

# SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

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

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### **Deputy Executive Officer**

Planning, Rule Development, and Area Sources  
Philip M. Fine, Ph.D.

### **Assistant Deputy Executive Officer**

Planning, Rule Development, and Area Sources  
Susan Nakamura

### **Planning and Rules Manager**

Planning, Rule Development, and Area Sources  
David De Boer

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Author: Uyen-Uyen Vo – Air Quality Specialist

Contributors: John Anderson – Air Quality Analysis and Compliance Supervisor  
Ryan Bañuelos – Air Quality Specialist  
Shawn Bennage – Supervising Air Quality Inspector  
Garrett Kakishita – Supervising Air Quality Inspector  
Anthony Oliver – Air Quality Specialist  
Amanda Sanders – Supervising Air Quality Inspector  
Elaine Shen – Program Supervisor  
Angela Shibata – Senior Air Quality Engineer  
Charles Tupac – Air Quality Analysis and Compliance Supervisor  
Sumner Wilson – Principal Air Quality Instrument Specialist  
Jillian Wong – Planning and Rules Manager

Reviewed by: Heather Farr – Program Supervisor  
Shahrzod Hanizavareh – Senior Deputy District Counsel  
Michael Morris – Program Supervisor

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WAYNE NASTRI

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## **BACKGROUND**

The South Coast Air Quality Management District (SCAQMD) is the lead air pollution agency in the South Coast Air Basin (Basin) 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 Basin and Coachella Valley, in addition to responding to thousands of public complaints regarding air quality.

Rule 1466 – Control of Particulate Emissions from Soils with Toxic Air Contaminants (Rule 1466) minimizes fugitive dust emissions containing arsenic, asbestos, cadmium, hexavalent chromium, lead, mercury, nickel, and polychlorinated biphenyls from sites that meet the rule’s applicability requirements by establishing dust control measures that can be implemented during earth-moving activities. Applicable sites are those conducting earth-moving activities where the soil contains applicable toxic air contaminant(s) as determined and designated by the U.S. Environmental Protection Agency (U.S. EPA), California Department of Toxics Substances Control (DTSC), State Water Resources Control Board (State Water Board), or Regional Water Quality Control Board (Regional Water Board). Additionally, Rule 1466 has a provision for the Executive Officer to identify sites, based on a set of criteria, to be subject to the requirements of the rule. The rule establishes a PM<sub>10</sub> ambient dust concentration limit and dust control measures. Notification to the Executive Officer is required prior to beginning earth-moving activities as well as when ambient PM<sub>10</sub> dust concentration limits are exceeded. Additional requirements include, recordkeeping and signage. Rule 1466 allows alternative dust control measures, ambient dust concentration limits, signage, and other alternative provisions upon Executive Officer approval.

At the July 2017 Board Hearing, the SCAQMD Governing Board adopted Rule 1466. The adoption Resolution directed staff to return the Governing Board as early as practicable considering impacts and staff resources, but no later than February 2018 with an amendment for the Board’s consideration to expand the list of applicable toxic air contaminants to include pesticides, herbicides, other metals, persistent bioaccumulative toxics, and semi-volatile organic compounds. Proposed Amended Rule 1466 (PAR 1466) expands the list of applicable toxic air contaminants consistent with the adoption Resolution and expands the rule’s applicability to other government designated sites. Other amendments to PAR 1466 are provided to clarify existing provisions.

## **REGULATORY BACKGROUND**

SCAQMD’s regulatory structure for fugitive dust and particulate matter includes rules that address fugitive dust (Rule 403 – Fugitive Dust); volatile organic compounds (VOCs) contaminated soil (Rule 1166 – Volatile Organic Compound Emissions from Decontamination of Soil); soil containing toxic air contaminant(s) (Rule 1466); and particulate matter and hexavalent chromium emissions from cement manufacturing facilities (Rule 1156 – Further Reductions of Particulate Emissions from Cement Manufacturing Facilities).

### **Rule 1166**

Rule 1166 was adopted on August 5, 1988 and established requirements to control VOC emissions from excavating, grading, handling and treating VOC-contaminated soil as a result of leakages from storage or transfer operations, accidental spillage or other deposition. Although Rule 1166 targets VOC emission reductions, implementation of the rule also results in concurrent reductions

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

### **Rule 403**

Rule 403 was adopted on May 7, 1976 and amended six times. The purpose of Rule 403 is to reduce particulate matter entrained in ambient air as a result of man-made fugitive dust sources by requiring actions to prevent, reduce, or mitigate fugitive dust emissions. Rule 403 limits particulate matter concentrations, when monitored, and contains control measures to limit fugitive dust. Rule 403 provides a menu of dust control guidance and options for the operator to select. Additional provisions, including more specific dust control measures, are included for large operations (> 50 acres) and for operations where fugitive dust concentrations exceed performance standards. Many sites with toxic air contaminant(s) in the soil are less than 50 acres, and therefore are not required to implement these additional and more specific dust control measures. Also, ambient dust monitoring is not always required under Rule 403. Even when monitoring is required, the 50  $\mu\text{g}/\text{m}^3$   $\text{PM}_{10}$  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 established 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,  $\text{PM}_{10}$ , and wind monitoring; and source testing. Additional provisions include Operation and Maintenance procedures; reporting and recordkeeping; and requirements after facility closure. Rule 1156 is only applicable to cement manufacturing facilities, only addresses hexavalent chromium, and does not apply to all earth-moving activities.

## **PUBLIC PROCESS**

PAR 1466 was developed through a public process. SCAQMD has held two working group meetings at the SCAQMD Headquarters in Diamond Bar on August 3, 2017 and September 12, 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 work through the details of staff's proposal. Additionally, a Public Workshop was held on September 19, 2017.

## **PROPOSED AMENDED RULE 1466**

PAR 1466 includes provisions to expand the applicability to other government designated sites, expand the list of applicable toxic air contaminants, and clarify existing provisions.

**Applicability (Subdivision (b))**

Effective January 1, 2018, PAR 1466 expands the applicability of the rule to include the owner or operator of Hazardous Material Release Sites that have been designated and notified by county, local, or state regulatory agencies pursuant to Health and Safety Code Section 25260. According to Health and Safety Code Section 25260, “‘hazardous materials release site’ or ‘site’ means any area, location, or facility where a hazardous material has been released or threatens to be released into the environment. ‘Hazardous materials release site’ does not include a site subject to a response and cleanup operation under Chapter 7.4 (commencing with Section 8670.1) of Division 1 of Title 2 of the Government Code or a corrective action under Part 6 (commencing with Section 46000) of Division 30 of the Public Resources Code.” Health and Safety Code Sections 25261-25263 and 25265 defines “Site Designation Committee” and authorizes the committee, at the request of the responsible party for a hazardous materials release site, to designate an administering agency to oversee the site’s investigation and remedial action. County, local, and state regulatory agencies include agencies such as environmental health departments, planning departments, fire departments, and public health offices and have the jurisdiction to supervise, oversee, or approve a site investigation and remedial action at a hazardous materials release site. Concern by stakeholders was raised that sites may avoid Rule 1466 by selecting a county, local, or regulatory agency to oversee a cleanup rather than selecting the U.S. EPA, DTSC, State Water Board, or Regional Water Board. Therefore, expanding the rule’s applicability will ensure that earth-moving activities at these sites requiring cleanup of soil with applicable toxic air contaminants will also be applicable to Rule 1466.

**Definitions (Subdivision (c))**

The definition for Applicable Toxic Air Contaminants is proposed to be deleted and instead incorporated into the definition of Soil with Applicable Toxic Air Contaminant(s). Additionally, in order to be consistent with subdivision (b), the definition for Soil with Applicable Toxic Air Contaminant(s) includes soil that has been identified by a county, local, or state regulatory agency. The list of applicable toxic air contaminants for sites designated by the U.S. EPA, the DTSC, the State Water Board, the Regional Water Board or a county, local or state regulatory agency has been expanded and is listed in Table I of the proposed rule. Effective January 1, 2018, the list of applicable toxic air contaminants for sites designated by the Executive Officer has been expanded to include any toxic air contaminant listed in SCAQMD Rule 1401 – New Source Review of Toxic Air Contaminants, Table I or the California Code of Regulations, Section 93001. The applicable toxic air contaminants for sites designated by other regulatory agencies, include those that are commonly found at contaminated sites above background levels and have negative health effects. The list of applicable toxic air contaminants for sites designated by the Executive Officer is much broader and includes all toxic air contaminants identified in SCAQMD Rule 1401 and California Code of Regulations Section 93001 (see Appendix 1 of the staff report, Applicable Toxic Air Contaminants for Executive Officer Designated Sites), excluding volatile organic compounds which are subject to Rule 1166. Both references for toxic air contaminants are included because each list on its own does not include all the categories required by the adoption Resolution. Rule 1401 includes 11 dioxins, whereas Section 93001 of the California Code of Regulations only has one. With respect to metals, Section 93001 includes cobalt compounds and Rule 1401 does not. Section 93001 includes polycyclic organic matter with more than one benzene ring and a boiling point of equal to or greater than 100 degrees Celsius, while Rule 1401 specifies certain polycyclic aromatic hydrocarbons (PAHs). Rule 1401 does not include any pesticides, whereas Section

93001 includes several. Referencing both Rule 1401 and Section 93001 allows the Executive Officer to identify unique sites that contain hazardous materials that are not the common substances listed in PAR 1466 Table I. PAR 1466 exempts volatile organic compounds subject to Rule 1166 because volatile organic compounds are regulated under Rule 1166. Volatile organic compounds and particulates are handled differently in terms of procedures for clean-up and/or remediation and need to be handled separately. Therefore, if a site contains both volatile organic compounds and toxic particulates, the site will be subject to both rules.

### **Table I, Applicable Toxic Air Contaminants**

To be consistent with SCAQMD Rule 1401 – New Source Review of Toxic Air Contaminants, Table I, Toxic Air Contaminants, the following changes were made to the current list of applicable toxic air contaminants:

- Arsenic is now listed as arsenic and arsenic compounds (inorganic), including, but not limited to: arsenic compounds (inorganic) and arsine.
- Cadmium is listed as cadmium and cadmium compounds.
- Hexavalent chromium is listed as chromium (hexavalent) and chromium compounds, including, but not limited to: barium chromate, calcium chromate, lead chromate, sodium dichromate, strontium chromate, and zinc chromate.
- Lead is listed as lead and lead compounds (inorganic, including elemental lead), including, but not limited to: lead compounds (inorganic), lead acetate, lead chromate, lead phosphate, and lead subacetate.
- Mercury is listed as mercury and mercury compounds (inorganic), including, but not limited to: mercuric chloride and methyl mercury.
- Nickel is listed as nickel and nickel compound, including, but not limited to: nickel acetate, nickel carbonate, nickel carbonyl, nickel hydroxide, nickel oxide, nickel subsulfide, nickelocene, and refinery dust from the pyrometallurgical process.
- Polychlorinated biphenyls is now listed as polychlorinated biphenyls (PCBs); 3,3',4,4' tetrachlorobiphenyl; 3,4,4',5 tetrachlorobiphenyl; 2,3,3',4,4' pentachlorobiphenyl; 2,3,4,4',5 pentachlorobiphenyl; 2,3',4,4',5 pentachlorobiphenyl; 2',3,4,4',5 pentachlorobiphenyl; 3,3',4,4',5 pentachlorobiphenyl; 2,3,3',4,4',5 hexachlorobiphenyl; 2,3,3',4,4',5' hexachlorobiphenyl; 2,3',4,4',5,5' hexachlorobiphenyl; 3,3',4,4',5,5' hexachlorobiphenyl; and 2,3,3',4,4',5,5' heptachlorobiphenyl.

The adoption Resolution directed staff to expand the list of applicable toxic air contaminants to include pesticides, herbicides, other metals, persistent bioaccumulative toxics, and semi-volatile organic compounds. Staff reviewed these categories and selected the compounds from each category that were commonly found at contaminated sites above background levels. The pesticides and herbicides that staff selected are chlordane and the dichlorodiphenyltrichloroethane (DDT) family of compounds. Staff did not include other metals because the original list of applicable toxic air contaminants covered the commonly found metals. Staff reviewed two years of data regarding cleanup projects and only found one site that would not be applicable to Rule 1466 because the site's contaminant of concern was zinc. Dioxins were included to cover the category of bioaccumulative toxics. Staff did not include any semi-volatile organic compounds because those would fall under Rule 1166.

The following substances are proposed to be added and will be applicable effective January 1, 2018:

- Dioxins. These are classified as persistent organic pollutants because they are extremely resistant to environmental degradation. Dioxins are highly toxic and have been linked to cancer, developmental problems in children, reproductive and infertility problems in adults, miscarriages, damage to the immune system, and interference with hormones. For consistency, PAR 1466 lists the same dioxins as in Rule 1401, referring to them as dibenzo-p-dioxins (chlorinated), including: 2,3,7,8-tetrachlorodibenzo-p-dioxin; 1,2,3,7,8-pentachlorodibenzo-p-dioxin; 1,2,3,4,7,8-hexachlorodibenzo-p-dioxin; 1,2,3,6,7,8-hexachlorodibenzo-p-dioxin; 1,2,3,7,8,9-hexachlorodibenzo-p-dioxin; 1,2,3,4,6,7,8-heptachlorodibenzo-p-dioxin; 1,2,3,4,6,7,8,9-octachlorodibenzo-p-dioxin; total tetrachlorodibenzo-p-dioxin; total pentachlorodibenzo-p-dioxin; total hexachlorodibenzo-p-dioxin; and total heptachlorodibenzo-p-dioxin.
- Pesticides. Depending on the pesticide, exposure can cause a variety of adverse health effects ranging from irritation of the skin and eyes to more severe effects such as causing cancer, reproductive and developmental problems, and endocrine disruption. PAR 1466 Table I includes the pesticides that are commonly found at contaminated sites above background levels that have negative health effects. The pesticides are: chlordane, dichlorodiphenyltrichloroethane (DDT), dichlorodiphenyldichloroethylene (DDE), and dichlorodiphenyldichloroethane (DDD). In general, when a less commonly found pesticide is identified it occurs with one of these four pesticides.
- Polycyclic Aromatic Hydrocarbons (PAHs). Exposure to PAHs is linked to cancer, cardiovascular disease, and poor fetal development. The PAHs included in PAR 1466 are the ones with the highest risk factor and include: benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, benzo[k]fluoranthene, chrysene, dibenz[a,h]anthracene, and indeno[1,2,3-c,d]pyrene.

#### **Monitoring Requirements (Subdivision (d))**

Paragraph (d)(3) specifies the requirements for PM<sub>10</sub> monitoring. PAR 1466 adds a provision, subparagraph (d)(3)(D), that requires all the PM<sub>10</sub> monitors used at a site to be identical in: make and model; settings; calibration; configuration; and calibration, correction, and correlation factors. The term “settings” refers to the run parameters entered into the instrument such as: flow rate, humidity control, conditioning of sample air stream, logging mode and averaging period, run times, zeroing, and correction factor. “Calibrations” includes PM<sub>10</sub>, flow, temperature, and pressure and also refers to calibration procedures and standards. “Configuration” refers to any of the accessories on the PM<sub>10</sub> monitor such as the: inlet (omni directional, heated, cyclone, etc.), water trap, zero module, pump, and filter. The phrase “calibration, correction, and correlation factors” refers to any value that scales the concentration output. This provision was added to ensure that the PM<sub>10</sub> results from all of the instruments at one site are operated in the same manner, producing results that are as accurate as possible.

Rule 1466 Appendix 1 provides alternative Executive Officer approved PM<sub>10</sub> monitor requirements. Currently, the requirement for the inlet is that it is omni-direction, heated, and has a water trap. PAR 1466 proposes to remove the water inlet requirement because the water trap is not necessary to correct for humidity as long as the inlet is heated. Currently, the performance standard for resolution is 0.1 µg/m<sup>3</sup>. PAR 1466 proposes to change the resolution to 1.0 µg/m<sup>3</sup>.



Increasing the resolution from 0.1 to 1.0  $\mu\text{g}/\text{m}^3$  will increase the number of monitors that may be approved but will not affect the quality of the data.

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

For clarification, subparagraph (e)(5)(D), replaces the term “freeboard” with the phrase “between the soil and the top of the truck bed” in the requirement to maintain at least six inches of space between the soil and the top of the truck while transporting within a site.

#### **Notification Requirements (Subdivision (f))**

For the notification of intent to conduct earth-moving activities, subparagraph (f)(1)(G) requires the notification to include a description of the earth-moving activities and a schedule that includes the anticipated start and completion dates of earth-moving activities. PAR 1466 adds a requirement to include the estimated volume of soil with applicable toxic air contaminant(s). Knowing the volume of soil with applicable toxic air contaminant(s) will allow staff to know the extent of the earth-moving activities. Additionally, PAR 1466 adds subparagraph (f)(1)(I) which requires the notification to state any applicable exemption(s).

In order to clarify the notification provisions and be consistent with Rule 403, PAR 1466 added paragraph (f)(2) Notification Updates, which includes provisions to specify when a notification needs to be updated. Additionally, notifying SCAQMD of the changes allows compliance personnel to be present, if necessary, and ensures that the requirements of the rule are being followed. PAR 1466 proposes that notifications must be updated when there is a change in the start date of any earth-moving activity. If the starting date is changed to an earlier date, subparagraph (f)(2)(A) requires that the change must be reported to the SCAQMD at least 72 hours before any earth-moving activities begin. If the starting date is changed to a later date, subparagraph (f)(2)(B) requires that the change must be reported to the SCAQMD as the information becomes available, but no later than the original start date. Subparagraph (f)(2)(C) requires notifications to be updated when there is a change in a site’s exemption status pursuant to subdivision (k). If a site’s exemption status changes, the change must be reported to the SCAQMD as soon as the information becomes available, but no later than 48 hours after the information becomes available.

Currently, Rule 301 – Permitting and Associated Fees does not have a fee for Rule 1466 Notifications. Staff plans to include a fee for Rule 1466 Notifications when Rule 301 gets updated or amended. The fee will be similar to Rule 1149 and Rule 1166 Notification Fees (Rule 301, subdivision (x)) for all notifications in subdivision (f), with the exception of those required under paragraph (f)(2) Notification Updates, which will not be subject to notification fees.

#### **Recordkeeping Requirements (Subdivision (h))**

In order to enforce subparagraph (d)(3)(D), paragraph (h)(2) will also require records for: instrument make and model; settings; configuration; and calibration, correction, and correlation factors.

#### **Executive Officer Designated Sites (Subdivision (i))**

Currently, in order to determine whether or not a site is applicable to Rule 1466, the Executive Officer, with evidence that a site contains soil with applicable toxic air contaminant(s), will consult

with U.S. EPA, DTSC, the State or Regional Water Boards, and/or local or state health agencies, and based on criteria specified in the rule. In order to be consistent with the new applicability, PAR 1466 adds that the Executive Officer will also consult with local, county, or state regulatory agencies. Additionally, subparagraph (i)(1)(A) has been added which allows the Executive Officer to consider a site's history, which includes current and previous operation(s) and use(s) and regulatory history, when making a determination. Site history will also be required to substantiate the request for an alternative PM<sub>10</sub> limit pursuant to subparagraph (d)(2)(A) and a specific provision exemption pursuant to paragraph (k)(1).

### **Exemptions (Subdivision (k))**

The exemption in paragraph (k)(1) allows the designating agency, in consultation with the Executive Officer, to exempt a site from one or more provisions in the rule. To be consistent with subdivision (b), PAR 1466 includes county, local, and state regulatory agencies as a designating agency with this authority.

Paragraph (k)(2) exempts earth-moving activities performed within enclosures vented to approved air pollution control equipment from certain provisions of Rule 1466. One of those exemptions is from subdivision (f), notification requirements; PAR 1466 proposes to remove this. These sites are still applicable to Rule 1466 and notification allows compliance personnel to be present, if necessary, to ensure the requirements are being followed.

Paragraph (k)(3) exempts linear trenching for sewer projects that directly load soil with applicable toxic air contaminant(s) into a truck or bin for transport from certain provisions of Rule 1466. PAR 1466 proposes to include linear trenching for natural gas, power, and water projects, which are very similar to linear trenching for sewer projects. Fugitive dust emissions will not be significant since activities in one area will have a short timeframe and the soil will be directly loaded into a truck or bin for transport. Linear trenching for water projects on roadways that directly load soil with applicable toxic air contaminant(s) into trucks or bin for transport, shall be exempt from all requirements except:

- Paragraph (e)(2), adequately wet soil
- Paragraph (e)(3), vehicles
- Paragraph (e)(4), stockpiles
- Paragraphs (e)(5) and (e)(6), truck loading and unloading
- Paragraph (e)(7), spilled soil
- Paragraph (e)(8), wind speed
- Paragraph (e)(11), schools, early education centers, and joint use agreement properties
- Subdivision (f), notification requirements
- Subdivision (h), recordkeeping requirements
- Subdivision (i), Executive Officer designated sites

PAR 1466 adds the option for exemptions (k)(3) and (k)(4) for the owner or operator or designating agency to utilize an alternative to directly loading into a truck or bin for transport, provided it is approved by the Executive Officer pursuant to subdivision (j) and meets the same objective and effectiveness as direct loading as listed in Appendix 2 of the rule.

## POTENTIALLY IMPACTED SITES

A review of notifications of hazardous site cleanup actions by responsible regulatory agencies between 2015 and 2016 indicate approximately 20 sites would have been subject to PAR 1466 had it been in place during that two-year time period. For Rule 1466, based on the original list of eight applicable toxic air contaminants, staff estimated that approximately 8 sites per year would be impacted. Therefore, PAR 1466's additional applicable toxic air contaminants will increase the number of affected sites by approximately 2.

## SOCIOECONOMIC ASSESSMENT

### Affected Industries

The proposed amendments to PAR 1466 would expand the rule's applicability to other government designated sites and expand the list of applicable toxic air contaminants to include pesticides, herbicides, and, persistent bioaccumulative toxics. These amendments would lead to an increased number of potentially affected sites and industries than those described in the Final Staff Report for Proposed Rule 1466.

A list of potentially impacted sites was developed based on a review of notifications of hazardous site cleanup actions within the SCAQMD's jurisdiction by responsible regulatory agencies between 2015 and 2016.<sup>1</sup> Over the two-year period, a total of 20 sites would have been subject to PAR 1466 had it been in place during that time period. Seven (3.5 per year) of the 20 sites would have been potentially impacted by the proposed amendments (Table 1 of the Draft Staff Report), and 13 (6.5 per year) would have been impacted by the current Rule 1466 that was adopted in July 2017. Therefore, this analysis assumed an average total of ten potentially impacted sites per year.

Table 1 of the Draft Staff Report summarizes the industries associated with past sites where the soil contained one or more of the additional applicable toxic air contaminant(s) under PAR 1466. Notice that the industries of the current owner or responsible party of the sites are listed, and they may differ from the previous industrial operations that resulted in contamination at these sites. The real estate industry, specifically Lessors of Residential Buildings and Dwellings (coded 531110 under the North American Industry Classification System), would have had the greatest number of potentially impacted sites with the largest total acreage from 2015 through 2016. Other potentially impacted industries include rail transportation and waste management. The public administration sector would be also affected.

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<sup>1</sup> Appendix C to Draft Subsequent Environmental Assessment of PAR 1466 (released on October 13, 2017).

**Table 1: Additional Potentially Affected Industries  
(Based on 2015 & 2016 Data)**

<b>Industry Classification</b>	<b>6-digit Industry NAICS</b>	<b># of Sites</b>	<b>Total Acreage</b>
Line-Haul Railroads	482111	1	3
Lessors of Residential Buildings and Dwellings	531110	3	85
Solid Waste Landfill	562212	1	38
Administration of Air and Water Resource and Solid Waste Management Programs	924110	1	17
Administration of Conservation Programs	924120	1	81
National Security	928110	1	n/a
<b>Total</b>		<b>7</b>	<b>≥ 224</b>

Among the additional potentially impacted sites that are not operated by public agencies, no information was available from the 2016 Dun and Bradstreet data that could be used to classify their small business status.<sup>2</sup> However, based on the County Business Patterns data from U.S. Census Bureau, about 99 percent of establishments in the Lessors of Residential Buildings and Dwellings industry and 96 percent of establishments in the Solid Waste Landfill industry would be classified as small businesses using the federal Small Business Administration's definition.<sup>3</sup>

### **Compliance Cost**

Due to the recent adoption of Rule 1466 in July 2017, staff elected to analyze the compliance cost of both the incremental cost of the proposed amendments and the total cost for the rule including the proposed amendments to provide further information to stakeholders.<sup>4</sup> In contrast to the incremental cost, which represents the amount of cost resulting only from the amendments, the total cost of the rule includes the estimated cost of the current Rule 1466 plus the proposed amendments. Compliance cost was estimated based on the same assumptions used in the Final Staff Report for Proposed Rule 1466. As such, it was assumed that a potentially impacted site

<sup>2</sup> The SCAQMD defines a "small business" in Rule 102 as, among other things, one which employs 10 or fewer persons and which earns \$500,000 or less in gross annual receipts. For the purpose of qualifying for access to services from the SCAQMD's Small Business Assistance Office (SBAO), Rule 102 further defines a small business as a business with total gross annual receipts of \$5 million or less, or with 100 or fewer employees. 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<sub>x</sub>, and (3) is a small business as defined by SBA. The federal SBA definitions of small businesses vary by six-digit NAICS codes. In general terms, it defines a small business as having 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.

<sup>3</sup> Geographic Area Series: County Business Patterns, 2015. US Census Bureau. For the four-county region. <https://factfinder.census.gov/>

<sup>4</sup>The cost assumptions made herein are based on the same data and information used for the Draft Subsequent Environmental Assessment (Draft SEA for PAR 1466; released on October 13, 2017). While the Draft SEA 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.

would have an average land area of about eight acres and an average period of three months for earth-moving activities at the site.

As discussed above, staff used data from past sites to develop a reasonable scenario for potentially impacted sites. The cost impact of current Rule 1466 was analyzed based on an assumption of eight sites per year affected by this rule, and the proposed amendments would potentially affect two additional sites per year. This scenario also takes into account the fact that many sites may have already employed some of the control methods and activities required in PAR 1466 in accordance with existing rules and requirements from other agencies. For example, many sites have already put fencing and windscreens in place or PM<sub>10</sub> monitors in accordance with DTSC requirements or vehicle egress measures and an onsite 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 PAR 1466 requirements which are incremental to this baseline.

The annual compliance cost for the current Rule 1466 was previously estimated at \$731,000 and the estimated *incremental* annual compliance cost for the proposed amendments is about \$182,000, bringing the total estimated compliance cost of PAR 1466 to nearly \$913,000 (Table 2).<sup>5</sup> A range of estimated compliance cost for an average-sized site (i.e., about eight acres) was also calculated to provide further information about the potential cost that could be incurred by a single site. The lower bound of the range, with a total cost of approximately \$31,000 per site per year, assumed that a potentially affected site has already employed an onsite dust control supervisor and installed equipment such as PM<sub>10</sub> monitors and fencing with windscreens. The upper bound assumed that none of the required measures have been implemented, and the cost would amount to about \$162,000 per site per year.

Notification fees for initial notifications and PM<sub>10</sub> exceedances, will be proposed as part of an upcoming amendment to Rule 301. As previously discussed, updated notification will not be subject to fees. The proposed fees initial notifications and PM<sub>10</sub> exceedances are expected to be similar to Rule 1149 and Rule 1166 Notification Fees (Rule 301, subdivision (x)), but the exact fee amounts will be determined during the rulemaking process for Rule 301. The proposed fees for initial notifications and PM<sub>10</sub> exceedances are expected to be approximately \$61.00 and have not been included in this estimate.

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<sup>5</sup> In the Final Staff Report for Proposed Rule 1466, a total of eight potentially impacted sites per year was assumed based on a dataset over a longer time frame. Table 2 reports the total compliance cost for PAR 1466 based on the assumption of ten potentially impacted sites per year using the 2015-2016 data for past sites, as discussed above, and the difference between this total cost and the compliance cost estimated in the Final Staff Report for Proposed Rule 1466 was considered to be the incremental cost for the proposed amendments.

**Table 2: Estimated Annual Compliance Cost**

Activity or Equipment	Annual Compliance Cost				Range of Annual Compliance Cost Per Site		
	Annual Cost for Current Rule 1466 <sup>6</sup>		Incremental Cost for Proposed Amendments		Total Cost for PAR 1466	Lower Bound	Upper Bound
PM <sub>10</sub> monitors	\$292,499	+	\$73,125	=	\$365,624	\$0	\$91,406
Sweeper with HEPA filter	\$118,200	+	\$29,550	=	\$147,750	\$14,775	\$14,775
Water Truck	\$107,520	+	\$26,880	=	\$134,400	\$13,440	\$13,440
Dust Control Supervisor	\$97,952	+	\$24,500	=	\$122,452	\$0	\$15,561
Fencing (temporary)	\$86,400	+	\$21,600	=	\$108,000	\$0	\$21,600
Water	\$17,741	+	\$4,435	=	\$22,176	\$2,218	\$2,218
Fencing in of stockpiles (at schools)	\$3,240	+	\$0	=	\$3,240	\$0	\$1,620
Notification signs	\$2,880	+	\$720	=	\$3,600	\$360	\$360
Vehicle Egress (washed gravel)	\$2,642	+	\$660	=	\$3,302	\$0	\$389
Speed limit signs	\$616	+	\$154	=	\$770	\$77	\$77
Fence gate (temporary)	\$500	+	\$125	=	\$625	\$0	\$125
Plastic Sheeting	\$480	+	\$120	=	\$600	\$0	\$200
<b>Total</b>	<b>\$730,670</b>	+	<b>\$181,869</b>	=	<b>\$912,540</b>	<b>\$30,870</b>	<b>\$161,770</b>

The items with relatively larger costs are PM<sub>10</sub> monitors, a sweeper with HEPA filters, water trucks, temporary fencing and windscreen, and employing a dust control supervisor. Following is a description of the estimation and associated cost assumptions:

- **PM<sub>10</sub> 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 that does not already use PM<sub>10</sub> monitors. Based on prior site data, it was assumed that approximately 60% of sites already have PM<sub>10</sub> monitors.<sup>7</sup> Note that this analysis does not consider any resale value the PM<sub>10</sub> monitors may have after project completion, therefore representing an upper bound on the cost for this equipment. This also assumes that contractors that work on multiple projects will use the monitors at other Rule 1466 sites.
- **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.

<sup>6</sup> From Table 3 of the Draft Staff Report for Proposed Rule 1466, June 2017.

<sup>7</sup> See Table 1, Final Staff Report for Proposed Rule 1466, June 2017.

- **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 to account for the non-wage benefits<sup>8</sup>, such as health benefits, considering a three month project period, and the fact that 30% of sites already employ supervisors that would satisfy this requirement.<sup>9</sup> 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 three month rental rate from a local supplier of \$4,500 per 500 linear feet of temporary six 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. This is a conservative estimate as the rule does allow fencing around the area where the earth moving activities will occur on site, which may represent a smaller portion of the entire site.
- **Water** costs were estimated based on the incremental water use required by the Rule 1466. Based on prior site data,<sup>10</sup> 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.<sup>11</sup> 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 four 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.

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<sup>8</sup> 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. <https://www.bls.gov/web/ecec/ecsuhst.pdf>

<sup>9</sup> The number of sites which already employ PM<sub>10</sub> monitors or onsite dust control supervisor differs due to sites being subject to different requirements from different lead agencies.

<sup>10</sup> See Table 1, Final Staff Report for Proposed Rule 1466, June 2017.

<sup>11</sup> 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.

### **Job Impacts**

It has been a standard practice for SCAQMD's socioeconomic impact assessments that, when the annual compliance cost is less than one million current U.S. dollars, the Regional Economic Impact Model Inc. (REMI)'s Policy Insight Plus Model is not used to simulate jobs and macroeconomic impacts, as is the case here. This is because the resultant impacts would be diminutive relative to the baseline regional economy. Since the annual incremental cost of compliance with Proposed Amended Rule 1466 are \$182,000 and the total estimated cost of compliance with Rule 1466 is \$913,000, a REMI analysis was not conducted.

### **CALIFORNIA ENVIRONMENTAL QUALITY ACT**

The California Environmental Quality Act (CEQA) requires that all potential adverse environmental impacts of proposed projects be evaluated and that methods to reduce or avoid identified significant adverse environmental impacts of these projects be implemented, if feasible. The purpose of the CEQA process is to inform the SCAQMD Governing Board, public agencies, and interested parties of potential adverse environmental impacts that could result from implementing the proposed project and to identify feasible mitigation measures or alternatives, when an impact is significant.

Public Resources Code Section 21080.5 allows public agencies with regulatory programs to prepare a plan or other written documents in lieu of a negative declaration or environmental impact report once the secretary of the resources agency has certified the regulatory program. The SCAQMD's regulatory program was certified by the secretary of resources agency on March 1, 1989, and has been adopted as SCAQMD Rule 110 – Rule Adoption Procedures to Assure Protection and Enhancement of the Environment. Pursuant to Rule 110 (the rule which implements the SCAQMD's certified regulatory program), the SCAQMD typically prepares an Environmental Assessment (EA) to evaluate the environmental impacts for rule projects proposed for adoption or amendment.

PAR 1466 is considered a “project” as defined by CEQA. Analysis of PAR 1466 indicates that more toxic air contaminants are proposed to be added to the list of applicable toxic air contaminants without substantially revising the existing requirements that were included in Rule 1466 as adopted in July 2017. As such, SCAQMD staff has determined that PAR 1466 contains new information of substantial importance which was not known and could not have been known at the time the Final EA was certified for the adoption of Rule 1466 in July 2017 (referred to herein as the July 2017 Final EA). However, PAR 1466 is not expected to create new significant effects that were not discussed in the previous July 2017 Final EA. Thus, analysis of the proposed project indicates that the type of CEQA document appropriate for the proposed project is a Subsequent Environmental Assessment (SEA), in lieu of an EA. The SEA is a substitute CEQA document, prepared in lieu of a Subsequent Negative Declaration with no significant impacts (CEQA Guidelines Section 15162(b)), pursuant to the SCAQMD's Certified Regulatory Program (CEQA Guidelines Section 15251(l); codified in SCAQMD Rule 110). The SEA is also a public disclosure document intended to: 1) provide the lead agency, responsible agencies, decision makers and the general public with information on the environmental impacts of the proposed project; and 2) be used as a tool by decision makers to facilitate decision making on the proposed project.

Thus, the SCAQMD, as lead agency for the proposed project, prepared a Draft SEA pursuant to its Certified Regulatory Program. Because PAR 1466 was not expected to have statewide,



regional, or areawide significance, a CEQA scoping meeting was not required and thus, was not held for the proposed project pursuant to Public Resources Code Section 21083.9(a)(2). Further, since no significant adverse impacts were identified, an alternatives analysis and mitigation measures were not required (CEQA Guidelines Section 15252(a)(2)(B)). The Draft SEA was released for a 32-day public review and comment period from October 13, 2017 to November 14, 2017. All comments received during the public comment period on the analysis presented in the Draft SEA will be responded to and included in an appendix to the Final SEA.

Prior to making a decision on the adoption of PAR 1466, the SCAQMD Governing Board must review and certify the Final SEA, including responses to comments, as providing adequate information on the potential adverse environmental impacts that may occur as a result of adopting PAR 1466.

## **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 Amended Rule 1466 is needed to expand the list of applicable toxic air contaminants to include pesticides, herbicides, other metals, persistent bioaccumulative toxics, and semi-volatile organic compounds and clarify existing provisions.

### **Authority**

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

### **Clarity**

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

### **Consistency**

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

### **Non-Duplication**

Proposed Amended Rule 1466 will not impose the same requirements as any existing state or federal regulations. The proposed amended rule is necessary and proper to execute the powers and duties granted to, and imposed upon, the 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 Amended Rule 1466 supersede those in Rule 403.

**Reference**

By adopting Proposed Amended 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 amendment are considered in the order of cost-effectiveness. The 2016 Air Quality Management Plan (AQMP) ranked, in the order of cost-effectiveness, all of the control measures for which costs were quantified. It is generally recommended that the most cost-effective actions be taken first. Although TXM-04 is a control measure that was included in the 2016 AQMP, Proposed Amended Rule 1466 was included in the 2016 AQMP as a toxic control measure and was not ranked relative to other criteria pollutant control measures in the 2016 AQMP.

**Incremental Cost-effectiveness**

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

## COMPARATIVE ANALYSIS

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

	<b>Proposed Amended Rule 1466</b>	<b>Rule 403</b>	<b>Rule 1166</b>	<b>Rule 1157</b>	<b>Rule 1403</b>	<b>Rule 1156</b>
<b>Purpose</b>	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 <sub>10</sub> emissions from aggregate activities	Limit asbestos emissions	Reduce particulate matter and hexavalent chromium emissions
<b>Applicability</b>	Designated cleanup sites with specified toxic air contaminants; Executive Officer designated cleanup sites based on a set of criteria	Any activity or anthropogenic condition capable of generating dust	VOC contaminated soils	Sand, gravel, quarried rock operations	Building demolition and renovation activities	Cement manufacturing operations and the property
<b>Monitoring</b>	Two-hour 25 µg/m <sup>3</sup> differential limit for PM <sub>10</sub> emission; Meteorological monitoring	If monitored, five-hour 50 µg/m <sup>3</sup> differential limit for PM <sub>10</sub> emission	Fifteen minute monitoring of VOC emissions	None	None	Hexavalent chromium monitoring, wind monitoring, and PM <sub>10</sub> monitoring if owner/operator accrues three or more notices of violation for Rule 403 exceedance within 36-month period
<b>General Controls</b>	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

	<b>Proposed Amended Rule 1466</b>	<b>Rule 403</b>	<b>Rule 1166</b>	<b>Rule 1157</b>	<b>Rule 1403</b>	<b>Rule 1156</b>
	Onsite compliance supervisor	Onsite compliance supervisor (large sites only)	None	None	Onsite compliance supervisor	None
	Earth-moving not allowed during hours of operation or facility-sponsored activities when conducted on school, early education center, or joint use agreement properties	None	None	None	None	None
<b>Vehicle Controls</b>	Vehicle speed limit	Vehicle speed limit (large sites only)	None	Vehicle speed limit	Vehicle marking	Vehicle speed limit
	Stabilize road and parking surfaces	Stabilize road and parking surfaces	None	Stabilize road and parking surfaces	None	Stabilize or apply gravel pad to roads
	Clean departing vehicles	None	None	None	None	Truck cleaning on site
	Limited track out	Limited track out	None	Limited track out	None	No track out
	Vehicle egress	Vehicle egress	None	Vehicle egress	None	Vehicle egress
	No internal paved road sweeping provision	None	None	None	None	Sweep internal paved roads
<b>Stockpile Controls</b>	Limited size	None	None	Limited size	Leak-tight containers	None
	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 inactive clinker stockpiles
	Segregate	None	Segregate	None	None	None
	Limited at schools, early education centers and joint use agreement properties	None	None	None	None	None

	<b>Proposed Amended Rule 1466</b>	<b>Rule 403</b>	<b>Rule 1166</b>	<b>Rule 1157</b>	<b>Rule 1403</b>	<b>Rule 1156</b>
	No freeboard requirement	None	None	None	None	Freeboard requirements
	No wind fence	None	None	None	None	Wind fence
<b>Loading, Unloading and Transferring Controls</b>	Adequately wet	Adequately wet	None	None	None	Apply dust suppressants as necessary
	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
	No requirement for enclosed system	None	None	None	None	Conducted in enclosed system that is vented to SCAQMD permitted air pollution control device
	No requirement for enclosed conveying systems and transfer points	None	None	None	None	Cover or enclose all conveying systems and enclose all transfer points
	No requirement for belt conveying system	None	None	None	None	Dust curtains, shrouds, belt scrapers, and gaskets along belt conveying system
<b>Notification</b>	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 <sub>10</sub> limit	None	None	None	Changes in quantity or schedule	Exceedance of hexavalent chromium, failing source testing compliance limits
	No advisory flyer requirement	None	None	None	None	Fugitive Dust Advisory flyer
<b>Signage</b>	Entrances and along perimeter	Entrances and along perimeter (large sites only)	None	None	Entrances and along perimeter	None

	<b>Proposed Amended Rule 1466</b>	<b>Rule 403</b>	<b>Rule 1166</b>	<b>Rule 1157</b>	<b>Rule 1403</b>	<b>Rule 1156</b>
<b>Recordkeeping</b>	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, clinker pile reclamation, vehicle traffic

## REFERENCES

Air Monitoring Methods - Criteria Pollutants, <https://www3.epa.gov/ttn/amtic/criteria.html>, U.S. EPA, accessed May 31, 2017

“Air Toxics Hot Spots Program, Risk Assessment Guidelines, Guidance Manual for Preparation of Health Risk Assessments”, Office of Environmental Health Hazard Assessment, February 2015

Brownfields, <http://www.dtsc.ca.gov/SiteCleanup/Brownfields/index.cfm>, DTSC, accessed May 31, 2017

Enterprise Database, Dun & Bradstreet, 2016, accessed October 2017.

“Final Staff Report: Proposed Rule 1466 – Control of Particulate Emissions from Soils with Toxic Air Contaminants”, South Coast Air Quality Management District, June 2017.

“List of Designated Reference and Equivalent Methods”, <https://www3.epa.gov/ttn/amtic/criteria.html>, U.S. EPA, accessed June 6, 2017

“Quality Assurance Handbook for Air Pollution Measurement Systems, Volume IV: Meteorological Measurements”, U.S. EPA, March 2008

“Rule 403 Fugitive Dust Implementation Handbook”, South Coast Air Quality Management District, June 2007

Site Cleanup Programs, [http://www.waterboards.ca.gov/water\\_issues/programs/scp/](http://www.waterboards.ca.gov/water_issues/programs/scp/), California Environmental Protection Agency, accessed May 31, 2017

Superfund: National Priorities List (NPL), <https://www.epa.gov/superfund/superfund-national-priorities-list-npl>, U.S. EPA, accessed May 31, 2017

**APPENDIX 1: Applicable Toxic Air Contaminants for Executive Officer Designated Sites**

<b>CAS Number</b>	<b>California Code of Regulations 93001<sup>1</sup></b>	<b>SCAQMD Rule 1401</b>
75-07-0	Acetaldehyde	acetaldehyde
60-35-5	Acetamide	acetamide
75-05-8	Acetonitrile	
98-86-2	Acetophenone	
53-96-3	2-Acetylaminofluorene	
107-02-8	Acrolein	acrolein
79-06-1	Acrylamide	acrylamide (or propenamamide)
79-10-7	Acrylic acid	acrylic acid
107-13-1	Acrylonitrile	acrylonitrile (or vinyl cyanide)
107-05-1	Allyl chloride	allyl chloride
117-79-3		aminoanthraquinone, 2-
7664-41-7		ammonia
92-67-1	4-Aminobiphenyl	
62-53-3	Aniline	aniline
90-04-0	o-Anisidine	
1332-21-4	Asbestos	asbestos
71-43-2	Benzene (including benzene from gasoline)	benzene (including benzene from gasoline)
92-87-5	Benzidine	benzidine (and its salts)
98-07-7	Benzotrichloride	
100-44-7	Benzyl chloride	benzyl chloride
92-52-4	Biphenyl	
117-81-7	Bis (2-ethylhexyl) phthalate (DEHP)	bis(2-ethylhexyl)phthalate (DEHP)
542-88-1	Bis (chloromethyl) ether	bis(chloromethyl)ether
7789-30-2		bromine pentafluoride
75-25-2	Bromoform	
106-99-0	1,3-Butadiene	butadiene, 1,3-
156-62-7	Calcium cyanamide	
105-60-2	Caprolactam	caprolactum
133-06-2	Captan	
63-25-2	Carbaryl	
75-15-0	Carbon disulfide	carbon disulfide
56-23-5	Carbon tetrachloride	carbon tetrachloride (or tetrachloromethane)
463-58-1	Carbonyl sulfide	carbonyl sulfide
120-80-9	Catechol	
133-90-4	Chloramben	
12789-03-6	Chlordane	
7782-50-5	Chlorine	chlorine
10049-04-4		chlorine dioxide



**APPENDIX 1: Applicable Toxic Air Contaminants for Executive Officer Designated Sites**

<b>CAS Number</b>	<b>California Code of Regulations 93001<sup>1</sup></b>	<b>SCAQMD Rule 1401</b>
79-11-8	Chloroacetic acid	
532-27-4	2-Chloroacetophenone	
108-90-7	Chlorobenzene	chlorobenzene
510-15-6	Chlorobenzilate	
75-43-4 75-69-4 76-13-1		<b>chlorofluorocarbons</b> dichlorodifluoromethane (CFC-12) trichlorofluoromethane (CFC-11) trichlorotrifluoroethane (CFC-113)
67-66-3	Chloroform	chloroform (trichloromethane)
95-83-0		chloro-o-phenylenediamine, 4-
95-69-2		chloro-o-toluidine, p-
107-30-2	Chloromethyl methyl ether	
95-57-8 87-86-5		<b>Chlorophenols</b> chlorophenol, 2- pentachlorophenol
76-06-2		chloropicrin
126-99-8	Chloroprene	chloroprene
120-71-8		credidine, p-
1319-77-3 95-48-7 108-39-4 106-44-5	Cresols/Cresylic acid (isomers and mixture) o-Cresol m-Cresol p-Cresol	<b>cresols/cresylic acid (all isomers and mixture)</b> cresol, o- cresol, m- cresol, p-
98-82-8	Cumene	
135-20-6		cupferron
94-75-7	2,4-D, salts and esters	
72-55-9	DDE	
924-16-3 621-64-7 55-18-5 10595-95-6		<b>dialkylnitrosamines</b> nitrosodi-n-butylamine, n- nitrosodi-n-propylamine, n- nitrosodiethylamine, n- nitrosomethylethylamine, n-
615-05-4		diaminoanisole, 2,4- (sulfate)
334-88-3	Diazomethane	
132-64-9 5120-73-19 57117-41-6 57117-31-4	Dibenzofurans	<b>dibenzofurans (chlorinated)</b> tetrachlorodibenzofuran, 2,3,7,8- pentachlorodibenzofuran, 1,2,3,7,8- pentachlorodibenzofuran, 2,3,4,7,8-

**APPENDIX 1: Applicable Toxic Air Contaminants for Executive Officer Designated Sites**

<b>CAS Number</b>	<b>California Code of Regulations 93001<sup>1</sup></b>	<b>SCAQMD Rule 1401</b>
70648-26-9 57117-44-9 72918-21-9 60851-34-5 67562-39-4 55673-89-7 39001-02-0 55722-27-5 30402-15-4 55684-94-1 38998-75-3		hexachlorodibenzofuran, 1,2,3,4,7,8- hexachlorodibenzofuran, 1,2,3,6,7,8- hexachlorodibenzofuran, 1,2,3,7,8,9- hexachlorodibenzofuran, 2,3,4,6,7,8- heptachlorodibenzofuran, 1,2,3,4,6,7,8- heptachlorodibenzofuran, 1,2,3,4,7,8,9- octachlorodibenzofuran, 1,2,3,4,5,6,7,8 total tetrachlorodibenzofuran total pentachlorodibenzofuran total hexachlorodibenzofuran total heptachlorodibenzofuran
1746-01-6 40321-76-4 39227-28-6 57653-85-7 19408-74-3 35822-46-9 3268-87-9 41903-57-5 36088-22-9 34465-46-8 37871-00-4		<b>dibenzo-p-dioxins (chlorinated)</b> tetrachlorodibenzo-p-dioxin, 2,3,7,8- pentachlorodibenzo-p-dioxin, 1,2,3,7,8- hexachlorodibenzo-p-dioxin, 1,2,3,4,7,8- hexachlorodibenzo-p-dioxin, 1,2,3,6,7,8- hexachlorodibenzo-p-dioxin, 1,2,3,7,8,9- heptachlorodibenzo-p-dioxin, 1,2,3,4,6,7,8- octachlorodibenzo-p-dioxin, 1,2,3,4, 6,7,8,9- total tetrachlorodibenzo-p-dioxin total pentachlorodibenzo-p-dioxin total hexachlorodibenzo-p-dioxin total heptachlorodibenzo-p-dioxin total dioxins, with individual isomers reported total dioxins, without individual isomers reported
96-12-8	1,2-Dibromo-3-chloropropane	dibromo-3-chloropropane, 1,2- (DBCP)
84-74-2	Dibutylphthalate	
106-46-7	1,4-Dichlorobenzene (p)	dichlorobenzene, 1,4- (or p-dichlorobenzene)
91-94-1	3,3-Dichlorobenzidene	dichlorobenzidine, 3,3
111-44-4	Dichloroethyl ether (Bis (2-chloroethyl) ether)	bis(2-chloroethyl)ether (DCEE)
542-75-6	1,3-Dichloropropene	
62-73-7	Dichlorvos	
9901 (emittant ID)		diesel PM – diesel particulate matter from diesel-fueled internal combustion engine exhaust
111-42-2	Diethanolamine	
91-66-7	N,N-Diethyl aniline (N,N-Dimethylaniline)	
64-67-5	Diethyl sulfite	
119-90-4	3,3-Dimethoxybenzidine	

**APPENDIX 1: Applicable Toxic Air Contaminants for Executive Officer Designated Sites**

<b>CAS Number</b>	<b>California Code of Regulations 93001<sup>1</sup></b>	<b>SCAQMD Rule 1401</b>
60-11-7	Dimethyl aminoazobenzene	dimethylaminoazobenzene, p-
119-93-7	3,3-Dimethyl benzidine	
79-44-7	Dimethyl carbamoyl chloride	
68-12-2	Dimethyl formamide	dimethylformamide (N,N-)
57-14-7	1,1-Dimethyl hydrazine	
131-11-3	Dimethyl phthalate	
77-78-1	Dimethyl sulfate	
534-52-1	4,6-Dinitro-o-cresol, and salts	
51-28-5	2,4-Dinitrophenol	
121-14-2	2,4-Dinitrotoluene	dinitrotoluene, 2,4-
123-91-1	1,4-Dioxane (1,4-Diethyleneoxide)	dioxane, 1,4- (or 1,4-diethylene dioxide)
122-66-7	1,2-Diphenylhydrazine	hydrazobenzene (or 1,2-diphenylhydrazine)
106-89-8	Epichlorohydrin (1-Chloro-2,3-epoxypropane)	epichlorohydrin (or 1-chloro-2,3-epoxypropane)
106-88-7	1,2-Epoxybutane	epoxybutane,1,2-
140-88-5	Ethyl acrylate	ethyl acrylate
100-41-4	Ethyl benzene	ethyl benzene
51-79-6	Ethyl carbamate (Urethane)	urethane (or ethyl carbamate)
75-00-3	Ethyl chloride (Chloroethane)	ethyl chloride (or chloroethane)
106-93-4	Ethylene dibromide (Dibromoethane)	ethylene dibromide (or 1,2-dibromoethane)
107-06-2	Ethylene dichloride (1,2-Dichloroethane)	ethylene dichloride (or 1,2-dichloroethane)
107-21-1	Ethylene glycol	
151-56-4	Ethylene imine (Aziridine)	
75-21-8	Ethylene oxide	ethylene oxide (or 1,2-epoxyethane)
96-45-7	Ethylene thiourea	ethylene thiourea
75-34-3	Ethylidene dichloride (1,1-Dichloroethane)	dichloroethane, 1,1-
1101		Fluorides (except hydrogen fluoride, listed separately)
50-00-0	Formaldehyde	formaldehyde
		gasoline vapors
111-30-8		glutaraldehyde
76-44-8	Heptachlor	
118-74-1	Hexachlorobenzene	hexachlorobenzene
87-68-3	Hexachlorobutadiene	
608-73-1		<b>hexachlorocyclohexanes (mixed or technical grade)</b>
319-85-6		hexachlorocyclohexane, alpha
319-85-7		hexachlorocyclohexane, beta
77-47-4	Hexachlorocyclopentadiene	hexachlorocyclopentadiene
67-72-1	Hexachloroethane	

**APPENDIX 1: Applicable Toxic Air Contaminants for Executive Officer Designated Sites**

<b>CAS Number</b>	<b>California Code of Regulations 93001<sup>1</sup></b>	<b>SCAQMD Rule 1401</b>
822-06-0	Hexamethylene-1,6-diisocyanate	
680-31-9	Hexamethylphosphoramide	
110-54-3	Hexane	hexane
302-01-2	Hydrazine	hydrazine
10035-10-6		hydrogen bromide (HBR)
74-90-8		hydrogen cyanide
7783-07-5		hydrogen selenide
7783-06-4		hydrogen sulfide
7647-01-0	Hydrochloric acid	hydrochloric acid (or hydrogen chloride)
7664-39-3	Hydrogen fluoride (Hydrofluoric acid)	hydrofluoric acid (or hydrogen fluoride)
123-31-9	Hydroquinone	
78-59-1	Isophorone	isophrone
67-63-0		isopropyl alcohol
58-89-9	Lindane (all isomers)	hexachlorocyclohexane, gamma- (lindane)
108-31-6	Maleic anhydride	maleic anhydride
67-56-1	Methanol	methanol (methyl alcohol)
72-43-5	Methoxychlor	
74-83-9	Methyl bromide (Bromomethane)	methyl bromide (or bromomethane)
74-87-3	Methyl chloride (Chloromethane)	
71-55-6	Methyl chloroform (1,1,1-Trichloroethane)	methyl chloroform (or 1,1,1-trichloroethane)
78-93-3	Methyl ethyl ketone (2-Butanone)	methyl ethyl ketone
60-34-4	Methyl hydrazine	
74-88-4	Methyl iodide (Iodomethane)	
108-10-1	Methyl isobutyl ketone (Hexone)	
624-83-9	Methyl isocyanate	methyl isocyanate
80-62-6	Methyl methacrylate	methyl methacrylate
1634-04-4	Methyl tert butyl ether	methyl tert-butyl ether
101-14-4	4,4-Methylene bis(2-chloroaniline)	methylene bis(2-chloroaniline), 4,4- (MOCA)
75-09-2	Methylene chloride (Dichloromethane)	methylene chloride (or dichloromethane)
101-68-8	Methylene diphenyl diisocyanate (MDI)	methylene diphenyl diisocyanate
101-77-9	4,4-Methylenedianiline	methylene dianiline, 4,4'- (and its dichloride)
90-94-8		michler's ketone
1135		mineral fibers (other than man-made)
91-20-3	Naphthalene	
7697-37-2		nitric acid
98-95-3	Nitrobenzene	nitrobenzene
92-93-3	4-Nitrobiphenyl	
100-02-7	4-Nitrophenol	

**APPENDIX 1: Applicable Toxic Air Contaminants for Executive Officer Designated Sites**

<b>CAS Number</b>	<b>California Code of Regulations 93001<sup>1</sup></b>	<b>SCAQMD Rule 1401</b>	
79-46-9	2-Nitropropane	nitrosodimethylamine, n-	
759-73-9		nitroso-n-ethylurea, n-	
684-93-5	N-Nitroso-N-methylurea	nitroso-n-methylurea, n-	
62-75-9	N-Nitrosodimethylamine		
86-30-6		nitrosodiphenylamine, n-	
156-10-5		nitrosodiphenylamine, p-	
59-89-2	N-Nitrosomorpholine	nitrosomorpholine, n-	
56-38-2	Parathion		
100-75-4		nitrosopiperidine, n-	
930-55-2		nitrosopyrrolidine, n-	
108171-26-2		paraffins, chlorinated (average chain length, c12; approx. 60% cl by weight)	
82-68-8	Pentachloronitrobenzene (Quintobenzene)		
201-778-6	Pentachlorophenol		
108-95-2	Phenol	phenol	
106-50-3	p-Phenylenediamine		
75-44-5	Phosgene	phosgene	
7803-51-2	Phosphine	phosphine	
7664-38-2		phosphoric acid	
7723-14-0	Phosphorus	<b>phosphorus and phosphorus compounds</b>	
12185-10-3			
85-44-9	Phthalic anhydride	phthalic anhydride	
1336-36-3	Polychlorinated biphenyls (Aroclors)	<b>polychlorinated biphenyls (PCBs)</b>	
32598-13-3		3,3',4,4' Tetrachlorobiphenyl	
70362-50-4		3,4,4',5 Tetrachlorobiphenyl	
32598-14-4		2,3,3',4,4' Pentachlorobiphenyl	
74472-37-0		2,3,4,4',5 Pentachlorobiphenyl	
31508-00-6		2,3',4,4',5 Pentachlorobiphenyl	
65510-44-3		2',3,4,4',5 Pentachlorobiphenyl	
57465-28-8		3,3',4,4',5 Pentachlorobiphenyl	
38380-08-4		2,3,3',4,4',5 Hexachlorobiphenyl	
69782-90-7		2,3,3',4,4',5' Hexachlorobiphenyl	
52663-72-6		2,3',4,4',5,5' Hexachlorobiphenyl	
32774-16-6		3,3',4,4',5,5' Hexachlorobiphenyl	
39635-31-9		2,3,3',4,4',5,5' Heptachlorobiphenyl	
7758-01-2			potassium bromate
1120-71-4		1,3-Propane sultone	propane sultone, 1,3-
57-57-8	beta-Propiolactone		

**APPENDIX 1: Applicable Toxic Air Contaminants for Executive Officer Designated Sites**

<b>CAS Number</b>	<b>California Code of Regulations 93001<sup>1</sup></b>	<b>SCAQMD Rule 1401</b>
123-38-6	Propionaldehyde	
114-26-1	Propoxur (Baygon)	
78-87-5	Propylene dichloride (1,2-Dichloropropane)	
115-07-1		propylene
107-98-2		propylene glycol methyl ether
75-56-9	Propylene oxide	propylene oxide (or 1,2-epoxy propane)
75-55-8	1,2-Propylenimine (2-Methylaziridine)	
91-22-5	Quinoline	
106-51-4	Quinone	
1310-73-2		sodium hydroxide
100-42-5	Styrene	tetrachlorodibenzo-p-dioxin, 2,3,7,8-, styrene (or vinyl benzene)
96-09-3	Styrene oxide	
7664-93-9		sulfuric acid (and oleum)
1746-01-6	2,3,7,8-Tetrachlorodibenzo-p-dioxin	
79-34-5	1,1,2,2-Tetrachloroethane	tetrachloroethane, 1,1,2,2-
127-18-4	Tetrachloroethylene (Perchloroethylene)	perchloroethylene (or tetrachloroethylene)
62-55-5		thioacetamide
7550-45-0	Titanium tetrachloride	diaminotoluene, 2,4-
108-88-3	Toluene	toluene (or methyl benzene)
95-80-7	2,4-Toluene diamine	
584-84-9	2,4-Toluene diisocyanate	toluene-2,4-diisocyanate
91-08-7		toluene-2,6-diisocyanate
95-53-4	o-Toluidine	
8001-35-2	Toxaphene (chlorinated camphene)	
120-82-1	1,2,4-Trichlorobenzene	
79-00-5	1,1,2-Trichloroethane	trichloroethane, 1,1,2-
79-01-6	Trichloroethylene	trichloroethylene
95-95-4	2,4,5-Trichlorophenol	
88-06-2	2,4,6-Trichlorophenol	trichlorophenol, 2,4,6-tetrachlorophenols (TECPH)
121-44-8	Triethylamine	triethylamine
1582-09-8	Trifluralin	
540-84-1	2,2,4-Trimethylpentane	
7440-62-2		vanadium (fume or dust)
1314-62-1		vanadium pentoxide
108-05-4	Vinyl acetate	vinyl acetate
593-60-2	Vinyl bromide	dichloroethylene, 1,1- (see vinylidene chloride)

**APPENDIX 1: Applicable Toxic Air Contaminants for Executive Officer Designated Sites**

<b>CAS Number</b>	<b>California Code of Regulations 93001<sup>1</sup></b>	<b>SCAQMD Rule 1401</b>
75-01-4	Vinyl chloride	vinyl chloride (or chloroethylene)
75-35-4	Vinylidene chloride (1,1-Dichloroethylene)	vinylidene chloride (dichloroethylene, 1,1-)
1330-20-7 95-47-6 108-38-3 106-42-3	Xylenes (isomers and mixture) o-Xylenes m-Xylenes p-Xylenes	<b>xylenes (isomers and mixture)</b> xylene, o- xylene, m- xylene, p-
	Antimony Compounds	
7440-38-2 7784-42-1	Arsenic Compounds (inorganic including arsine)	<b>arsenic and arsenic compounds (inorganic)</b> including, but not limited to: arsenic compounds (inorganic) arsine
7440-41-7	Beryllium Compounds	beryllium and beryllium compounds
7440-43-9	Cadmium Compounds	cadmium and cadmium compounds
	Chromium Compounds	
18540-29-9 10294-40-3 13765-19-0 7758-97-6 10588-01-9 7789-06-2 13530-65-9 1333-82-0		<b>chromium (hexavalent) and chromium compounds</b> including, but not limited to: barium chromate calcium chromate lead chromate sodium dichromate strontium chromate zinc chromate chromic trioxide
	Cobalt Compounds	
7440-50-8		copper and copper compounds
	Coke Oven Emissions	
	Cyanide Compounds [FN1]	
107-21-1 111-76-2 110-80-5 111-15-9 109-86-4 110-49-6	Glycol ethers [FN2]	<b>glycol ethers (and their acetates)</b> ethylene glycol ethylene glycol butyl ether ethylene glycol ethyl ether ethylene glycol ethyl ether acetate ethylene glycol methyl ether ethylene glycol methyl ether acetate
7439-92-1	Lead Compounds	<b>lead and lead compounds (inorganic, including elemental lead)</b> including, but not limited to: lead compounds (inorganic)

**APPENDIX 1: Applicable Toxic Air Contaminants for Executive Officer Designated Sites**

<b>CAS Number</b>	<b>California Code of Regulations 93001<sup>1</sup></b>	<b>SCAQMD Rule 1401</b>
301-04-2 7758-97-6 7446-27-7 1335-32-6		lead acetate lead chromate lead phosphate lead subacetate
		lead compounds (other than inorganic)
7439-96-5	Manganese Compounds	manganese and manganese compounds
7439-97-6  7487-94-7 593-74-8	Mercury Compounds	<b>mercury and mercury compounds (inorganic)</b> including, but not limited to: mercuric chloride methyl mercury
	Fine mineral fibers [FN3]	
7440-02-0  373-02-4 3333-67-3 13463-39-3 12054-48-7 1313-99-1 12035-72-2 1271-28-9	Nickel Compounds	<b>nickel and nickel compounds:</b> including, but not limited to: nickel acetate nickel carbonate nickel carbonyl nickel hydroxide nickel oxide nickel subsulfide nickelocene refinery dust from the pyrometallurgical process
56-55-3 50-32-8 205-99-2 205-82-3 207-08-9 218-01-9 226-36-8 224-42-0 53-70-3 192-65-4 189-64-0 189-55-9 191-30-0 194-59-2 57-97-6 42397-64-8		<b>polycyclic aromatic hydrocarbons (PAHs)</b> benz[a]anthracene benzo[a]pyrene benzo[b]fluoranthene benzo[j]fluoranthene benzo[k]fluoranthene chrysene dibenz[a,h]acridine dibenz[a,j]acridine dibenz[a,h]anthracene dibenzo[a,e]pyrene dibenzo[a,h]pyrene dibenzo[a,i]pyrene dibenzo[a,l]pyrene dibenzo[c,g]carbazole, 7h- dimethylbenz[a]anthracene, 7,12- dinitropyrene, 1,6-



**APPENDIX 1: Applicable Toxic Air Contaminants for Executive Officer Designated Sites**

<b>CAS Number</b>	<b>California Code of Regulations 93001<sup>1</sup></b>	<b>SCAQMD Rule 1401</b>
42397-65-9 193-39-5 56-49-5 3697-24-3 91-20-3 602-87-9 2043937 607-57-8 5522-43-0 57835-92-4 1150/1151		dinitropyrene, 1,8- indeno[1,2,3-cd]pyrene methylcholanthrene, 3- methylchrysene, 5- naphthalene nitroacenaphthene, 5- nitrochrysene, 6- nitrofluorene, 2- nitropyrene, 1- nitropyrene, 4- polycyclic aromatic hydrocarbons (PAHs), total
	Polycyclic Organic Matter [FN4]	
	Radionuclides (including radon) [FN5]	
7782-49-2	Selenium Compounds	<b>selenium and selenium compounds</b>
		other than hydrogen selenide
7440-66-6  1314-13-2		<b>zinc and zinc compounds</b> including, but not limited to: zinc oxide

1: For all listing above which contain the word “compounds” and for glycol ethers, the following applies: Unless otherwise specified, these listings are defined as including any unique chemical substance that contains the named chemical (i.e., antimony, arsenic, etc) as part of that chemical's infrastructure.

[FN1]

X >>>1 CN where X=HN <<<1 or any other group where a formal dissociation may occur. For example KCN or Ca(CN) 2

[FN2]

includes mono- and di-ethers of ethylene glycol, diethylene glycol, and triethylene glycol (R(OCH 2 CH 2) n -OR <<<1 where

[FNn]

= 1,2 or 3

[FNR]

= alkyl or aryl groups

[FNR]

>>>1 = R, H, or groups which, when removed, yield glycol ethers with the structure; R(OCH sub2 CH) subn -OH. Polymers are excluded from the glycol category.

[FN3]

includes mineral fiber emissions from facilities manufacturing or processing glass, rock, or slag fibers (or other mineral derived fibers) of average diameter 1 micrometer or less.

[FN4]

includes organic compounds with more than one benzene ring, and which have a boiling point greater than or equal to 100 degrees C

[FN5]

a type of atom which spontaneously undergoes radioactive decay.

## APPENDIX 2: COMMENTS AND RESPONSES

Comment Letter #1  
Los Angeles Department of Water and Power  
October 2, 2017



ERIC GARCETTI  
Mayor

Commission  
MEL LEVINE, *President*  
WILLIAM W. FUNDERBURK JR., *Vice President*  
JILL BANKS BARAD  
CHRISTINA E. NOONAN  
AURA VASQUEZ  
BARBARA E. MOSCHOS, *Secretary*

DAVID H. WRIGHT  
General Manager

October 2, 2017

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

Dear Ms. Uyen-Uyen Vo,

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

The Los Angeles Department of Water and Power (LADWP) appreciate the opportunity to review and comment on Proposed Amended Rule 1466. LADWP requests the addition of "power projects" to Section (k)(3). LADWP performs linear trenching for both water and power projects in order to increase system reliability. This would allow LADWP to perform maintenance on underground transmission lines without disrupting service.

The proposed change is indicated in bold and underlined:

"(k) Exemptions (3) Linear trenching for sewer, water, **and power** projects on roadways with soil with applicable toxic air contaminant(s), directly loaded into a truck or bin for transport, shall be exempt from all requirements except: paragraphs (e)(2) through (e)(8), paragraph (e)(11), and subdivisions (f), (h), and (i)."

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

Sincerely,

A handwritten signature in cursive script that reads 'Jodean Giese'.

Jodean Giese  
Manager of Air Quality

JM:vf  
c: Joseph Maxey

Putting Our Customers First

111 N. Hope Street, Los Angeles, California 90012-2607 Mailing Address: Box 51111, Los Angeles, CA 90051-5700  
Telephone (213) 367-4211 www.LADWP.com

### **Response to Comment Letter #1:**

Thank you for the suggestion, staff has clarified the rule language to include an exemption for linear trenching for power projects in paragraph (k)(3).