, based on the 2017 Dun and Bradstreet data. None of the owners or

¹ This refers to the vacant lot listed Table 1.

operators of the six sites for which there are sales and employment data were reported as a small business as defined under SCAQMD Rule 102. Under the federal Small Business Administration's definition, three sites were previously operated by small businesses.²

Compliance Cost

Based on the same data used to compile Table 2, staff developed a reasonable scenario for potential compliance cost.³ It is assumed that an average of 8 toxic cleanup sites ($25 \text{ sites} \div 3 \text{ years} \approx 8 \text{ sites}$), with an average size of eight acres per site ($198 \text{ acres} \div 25 \text{ sites} \approx 8 \text{ acres}$) would be potentially subject to Proposed Rule 1466 on an annual basis. Based on time spent on earth-moving activities from a sample of sites from Table 1, staff assumes an average period of 3 months for earth-moving activities for this scenario. Additionally, this scenario also takes into account the fact that many sites may have already employed some of the dust control measures proposed in Proposed Rule 1466 in accordance with existing SCAQMD rules and requirements from other agencies. For example, many sites have already put fencing and windscreens in place or PM_{10} monitors in accordance with DTSC requirements or vehicle egress measures and on-site compliance supervisor in accordance with SCAQMD Rule 403. Staff calculated the percentage of sites which already use particular dust control measures, monitoring equipment, or undertake required activities in order to estimate the portion of Proposed Rule 1466 requirements which are incremental to this baseline.

Based on this scenario, the estimated total regional annual compliance cost was found to be about \$731,000 (Table 3). A range of cost per average-sized site was also calculated to provide further information about what cost of this proposed rule for a single site would be. A low cost site, which already has employed an on-site dust control supervisor, and equipment like PM_{10} monitors and fencing with windscreens, would have cost of about \$31,000. While a high cost site, which has not already employed any of the required measures would have a cost of about \$161,000.

²The SCAQMD defines a "small business" in Rule 102 for purposes of fees as one which employs 10 or fewer persons and which earns less than \$500,000 in gross annual receipts. The SCAQMD also defines "small business" for the purpose of qualifying for access to services from the SCAQMD's Small Business Assistance Office (SBAO) as a business with an annual receipt of \$5 million or less, or with 100 or fewer employees. In addition to the SCAQMD's definition of a small business, the federal Clean Air Act Amendments (CAAA) of 1990 and the federal Small Business Administration (SBA) also provide definitions of a small business. The CAAA classifies a business as a "small business stationary source" if it: (1) employs 100 or fewer employees, (2) does not emit more than 10 tons per year of either VOC or NO_x , and (3) is a small business as defined by SBA. The SBA definitions of small businesses vary by six-digit North American Industrial Classification System (NAICS) codes. In general terms, a small businesses must have no more than 500 employees for most manufacturing and mining industries, and no more than \$7 million in average annual receipts for most nonmanufacturing industries.

³The cost assumptions made herein are based on the same data and information used for the Draft Environmental Assessment (EA) (Draft EA; released on May 12, 2017). While the Draft EA examines the maximum environmental impacts of compliance-related activities that could occur concurrently, the socioeconomic assessment typically analyzes, on an annual basis, the socioeconomic impacts of compliance-related activities, regardless of whether they could occur concurrently during the same period within any given year.

Table 3: Estimated Annual Compliance Cost

Activity or Equipment	Average Annual Cost	Cost per site	
		Low cost site	High cost site
PM ₁₀ monitors	\$292,499	\$0	\$91,406
Sweeper with HEPA filter	\$118,200	\$14,775	\$14,775
Water Truck	\$107,520	\$13,440	\$13,440
Dust Control Supervisor	\$97,952	\$0	\$15,561
Fencing (temporary)	\$86,400	\$0	\$21,600
Water	\$17,741	\$2,218	\$2,218
Fencing in of stockpiles (at school, early education centers, and joint use agreement properties)	\$3,240	\$0	\$1,620
Notification signs	\$2,880	\$360	\$360
Vehicle Egress (washed gravel)	\$2,642	\$0	\$389
Speed limit signs	\$616	\$77	\$77
Fence gate (temporary)	\$500	\$0	\$125
Plastic Sheeting	\$480	\$0	\$200
Total	\$730,670	\$30,870	\$161,770

The items with relatively larger costs are the PM₁₀ monitors, sweeper with HEPA filters, water trucks, temporary fencing and windscreen, and the dust control supervisor. Following is a description of the estimation and associated cost assumptions:

- **PM₁₀ Monitors** cost was estimated based on an assumption of the purchase of two T640 model monitors with the 640X option (one upwind and one downwind) per site at \$45,703 per monitor, based on a price quote from a local supplier. This would result in a cost of about \$91,406 for each site, which does not already use PM₁₀ monitors. Based on prior site data (see Table 1), it was assumed that approximately 60% of sites already have PM₁₀ monitors. Note that this analysis does not consider any resale value the PM₁₀ monitors may have after project completion, therefore representing an upper bound on the cost for this equipment.
- **Sweeper with HEPA Filter** cost was estimated based on a price quote from a national supplier of \$14,775 per unit for purchase. This analysis does not consider any resale value the sweeper may have after project completion, therefore representing an upper bound on the cost for this equipment.
- **Water Trucks** cost was estimated based on the assumption of one 4,000-5,000 gallon capacity water truck necessary to service an average size cleanup site at a rental rate of \$4,480 per month, based on a price quote from a local supplier.
- **On-site Dust Control Supervisor** cost was estimated based on an annual salary of \$46,800 from a job listing for construction supervisor in Los Angeles county and adjusted for to account for the non-wage benefits⁴, such as health benefits, considering a 3-month project period, and

⁴ Based on the ratio of Total Benefits to Wages and Salary on average for 2016 from Employer Cost of Employee Compensation, Bureau of Labor Statistics.

the fact that 30% of sites already employ supervisors that would satisfy this requirement.⁵ This results in an incremental cost of about \$15,561 for each site that does not already employ a dust control supervisor.

- **Fencing, windscreen, and gate (temporary)** costs were estimated based on an average eight acre site, that would have an approximately 600' x 600' perimeter, using a quote of a 3-month rental rate from a local supplier of \$4,500 per 500 linear feet of temporary 6-foot fencing with windscreens, and adjusting for the desired number of linear feet. An additional \$125 per site is included for fence gates. Based on about half of sites already having fencing with windscreens in place, this results in a cost of about \$21,725 for a site without these structures already in place.
- **Water** costs were estimated based on the incremental water use required by the Proposed Rule 1466. Based on prior site data (see Table 1), incremental water use was estimated to be about 1,700 cubic feet per site, per work day on average. As the majority of sites were located in Los Angeles county, the Tier 1 commercial water rate from Los Angeles Department of Water and Power of \$1.999 per hundred cubic feet (hcf) was used to calculate the cost of water.⁶ This results in a cost estimate of about \$2,218 per average site.
- **Fencing in of Stockpiles** cost was estimated based on the assumption that about 180 linear feet of fencing would be necessary to surround a 400 cubic yard stockpile. This requirement is specific to schools, early education centers, and joint use agreement properties.
- **Notification signs** cost was estimated based on a price of \$90/sign, assuming four signs for each site.
- **Vehicle Egress** cost was estimated based on the assumed use of washed gravel, which is the lowest cost option to fulfill this proposed requirement. The estimation assumed 21 tons of gravel at a price of \$18.50 per ton and taking into account that 14% of sites have already employed vehicle egress measures.
- **Speed limit signs** cost was estimated based on a price of \$19.25/sign from a national supplier, assuming 4 signs for each site.
- **Plastic Sheeting** cost was estimated based on a price of \$200 for a 20' x 100' sheet of 10 millimeter plastic sheeting from a local supplier.

Job Impacts

It has been standard practice for SCAQMD socioeconomic analysis that when the annual compliance cost is less than one million current U.S. dollars, the Regional Economic Impact Model (REMI) is not used to simulate jobs and macroeconomic impacts. This is because the resultant impacts would be diminutive relative to the baseline regional economy. Since the annual cost of compliance with Proposed Rule 1466 are \$730,670, a REMI analysis was not conducted.

CALIFORNIA ENVIRONMENTAL QUALITY ACT

Pursuant to the California Environmental Quality Act (CEQA) and SCAQMD Rule 110, SCAQMD staff has evaluated the proposed project and made the appropriate CEQA

⁵The number of sites which already employ PM₁₀ monitors or onsite dust control supervisor differs due to sites being subject to different requirements from different lead agencies.

⁶ A site will pay different water rates depending on where it is located. Water rates from major water districts in each of the four counties in the air basin are examined, and the rate used to calculate cost is considered to be a good proxy for other Tier 1 rates in the region. A rate of about \$2.04/hcf is found for City of Anaheim, \$1.978/hcf for Western Municipal Water District in Riverside, and about \$1.52/hcf for the San Bernardino Municipal Water District.

determination. The public workshop meeting provided an opportunity to solicit public input on any potential environmental impacts from the proposed project. Comments received at the public workshop on any environmental impacts will be considered when making the CEQA determination.

DRAFT FINDINGS UNDER CALIFORNIA HEALTH AND SAFETY CODE SECTION 40727

Requirements to Make Findings

California Health and Safety Code Section 40727 requires that prior to adopting, amending or repealing a rule or regulation, the SCAQMD Governing Board shall make findings of necessity, authority, clarity, consistency, non-duplication, and reference based on relevant information presented at the public hearing, and in the staff report.

Necessity

Proposed Rule 1466 is needed to address fugitive emissions of toxic air contaminants from earth-moving activities. The proposed rule applies to sites where a designating agency such as U.S. EPA, DTSC, Regional Water Board, or State Water Board has identified one or more of certain toxic air contaminants in the soil and the site has begun earth-moving activities. Proposed Rule 1466 also has provisions that permit the Executive Officer of the SCAQMD to designate a site as needing to comply with the provisions of Rule 1466 based on a series of criteria. Rule 1466 fills a gap in the SCAQMD's existing regulatory program to ensure sites conducting earth-moving activities with soil that contains certain toxics are implementing specific dust control measures and are monitoring particulate emissions to minimize the surrounding communities' exposure to toxic air contaminants.

Authority

The SCAQMD Governing Board has authority to adopt 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 Rule 1466 is written or displayed so that its meaning can be easily understood by the persons directly affected by it.

Consistency

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

Reference

By adopting Proposed Rule 1466, the SCAQMD 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 adoption 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 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, sulphur oxides, oxides of nitrogen, and their precursors. Since Proposed 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 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	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	Two-hour 25 µg/m ³ differential limit for PM ₁₀ emission; Meteorological monitoring	If monitored, five-hour 50 µg/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 accrues three or more notices of violation for Rule 403 exceedance within 36-month period
General Controls	Perimeter fencing and windscreen	Perimeter fencing and windscreen	None	None	Removal procedures	None
	Application of dust suppressants during earth-moving activities	Adequately wet during earth-moving activities	None	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

	Proposed Rule 1466	Rule 403	Rule 1166	Rule 1157	Rule 1403	Rule 1156
	Earth-moving not allowed during hours operation or facility sponsored activities when conducted on school, early education centers, 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 facility 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
	None	None	None	None	None	Sweep internal paved roads
Stockpile Controls	Limited size	None	None	Limited size	Leak-tight containers	
	Adequately wet or chemically stabilized	Adequately wet or chemically stabilized	Adequately wet or chemically stabilized	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 piles
	Segregate	None	Segregate	None	None	None
	Limited at schools, early education centers and joint use agreement properties	None	None	None	None	None
	None	None	None	None	None	Freeboard requirements
	None	None	None	None	None	Wind fence
	Adequately wet	Adequately wet	None	None	None	Apply dust suppressants as necessary

	Proposed Rule 1466	Rule 403	Rule 1166	Rule 1157	Rule 1403	Rule 1156
Loading, Unloading and Transferring Controls	Loading techniques	Loading techniques	None	None	None	Minimize height of drop
	Cover loads	Cover loads (contingency only)	Cover loads	None	None	Close cement truck hatches
						Conducted in enclosed system that is vented to SCAQMD permitted air pollution control device
						Cover or enclose all conveying systems and enclose all transfer points
						Dust curtains, shrouds, belt scrapers, and gaskets along belt conveying system
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 hourly PM ₁₀ limit	None	None	None	Changes in quantity or schedule	Exceedance of hexavalent chromium, fail source testing compliance limits
	None	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	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, vehicle traffic

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