Appendix H3
Soil Management Plan

Prepared for
Prologis, Inc.

Prepared by:
Ramboll US Corporation
Irvine, California

Project Number
1690018460-001

Date:
August 12, 2020

SOIL MANAGEMENT PLAN

PROPOSED INDUSTRIAL DEVELOPMENT
534 WEST STRUCK AVENUE
ORANGE, CALIFORNIA

RAMBOLL

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1. INTRODUCTION

Ramboll US Corporation (Ramboll), on behalf of on behalf of Prologis, Inc. (Prologis), has prepared this Soil Management Plan (SMP) for the property located at 534 West Struck Avenue in Orange, California (herein referred to as the "site"; Figure 1). General details of on-site facilities are provided in Figure 2.

This SMP has been prepared to provide guidance for the management of potentially-impacted soils and/or subsurface features encountered during earthwork activities conducted during site preparation as part of redevelopment. Site preparation activities generally include demolition and grading.

The term **Earthwork activities**, for the purpose of this SMP, includes all soil movement, such as trenching, excavation, rough grading, and/or backfilling under the grading plan. Demolition of all buildings and aboveground structures will be managed by other contractors prior to earthwork. Earthwork related to the redevelopment of the site will include excavation of soil to access foundations, pilings and other subsurface structures for demolition and/or removal, trenching to access utility lines to be removed, grading, and/or excavation of impacted soil/materials.

1.1 Purpose of the SMP

The purpose of this SMP is to provide established protocols for implementing appropriate actions to address potential risks that may be encountered during future earthwork activities associated with subsurface issues. In particular, this SMP provides the protocols to be employed for the identification, characterization, on-site handling and profiling of soils and subsurface features encountered during site preparation activities.

Throughout the SMP, the term "**potentially-impacted soil**" is used, which describes soil that appears to be contaminated based on visual or olfactory evidence. In contrast, "**impacted soil**" is soil that contains concentrations of hazardous substances that exceed applicable screening levels and which could be considered reportable to a regulatory agency and/or which must be transported off-site for disposal at a licensed off-site disposal facility.

The Phase I and II Environmental Site Assessment (ESA) Activities conducted by others in connection with the site identified certain *environmental concerns* related to the historical widespread chemical use, storage and disposal operations/practices at the site, which resulted in soil contamination that was the subject of prior remedial actions. The facility historically maintained numerous underground storage tanks (USTs) and discrepancies reportedly exist with regard to the number and types of the USTs and their decommissioning/removal status. No known USTs are currently located at the site.

The possibility exists that impacted soil or subsurface features could be encountered in certain areas of the site. Features such as pits, sumps and clarifiers or USTs need to be appropriately and expeditiously managed due to additional agency oversight and/or permitting that may necessary in connection with the proper abandonment of such features. Accordingly, the SMP provides procedures for efficiently managing potentially-impacted soils and/or USTs during site preparation activities conducted throughout the site.

1.2 Project Team

A number of representatives comprise the project team for the purposes of implementing this SMP. Their roles and key responsibilities and duties are defined below.

Client Representative: John Carter (Construction Manager)

Prologis, as the owner of the property, will coordinate and contract the work with the General Contractor and Environmental Consultant for the project. All project team members are subordinate to Prologis and should keep Prologis informed of all activities, findings, and schedules.

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Ramboll US Corporation (or an alternative Environmental Consultant if retained by Prologis) is responsible for evaluating the environmental issues that may be encountered at the site, including interface with and notification to the client and appropriate agencies, as needed.

General Contractor: TBD

TBD

Hazardous Materials Contractor/Waste Hauler: American Integrated Services

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2. SITE DESCRIPTION, BACKGROUND, AND RECORDS REVIEW

2.1 Site Description

The site is improved with one approximately 40,000 square foot concrete tilt-up building, five open canopy storage areas, 14 silos for plastic granule storage, additional open storage areas and parking/drive areas (Figure 2). The site is currently occupied by Nursery Supplies, Inc., a manufacturer of plastic nursery planting pots. The site address is 534 West Struck Avenue in the City of Orange, California and is identified by Orange County Assessor's Parcel Number (APN) 375-331-04. The site is accessed via an asphalt-paved entrance along West Struck Avenue located at the north site boundary. There are no on-site surface water bodies.

The site is located in a mixed commercial and light industrial land use area. The site is bound by West Struck Avenue, followed by commercial/ industrial development to the north; railroad tracks, followed by commercial/ industrial development to the east; commercial/ industrial development to the south; and commercial/industrial development to the west.

2.2 Site Background and History

According to the 2020 Phase I ESA prepared for the site by GeoTek, Inc. (GeoTek), the site appeared to have been utilized for agricultural purposes from at least 1938 until at least 1966. A structure was observed in the southern portion of the site in an aerial photograph dated 1972; otherwise, the site appeared to have been vacant land. The existing concrete tilt-up structure was observed in an aerial photograph dated 1977. All of the site structures were observed in aerial photographs dated 2016 and 2018. The surrounding properties appeared to historically have been utilized for agricultural purposes from at least 1938 to at least 1952. The industrial/commercial development to the west and south of the site were observed in an aerial photograph dated 1963.

For an undetermined period of time prior to 1977, the site was occupied by Granada Plastics, as evidenced by a tank permit issued to Granada Plastics in 1976 by the City of Orange Building Department. The operations of Granada Plastics at the site are not known. From at least 1977 to 1984, the site was occupied by two subsidiaries of American Petrofina (Petrofina): Cosden Oil and Chemical Company and Sterling Plastics for the production of polystyrene resin pellets. The facility on-site was operated by Sterling Plastics until approximately 1978 and then by Cosden until 1984. Nursery Supplies, Inc. has occupied the site from early- to mid-1980s to the present day for the manufacturing of plastic nursery planting pots.

2.3 Orange County Health Care Agency Records Review

Ramboll reviewed records from the Orange County Health Care Agency (OCHCA) that were attached to GeoTek's March 2020 Phase I ESA for the site. Based on a review of a CERCLA inspection report by United States Environmental Protection Agency's (USEPA's) contractor, Ecology and Environment, at the site in 1989, it was noted that styrene monomer was used to produce polystyrene resin pellets at the site in the late 1970s/early 1980s. The styrene monomer was transported to the site in tank cars and stored in one of three 50,000-gallon underground storage tanks (southeast portion) at the site. The styrene monomer was transferred to the aboveground rubber dissolver tank, where rubber was added. This styrene rubber solution was transferred to the mix feed UST located in the southeastern portion of the site. After being mixed with mineral oil and ethyl benzene, the mixed feed was pumped to the first polymerization vessel.

In September 1985, during site improvement operations (removal of existing asphaltic pavement and replacement with concrete pavement), soil contamination was found in subsurface soils. Subsequently, a survey of the site was conducted using a HNU photoionization detector. At each location of contamination (Areas 1 through 5), trenches were excavated until soil samples indicated contaminant concentrations below detection limits at the time. The contaminants detected in the subsurface soils at the site were styrene and ethyl benzene. The South Coast Air Quality Management District (SCAQMD) approved aeration and evaporation of the styrene and ethyl benzene by spreading the excavated soils in the southwestern portion (Area 5) of the site.

According to the City of Orange Fire Department (OCFD), seven USTs were installed for Granada Plastics in December 1975, but were not registered. The representatives of Cosden's parent company, American Petrofina, indicated that only six USTs existed at the site. The City of Orange Building Department has one permit on file for the site that was issued to Granada Plastics in 1976 for mineral oil storage tanks, and does not note either the number of tanks or volume thereof. A Sterling Plastics facility map of the site indicated at least four USTs were historically located in the tank area.

Petrofina indicated that five of the six USTs were removed whole, loaded on trucks, and shipped to the company's Louisiana plant. The sixth UST, which contained solidified material (apparently due to the 1978 incident discussed below), was cut apart and handled by a disposal company. This removal process apparently occurred in 1983, although Petrofina did not supply any documentation. An OCHCA inspection on March 23, 1984, documented the removal of three on-site, USTs in July 1983 and their transport to Louisiana. One UST contained 8,000 gallons of styrene monomer, one UST contained 3,500 gallons of styrene monomer and water, and one UST contained 5,000 gallons of oil and water. Furthermore, 8,400 pounds of polystyrene resin were shipped to Louisiana in 55-gallon drums; it is likely that this was the solidified material from the UST spill in 1978. The City of Orange confirmed the removal of three USTs, but dates the removal in 1982. Neither OCHCA nor the City of Orange has documentation regarding the removal of more than three USTs.

2.4 City of Orange Fire Department Records Review

Ramboll requested and obtained copies of records from the COFD in July 2020 related to the spill incidents at the site in 1978 and 1982.

On August 14, 1978, liquid styrene monomer began to harden and generate heat in two on-site tanks. This heat caused a vapor release from a 40,000-gallon UST and a connected 12,000-gallon aboveground storage tank (AST). The on-site, USTs were buried in backfill and loose aggregate. The UST vents allowed vapor to escape without rupturing the tank, but some vents from the AST split due to the pressure. While a fire did not occur, the potential for ignition of an explosive fire was high. Styrene monomer has a flash point of 90° Fahrenheit and is in the same combustion category as gasoline. Within 3 hours, a 20,000-gallon lump of semi-solid styrene had hardened in the UST. According to newspaper reports, the facility was occupied by Sterling Plastics at the time.

In November 1982, a loss of electricity caused an interruption in the operation of a Cosden refrigeration unit that pumped inhibiting chemical to the liquid styrene monomer. The valve of a 6,000-gallon AST ruptured after a sufficient amount of vapor had accumulated. Apparently fire officials were summoned too late to prevent heating of the styrene monomer. A fire ensued, allowing vapors to escape. Areas were sandbagged to prevent further tank deterioration and release of liquid monomer.

The 1982 incident involved the same type of reaction as the 1978 incident - the solidification of the styrene monomer into a "plastic blob." This source also indicated that although some polymerized styrene was released into the flood channels, the majority of the styrene monomer hardened in the tank. According to the OCFD, any substances released in the 1982 incident were either polymerized or rendered nonhazardous. No documentation exists to substantiate the solidification of all the styrene monomer into solid polymer styrene or the rendering of the released substances nonhazardous. Cleanup operations were performed at the site, but the extent of the cleanup is unknown.

2.5 Potential Areas and Features of Concern

Based on the review of available environmental documents, Ramboll has identified the following potential areas and features of concern (PAOCs) at the site with regard to soil management (Figure 2).

- Possible former UST(s) at the site.
- Possible residual contamination from former spills (1978 and 1982), specifically in the southeastern portion of the site.
- Possible contamination during off-loading of chemicals from the railroad along the eastern site boundary.
- Possible residual contamination in Areas 1 through 5, assessed by Leighton & Associates in 1986.
- Hazardous materials storage area (motor oil totes) near northeastern corner of site.
- Motor oil staining near southeastern corner of site.
- Hazardous waste storage area (motor oil drums) near northeastern portion of site.
- Hazardous waste storage area in the east-central portion of site.

Based on the industrial use of the site, other potential areas and/or features of concern may be encountered at the site that may require soil management and disposition in accordance with State and local environmental regulations.

2.6 Potential for Encountering Unknown USTs and Unknown Soil Impacts

There is uncertainty about the number of USTs removed from the site as complete documentation of UST installation and removal operations at the site does not exist. Therefore, there is a potential that the grading contractor could encounter USTs throughout portions of the site, especially in exterior areas. Additionally, based on the historical site features and operations, impacted soils from former leaks/spills, and hazardous material storage/use throughout the site, may be encountered throughout portions of the site, including areas beneath the existing buildings. Therefore, Ramboll personnel will be on-site for the duration of any rough grading/earth moving activities in order to screen for USTs and/or impacted soils that may be encountered during demolition or grading at the site.

3. SOIL MANAGEMENT DURING GRADING/EXCAVATION

Based on-site investigation activities, potential areas have been identified where impacted soil may be encountered during earthwork activities. Therefore, during earthwork activities at the site, the grading contractor is required to follow the SMP in the event that the soil encountered is visibly stained, discolored, oily, non-native, contains debris/trash, or has a noticeable solvent-like or hydrocarbon-like odor (potentially-impacted soil). This section outlines the steps to be taken during all soil movement activities (e.g., trenching, excavation, rough grading, and/or backfilling) under the grading plan.

3.1 Site-Specific Health and Safety

Contractors working at the site shall follow the applicable California Department of Health and Safety Administration (Cal/OSHA) regulations for construction safety in Sections 1500 through 1938 of California Code of Regulations (CCR) Title 8 (8 CCR 1500-1938). Contractor employees involved in "clean-up operations" or "hazardous substance removal work" (if warranted) as defined in Cal/OSHA standards for HAZWOPER, 8 CCR §5192 shall ensure that personnel conducting such activities have had training and are subject to medical surveillance, in accordance with Cal/OSHA requirements (HAZWOPER-trained personnel). Soil that is characterized as "Impacted Soil" by Ramboll personnel shall be handled only by HAZWOPER-trained personnel.

3.2 Grading and Mitigation Measures

Because the encountered on-site soil may be potentially contaminated, fugitive dust (or nuisance dust) generated during on-site grading/excavation activities will be controlled in order to minimize both potential on-site and off-site impacts to human health and the environment. Measures that will be used to mitigate potential impacts to human health and the environment during on-site grading/excavation are described in this section. Such activities are identified as: (1) dust generation associated with grading, excavation and loading activities, transportation of equipment over on-site soil, and wind, and; (2) storm water runoff control.

3.2.1 Dust Control

Generation of dust during grading/excavation operations will be managed by the grading contractor in accordance with SCAQMD Rule 403 (see Appendix A). It is particularly important to minimize exposure of on-site grading workers to dust, that is unlikely to but could contain chemicals, and minimize dust from migrating off-site. Dust can be generated via various actions, including but not limited to, grading/excavation, vehicle traffic, ambient wind traversing soil stockpiles and exposed site surfaces, and vehicle loading. Contractor exposure to dust generated from potentially-impacted soil and transportation of impacted dust and nuisance dust off-site will be minimized through use of various dust control measures including:

- Misting or spraying water on soil while performing grading/excavation activities and loading transportation vehicles;
- Limiting vehicle speeds on the site to 5 miles per hour or less;
- Controlling excavation activities to minimize the generation of dust;
- Cleaning up any track-outs at the end of each work day;
- Minimizing drop heights during vehicle loading; and

- Covering exposed soil stockpiles generated as a result of excavating visibly contaminated soils with plastic sheeting or tarps.

Additional information regarding controlling visible dust emissions and required best available control technologies are provided in SCAQMD Rule 403 (see Appendix A). All contractors whose actions may result in disturbance of soils are responsible for complying with the requirements of SCAQMD Rule 403.

3.2.2 Storm Water Runoff Control

The grading contractor is responsible for obtaining a storm water permit for grading activities pursuant to the requirements of the State Water Resources Control Board General Construction Activity Storm Water Permit. In addition, the grading contractor may be responsible for preparing and implementing a Storm Water Pollution Prevention Plan. Procedures for managing surface water runoff at the site are not included in this SMP and are assumed to be handled by the general contractor.

3.3 Flowchart for Notification and Handling of Soils During Earthwork

Figure 3 presents a flowchart entitled *Flowchart for Notification and Handling of Soils during Earthwork,* which specifies the procedures to be employed by on-site personnel to adequately manage impacted soils and to ensure that the proper notification protocols, permitting procedures and sampling procedures are followed. Details on the procedures are presented below.

3.4 Soil Management Protocols

During earthwork activities commencing in the PAOCs identified above and depicted in Figure 2, environmental monitoring (visual and olfactory) will be performed by a field technician to initially recognize areas of potentially-impacted soil that may not have been found during the previous subsurface soil investigations performed at the site. For the work within and around the PAOCs, observations will be documented through field notes and site photographs.

In addition, prior to commencing with grading, 40-hour HAZWOPER-certified heavy equipment operators will be briefed to alert them to the possibility of encountering potentially-impacted soil below ground surface outside of the PAOCs and areas of soil impacts. Additionally, the location for the stockpiling of potentially-impacted soil will be discussed during the briefing to ensure that the placement of such soils will not interfere with the overall grading operations while ensuring the protection of human health and the environment. While Ramboll staff will be present during rough grading/earth moving activities, the 40-hour HAZWOPER-certified contractor and personnel employed by Prologis will also be briefed on how to recognize visual and olfactory indicators of contaminated soil that may be encountered during the course of their work. If no potentially-impacted soil is encountered, excavation as outlined in the grading plan can proceed uninterrupted, and the excavated soil can be reused at the site.

The presence of impacted soil at the site will be identified in the event any contractor or consultant discovers soil that is visibly stained, discolored, oily, and/or has a noticeable odor. If potentially-impacted soil is identified, soil will be placed on plastic sheeting, segregated, and covered with plastic sheeting. Segregated soil will be sampled as described in Section 3.5, as appropriate.

3.4.1 Engineering Controls to Limit Vapor Emissions

Management of volatile organic compound (VOC)-contaminated soil (e.g., known or suspected areas such as USTs) shall comply with SCAQMD Rule 1166 requirements (see Appendix B). To plan for this occurrence, either a various locations or site-specific Rule 1166 permit must be obtained from the SCAQMD before start of work. Protocols for vapor monitoring are included in the Rule 1166 permit and will include monitoring every 15 minutes with an organic vapor monitor (OVM) or equivalent field instrument along the exposed face of the excavation or surface soil (typically at 3 inches above the exposed soil surface) and monitoring the excavated material as it is produced. OVM readings of 50 parts per million or higher at 3 inches above the exposed soil surface indicate VOC-contaminated soil has been encountered.

For work within known or suspect areas of VOC contamination, an environmental field technician should be on-site during grading activities to comply with Rule 1166. In the event that contaminated soils are detected, soil will be placed on plastic sheeting, segregated, and covered with plastic sheeting. Mitigation measures and notifications for the segregated soil will be implemented per Rule 1166. Protocols for worker safety while working with soil containing VOCs, including air monitoring, action levels, and personal protective equipment requirements, will be provided in the contractor's Health and Safety Plan. Vapor suppression, such as covering stockpiles with plastic sheeting, will be performed on segregated soil when the monitored VOC concentration exceeds the prescribed action level.

3.4.2 Engineering Controls to Limit Fugitive Dust Emissions Containing Toxic Air Contaminants

The excavation of soil with the potential for release of toxic air contaminants must comply with SCAQMD Rule 1466 requirements to minimize the amount of off-site fugitive dust emissions containing toxic air contaminants. There are no known Rule 1466 chemicals at the site. If any concerns are encountered that require engagement under this rule, Rule 1466 requirements will be followed as applicable. Dust suppression, monitoring, notification, signage, and record keeping requirement for Rule 1466 are described in Appendix C.

3.4.3 Visibly Contaminated Soil and Soil with Noticeable Odor

As outlined in the *Flowchart for Handling Soils During Earthwork* (see Figure 3), if potentially-impacted soil is found at the site, the contractor will segregate the soil into discrete stockpiles by placing the potentially-impacted soil on plastic sheeting and covering the segregated pile with plastic sheeting. Plastic sheeting used to cover piles will be anchored at multiple locations with sand bags. Subsequently, a Ramboll field technician should be on-site to evaluate the potentially-impacted soil and, if warranted, collect soil samples for appropriate analyses to profile the potentially-impacted soil prior to disposal.

If Consultant's evaluation/sampling classifies the soil as "non-impacted soil," (e.g. reported concentrations are below USEPA Regional Screening Levels (RSLs) and/or California Department of Toxic Substances Control (DTSC) Human and Ecological Risk Office (HERO), Note 3 – DTSC-modified screening levels for a commercial/industrial land-use scenario) then the Grading Contractor will be allowed to use such soils on-site. If the Consultants evaluation/sampling classifies the soil as "impacted soil," then the environmental consultant will notify Prologis and determine appropriate next steps to export soil to an appropriate off-site disposal facility. The Consultant field technician will also then collect confirmation soil samples from the location where the impacted soils originated in order to demonstrate that the remaining soils are considered clean.

3.5 Management of Subsurface Features

In the event that a previously unknown UST, sump, pit, clarifier or other subsurface feature is encountered during grading activities, the grading contractor will notify Consultant and owner immediately so that it can be properly assessed and a determination made as to whether removal of the feature will require permitting under OCHCA, and then such permitting requirements, if any, will be satisfied prior to removal of the subsurface facility.

The following describes the general procedure to be followed in the event that a UST is encountered during grading activities at the site.

- Consultant will work with a contractor to procure the appropriate permits and make the appropriate notifications, including:
  - Obtaining a Facility Modification permit from the OCHCA for UST removal.
  - Obtaining a Fire permit from the OCFD for UST removal.
  - Filing the appropriate SCAQMD notification and paying applicable fees in accordance with SCAQMD - Rule 1166 – UST/VOC Mitigation Plan and Rule 1149 – UST Degassing.
- A UST removal inspection with OCHCA's Hazardous Materials Mitigation Section and OCFD will be scheduled to observe the condition of the UST(s) during removal and direct sampling to determine whether a reportable unauthorized release has occurred.
- Hardscape from above the UST(s) will be removed and the overburden soil from above and along the sides of UST(s) will be excavated. All excavation material will be stockpiled onsite and will be placed on and covered by visqueen sheeting as outlined in SCAQMD – R1166 Mitigation Plan. Rule 1166 VOC monitoring will be performed by Consultant field staff during the excavation activities. Temporary fencing will be provided around each excavation and stockpile.
- All residual liquid, solids, or sludge from the UST(s) and/or its piping will be removed and handled as hazardous waste or recyclable material. If the UST to be removed contained a hazardous substance that could produce flammable vapors at standard temperature and pressure, then the USTs shall be inerted to levels that shall preclude explosion or to such lower vapor levels as may be required by the OCFD.
- The UST(s) will be cleaned with rinse water. The UST(s) and/or its associated piping will be removed and disposed. Where removal of piping might damage structures or other in use piping is contained in a common trench, that piping may be closed in place after being emptied of all contents and capped.
- Obtain confirmation soil samples from the excavations of any UST and/or piping removed. Regulations require two samples, one at each end of each UST removed and samples for each 20 linear feet of pipe trenching. Where closure in place of piping is necessary and where soil samples cannot otherwise be obtained, soil borings placed near the piping trench may be required. Further, sidewall samples from depths between 0-10 feet below ground surface may be required. Soil samples will be analyzed for total petroleum hydrocarbon (TPH) in the gasoline, diesel, and oil range by USEPA Method 8015M, VOCs that include benzene, toluene, ethylbenzene, total xylenes (BTEX), naphthalene, ethanol, Methyl Tertiary Butyl Ether (MTBE) and all other fuel oxygenates

by USEPA Method 8260B, and for polycyclic aromatic hydrocarbons using EPA Method 8310 or 8270C (SIM Mode).

- Excavate and dispose of contaminated soil (if any) off-site under appropriate manifest to approved facility.
- Once approved to backfill, Consultant and contractor will import and compact clean fill (screened fill sand or one sack slurry) to backfill the volume of the USTs and excavated soil.
- Closure Documentation will be submitted to the OCHCA with all required information.

3.6 Analytical Laboratory Methods for Soil Samples

Soil sampling, if warranted upon the identification of potentially-impacted soil and/or features, shall be performed by the environmental consultant personnel only. If soil samples are collected, the analyses to be performed will be selected in a manner consistent with those USEPA methods utilized to detect the chemicals of concern that may be present in the area from which the samples were collected and shall be in collected and analyzed in accordance with project data quality objectives to be provided under separate cover. This is best evaluated by physical observation (e.g., soil color, odor, VOC monitoring) and by the results of previous soil analytical data. A generalized approach based on physical observation of suspected contamination is presented below.

- In general, soil that appears dark or oil stained or has a gasoline, diesel, or other oil-like odor (likely affected by petroleum hydrocarbons) will be placed on plastic sheeting, segregated and covered with plastic sheeting. The environmental consultant will collect composite samples and analyze them for full range TPH by modified USEPA Method 8015M.
- If evidence of VOCs is detected with the OVM, the soil samples will be placed on plastic sheeting, segregated and covered with plastic sheeting. The environmental consultant will collect discrete samples and analyze them for VOCs by USEPA Method 5035/8260B.
- Soil that appears discolored or non-native in a manner typical of suspected metal impacts (e.g., fill material, greenish, red, blue, yellow, gray, or silvery in color) will be placed on plastic sheeting, segregated and covered with plastic sheeting. The environmental consultant will collect composite samples and analyze them for the CCR Title 22 Metals using USEPA Method 6010/7000 series.

Other analyses for polychlorinated biphenyls and/or semi-volatile organic compounds (SVOCs) will be considered, as appropriate based on field assessment. In addition, additional analyses may be needed for profiling purposes by the selected soil disposal facility should off-site disposal be necessary.

3.7 Evaluation of Soil Sample Analytical Data

If characterization conducted by the Environmental Consultant of the potentially-impacted soil confirms that the soil does not have chemical concentrations above applicable screening levels (e.g. USEPA RSLs and California DTSC HERO, Note 3 – DTSC-modified screening levels for a commercial/industrial land-use scenario), then the soil may be used onsite or exported from the site as a non-hazardous material. If the characterization confirms that chemical concentrations in the potentially-impacted soil exceed applicable screening levels, then based on the chemical constituents, the Environmental Consultant and Prologis will evaluate the

appropriate next steps to export the waste to an appropriate off-site disposal facility (see below table for disposal facilities selected based on classification), as necessary.

Disposal Facilities

Waste Classification	Facility name	Address	Phone	Permit/EPA ID
Non Hazardous Soils (Class III)	Waste Connections – Chiquita Canyon Landfill	29201 Henry Mayo Drive, Castaic, CA 91384	661-257-3655	Conditional Use Permit: CUP 2004-00042
Non-RCRA Hazardous Soils	CR&R - South Yuma Canyon Landfill	19536 South Avenue 1E, Yuma, AZ 85365	928-341-9300	AZR000506980
RCRA Hazardous Soils	US Ecology	Highway 95 South, Beatty, NV 89003	800-239-3943	NVT330010000

3.8 Contact Information

The following people are to be contacted in the event that potentially-impacted soil or previously unknown subsurface features are encountered.

Project Personnel Contact Information

Company	Role	Name	Office Phone	Mobile Phone	Email Address
Prologis	Project Owner Representative	Julia Smith	(415) 733 9411	(510) 566 9177	julias4@prologis.com
		John Carter	(562) 345-9237		jcarter@prologis.com
Ramboll	Consultant	Leo Rebele	(949) 798 3604	(562) 761 9191	lrebele@ramboll.com
		Manasi Chavan	(949) 798 3669	(213) 400 5295	mchavan@ramboll.com
General Contractor	TBD	TBD	TBD	TBD	TBD
American Integrated Services	Hazardous Waste Contractor	John Farmer	(310) 522 1168	(714) 307 4322	jfarmer@americanintegrated.com

4. EXCAVATION AND SOIL REMOVAL

If impacted soil is observed, Consultant and Prologis will evaluate the appropriate next steps to characterize the soil, excavate as appropriate, and manage the waste in accordance with the procedures specified above.

4.1 Excavation Activities

Prior to excavation activities, any concrete in the proposed excavation footprint areas will be removed. If impacted areas are encountered, it is anticipated to excavate impacted areas ranging in depth from 2-10 feet below ground surface (bgs), but such excavations are subject to further evaluation of field conditions and consultation with Prologis.

4.2 Excavation Oversight

All activities will be overseen by a California-registered Professional Geologist. During excavation activities, soil will be monitored with a OVM and for visual and olfactory cues for evidence of impacted soil. In addition, measures will be taken to manage visible emissions in accordance with SCAQMD Rule 401; fugitive dust in accordance with SCAQMD Rule 403; VOC emissions in accordance with SCAQMD Rule 1166; and/or minimize the potential for release of toxic air contaminants in accordance with SCAQMD Rule 1466.

The proposed excavations will be completed as described in Section 4.1, unless deeper excavation is necessary to achieve clean confirmation samples. Similarly, if additional excavation is necessary beyond the pre-planned excavation areas, as dictated by the confirmation samples, additional concrete removal, and lateral excavation will be completed.

4.3 Soil Stockpile Management

Excavated soil will be managed on-site using dust control measures outlined in Section 3.2.1 and will be stockpiled on top of plastic to keep impacted soil separate from other soil on-site. Stockpiles will be fully covered with plastic and labeled when not in use and at the end of each work day. Plastic covers will be anchored and secured using sand bags to eliminate the risk of fugitive dust emissions. When additional pieces of plastic are needed, the edges of the plastic will be overlapped by a minimum of 24 inches and will be secured with extra wide duct tape. While stockpiles are in use, water will be sprayed at regular intervals to reduce fugitive dust emissions. All stockpiles will be inspected twice a day (i.e., at the beginning and end of each work day), and any issues will be corrected as needed. Stockpiles will be maintained in order until transported off-site under appropriate manifest to their respective approved facilities.

4.4 Confirmation and Stockpile Sampling

Confirmation soil samples will be collected from each sidewall and from the bottom of each excavation and analyzed for the appropriate chemical(s) of concern (e.g., TPH, Metals, VOCs, PCBs). One sidewall sample will be collected for every 25 linear feet per sidewall and one bottom sample will be collected for every 1,000 square feet. If the excavation is greater than 4’ in depth, samples shall be collected from the backhoe bucket. Confirmation soil samples will be compared to regulatory thresholds for commercial/ industrial land use. If confirmation soil sample results have concentrations above their respective commercial/industrial land use thresholds, additional lateral and/or vertical excavation and confirmation sampling/analysis may be required.

Stockpile samples will be collected and analyzed according to DTSC guidance document titled Information Advisory Clean Imported Fill Material published in October 2001.

- 1 sample per 250 cubic yards for a stockpile consisting of up to 1,000 cubic yards of soil;
- 4 samples for first 1,000 cubic yards + 1 sample per additional 500 cubic yards for a stockpile consisting of 1,000 to 5,000 cubic yards of soil; and
- 12 samples for first 5,000 cubic yards + 1 sample per additional 1,00 cubic yards for a stockpile consisting of greater than 5,000 cubic yards of soil.

Depending on the nature of the soil, the stockpile samples may be analyzed for VOCs by USEPA Method 8260B, TPH by USEPA Method 8015B, Title 22 metals by USEPA Method 6010B/7470A, and PCBs by USPEA Method 8082. Additional stockpile sampling, based on statistics-based sampling protocol, may be considered based on cost implications and further client discussions.

Excavated impacted soil may be temporarily stockpiled on plastic sheeting at locations adjacent to each excavation or in area(s) designated by the general contractor prior to off-site disposal.

4.5 Soil Transportation and Disposal

Once soil profiles are approved by each disposal facility (see Section 3.7), the appropriate soil will be loaded into semi-trucks and hauled directly to the disposal facility under proper manifest documentation in accordance with the SMP, SCAQMD Rule 1166, SCAQMD Rule 1466 and SCAQMD Rules 401 and 403.

In the event of tears of the visqueen plastic sheeting in area of stockpiled soils, after export is complete, confirmation samples will be collected from the footprints of the stockpiles to confirm that all impacted soil was removed from the site in accordance with the SMP.

4.6 Decontamination

Entry to each of the excavation areas will be fenced off and access will be limited to avoid unnecessary exposure and limit the potential for cross contamination. Non-disposable sampling equipment that comes into direct contact with impacted or potentially-impacted media will be decontaminated over plastic, prior to sample collection, to limit the potential for cross contamination and better represent site-specific conditions. Decontamination will be conducted using the following procedures:

- Non-phosphate detergent and tap water wash, using a brush;
- Tap water rinse;
- Initial deionized/distilled water rinse;
- Final deionized/distilled water rinse; and
- Heavy equipment will be rinsed with non-phosphate detergent and tap water.

Disposable one-time use equipment will not be decontaminated but will be packaged for appropriate off-site disposal.

Trucks used for transporting soil off-site will be visually inspected before leaving the exclusion zone. All soil adhering to the exterior surfaces will be brushed and/or vacuumed off and staged on plastic. All trucks will be tarped on-site immediately after loading and will be

inspected to ensure they are properly covered and secured before exiting the site. Excavation equipment surfaces will also be brushed off over plastic prior to removal from the exclusion zone.

4.7 Soil Import

Any impacted soil removed from the site for disposal purposes will need to be replaced with clean import material. Prior to importing soil on-site, Consultant will review the environmental history of any borrow site proposed for the project. Documents reviewed may include Phase I ESAs or other site assessment reports and will be provided for reference in the completion report. Following review of documents, samples will be collected from each borrow site and analyzed for TPH, VOCs, PCBs, metals, and pesticides to confirm imported soil does not exceed applicable commercial/industrial screening levels. Additional chemical analytes may be analyzed for if warranted based on Consultant's review. Consultant will follow the DTSC guidance document entitled "Information Advisory: Clean Import Fill Material" issued in 2001 (DTSC, 2001).

4.8 Backfill and Site Restoration

Once soil excavation and completion of soil import activities are complete for any given area, site redevelopment activities will commence.

5. CONSTRUCTION BEST MANAGEMENT PRACTICES

Construction Best Management Practices (BMP) are management practices, operating procedures, or schedules of activities to control, reduce, or prevent discharge of pollutants from construction activities. Excavation of soil and concrete debris handling activities will include the following BMPs:

General

- Material or products will be stored in manufacturer's original containers.
- Where possible, storage will be under a roof.
- Storage areas will be neat and orderly to facilitate inspection.
- Check all equipment for leaks and repair leaking equipment promptly.
- Perform major maintenance, repairs, and washing of equipment away from the excavation site.
- Designate a completely contained area away from storm drains for refueling and/or maintenance work that must be performed at the site.
- Spill kits (absorbent materials/rags, disposal bags, buckets/containers) should be kept on site.
- Clean-up all spills and leaks using dry methods (absorbent materials/rags).
- Dry sweep dirt from paved surfaces for general clean-up.
- Train employees to perform and apply these BMPs.

Concrete Breakout

- Avoid creating excess dust when breaking concrete. Prevent dust from entering waterways.
- Protect storm drains using earth dikes, straw bales, sand bags, absorbent socks, or other control measures to divert or trap and filter runoff.
- Shovel or vacuum saw-cut slurry and remove from the site.
- Remove contaminated broken pavement from the site promptly. Do not allow rainfall or runoff to contact contaminated broken concrete.

Excavation

- Schedule excavation work for dry weather periods when possible.
- Protect storm drains using earth dikes, straw bales, sand bags, absorbent socks, or other control measures to divert or trap and filter runoff.
- Avoid over-application by water trucks for dust control.
- Cover stockpiles and other construction materials with heavy-duty plastic. Protect from rainfall and prevent runoff with temporary roofs or heavy-duty plastic and berms.

6. COMPLETION REPORT

At the conclusion of grading/excavation activities, a Completion Report should be prepared if deemed to be necessary (i.e., if potentially-contaminated soil is encountered).

The report would document field monitoring activities and visual observations made during grading/excavations, as well as soil sampling locations/results. In addition, the report would include a description of the location(s) of any impacted soil encountered, actions taken to further characterize and mitigate impacts, confirmation soil sampling results and disposition of any excavated soil.

Furthermore, the report would include a description of encountered subsurface structures, if applicable, and steps taken to remove and close such encountered structures. The report will include maps depicting soil sampling locations, as well as locations of potentially-contaminated soil and/or subsurface structures, if such are encountered during grading activities.

7. LIMITATIONS

This SMP document has been prepared for the exclusive use of the Prologis and its assigns and designees, and may not be relied upon by any other person or entity without Ramboll's prior express written permission. This document has been prepared in conformance with generally accepted standards of practice in the fields of environmental sciences and engineering at the time the services were rendered. Ramboll makes no other warranty or representation, either express or implied, with respect to its services.

The document findings are based on information/data provided by our client and/or other third parties and conditions identified as a result of Ramboll's investigations as of the date of the document. Ramboll has not attempted to verify information/data provided to it by our client or other third parties, except as explicitly noted in our document, and makes no express representations to the accuracy of such information/data by the inclusion of it in our document.

It is Ramboll's opinion that the level of detail carried out during the preparation of this document to meet the objectives of the SMP; however, there is no warranty or guarantee, expressed or implied, that this document has covered all potential environmental liabilities associated with the site.

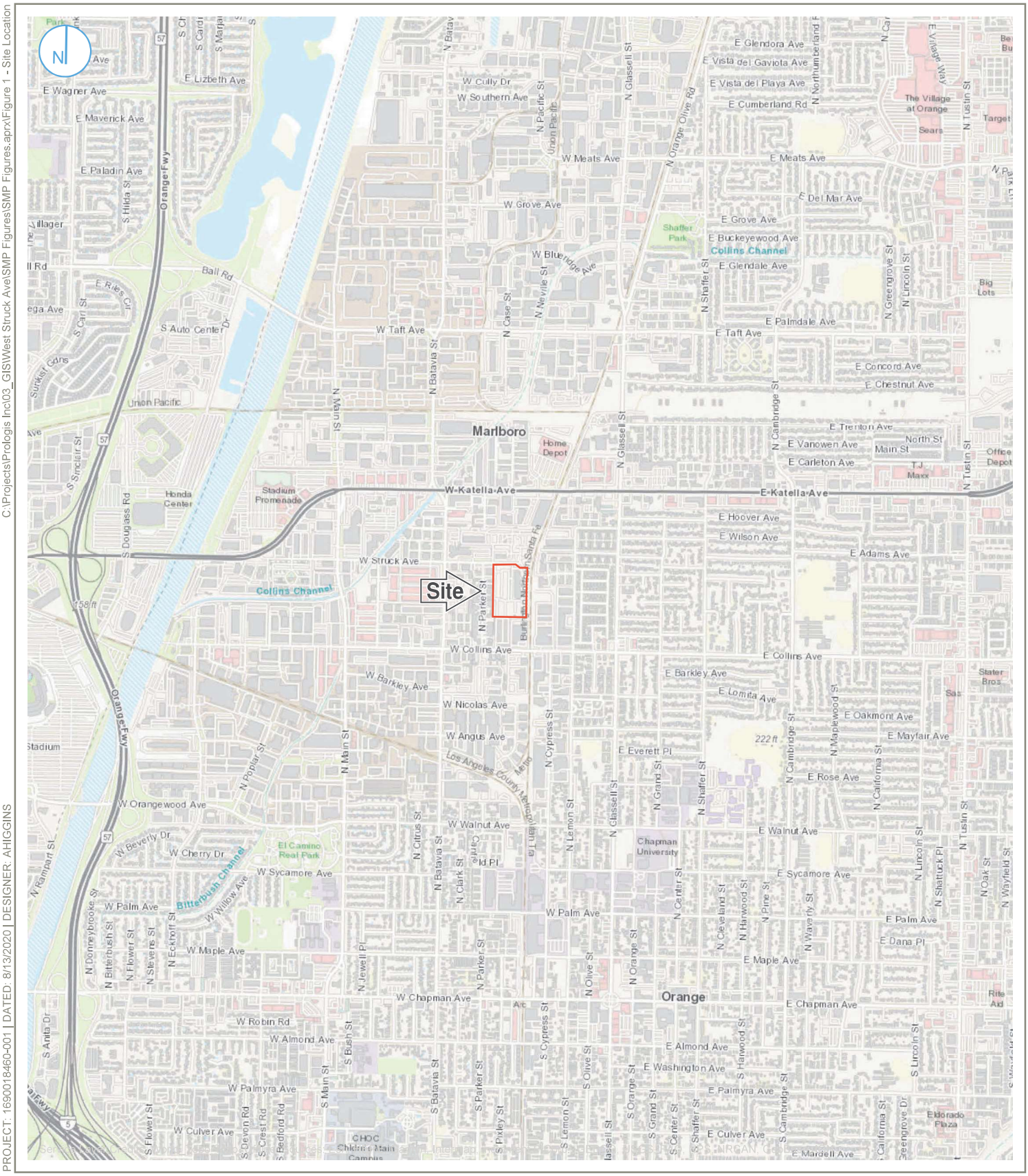
8. REFERENCES

DTSC. 2001. Information Advisory Clean Imported Fill Material. October.

GeoTek, Inc. 2020a. "Phase I Environmental Site Assessment, 534 West Struck Avenue, Orange, California." March 31.

GeoTek, Inc. 2020b. "Limited Phase II Environmental Site Assessment, 534 West Struck Avenue, Orange, California." June 30.

FIGURES



PROJECT: 1690018460-001 | DATED: 8/13/2020 | DESIGNER: AHIGGINS

C:\Projects\Prologis Inc\03_GIS\West Struck Ave\SMP Figures\SMP Figures.aprx\Figure 1 - Site Location

KEY MAP

Site Boundary

Map Scale: 1:1:24,000;
Map Center: 117°51'29"W 33°48'18"N

0 1,000 2,000 Feet

SITE LOCATION

Proposed Industrial Development
West 534 Struck Avenue
Orange, California

FIGURE 1

RAMBOLL US CORPORATION
A RAMBOLL COMPANY

RAMBOLL

Site Boundary

Historical Site Features

- Area of Possible Residual Contamination Formerly Assessed by Leighton & Associates
- Former Pellet Storage Silos
- Former Process Equiptment Area
- Former Contaminated Soil Stockpiles

0 35 70 Feet

Key to Tanks

- **T1** Former Styrene UST No. 1 (Polymerized)
- **T2** Former Styrene UST No. 2 (20,000-gal)
- **T3** Former Styrene UST No. 3 (30,000-gal)
- **TM** Former Mixed Feed UST (Styrene & Polybutadiene Rubber, 33,000-gal)
- **TD** Former Rubber Dissolving AST
- **VR** Former Vertical Reactor

Notes

AST =Aboveground storage tank
UST = Underground storage tank

SITE LAYOUT & HISTORICAL FEATURES

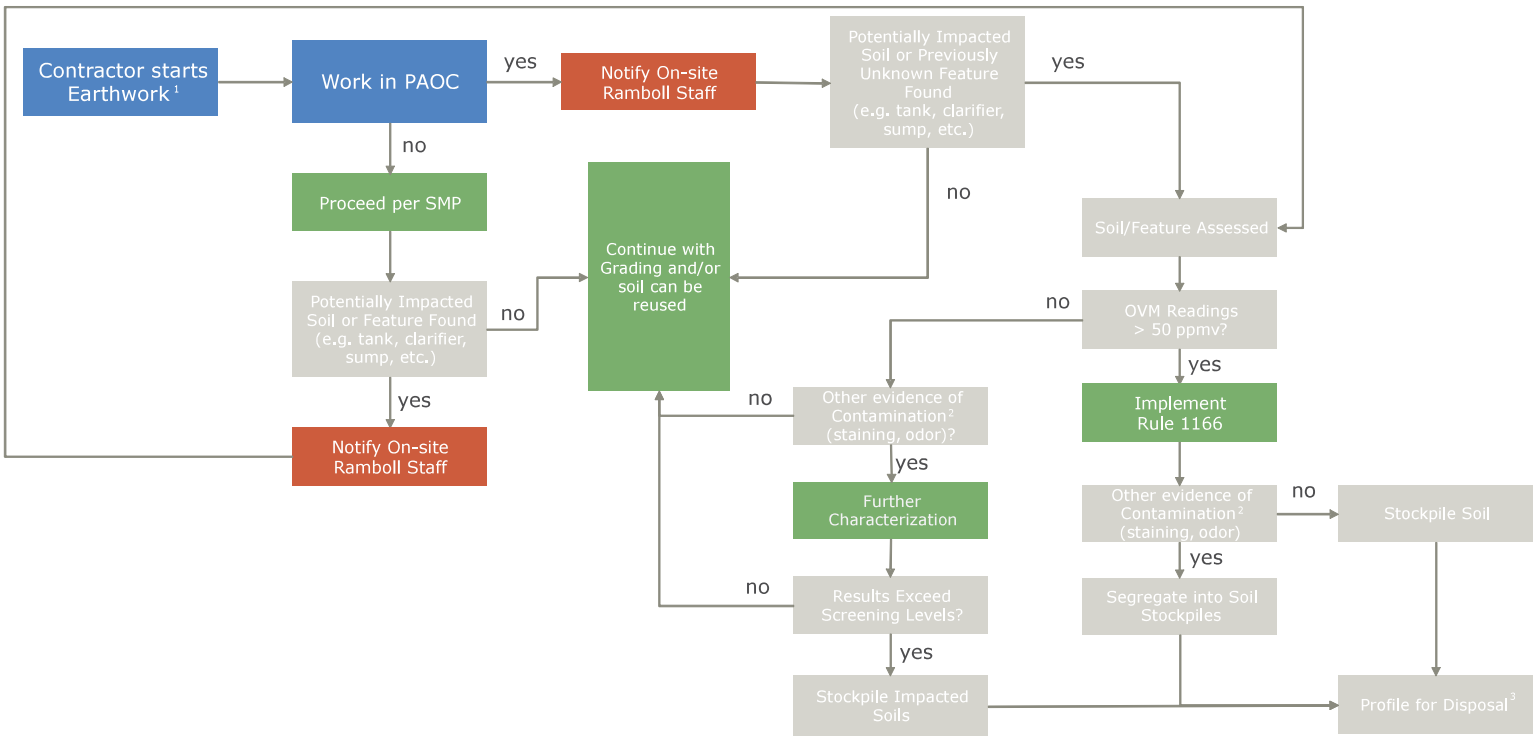
Proposed Industrial Development
West 534 Struck Avenue
Orange, California

FIGURE 2

RAMBOLL US CORPORATION
A RAMBOLL COMPANY

RAMBOLL

PROJECT: 1690018460-001 | DATED: 8/13/2020 | DESIGNER: AHIGGINS C:\Projects\Prologis Inc\03_GIS\West Struck Ave\SMP Figures\SMP Figures.aprx\Figure 3 - SMP Flowchart



Notes

1. PAOC Potential Area of Concern
2. OVM Organic Vapor Monitor
3. VOC Volatile Organic Compound
4. SMP Soil Management Plan

[1] Earthwork includes all soil movement activities (e.g. trenching, excavation, rough grading, backfilling) under grading plan.

[2] Non-VOC Potential Impacts identified based on visual or olfactory evidence, especially signs of fill material. Signs of fill may include but are not limited to soil that contains brick, glass, and porcelain.

[3] Composite or discrete soil samples may be collected and analyzed to profile soil for off-site disposal to an appropriate disposal facility

SMP FLOWCHART

Proposed Industrial Development
534 West Struck Avenue
Orange, California

FIGURE 3

RAMBOLL US CORPORATION
A RAMBOLL COMPANY

RAMBOLL

APPENDIX A
SCAQMD RULE 403

(Adopted May 7, 1976) (Amended November 6, 1992)
(Amended July 9, 1993) (Amended February 14, 1997)
(Amended December 11, 1998)(Amended April 2, 2004)
(Amended June 3, 2005)

RULE 403. FUGITIVE DUST

(a) Purpose

The purpose of this Rule is to reduce the amount of particulate matter entrained in the ambient air as a result of anthropogenic (man-made) fugitive dust sources by requiring actions to prevent, reduce or mitigate fugitive dust emissions.

(b) Applicability

The provisions of this Rule shall apply to any activity or man-made condition capable of generating fugitive dust.

(c) Definitions

(1) ACTIVE OPERATIONS means any source capable of generating fugitive dust, including, but not limited to, earth-moving activities, construction/demolition activities, disturbed surface area, or heavy- and light-duty vehicular movement.

(2) AGGREGATE-RELATED PLANTS are defined as facilities that produce and / or mix sand and gravel and crushed stone.

(3) AGRICULTURAL HANDBOOK means the region-specific guidance document that has been approved by the Governing Board or hereafter approved by the Executive Officer and the U.S. EPA. For the South Coast Air Basin, the Board-approved region-specific guidance document is the Rule 403 Agricultural Handbook dated December 1998. For the Coachella Valley, the Board-approved region-specific guidance document is the Rule 403 Coachella Valley Agricultural Handbook dated April 2, 2004.

(4) ANEMOMETERS are devices used to measure wind speed and direction in accordance with the performance standards, and maintenance and calibration criteria as contained in the most recent Rule 403 Implementation Handbook.

(5) BEST AVAILABLE CONTROL MEASURES means fugitive dust control actions that are set forth in Table 1 of this Rule.

(6) BULK MATERIAL is sand, gravel, soil, aggregate material less than two inches in length or diameter, and other organic or inorganic particulate matter.

(7) CEMENT MANUFACTURING FACILITY is any facility that has a cement kiln at the facility.

(8) CHEMICAL STABILIZERS are any non-toxic chemical dust suppressant which must not be used if prohibited for use by the Regional Water Quality Control Boards, the California Air Resources Board, the U.S. Environmental Protection Agency (U.S. EPA), or any applicable law, rule or regulation. The chemical stabilizers shall meet any specifications, criteria, or tests required by any federal, state, or local water agency. Unless otherwise indicated, the use of a non-toxic chemical stabilizer shall be of sufficient concentration and application frequency to maintain a stabilized surface.

(9) COMMERCIAL POULTRY RANCH means any building, structure, enclosure, or premises where more than 100 fowl are kept or maintained for the primary purpose of producing eggs or meat for sale or other distribution.

(10) CONFINED ANIMAL FACILITY means a source or group of sources of air pollution at an agricultural source for the raising of 3,360 or more fowl or 50 or more animals, including but not limited to, any structure, building, installation, farm, corral, coop, feed storage area, milking parlor, or system for the collection, storage, or distribution of solid and liquid manure; if domesticated animals, including horses, sheep, goats, swine, beef cattle, rabbits, chickens, turkeys, or ducks are corralled, penned, or otherwise caused to remain in restricted areas for commercial agricultural purposes and feeding is by means other than grazing.

(11) CONSTRUCTION/DEMOLITION ACTIVITIES means any on-site mechanical activities conducted in preparation of, or related to, the building, alteration, rehabilitation, demolition or improvement of property, including, but not limited to the following activities: grading, excavation, loading, crushing, cutting, planing, shaping or ground breaking.

(12) CONTRACTOR means any person who has a contractual arrangement to conduct an active operation for another person.

(13) DAIRY FARM is an operation on a property, or set of properties that are contiguous or separated only by a public right-of-way, that raises cows or

produces milk from cows for the purpose of making a profit or for a livelihood. Heifer and calf farms are dairy farms.

(14) DISTURBED SURFACE AREA means a portion of the earth's surface which has been physically moved, uncovered, destabilized, or otherwise modified from its undisturbed natural soil condition, thereby increasing the potential for emission of fugitive dust. This definition excludes those areas which have:

(A) been restored to a natural state, such that the vegetative ground cover and soil characteristics are similar to adjacent or nearby natural conditions;

(B) been paved or otherwise covered by a permanent structure; or

(C) sustained a vegetative ground cover of at least 70 percent of the native cover for a particular area for at least 30 days.

(15) DUST SUPPRESSANTS are water, hygroscopic materials, or non-toxic chemical stabilizers used as a treatment material to reduce fugitive dust emissions.

(16) EARTH-MOVING ACTIVITIES means the use of any equipment for any activity where soil is being moved or uncovered, and shall include, but not be limited to the following: grading, earth cutting and filling operations, loading or unloading of dirt or bulk materials, adding to or removing from open storage piles of bulk materials, landfill operations, weed abatement through disking, and soil mulching.

(17) DUST CONTROL SUPERVISOR means a person with the authority to expeditiously employ sufficient dust mitigation measures to ensure compliance with all Rule 403 requirements at an active operation.

(18) FUGITIVE DUST means any solid particulate matter that becomes airborne, other than that emitted from an exhaust stack, directly or indirectly as a result of the activities of any person.

(19) HIGH WIND CONDITIONS means that instantaneous wind speeds exceed 25 miles per hour.

(20) INACTIVE DISTURBED SURFACE AREA means any disturbed surface area upon which active operations have not occurred or are not expected to occur for a period of 20 consecutive days.

(21) LARGE OPERATIONS means any active operations on property which contains 50 or more acres of disturbed surface area; or any earth-moving operation with a daily earth-moving or throughput volume of 3,850 cubic

meters (5,000 cubic yards) or more three times during the most recent 365-day period.

(22) OPEN STORAGE PILE is any accumulation of bulk material, which is not fully enclosed, covered or chemically stabilized, and which attains a height of three feet or more and a total surface area of 150 or more square feet.

(23) PARTICULATE MATTER means any material, except uncombined water, which exists in a finely divided form as a liquid or solid at standard conditions.

(24) PAVED ROAD means a public or private improved street, highway, alley, public way, or easement that is covered by typical roadway materials, but excluding access roadways that connect a facility with a public paved roadway and are not open to through traffic. Public paved roads are those open to public access and that are owned by any federal, state, county, municipal or any other governmental or quasi-governmental agencies. Private paved roads are any paved roads not defined as public.

(25) PM_{10} means particulate matter with an aerodynamic diameter smaller than or equal to 10 microns as measured by the applicable State and Federal reference test methods.

(26) PROPERTY LINE means the boundaries of an area in which either a person causing the emission or a person allowing the emission has the legal use or possession of the property. Where such property is divided into one or more sub-tenancies, the property line(s) shall refer to the boundaries dividing the areas of all sub-tenancies.

(27) RULE 403 IMPLEMENTATION HANDBOOK means a guidance document that has been approved by the Governing Board on April 2, 2004 or hereafter approved by the Executive Officer and the U.S. EPA.

(28) SERVICE ROADS are paved or unpaved roads that are used by one or more public agencies for inspection or maintenance of infrastructure and which are not typically used for construction-related activity.

(29) SIMULTANEOUS SAMPLING means the operation of two PM_{10} samplers in such a manner that one sampler is started within five minutes of the other, and each sampler is operated for a consecutive period which must be not less than 290 minutes and not more than 310 minutes.

(30) SOUTH COAST AIR BASIN means the non-desert portions of Los Angeles, Riverside, and San Bernardino counties and all of Orange

County as defined in California Code of Regulations, Title 17, Section 60104. The area is bounded on the west by the Pacific Ocean, on the north and east by the San Gabriel, San Bernardino, and San Jacinto Mountains, and on the south by the San Diego county line.

(31) STABILIZED SURFACE means any previously disturbed surface area or open storage pile which, through the application of dust suppressants, shows visual or other evidence of surface crusting and is resistant to wind-driven fugitive dust and is demonstrated to be stabilized. Stabilization can be demonstrated by one or more of the applicable test methods contained in the Rule 403 Implementation Handbook.

(32) TRACK-OUT means any bulk material that adheres to and agglomerates on the exterior surface of motor vehicles, haul trucks, and equipment (including tires) that have been released onto a paved road and can be removed by a vacuum sweeper or a broom sweeper under normal operating conditions.

(33) TYPICAL ROADWAY MATERIALS means concrete, asphaltic concrete, recycled asphalt, asphalt, or any other material of equivalent performance as determined by the Executive Officer, and the U.S. EPA.

(34) UNPAVED ROADS means any unsealed or unpaved roads, equipment paths, or travel ways that are not covered by typical roadway materials. Public unpaved roads are any unpaved roadway owned by federal, state, county, municipal or other governmental or quasi-governmental agencies. Private unpaved roads are all other unpaved roadways not defined as public.

(35) VISIBLE ROADWAY DUST means any sand, soil, dirt, or other solid particulate matter which is visible upon paved road surfaces and which can be removed by a vacuum sweeper or a broom sweeper under normal operating conditions.

(36) WIND-DRIVEN FUGITIVE DUST means visible emissions from any disturbed surface area which is generated by wind action alone.

(37) WIND GUST is the maximum instantaneous wind speed as measured by an anemometer.

(d) Requirements

(1) No person shall cause or allow the emissions of fugitive dust from any active operation, open storage pile, or disturbed surface area such that:

(A) the dust remains visible in the atmosphere beyond the property line of the emission source; or

(B) the dust emission exceeds 20 percent opacity (as determined by the appropriate test method included in the Rule 403 Implementation Handbook), if the dust emission is the result of movement of a motorized vehicle.

(2) No person shall conduct active operations without utilizing the applicable best available control measures included in Table 1 of this Rule to minimize fugitive dust emissions from each fugitive dust source type within the active operation.

(3) No person shall cause or allow PM_{10} levels to exceed 50 micrograms per cubic meter when determined, by simultaneous sampling, as the difference between upwind and downwind samples collected on high-volume particulate matter samplers or other U.S. EPA-approved equivalent method for PM_{10} monitoring. If sampling is conducted, samplers shall be:

(A) Operated, maintained, and calibrated in accordance with 40 Code of Federal Regulations (CFR), Part 50, Appendix J, or appropriate U.S. EPA-published documents for U.S. EPA-approved equivalent method(s) for PM_{10}.

(B) Reasonably placed upwind and downwind of key activity areas and as close to the property line as feasible, such that other sources of fugitive dust between the sampler and the property line are minimized.

(4) No person shall allow track-out to extend 25 feet or more in cumulative length from the point of origin from an active operation. Notwithstanding the preceding, all track-out from an active operation shall be removed at the conclusion of each workday or evening shift.

(5) No person shall conduct an active operation with a disturbed surface area of five or more acres, or with a daily import or export of 100 cubic yards or more of bulk material without utilizing at least one of the measures listed in subparagraphs (d)(5)(A) through (d)(5)(E) at each vehicle egress from the site to a paved public road.

(A) Install a pad consisting of washed gravel (minimum-size: one inch) maintained in a clean condition to a depth of at least six inches and extending at least 30 feet wide and at least 50 feet long.

(B) Pave the surface extending at least 100 feet and at least 20 feet wide.

(C) Utilize a wheel shaker/wheel spreading device consisting of raised dividers (rails, pipe, or grates) at least 24 feet long and 10 feet wide to remove bulk material from tires and vehicle undercarriages before vehicles exit the site.

(D) Install and utilize a wheel washing system to remove bulk material from tires and vehicle undercarriages before vehicles exit the site.

(E) Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the actions specified in subparagraphs (d)(5)(A) through (d)(5)(D).

(6) Beginning January 1, 2006, any person who operates or authorizes the operation of a confined animal facility subject to this Rule shall implement the applicable conservation management practices specified in Table 4 of this Rule.

(e) Additional Requirements for Large Operations

(1) Any person who conducts or authorizes the conducting of a large operation subject to this Rule shall implement the applicable actions specified in Table 2 of this Rule at all times and shall implement the applicable actions specified in Table 3 of this Rule when the applicable performance standards can not be met through use of Table 2 actions; and shall:

(A) submit a fully executed Large Operation Notification (Form 403 N) to the Executive Officer within 7 days of qualifying as a large operation;

(B) include, as part of the notification, the name(s), address(es), and phone number(s) of the person(s) responsible for the submittal, and a description of the operation(s), including a map depicting the location of the site;

(C) maintain daily records to document the specific dust control actions taken, maintain such records for a period of not less than three years; and make such records available to the Executive Officer upon request;

(D) install and maintain project signage with project contact signage that meets the minimum standards of the Rule 403 Implementation Handbook, prior to initiating any earthmoving activities;

(E) identify a dust control supervisor that:

(i) is employed by or contracted with the property owner or developer;

(ii) is on the site or available on-site within 30 minutes during working hours;

(iii) has the authority to expeditiously employ sufficient dust mitigation measures to ensure compliance with all Rule requirements;

(iv) has completed the AQMD Fugitive Dust Control Class and has been issued a valid Certificate of Completion for the class; and

(F) notify the Executive Officer in writing within 30 days after the site no longer qualifies as a large operation as defined by paragraph (c)(18).

(2) Any Large Operation Notification submitted to the Executive Officer or AQMD-approved dust control plan shall be valid for a period of one year from the date of written acceptance by the Executive Officer. Any Large Operation Notification accepted pursuant to paragraph (e)(1), excluding those submitted by aggregate-related plants and cement manufacturing facilities must be resubmitted annually by the person who conducts or authorizes the conducting of a large operation, at least 30 days prior to the expiration date, or the submittal shall no longer be valid as of the expiration date. If all fugitive dust sources and corresponding control measures or special circumstances remain identical to those identified in the previously accepted submittal or in an AQMD-approved dust control plan, the resubmittal may be a simple statement of no-change (Form 403NC).

(f) Compliance Schedule

The newly amended provisions of this Rule shall become effective upon adoption. Pursuant to subdivision (e), any existing site that qualifies as a large operation will have 60 days from the date of Rule adoption to comply with the notification and recordkeeping requirements for large operations. Any Large Operation

Notification or AQMD-approved dust control plan which has been accepted prior to the date of adoption of these amendments shall remain in effect and the Large Operation Notification or AQMD-approved dust control plan annual resubmittal date shall be one year from adoption of this Rule amendment.

(g) Exemptions

(1) The provisions of this Rule shall not apply to:

(A) Dairy farms.

(B) Confined animal facilities provided that the combined disturbed surface area within one continuous property line is one acre or less.

(C) Agricultural vegetative crop operations provided that the combined disturbed surface area within one continuous property line and not separated by a paved public road is 10 acres or less.

(D) Agricultural vegetative crop operations within the South Coast Air Basin, whose combined disturbed surface area includes more than 10 acres provided that the person responsible for such operations:

(i) voluntarily implements the conservation management practices contained in the Rule 403 Agricultural Handbook;

(ii) completes and maintains the self-monitoring form documenting sufficient conservation management practices, as described in the Rule 403 Agricultural Handbook; and

(iii) makes the completed self-monitoring form available to the Executive Officer upon request.

(E) Agricultural vegetative crop operations outside the South Coast Air Basin whose combined disturbed surface area includes more than 10 acres provided that the person responsible for such operations:

(i) voluntarily implements the conservation management practices contained in the Rule 403 Coachella Valley Agricultural Handbook; and

(ii) completes and maintains the self-monitoring form documenting sufficient conservation management practices, as described in the Rule 403 Coachella Valley Agricultural Handbook; and

(iii) makes the completed self-monitoring form available to the Executive Officer upon request.

(F) Active operations conducted during emergency life-threatening situations, or in conjunction with any officially declared disaster or state of emergency.

(G) Active operations conducted by essential service utilities to provide electricity, natural gas, telephone, water and sewer during periods of service outages and emergency disruptions.

(H) Any contractor subsequent to the time the contract ends, provided that such contractor implemented the required control measures during the contractual period.

(I) Any grading contractor, for a phase of active operations, subsequent to the contractual completion of that phase of earth-moving activities, provided that the required control measures have been implemented during the entire phase of earth-moving activities, through and including five days after the final grading inspection.

(J) Weed abatement operations ordered by a county agricultural commissioner or any state, county, or municipal fire department, provided that:

(i) mowing, cutting or other similar process is used which maintains weed stubble at least three inches above the soil; and

(ii) any discing or similar operation which cuts into and disturbs the soil, where watering is used prior to initiation of these activities, and a determination is made by the agency issuing the weed abatement order that, due to fire hazard conditions, rocks, or other physical obstructions, it is not practical to meet the conditions specified in clause (g)(1)(H)(i). The provisions this clause shall not exempt the owner of any property from stabilizing, in accordance with paragraph (d)(2), disturbed surface areas which have been created as a result of the weed abatement actions.

(K) sandblasting operations.

(2) The provisions of paragraphs (d)(1) and (d)(3) shall not apply:

(A) When wind gusts exceed 25 miles per hour, provided that:

(i) The required Table 3 contingency measures in this Rule are implemented for each applicable fugitive dust source type, and;

(ii) records are maintained in accordance with subparagraph (e)(1)(C).

(B) To unpaved roads, provided such roads:

(i) are used solely for the maintenance of wind-generating equipment; or

(ii) are unpaved public alleys as defined in Rule 1186; or

(iii) are service roads that meet all of the following criteria:

(a) are less than 50 feet in width at all points along the road;

(b) are within 25 feet of the property line; and

(c) have a traffic volume less than 20 vehicle-trips per day.

(C) To any active operation, open storage pile, or disturbed surface area for which necessary fugitive dust preventive or mitigative actions are in conflict with the federal Endangered Species Act, as determined in writing by the State or federal agency responsible for making such determinations.

(3) The provisions of (d)(2) shall not apply to any aggregate-related plant or cement manufacturing facility that implements the applicable actions specified in Table 2 of this Rule at all times and shall implement the applicable actions specified in Table 3 of this Rule when the applicable performance standards of paragraphs (d)(1) and (d)(3) can not be met through use of Table 2 actions.

(4) The provisions of paragraphs (d)(1), (d)(2), and (d)(3) shall not apply to:

(A) Blasting operations which have been permitted by the California Division of Industrial Safety; and

(B) Motion picture, television, and video production activities when dust emissions are required for visual effects. In order to obtain this exemption, the Executive Officer must receive notification in writing at least 72 hours in advance of any such activity and no nuisance results from such activity.

(5) The provisions of paragraph (d)(3) shall not apply if the dust control actions, as specified in Table 2, are implemented on a routine basis for

each applicable fugitive dust source type. To qualify for this exemption, a person must maintain records in accordance with subparagraph (e)(1)(C).

(6) The provisions of paragraph (d)(4) shall not apply to earth coverings of public paved roadways where such coverings are approved by a local government agency for the protection of the roadway, and where such coverings are used as roadway crossings for haul vehicles provided that such roadway is closed to through traffic and visible roadway dust is removed within one day following the cessation of activities.

(7) The provisions of subdivision (e) shall not apply to:

(A) officially-designated public parks and recreational areas, including national parks, national monuments, national forests, state parks, state recreational areas, and county regional parks.

(B) any large operation which is required to submit a dust control plan to any city or county government which has adopted a District-approved dust control ordinance.

(C) any large operation subject to Rule 1158, which has an approved dust control plan pursuant to Rule 1158, provided that all sources of fugitive dust are included in the Rule 1158 plan.

(8) The provisions of subparagraph (e)(1)(A) through (e)(1)(C) shall not apply to any large operation with an AQMD-approved fugitive dust control plan provided that there is no change to the sources and controls as identified in the AQMD-approved fugitive dust control plan.

(h) Fees

Any person conducting active operations for which the Executive Officer conducts upwind/downwind monitoring for PM_{10} pursuant to paragraph (d)(3) shall be assessed applicable Ambient Air Analysis Fees pursuant to Rule 304.1. Applicable fees shall be waived for any facility which is exempted from paragraph (d)(3) or meets the requirements of paragraph (d)(3).

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Backfilling	01-1 Stabilize backfill material when not actively handling; and 01-2 Stabilize backfill material during handling; and 01-3 Stabilize soil at completion of activity.	✓ Mix backfill soil with water prior to moving ✓ Dedicate water truck or high capacity hose to backfilling equipment ✓ Empty loader bucket slowly so that no dust plumes are generated ✓ Minimize drop height from loader bucket
Clearing and grubbing	02-1 Maintain stability of soil through pre-watering of site prior to clearing and grubbing; and 02-2 Stabilize soil during clearing and grubbing activities; and 02-3 Stabilize soil immediately after clearing and grubbing activities.	✓ Maintain live perennial vegetation where possible ✓ Apply water in sufficient quantity to prevent generation of dust plumes
Clearing forms	03-1 Use water spray to clear forms; or 03-2 Use sweeping and water spray to clear forms; or 03-3 Use vacuum system to clear forms.	✓ Use of high pressure air to clear forms may cause exceedance of Rule requirements
Crushing	04-1 Stabilize surface soils prior to operation of support equipment; and 04-2 Stabilize material after crushing.	✓ Follow permit conditions for crushing equipment ✓ Pre-water material prior to loading into crusher ✓ Monitor crusher emissions opacity ✓ Apply water to crushed material to prevent dust plumes

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Cut and fill	05-1 Pre-water soils prior to cut and fill activities; and 05-2 Stabilize soil during and after cut and fill activities.	✓ For large sites, pre-water with sprinklers or water trucks and allow time for penetration ✓ Use water trucks/pulls to water soils to depth of cut prior to subsequent cuts
Demolition – mechanical/manual	06-1 Stabilize wind erodible surfaces to reduce dust; and 06-2 Stabilize surface soil where support equipment and vehicles will operate; and 06-3 Stabilize loose soil and demolition debris; and 06-4 Comply with AQMD Rule 1403.	✓ Apply water in sufficient quantities to prevent the generation of visible dust plumes
Disturbed soil	07-1 Stabilize disturbed soil throughout the construction site; and 07-2 Stabilize disturbed soil between structures	✓ Limit vehicular traffic and disturbances on soils where possible ✓ If interior block walls are planned, install as early as possible ✓ Apply water or a stabilizing agent in sufficient quantities to prevent the generation of visible dust plumes
Earth-moving activities	08-1 Pre-apply water to depth of proposed cuts; and 08-2 Re-apply water as necessary to maintain soils in a damp condition and to ensure that visible emissions do not exceed 100 feet in any direction; and 08-3 Stabilize soils once earth-moving activities are complete.	✓ Grade each project phase separately, timed to coincide with construction phase ✓ Upwind fencing can prevent material movement on site ✓ Apply water or a stabilizing agent in sufficient quantities to prevent the generation of visible dust plumes

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Importing/exporting of bulk materials	09-1 Stabilize material while loading to reduce fugitive dust emissions; and 09-2 Maintain at least six inches of freeboard on haul vehicles; and 09-3 Stabilize material while transporting to reduce fugitive dust emissions; and 09-4 Stabilize material while unloading to reduce fugitive dust emissions; and 09-5 Comply with Vehicle Code Section 23114.	✓ Use tarps or other suitable enclosures on haul trucks ✓ Check belly-dump truck seals regularly and remove any trapped rocks to prevent spillage ✓ Comply with track-out prevention/mitigation requirements ✓ Provide water while loading and unloading to reduce visible dust plumes
Landscaping	10-1 Stabilize soils, materials, slopes	✓ Apply water to materials to stabilize ✓ Maintain materials in a crusted condition ✓ Maintain effective cover over materials ✓ Stabilize sloping surfaces using soil binders until vegetation or ground cover can effectively stabilize the slopes ✓ Hydroseed prior to rain season
Road shoulder maintenance	11-1 Apply water to unpaved shoulders prior to clearing; and 11-2 Apply chemical dust suppressants and/or washed gravel to maintain a stabilized surface after completing road shoulder maintenance.	✓ Installation of curbing and/or paving of road shoulders can reduce recurring maintenance costs ✓ Use of chemical dust suppressants can inhibit vegetation growth and reduce future road shoulder maintenance costs

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Screening	12-1 Pre-water material prior to screening; and 12-2 Limit fugitive dust emissions to opacity and plume length standards; and 12-3 Stabilize material immediately after screening.	✓ Dedicate water truck or high capacity hose to screening operation ✓ Drop material through the screen slowly and minimize drop height ✓ Install wind barrier with a porosity of no more than 50% upwind of screen to the height of the drop point
Staging areas	13-1 Stabilize staging areas during use; and 13-2 Stabilize staging area soils at project completion.	✓ Limit size of staging area ✓ Limit vehicle speeds to 15 miles per hour ✓ Limit number and size of staging area entrances/exists
Stockpiles/ Bulk Material Handling	14-1 Stabilize stockpiled materials. 14-2 Stockpiles within 100 yards of off-site occupied buildings must not be greater than eight feet in height; or must have a road bladed to the top to allow water truck access or must have an operational water irrigation system that is capable of complete stockpile coverage.	✓ Add or remove material from the downwind portion of the storage pile ✓ Maintain storage piles to avoid steep sides or faces

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Traffic areas for construction activities	15-1 Stabilize all off-road traffic and parking areas; and 15-2 Stabilize all haul routes; and 15-3 Direct construction traffic over established haul routes.	✓ Apply gravel/paving to all haul routes as soon as possible to all future roadway areas ✓ Barriers can be used to ensure vehicles are only used on established parking areas/haul routes
Trenching	16-1 Stabilize surface soils where trencher or excavator and support equipment will operate; and 16-2 Stabilize soils at the completion of trenching activities.	✓ Pre-watering of soils prior to trenching is an effective preventive measure. For deep trenching activities, pre-trench to 18 inches soak soils via the pre-trench and resuming trenching ✓ Washing mud and soils from equipment at the conclusion of trenching activities can prevent crusting and drying of soil on equipment
Truck loading	17-1 Pre-water material prior to loading; and 17-2 Ensure that freeboard exceeds six inches (CVC 23114)	✓ Empty loader bucket such that no visible dust plumes are created ✓ Ensure that the loader bucket is close to the truck to minimize drop height while loading
Turf Overseeding	18-1 Apply sufficient water immediately prior to conducting turf vacuuming activities to meet opacity and plume length standards; and 18-2 Cover haul vehicles prior to exiting the site.	✓ Haul waste material immediately off-site

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Unpaved roads/parking lots	19-1 Stabilize soils to meet the applicable performance standards; and 19-2 Limit vehicular travel to established unpaved roads (haul routes) and unpaved parking lots.	✓ Restricting vehicular access to established unpaved travel paths and parking lots can reduce stabilization requirements
Vacant land	20-1 In instances where vacant lots are 0.10 acre or larger and have a cumulative area of 500 square feet or more that are driven over and/or used by motor vehicles and/or off-road vehicles, prevent motor vehicle and/or off-road vehicle trespassing, parking and/or access by installing barriers, curbs, fences, gates, posts, signs, shrubs, trees or other effective control measures.	

Table 2
DUST CONTROL MEASURES FOR LARGE OPERATIONS

FUGITIVE DUST SOURCE CATEGORY		CONTROL ACTIONS
Earth-moving (except construction cutting and filling areas, and mining operations)	(1a)	Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D-2216, or other equivalent method approved by the Executive Officer, the California Air Resources Board, and the U.S. EPA. Two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations each subsequent four-hour period of active operations; OR
	(1a-1)	For any earth-moving which is more than 100 feet from all property lines, conduct watering as necessary to prevent visible dust emissions from exceeding 100 feet in length in any direction.
Earth-moving: Construction fill areas:	(1b)	Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D-2216, or other equivalent method approved by the Executive Officer, the California Air Resources Board, and the U.S. EPA. For areas which have an optimum moisture content for compaction of less than 12 percent, as determined by ASTM Method 1557 or other equivalent method approved by the Executive Officer and the California Air Resources Board and the U.S. EPA, complete the compaction process as expeditiously as possible after achieving at least 70 percent of the optimum soil moisture content. Two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations during each subsequent four-hour period of active operations.

Table 2 (Continued)

FUGITIVE DUST SOURCE CATEGORY	CONTROL ACTIONS	
Earth-moving: Construction cut areas and mining operations:	(1c)	Conduct watering as necessary to prevent visible emissions from extending more than 100 feet beyond the active cut or mining area unless the area is inaccessible to watering vehicles due to slope conditions or other safety factors.
Disturbed surface areas (except completed grading areas)	(2a/b)	Apply dust suppression in sufficient quantity and frequency to maintain a stabilized surface. Any areas which cannot be stabilized, as evidenced by wind driven fugitive dust must have an application of water at least twice per day to at least 80 percent of the unstabilized area.
Disturbed surface areas: Completed grading areas	(2c)	Apply chemical stabilizers within five working days of grading completion; OR
	(2d)	Take actions (3a) or (3c) specified for inactive disturbed surface areas.
Inactive disturbed surface areas	(3a)	Apply water to at least 80 percent of all inactive disturbed surface areas on a daily basis when there is evidence of wind driven fugitive dust, excluding any areas which are inaccessible to watering vehicles due to excessive slope or other safety conditions; OR
	(3b)	Apply dust suppressants in sufficient quantity and frequency to maintain a stabilized surface; OR
	(3c)	Establish a vegetative ground cover within 21 days after active operations have ceased. Ground cover must be of sufficient density to expose less than 30 percent of unstabilized ground within 90 days of planting, and at all times thereafter; OR
	(3d)	Utilize any combination of control actions (3a), (3b), and (3c) such that, in total, these actions apply to all inactive disturbed surface areas.

Table 2 (Continued)

FUGITIVE DUST SOURCE CATEGORY	CONTROL ACTIONS	
Unpaved Roads	(4a)	Water all roads used for any vehicular traffic at least once per every two hours of active operations [3 times per normal 8 hour work day]; OR
	(4b)	Water all roads used for any vehicular traffic once daily and restrict vehicle speeds to 15 miles per hour; OR
	(4c)	Apply a chemical stabilizer to all unpaved road surfaces in sufficient quantity and frequency to maintain a stabilized surface.
Open storage piles	(5a)	Apply chemical stabilizers; OR
	(5b)	Apply water to at least 80 percent of the surface area of all open storage piles on a daily basis when there is evidence of wind driven fugitive dust; OR
	(5c)	Install temporary coverings; OR
	(5d)	Install a three-sided enclosure with walls with no more than 50 percent porosity which extend, at a minimum, to the top of the pile. This option may only be used at aggregate-related plants or at cement manufacturing facilities.
All Categories	(6a)	Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the methods specified in Table 2 may be used.

TABLE 3
CONTINGENCY CONTROL MEASURES FOR LARGE OPERATIONS

FUGITIVE DUST SOURCE CATEGORY	CONTROL MEASURES
Earth-moving	(1A) Cease all active operations; OR (2A) Apply water to soil not more than 15 minutes prior to moving such soil.
Disturbed surface areas	(0B) On the last day of active operations prior to a weekend, holiday, or any other period when active operations will not occur for not more than four consecutive days: apply water with a mixture of chemical stabilizer diluted to not less than 1/20 of the concentration required to maintain a stabilized surface for a period of six months; OR (1B) Apply chemical stabilizers prior to wind event; OR (2B) Apply water to all unstabilized disturbed areas 3 times per day. If there is any evidence of wind driven fugitive dust, watering frequency is increased to a minimum of four times per day; OR (3B) Take the actions specified in Table 2, Item (3c); OR (4B) Utilize any combination of control actions (1B), (2B), and (3B) such that, in total, these actions apply to all disturbed surface areas.
Unpaved roads	(1C) Apply chemical stabilizers prior to wind event; OR (2C) Apply water twice per hour during active operation; OR (3C) Stop all vehicular traffic.
Open storage piles	(1D) Apply water twice per hour; OR (2D) Install temporary coverings.
Paved road track-out	(1E) Cover all haul vehicles; OR (2E) Comply with the vehicle freeboard requirements of Section 23114 of the California Vehicle Code for both public and private roads.
All Categories	(1F) Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the methods specified in Table 3 may be used.

Table 4
(Conservation Management Practices for Confined Animal Facilities)

SOURCE CATEGORY	CONSERVATION MANAGEMENT PRACTICES
Manure Handling **(Only applicable to Commercial Poultry Ranches)**	(1a) Cover manure prior to removing material off-site; AND (1b) Spread the manure before 11:00 AM and when wind conditions are less than 25 miles per hour; AND (1c) Utilize coning and drying manure management by removing manure at laying hen houses at least twice per year and maintain a base of no less than 6 inches of dry manure after clean out; or in lieu of complying with conservation management practice (1c), comply with conservation management practice (1d). (1d) Utilize frequent manure removal by removing the manure from laying hen houses at least every seven days and immediately thin bed dry the material.
Feedstock Handling	(2a) Utilize a sock or boot on the feed truck auger when filling feed storage bins.
Disturbed Surfaces	(3a) Maintain at least 70 percent vegetative cover on vacant portions of the facility; OR (3b) Utilize conservation tillage practices to manage the amount, orientation and distribution of crop and other plant residues on the soil surface year-round, while growing crops (if applicable) in narrow slots or tilled strips; OR (3c) Apply dust suppressants in sufficient concentrations and frequencies to maintain a stabilized surface.
Unpaved Roads	(4a) Restrict access to private unpaved roads either through signage or physical access restrictions and control vehicular speeds to no more than 15 miles per hour through worker notifications, signage, or any other necessary means; OR (4b) Cover frequently traveled unpaved roads with low silt content material (i.e., asphalt, concrete, recycled road base, or gravel to a minimum depth of four inches); OR (4c) Treat unpaved roads with water, mulch, chemical dust suppressants or other cover to maintain a stabilized surface.
Equipment Parking Areas	(5a) Apply dust suppressants in sufficient quantity and frequency to maintain a stabilized surface; OR (5b) Apply material with low silt content (i.e., asphalt, concrete, recycled road base, or gravel to a depth of four inches).

APPENDIX B
SCAQMD RULE 1166

(Adopted August 5, 1988)(Amended July 14, 1995)(Amended May 11, 2001)

RULE 1166. VOLATILE ORGANIC COMPOUND EMISSIONS FROM DECONTAMINATION OF SOIL

(a) Applicability

This rule sets requirements to control the emission of Volatile Organic Compounds (VOC) from excavating, grading, handling and treating VOC-contaminated soil as a result of leakage from storage or transfer operations, accidental spillage, or other deposition.

(b) Definitions

(1) EXCAVATION is the process of digging out and removing materials, including any material necessary to that process such as the digging out and removal of asphalt or concrete necessary to expose, dig out and remove known VOC contaminated soil.

(2) GRADING is the process of leveling off to produce a smooth surface including the removal of any material necessary to that process such as asphalt and concrete necessary to expose known VOC contaminated soil.

(3) SOIL DECONTAMINATION MEASURE is any process approved by the Executive Officer to remediate, destroy, remove, or encapsulate VOC and VOC-contaminated soil.

(4) UNDERGROUND STORAGE TANK means any one or combination of tanks, including pipes connected thereto, which is used for the storage of organic liquid which is more than 50% beneath the surface of the ground.

(5) VOC CONTAMINATED SOIL is a soil which registers a concentration of 50 ppm or greater of Volatile Organic Compounds as measured before suppression materials have been applied and at a distance of no more than three inches from the surface of the excavated soil with an organic vapor analyzer calibrated with hexane.

(6) VOC CONTAMINATED SOIL MITIGATION PLAN is a plan to minimize VOC emissions to the atmosphere during excavation and any subsequent handling of VOC-contaminated soil.

(7) VOLATILE ORGANIC COMPOUND (VOC) is any volatile compound of carbon, excluding methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, and exempt compounds. Exempt compounds are defined in Rule 102—Definition Of Terms.

(8) VOLATILE ORGANIC MATERIALS include gasoline, diesel, crude oil, lubricant, waste oil, adhesive, paint, stain, solvent, resin, monomer, and/or any other material containing VOC.

(c) Requirements

(1) A person excavating an underground storage tank and/or transfer piping storing or previously storing VOC materials, or excavating or grading soil containing VOC materials shall:

(A) Apply for, obtain and operate pursuant to a mitigation plan approved by the Executive Officer prior to commencement of excavation or handling. The mitigation plan general requirement and application requirements are found in Attachment A to this rule. A copy of the approved plan must be on site during the entire excavation period.

(B) Notify the Executive Officer at least 24 hours prior to excavation using a form approved by the Executive Officer which is fully completed.

If the excavation does not commence on start date, renotification is required.

An alternative notification procedure may be authorized for multiple excavations within a single facility, with prior written approval from the Executive Officer.

(C) Monitor for VOC contamination pursuant to subdivision (e), at least once every 15 minutes commencing at the beginning of excavation or grading and record all VOC concentration readings in a format approved by the Executive Officer; and

(D) When VOC-contaminated soil is detected during excavation or grading:

(i) Implement the approved mitigation plan (Attachment A).

(ii) Notify the Executive Officer within 24 hours of detection of VOC-contaminated soil.

(iii) Monitor and record VOC concentration readings as prescribed in the plan. Monitoring records must be kept available on site.

(iv) Keep calibration records for all monitoring instruments available on site.

(2) A person handling VOC-contaminated soil at or from an excavation or grading site shall:

(A) Segregate VOC-contaminated stockpiles from non-VOC contaminated stockpiles such that mixing of the stockpiles does not take place.

(B) Spray VOC-contaminated soil stockpiles with water and/or approved vapor suppressant and cover them with plastic sheeting for all periods of inactivity lasting more than one hour.

(C) Conduct a daily visual inspection of all covered VOC contaminated soil stockpiles to ensure the integrity of the plastic covered surfaces. A daily inspection record must be maintained on site.

(D) Comply with the provisions in subparagraph (c) (1)(A) and clause (c)(1)(D)(i).

(E) Maintain a record of the identification and business addresses of the generator, transporter and storage/treatment facilities. Such record shall be signed by each party at the time custody is transferred.

(F) Treat or remove contaminated soil from an excavation or grading site within 30 days from the time of excavation.

(3) If the VOC concentration in the excavated soil is measured at greater than 1000 ppm, spray the soil with water or vapor suppressant and:

(A) As soon as possible, but not more than 15 minutes, place the soil in sealed containers, or

(B) As soon as possible, but not more than 15 minutes, load into trucks, moisten with additional water, cover and transport off site, or

(C) Implement other alternative storage methods approved in writing by the Executive Officer.

(4) A person treating VOC-contaminated soil shall:

(A) Obtain a permit to construct and operate treatment equipment, as applicable, from the Executive Officer, and

(B) Implement VOC-contaminated soil decontamination measures, as approved by the Executive Officer in writing, which result in Best Available Control Technology applied during all segments, and which include, but are not limited to, at least one of the following:

(i) Installation and operation of an underground VOC collection system and a disposal system prior to excavation.

(ii) Collection and disposal of the VOC from the excavated soil on-site using equipment approved by the Executive Officer.

(iii) Any equivalent VOC-contaminated soil control measure previously approved in writing by the Executive Officer.

(5) A person shall not engage in or allow any on-site or off-site spreading, grading or screening of VOC-contaminated soil, which results in uncontrolled evaporation of VOC to the atmosphere.

(6) Loading trucks for contaminated soil must meet the following:

(A) The truck and trailer shall be adequately tarped prior to leaving the site; no excavated materials shall extend above the sides or rear of the truck or trailer to prevent soil spillage during transport, and

(B) The exterior of the truck, trailer and tires shall be cleaned off prior to the truck leaving the site.

(d) Exemptions

(1) The provisions of this rule shall not apply to the following:

(A) Excavation, handling, and treating of less than one (1) cubic yard of contaminated soil.

(B) Removal of soil for sampling purposes.

(C) Accidental spillage of five (5) gallons or less of VOC containing material.

(2) The provisions of paragraphs (c)(1) and (c)(2) shall not apply to soil excavation or handling as a result of an emergency as declared by an authorized health officer, agricultural commissioner, fire protection officer, or other authorized agency officer. Whenever possible, the Executive Officer shall be notified by telephone prior to commencing such excavation. The Executive Officer shall be notified in writing no later than 48 hours following such excavation. Written notification shall include written emergency declaration from the authorized officer.

(e) Test Methods

(1) A person shall measure excavated soils for volatile organic compounds to determine contamination by:

(A) Using an organic vapor analyzer calibrated with hexane, complying with 40 CFR Part 60 Appendix A, EPA Reference Method 21 Section 3 or any equivalent method with prior approval in writing by the Executive Officer. If other calibrating gases are used, then the measured readings shall be correlated to and expressed as hexane.

(B) Placing the probe inlet at a distance of no more than three inches from the surface of the excavated soil and while slowly moving the probe across the soil surface, observe the instrument readout. If an increased meter reading is observed, continue to sample the excavated soil until the maximum meter reading is obtained. Leave the probe inlet at this maximum reading location for approximately double the instrument response time. If the maximum observed meter reading is greater than the 50 ppm standard in the regulation, record and report the results.

(2) The presence of VOC in stored or spillage materials shall be determined by SCAQMD Method 313 [Determination of Presence of Volatile Organic Compounds (VOC) in Headspace] and/or Method 304 (Determination of Volatile Organic Compounds in Various Materials) contained in the SCAQMD "Laboratory Methods of Analysis for Enforcement Samples" manual.

(f) Enforcement

(1) Violation of any provision of this rule or the violation of the approved mitigation plan shall be grounds for the Executive Officer to amend or revoke the mitigation plan, in addition to penalties provided by the Health & Safety Code.

(2) If the owner or operator is served with a Notice of Violation for creating a public nuisance, the owner or operator shall suspend operation until the public nuisance is mitigated to the satisfaction of the Executive Officer.

ATTACHMENT A
GENERAL MITIGATION PLANS REQUIREMENTS

VOC Contaminated Soil Mitigation Plans shall be written to minimize VOC emissions to the atmosphere during excavation, grading, handling and treatment of VOC contaminated soil. VOC Contaminated Soil Mitigation Plans shall consist of three types: Various Locations, Site Specific and Facility Treatment.

(1) General Requirements

(A) A plan is not transferable.

(B) A person responsible for the excavation, grading or handling of VOC contaminated soil must be completely familiar with the plan and must adhere to the plan requirement. The Executive Officer may require that the plan be signed by the owner and/or operator.

(C) A plan may be amended upon renewal.

(D) Permission to excavate, grade or handle VOC contaminated soil may be withdrawn by the District upon a finding by the Executive Officer that the excavation, grading or handling of the VOC contaminated soil is causing a public nuisance or violating other AQMD rules or regulations.

(2) Various Location Plans:

(A) Shall be limited to the excavation of 2000 cubic yards or less of VOC contaminated soil in any consecutive 12 month period at the same site.

(B) Shall not be used in conjunction with any other various location plan at the same site within a consecutive 12-month period.

(C) Shall expire after one year from issuance unless renewed.

(D) Shall not be issued for nor used for operations that involve grading, soil treatment or remediation, or landfills.

(3) Site Specific Plans:

(A) Shall be for excavation of greater than 2000 cubic yards of VOC contaminated soil.

(B) Shall be issued for specific excavation or grading locations for a period not to exceed two years.

(C) Shall not be renewable.

(4) Facility Treatment Plans:

(A) Shall be issued for a treatment facility at a permanent location.

(B) Shall expire after one year from issuance unless renewed.

(5) Applications for Site Specific Plans shall contain as a minimum:

(A) Reasons for excavation or grading.

(B) Cause of VOC soil contamination and history of the site.

(C) Description of tanks or piping associated with the soil contamination.

(D) An estimate of the amount of contaminated soil.

(E) The operating schedule for excavation and removal.

(F) Description of how the excavation or grading will be conducted.

(G) Description of mitigation measures for dust, odors and VOC.

(H) Details of disposal of VOC contaminated soil, including the ultimate receptor.

(I) Description of monitoring equipment and techniques.

(J) A map showing the facility layout, property line, and surrounding area up to 2500 feet away, and including any schools, residential areas or other sensitive receptors such as hospitals or locations where children or elderly people live or work.

(K) Designation of a person who can conduct a site inspection with the Executive Officer prior to issuance of the plan.

(6) Applications for Facility Treatment Plans shall at a minimum:

(A) Include a list of all AQMD permits to construct or operate which have been issued for that treatment and control equipment.

(B) Provide for the implementation of VOC-contaminated soil decontamination measures, as approved by the Executive Officer in writing, which result in Best Available Control Technology during all operations.

(C) Provide a map showing the facility layout including the location of all proposed VOC and non-VOC contaminated soil stockpiles.

(D) Specify the total amount of VOC contaminated soil proposed to be stockpiled on site.

(E) Provide for VOC contaminated soil stockpiles to be kept moist with water or suppressant and be covered to prevent fugitive emissions.

(F) Provide for VOC contaminated soil stockpiles to be segregated from non-VOC contaminated soil stockpiles.

(G) Provide for maintenance of records for stockpiles according to the source name, address and dates of reception.

(H) Provide for records of the generator, transporter and storage/treatment facilities and indicate their identification and business addresses. Such records shall be signed by each party at the time custody is transferred.

(I) Provide a map showing the facility layout, property line, and surrounding area up to 2500 feet away, and including any schools, residential area or other sensitive receptors such as hospitals, or locations where children or elderly people live or work.

(J) Designation of a person who can conduct a site inspection with the Executive Officer prior to issuance of the plan.

(K) Specify the operating schedule and maximum amount of VOC-contaminated soil proposed to be remediated on a daily basis.

(7) In approving a plan, the Executive Officer require reasonable conditions deemed necessary to ensure the operations comply with the plan and AQMD rules. The conditions may include, but shall not be limited to, procedures for ensuring responsibility for the implementation of the plan, accessibility to the site for AQMD staff, notification of actions required by the plan, identification of emission receptors, monitoring and testing, suppression and covering of stockpiles, prevention of public nuisance from VOC or dust emissions, prevention of fugitive emissions of VOC contaminated soil, loading of truck trailers, and disposal and treatment.

(8) In approving a plan, the Executive Officer may require any records deemed necessary to be maintained by the operator to demonstrate compliance with the plan. Such records shall be retained for at least 2 years and be made available to the Executive officer upon request.

APPENDIX C
SCAQMD RULE 1466

(Adopted July 7, 2017)(Amended December 1, 2017)

RULE 1466. CONTROL OF PARTICULATE EMISSIONS FROM SOILS WITH TOXIC AIR CONTAMINANTS

(a) Purpose

The purpose of this rule is to minimize the amount of off-site fugitive dust emissions containing toxic air contaminants by reducing particulate emissions in the ambient air as a result of earth-moving activities, including, excavating, grading, handling, treating, stockpiling, transferring, and removing soil that contains applicable toxic air contaminants from sites that meet the applicability requirements of subdivision (b).

(b) Applicability

(1) This rule shall apply to any owner or operator conducting earth-moving activities of soil with applicable toxic air contaminant(s) as defined in paragraph (c)(15) that have been identified as contaminant(s) of concern at a site that has been designated and notified by:

(A) The U.S. Environmental Protection Agency (U.S. EPA) as a Superfund National Priorities List site;

(B) The California Department of Toxic Substances Control (DTSC) as a Brownfield or Cleanup Program site;

(C) The State Water Resources Control Board (State Water Board) or Regional Water Quality Control Board (Regional Water Board) as a Site Cleanup Program site;

(D) A county, local, or state regulatory agency as a Hazardous Material Release site, as defined in California Health and Safety Code Section 25260, effective January 1, 2018; or

(E) The Executive Officer pursuant to subdivision (i).

(2) This rule shall not apply to:

(A) Earth-moving activities of soil with applicable toxic air contaminant(s) of less than 50 cubic yards; or

(B) Removal of soil for sampling purposes.

(c) Definitions

(1) ADEQUATELY WET is the condition of being sufficiently mixed or penetrated with water to prevent the release of particulates or visible emissions. The process

by which an adequately wet condition is achieved is by using a dispenser or water hose with a nozzle that permits the use of a fine, low-pressure spray or mist.

(2) ADJACENT ATHLETIC AREA is any outdoor athletic field or park where youth organized sports occur that is in physical contact or separated solely by a public roadway or other public right-of-way to a school or early education center.

(3) CHEMICAL STABILIZERS are any non-toxic chemical dust suppressant. The chemical stabilizers shall meet any specifications, criteria, or tests required by any federal, state, or local agency or any applicable law, rule, or regulation. Unless otherwise indicated, the use of a non-toxic chemical stabilizer shall be of sufficient concentration and application frequency to maintain a stabilized surface and no less than what is specified by the manufacturer.

(4) DISTURBED SURFACE AREA is a portion of the earth's surface which has been physically moved, uncovered, destabilized, or otherwise modified from its undisturbed natural soil condition, thereby increasing the potential for fugitive dust. This definition excludes those areas which have:

(A) Been restored to a natural state, such that the vegetative ground cover and soil characteristics are similar to adjacent or nearby natural conditions;

(B) Been paved or otherwise covered by a permanent structure; or

(C) Sustained a vegetative ground cover of at least 70 percent of the native cover for a particular area for at least 30 days.

(5) DUST SUPPRESSANTS are water, hygroscopic materials, or chemical stabilizers used as a treatment material to reduce fugitive dust emissions.

(6) 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, but does not include any property in which education is primarily conducted in private homes. Early education center includes any building or structure, playground, athletic field, or other areas of early education center property.

(7) EARTH-MOVING ACTIVITIES are, for the purpose of this rule, any activity on a site that meets the applicability requirements of subdivision (b) where soil with applicable toxic air contaminant(s) are being moved or uncovered, and shall include, but not be limited to the following: excavating, grading, earth cutting and filling operations, loading or unloading, and adding to or removing from stockpiles.

(8) FUGITIVE DUST is, for the purpose of this rule, any solid particulate matter that is in contact with ambient air and has the potential to become airborne, other than solid particulate matter that is emitted from an exhaust stack.

(9) 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.

(10) OWNER OR OPERATOR is any firm, business establishment, association, partnership, corporation or individual, whether acting as principal, agent, employee, contractor, or other capacity.

(11) PAVED ROAD is a public or private improved street, highway, alley, public way, or easement that is covered by typical roadway materials, but excluding access roadways that connect a facility with a public paved roadway and are not open to through traffic. Public paved roads are those open to public access and that are owned by any federal, state, county, municipal, or any other governmental or quasi-governmental agencies. Private paved roads are any paved roads not defined as public.

(12) PROPERTY LINE is the boundary of an area where a person has the legal use or possession of the property. Where such property is divided into one or more sub-tenancies, the property line(s) shall refer to the boundaries dividing the areas of all sub-tenancies.

(13) SCHOOL is any public or private education center, including juvenile detention facilities and education centers serving as the students' place of residence (e.g., boarding schools), used for purposes of the education of more than 12 children in kindergarten or any grades 1 to 12, inclusive, but does not include any school in which education is primarily conducted in private homes. School includes any building or structure, playground, athletic field, or other areas of school property.

(14) SOIL is dirt, sand, gravel, clay, and aggregate material less than two inches in length or diameter, and other organic or inorganic particulate matter.

(15) SOIL WITH APPLICABLE TOXIC AIR CONTAMINANT(S) means, for the purpose of this rule, soil that has been identified by the U.S. EPA, the DTSC, the State Water Board, the Regional Water Board, or a county, local, or state regulatory agency to contain one or more of the applicable toxic air contaminants as listed in Table I that exceed action levels as specified by the designating agency or, effective January 1, 2018, soil that has been identified by the Executive Officer to contain one or more of the toxic air contaminants listed in Rule 1401 – New Source Review of Toxic Air Contaminants Table I or Hazardous Air Pollutants Identified as Toxic Air Contaminants as listed in California Code of Regulations Section 93001, excluding volatile organic compounds regulated under Rule 1166 – Volatile Organic Compound Emissions from Decontamination of Soil.

(16) STABILIZED SURFACE is any previously disturbed surface area or stockpile, which through the application of dust suppressants, shows visual or other evidence of surface crusting and is resistant to wind driven fugitive dust, and is demonstrated to be stabilized. Stabilization can be demonstrated by one or more of the applicable test methods contained in the SCAQMD *Rule 403 Fugitive Dust Implementation Handbook* or in Volumes I and II of SCAQMD's *Dust Control in the Coachella Valley*.

(17) STOCKPILE is any accumulation of soil, which is not fully enclosed, covered, or chemically stabilized, and which attains a height of three feet or more and a total surface area of 150 square feet or more.

(18) TRACK-OUT is any soil that adheres to and agglomerates on the exterior surface of motor vehicles, haul trucks, and equipment (including tires) that has been released onto a paved road.

(19) WIND-DRIVEN FUGITIVE DUST is visible emissions from any disturbed surface area, which is generated by wind action alone.

(20) WIND GUST is the maximum instantaneous wind speed as measured by an anemometer.

(d) Monitoring Requirements

(1) When earth-moving activities or vehicular movement occurs, the owner or operator shall conduct continuous direct-reading near real-time ambient monitoring of PM_{10} concentrations pursuant to paragraph (d)(3).

(2) If the PM_{10} concentration averaged over two hours exceeds 25 micrograms per cubic meter, as measured pursuant to paragraph (d)(3) and as determined pursuant to paragraph (d)(4), the owner or operator shall cease earth-moving activities, apply dust suppressant to fugitive dust sources, or implement other dust control measures as necessary until the PM_{10} concentration is equal to or less than 25 micrograms per cubic meter averaged over 30 minutes.

(A) The owner or operator or designating agency may request an alternative PM_{10} limit from the Executive Officer provided the exposure to toxic air contaminants from fugitive dust from earth-moving activities at the proposed PM_{10} concentration level is health protective to the public. The owner or operator or designating agency shall provide the Executive Officer the information specified in subparagraphs (i)(1)(A) through (H) and substantiate its position that an alternative PM_{10} limit is health protective.

Use of an alternative PM_{10} limit must be submitted and approved by the Executive Officer as specified in subdivision (j).

(3) The owner or operator conducting earth-moving activities shall install and conduct ambient PM_{10} monitoring as follows:

(A) In accordance with a U.S. EPA-approved equivalent method for PM_{10} monitoring or an alternative method approved by the Executive Officer. The owner or operator or designating agency shall select an alternative PM_{10} method as specified in Appendix 1. Use of an alternative PM_{10} method must be submitted and approved by the Executive Officer as specified in subdivision (j);

(B) Using a minimum of one upwind monitor where the location of the upwind monitor(s) are indicative of background PM_{10} levels and not generally influenced by fugitive dust sources from the site;

(C) Using a minimum of one downwind monitor placed in the seasonal prevailing wind direction downwind of each area of earth-moving activity and as close to the property line as feasible;

(D) Using PM_{10} monitors that are identical in make and model; settings; calibration; configuration; and calibration, correction, and correlation factors.

(E) Operate, maintain, and calibrate ambient PM_{10} monitors in accordance with appropriate U.S. EPA-published documents for U.S. EPA-approved equivalent method(s) for PM_{10} or the alternative method approved by the Executive Officer, and manufacturer's instructions; and

(F) Collect ambient PM_{10} data with a data acquisition system that is capable of logging direct-reading near real-time data providing the date, time, and PM_{10} concentration in micrograms per cubic meter every 10 minutes or less.

(4) The owner or operator shall calculate the PM_{10} concentration based on the PM_{10} concentration averaged over two hours, starting at the top of each hour, where:

(A) The PM_{10} concentration is the absolute difference between the upwind and downwind monitors;

(B) If there is more than one upwind monitor, the upwind result is the two hour average of all upwind monitors;

(C) If there is more than one downwind monitor, the downwind average is the maximum two hour average concentration of any of the downwind monitors; and

(D) The owner or operator or designating agency may use an alternative calculation methodology if the owner or operator or designating agency provides information to substantiate that all or some the PM_{10} concentration is the result of another source and not attributed to the earth-moving activities of the site. Use of an alternative calculation methodology must be submitted and approved by the Executive Officer as specified in subdivision (j).

(5) When earth-moving activities occur, the owner or operator shall monitor wind direction and speed as specified in U.S. EPA *Quality Assurance Handbook for Air Pollution Measurement Systems, Volume IV: Meteorological Measurements*.

(e) Requirements to Minimize Fugitive Dust Emissions

(1) An owner or operator shall not conduct earth-moving activities unless the area is surrounded with fencing that is a minimum of 6 feet tall and at least as tall as the height of the tallest stockpile, with a windscreen with a porosity of 50 ± 5%.

(2) An owner or operator conducting earth-moving activities shall:

(A) Adequately wet to the depth of earth-moving activity and allow time for penetration; and

(B) Adequately wet at frequencies to prevent the generation of visible dust plumes.

(3) An owner or operator that is moving vehicles on, within, or off a site where earth-moving activities are occurring shall:

(A) Post signs at all entrances of the site to designate the speed limit as 15 miles per hour;

(B) Stabilize the surface of all vehicular traffic and parking areas by applying gravel, paving, or dust suppressant;

(C) Not allow track-out to extend beyond 25 feet of the property line. Remove any track-out each day using a vacuum equipped with a filter(s) rated by the manufacturer to achieve a 99.97% capture efficiency for 0.3 micron particles;

(D) Clean the soil from the exterior of trucks, trailers, and tires prior to the truck leaving the site; and

(E) The owner or operator shall utilize at least one of the measures listed in clause (e)(3)(E)(i) through (e)(3)(E)(iv) at each vehicle egress from the site to a paved public road:

(i) Install a pad consisting of washed gravel (minimum-size: one inch), maintained in a clean condition, to a depth of at least six inches and extending at least 30 feet wide and at least 50 feet long;

(ii) Pave the surface extending at least 100 feet from the property line and at least 20 feet wide;

(iii) Utilize a wheel shaker/wheel spreading device consisting of raised dividers (rails, pipes, or grates) at least 24 feet long and 10 feet wide; or

(iv) Install and utilize a wheel washing system to remove soil from tires and vehicle undercarriages.

(4) An owner or operator conducting earth-moving activities that result in the development of stockpiles of any soil with applicable toxic air contaminant(s) shall:

(A) Segregate non-contaminated stockpiles from stockpiles with applicable toxic air contaminant(s) and label with "SCAQMD Rule 1466 – Control of Particulate Emissions from Soils with Toxic Air Contaminant(s) Applicable Soil";

(B) Maintain stockpiles to avoid steep sides or faces that exceed the angle of repose;

(C) Not create a stockpile that is more than 400 cubic yards of soil and greater in height than the perimeter fencing and windscreen;

(D) Apply dust suppressant to stockpiles;

(E) At the end of each working day, either chemically stabilize and/or completely cover with 10 millimeter thick plastic sheeting that overlaps a minimum of 24 inches. The plastic sheeting shall be anchored and secured so that no portion of the soil is exposed to the atmosphere; and

(F) Daily, inspect stabilized or covered stockpiles. For a stabilized stockpile, such inspections shall include a demonstration of stabilization by one or more of the applicable test methods contained in SCAQMD *Rule 403 Fugitive Dust Implementation Handbook* or Volumes I and II of SCAQMD's *Dust Control in the Coachella Valley*. For a covered stockpile, such inspections shall include a visual inspection of all seams and plastic cover surfaces. Immediately re-stabilize or repair any holes, tears, or any other potential sources of fugitive toxic air contaminant emissions.

(5) An owner or operator conducting truck loading activities of soil containing applicable toxic air contaminant(s) shall:

(A) Apply dust suppressant to material prior to loading;

(B) Empty the loader bucket slowly so that no dust plumes are generated;

(C) Minimize the drop height from the loader bucket;

(D) Maintain at least six inches of space between the soil and the top of the truck bed while transporting within a site; and

(E) Completely tarp the truck and trailer prior to leaving the site.

(6) An owner or operator conducting truck unloading activities of soil containing applicable toxic air contaminant(s) shall:

(A) Apply dust suppressant to material prior to unloading; and

(B) Empty the trailer slowly so that no dust plumes are generated.

(7) The owner or operator shall immediately remove any spilled soil containing applicable toxic air contaminant(s).

(8) The owner or operator shall cease earth-moving activities if the wind speed is greater than 15 miles per hour (mph) averaged over a 15-minute period or instantaneous wind speeds exceed 25 mph.

(9) During earth-moving activities, the owner or operator shall have an on-site dust control supervisor that:

(A) Is employed by or contracted with the owner or operator;

(B) Is located on the site during working hours;

(C) Is in a position to expeditiously employ sufficient dust control measures to ensure compliance with all rule requirements;

(D) Has completed the SCAQMD Fugitive Dust Control Class and has been issued a valid Certificate of Completion for the class; and

(E) Has the following credentials, if asbestos is an applicable toxic air contaminant:

(i) Successfully completed the Asbestos Abatement Contractor/Supervisor course pursuant to the Asbestos Hazard Emergency Response Act (AHERA), and obtained and maintained accreditation as an AHERA Asbestos Abatement Contractor/Supervisor; and

(ii) Trained on the provisions of 40 CFR Part 61.145, 61.146, 61.147 and 61.152 (Asbestos NESHAP provisions) and Part 763, and have the means by which to comply with these provisions.

(10) If earth-moving activities will not occur for three (3) or more consecutive days, apply a chemical stabilizer to potential sources of fugitive dust diluted to the concentration required to maintain a stabilized surface for the period of inactivity; re-stabilize as necessary.

(11) An owner or operator that is conducting earth-moving activities of soil with applicable toxic air contaminant(s) at a school, early education center, joint use agreement property, or adjacent athletic area shall:

(A) Only conduct earth-moving activities at a school or early education center outside of the hours between 7:30 a.m. and 4:30 p.m. on days when the school or early education center is in session;

(B) Not conduct earth-moving activities at a school, early education center, joint use agreement property, or adjacent athletic area if there is a school or early education center sponsored activity or youth organized sports at that site;

(C) Handle excavated soils with applicable toxic air contaminant(s) by:

(i) Immediately placing soil in a leak-tight container whereby any contained solids or liquids are prevented from escaping or spilling out;

(ii) Directly loading soil in trucks, applying dust suppressant, and covering prior to transporting; or

(iii) Stockpiling pursuant to paragraph (e)(4), in a fenced area that is not accessible to the general public, and locked when not in use; and

(D) Within five (5) days of its excavation, remove all soil with applicable toxic air contaminant(s) from the site.

(12) With the exception of paragraphs (e)(7) and (e)(11), the owner or operator or designating agency may use alternative dust control measures that meet the objective and effectiveness of the dust control measure it is replacing, where the objective and effectiveness of each category of dust control measures is stated in Appendix 2. Use of alternative dust control measures must be submitted and approved by the Executive Officer as specified under subdivision (j).

(f) Notification Requirements

(1) At least 72 hours and no more than 30 days prior to conducting any earth-moving activities on any site meeting the applicability requirements of subdivision (b), the owner or operator shall electronically notify the Executive Officer, using a format approved by the Executive Officer, of the intent to conduct any earth-moving activities. Notifications shall include the following requirements:

(A) Name, address, telephone number, and e-mail address of the owner or operator;

(B) Name, telephone number, and e-mail address of the on-site dust control supervisor;

(C) Project name and, if applicable, the project identification number from the designating agency;

(D) Project location (address and/or coordinates);

(E) Identify whether the site is a school, early education center, joint use agreement property, or adjacent athletic area;

(F) A map indicating the specific location(s) of each earth-moving activity and the concentrations of the applicable toxic air contaminant(s) and location of PM_{10} monitors;

(G) A description of the earth-moving activities, estimated volume of soil with applicable toxic air contaminant(s), and a schedule that includes the anticipated start and completion dates of earth-moving activities;

(H) Current and/or previous type of operation(s) and use(s) at the site;

(I) Applicable exemption(s); and

(J) Whether the notice is a revised notification.

(2) Notification Updates

Notifications pursuant to paragraph (f)(1) shall be updated when any of the following conditions arise:

(A) Earlier Start Date

A change in the start date of any earth-moving activity to an earlier date shall be reported to the SCAQMD no later than 72 hours before any earth-moving activities begin.

(B) Later Start Date

A delay in the start date of any earth-moving activity shall be reported to the SCAQMD as soon as the information becomes available, but no later than the original start date.

(C) Change in Exemption Status

Any change(s) in exemption status pursuant to subdivision (k) shall be reported to the SCAQMD as soon as the information becomes available, but no later than 48 hours after the information becomes available.

(3) Within 72 hours of an exceedance of the PM_{10} emission limit specified in subdivision (d), the owner or operator of a site meeting the applicability requirements of subdivision (b) shall electronically notify the Executive Officer, using a format approved by the Executive Officer, of the exceedance and shall include the following information:

(A) Name, address, telephone number, and e-mail address of the owner or operator;

(B) Name, telephone number, and e-mail address of the on-site dust control supervisor;

(C) Project name and, if applicable, the project identification number from the designating agency;

(D) Project location (address and/or coordinates);

(E) PM_{10} monitoring results, including result, date and time of exceedance(s), 12 hours before first exceedance, and 12 hours after last exceedance;

(F) Earth-moving activities occurring at the date and time of exceedance(s); and

(G) Dust control measure(s) taken to mitigate fugitive dust.

(g) Signage Requirements

When conducting earth-moving activities, the owner or operator shall install and maintain project signage.

(1) Unless otherwise approved in writing by the Executive Officer, signage shall:

(A) Be installed at all entrances and at intervals of 1,000 feet or less along the property line or perimeter of the site, with a minimum of one along each side;

(B) Be located between 6 and 8 feet above grade from the bottom of the sign;

(C) Display lettering at least four inches tall with text contrasting with the sign background; and

(D) Display the following information:

(i) Local or toll-free phone number for the site contact or pre-recorded notification center that is accessible 24 hours a day; and

(ii) Warning statement:

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

(E) If signage pursuant to paragraph (g)(1) exceeds 48 inches by 96 inches, the owner or operator or designating agency must still include the warning statement referenced in (g)(1)(D)(ii), displaying lettering at least four inches tall with text contrasting with the sign background, but may use 2.5 inch tall lettering to list applicable toxic air contaminants. All other signage requirements set forth in paragraph (g)(1) shall remain the same. If signage

continues to exceed 48 inches by 96 inches with these parameters, the owner or operator or designating agency may use alternative signage as set forth in paragraph (g)(2).

(2) The owner or operator or designating agency may use alternative signage approved by the Executive Officer pursuant to subdivision (j). Notwithstanding subdivision (j), the request shall include a visual representation of the alternative sign, including proposed lettering height, and locations and, at a minimum, the alternative signage shall:

(A) Display text contrasting with the sign background; and

(B) Display the following warning statement:

"THIS SITE CONTAINS SOILS THAT CONTAIN THE FOLLOWING CHEMICALS: [LIST APPLICABLE TOXIC AIR CONTAMINANT(S)]
TO REPORT ANY DUST LEAVING THE SITE PLEASE CALL
THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT AT
1-800-CUT-SMOG"

(h) Recordkeeping Requirements

The owner or operator shall maintain records for a period of not less than three years and shall make such records available to the Executive Officer upon request. At a minimum, records shall be maintained daily and shall include:

(1) Inspection of all covered stockpiles containing soils with applicable toxic air contaminant(s);

(2) Results of wind and PM_{10} monitoring, including: instrument make and model; settings; calibration; configuration; calibration, correction, and correlation factors; maintenance; operator training; and daily instrument performance check records for all monitoring instruments;

(3) Earth-moving activities conducted and the corresponding volume of soil with applicable toxic air contaminant;

(4) Names and business addresses of the transporting and receiving facilities, and a copy of the shipping manifest; and

(5) 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.

(i) Executive Officer Designated Sites

(1) The Executive Officer may designate a site if the Executive Officer has evidence that the site contains soil with applicable toxic air contaminant(s) as defined in paragraph (c)(15), after consultation with U.S. EPA, DTSC, the State or Regional Water Boards, and/or local, county, or state health and regulatory agencies, and consideration of the following:

(A) Site history, including current and/or previous type(s) of operation(s) and use(s) at the site and regulatory history;

(B) Concentration(s) of applicable toxic air contaminant(s) in the soil;

(C) Background concentration(s) of applicable toxic air contaminant(s);

(D) Volume of soil with applicable toxic air contaminant(s);

(E) Distance to a residence, park, or school;

(F) Meteorological data;

(G) Health risk information or other data provided by the owner or operator, if available; and

(H) Ambient monitoring data and other applicable data, if available.

(2) Prior to making a determination, the Executive Officer will notify the owner or operator in writing that the site may be subject to this rule.

(A) In the event the owner or operator exercises this opportunity to demonstrate that this rule does not apply, the owner or operator shall submit information to the Executive Officer within 14 days of the notification substantiating why the site should be excluded from this rule.

(B) Upon final determination, the Executive Officer will notify the owner or operator in writing if the site is subject to this rule.

(3) During the determination period, the owner or operator shall comply with the provisions of this rule or cease all earth-moving activities until a determination is made.

(j) Alternative Provisions

(1) If requesting an alternative provision pursuant to subparagraphs (d)(2)(A), (d)(3)(A), or (d)(4)(D) or paragraphs (e)(12), (g)(2), (k)(3), or (k)(4) the owner or operator or designating agency shall submit all information to the Executive Officer to substantiate its positon.

(A) The owner or operator or designating agency that elects to request alternative provisions for the PM_{10} limit, PM_{10} monitoring method, signage,

or direct loading exemption shall submit the request in writing at least 30 days prior to conducting any earth-moving activities.

(B) The owner or operator or designating agency that elects to request alternative provisions for the PM_{10} calculation or dust control measures shall submit the request, in writing, prior to an exceedance of the PM_{10} concentration requirements set forth in paragraph (d)(2).

(2) The Executive Officer may request additional information from the owner or operator or designating agency.

(3) The owner or operator or designating agency shall submit all requested information within 14 days of the request for additional information.

(4) The Executive Officer will review the request for an alternative provision and will approve or reject the data and notify the owner or operator or designating agency in writing. Approved alternative provisions may not be used retroactively.

(k) Exemptions

(1) The owner or operator may be exempt from one or more provisions of this rule provided there is written confirmation that the designating agency under subparagraphs (b)(1)(A) through (D) has consulted with the Executive Officer and has determined that the provision(s) are not needed based on information specified in subparagraphs (i)(1)(A) through (H).

(2) Earth-moving activities performed within an enclosed system vented to SCAQMD permitted air pollution control equipment shall be exempt from all requirements except: subparagraphs (e)(3)(C) through (e)(3)(E), subparagraphs (e)(5)(D) and (e)(5)(E), and subdivisions (f), (g), and (h).

(3) Linear trenching for natural gas, power, sewer, and water 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). The owner or operator or designating agency may use an alternative to directly load into a truck or bin for transport that meets the objective and effectiveness of directly loading soil, where the objective and effectiveness is stated in Appendix 2. Use of an alternative measure must be submitted and approved by the Executive Officer as specified under subdivision (j).

(4) Earth-moving activities consisting only of excavation activities of soil with applicable toxic air contaminant(s) of less than 500 cubic yards, 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). The owner or operator or designating agency may use an alternative to directly load into a truck or bin for transport that meets the objective and effectiveness of directly loading soil, where the objective and effectiveness is stated in Appendix 2. Use of alternative measure must be submitted and approved by the Executive Officer as specified under subdivision (j).

(5) Active operations 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, fire protection officer, or other authorized agency officer shall be exempt from all requirements. The Executive Officer shall be notified electronically no later than 48 hours following such earth-moving activities. Written notification shall include written emergency declaration from the authorized officer.

(6) Active operations conducted by essential service utilities to provide electricity, natural gas, telephone, water, or sewer during periods of service outages and emergency disruptions shall be exempt from all requirements. The Executive Officer shall be notified electronically no later than 48 hours following such earth-moving activities.

Table I – Applicable Toxic Air Contaminants

CAS Number	Substance
7440-38-2	**arsenic and arsenic compounds (inorganic)**
	including, but not limited to:
	arsenic compounds (inorganic)
7784-42-1	arsine
1332-21-4	asbestos
7440-43-9	cadmium and cadmium compounds
57-74-9	chlordane*

CAS Number	Substance
	dibenzo-p-dioxins (chlorinated)*
1746-01-6	tetrachlorodibenzo-p-dioxin, 2,3,7,8-
40321-76-4	pentachlorodibenzo-p-dioxin, 1,2,3,7,8-
39227-28-6	hexachlorodibenzo-p-dioxin, 1,2,3,4,7,8-
57653-85-7	hexachlorodibenzo-p-dioxin, 1,2,3,6,7,8-
19408-74-3	hexachlorodibenzo-p-dioxin, 1,2,3,7,8,9-
35822-46-9	heptachlorodibenzo-p-dioxin, 1,2,3,4,6,7,8-
3268-87-9	octachlorodibenzo-p-dioxin, 1,2,3,4,6,7,8,9-
41903-57-5	total tetrachlorodibenzo-p-dioxin
36088-22-9	total pentachlorodibenzo-p-dioxin
34465-46-8	total hexachlorodibenzo-p-dioxin
37871-00-4	total heptachlorodibenzo-p-dioxin
72-54-8	dichlorodiphenyldichloroethane*
72-55-9	dichlorodiphenyldichloroethylene*
50-29-3	dichlorodiphenyltrichloroethane*
18540-29-9	**chromium (hexavalent) and chromium compounds**
	including, but not limited to:
10294-40-3	barium chromate
13765-19-0	calcium chromate
7758-97-6	lead chromate
10588-01-9	sodium dichromate
7789-06-2	strontium chromate
13530-65-9	zinc chromate
7439-92-1	**lead and lead compounds (inorganic, including elemental lead)**
	including, but not limited to:
	lead compounds (inorganic)
301-04-2	lead acetate
7758-97-6	lead chromate

CAS Number	Substance
7446-27-7	lead phosphate
1335-32-6	lead subacetate
7439-97-6	**mercury and mercury compounds (inorganic)**
	including, but not limited to:
7487-94-7	mercuric chloride
593-74-8	methyl mercury
7440-02-0	**nickel and nickel compounds**
	including, but not limited to:
373-02-4	nickel acetate
3333-67-3	nickel carbonate
13463-39-3	nickel carbonyl
12054-48-7	nickel hydroxide
1313-99-1	nickel oxide
12035-72-2	nickel subsulfide
1271-28-9	nickelocene
	refinery dust from the pyrometallurgical process
1336-36-3	**polychlorinated biphenyls (PCBs)**
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

CAS Number	Substance
	polycyclic aromatic hydrocarbons (PAHs)*
56-55-3	benzo[a]anthracene
50-32-8	benzo[a]pyrene
205-99-2	benzo[b]fluoranthene
207-08-9	benzo[k]fluoranthene
218-01-9	chrysene
53-70-3	dibenz[a,h]anthracene
193-39-5	indeno[1,2,3-c,d]pyrene

* Effective January 1, 2018

Appendix 1 – Executive Officer Approved PM_{10} Monitors

The Executive Officer may approve PM_{10} monitors that meeting the following requirements.

1. PM_{10} monitors must be continuous direct-reading near-real time monitors and shall monitor particulate matter less than 10 microns.
2. PM_{10} monitors must be equipped with:
   a. Omni-directional heated sampler inlet;
   b. Sample pump;
   c. Volumetric flow controller;
   d. Enclosure; and
   e. Data logger capable of logging each data point with average concentration, time/date, and data point number.
3. PM_{10} monitors must have the following minimum performance standards:
   a. Range: 0 - 10,000 $\mu g/m^3$
   b. Accuracy: ±5% of reading ± precision
   c. Resolution: 1.0 $\mu g/m^3$
   d. Measurement Cycle: User selectable (30 minute and 2 hour)
4. In order to ensure the validity of the PM_{10} 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: instrument calibration, instrument maintenance, operator training, and daily instrument performance (span) checks.

Appendix 2 – Objectives and Effectiveness of Dust Control Measures Set-Forth in Subdivision (e)

Dust Control Measure	Objective	Effectiveness
(e)(1) Fencing and Windscreen Requirement	To minimize off-site fugitive dust emissions containing toxic air contaminants, provide a wind break, act as containment, provide security, and limit access to unauthorized persons.	Any dust control measure that is equally or more effective in minimizing off-site fugitive dust emissions containing toxic air contaminants that may result in exposure to the general public and will limit public access to the site.
(e)(2) Water Application	To minimize fugitive dust emissions containing toxic air contaminants from earth-moving activities.	Any dust control measure that is equally or more effective at preventing the generation of visible dust plumes from earth-moving activities.
(e)(3) Vehicle Movement	To minimize fugitive dust emissions containing toxic air contaminants from on-site vehicles and as vehicles are moving off-site.	Any dust control measure that is equally or more effective at preventing the generation of dust plumes from on-site vehicle movement and any fugitive dust that can be tracked out of the site that can result in exposure to the general public.
(e)(4) Stockpiles	To minimize fugitive dust emissions containing toxic air contaminants from stockpiles.	Any dust control measure that is equally or more effective at minimizing fugitive dust emissions containing toxic air contaminants from stockpiles and that will prevent the generation of dust plumes from stockpiles that can result

Dust Control Measure	Objective	Effectiveness
		in exposure to the general public.
(e)(5) Truck Loading	To minimize fugitive dust emissions containing toxic air contaminants from truck loading and truck movement.	Any dust control measure that is equally or more effective at preventing a dust plume or fugitive dust occurring during the loading of soils containing toxic air contaminants into trailers and physical containment or other mechanisms to minimize fugitive dust from escaping the trailer during transport.
(e)(6) Truck Unloading	To minimize fugitive dust emissions containing toxic air contaminants from truck unloading and truck movement.	Any dust control measure that is equally or more effective at preventing a dust plume or fugitive dust occurring during the unloading of soils containing toxic air contaminants.
(e)(8) Earth-Moving Activities at Certain Wind Speeds	To minimize fugitive dust emissions containing toxic air contaminants from high wind events.	Any dust control measure that is equally or more effective at preventing a dust plume or fugitive dust occurring during high wind events.
(e)(9) On-site Dust Control Supervisor	To require the on-site presence of a person that has specific training to ensure compliance with all rule requirements.	Any measure that ensures the on-site presence of a person with training covering the same material as that covered by an SCAQMD Fugitive Dust Control Class and appropriate credentials to handle applicable toxic air contaminants and that can

Dust Control Measure	Objective	Effectiveness
		ensure compliance with all rule requirements.
(e)(10) Application of Chemical Stabilizer During Periods of Inactivity	To minimize a dust plume or fugitive dust emissions containing toxic air contaminants from occurring on-site during periods of inactivity.	Any dust control measure that is equally or more effective at preventing a dust plume or fugitive dust emissions containing toxic air contaminants from occurring on-site during periods of inactivity.
(k)(3)/(k)(4) Direct Load into a Truck or Bin for Transport	To minimize a dust plume or fugitive dust emissions containing toxic air contaminants from truck loading and unloading.	Any dust control measure that is equally or more effective at preventing a dust plume or fugitive dust emissions containing toxic air contaminants from truck loading and unloading.