

FUGITIVE DUST EMISSIONS CONTROL PLAN

Submittal 01 57 19

Revision 1

WESTSIDE SUBWAY EXTENSION PROJECT CONTRACT: C1045

January 29, 2015

Project Site Address: 5055 Wilshire Boulevard, Los Angeles, CA 90036

Prepared For:

LOS ANGELES COUNTY
METROPOLITAN TRANSPORTATION AUTHORITY
One Gateway Plaza
Los Angeles, CA 90012-2952

Prepared By Design Build Contractor:



SKANSKA • TRAYLOR • SHEA

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ATTACHMENTS

Attachment A- South Coast Air Quality Management District (SCAQMD) Rule 403

Section 1 - INTRODUCTION

1.1 Objectives

This Fugitive Dust Emissions Control Plan (Plan) is written to provide means and methods for controlling or minimizing the emission of fugitive dust pursuant to relevant Project specifications in Section 01 57 19 and South Coast Air Quality Management District (SCAQMD) Rule 403 standards (Attachment A). The Plan (Section 5.0) contains the Best Available Control Measures that will be implemented (BACM). The Rule 403 Implementation Handbook will be utilized as needed. The objectives of this plan are as follows:

- Prevent emission of fugitive dust which remains visible in the atmosphere beyond the property line as a result of any Project transport, handling, construction or storage activity.
- Minimize fugitive dust from operations involving demolition, excavation, grading, clearing of land, and disposal of solid waste.
- Implement daily inspection requirements and report to Metro monthly
- Prevent particulate matter from exceeding 50µg/m³ at the property line for a five hour period during the time of active operations.
- Prevent track-out of bulk materials or dust accumulation on public roadways (including but not limited to private driveways and parking areas) as a result of Contractor's operations.

1.2 Scope of Work

This plan has been prepared by Skanska Traylor Shea (STS) to address fugitive dust emissions from the Westside Subway Extension Design-Build Project (Project) and includes applicable forms for compliance with Rule 403. This plan may be amended, as necessary, to address the objectives stated in the previous section if project parameters significantly change.

The project does not exceed the AQMD thresholds for a Large Operation (please see the definition below) and as a result no formal submittal to AQMD is required.

“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.” (AQMD Rule 403, Amended June 3, 2005)

1.3 Description of Project

The Metro Westside Subway Extension Design-Build Project (Project), Section 1 (Westside Subway) is the first of three projects to extend the Purple Line from Wilshire Center to Westwood. Major Project elements include, but are not limited to, the construction of stations, utility work, track work, and 3.7 miles of underground tunnel work.

Section 2 - PLAN OVERVIEW

2.1 Sources of Fugitive Dust Emissions

Construction for the project will include demolition, pavement removal, grading and movement of soil, installation and removal of temporary street decking, tunneling activities, and construction of permanent structures. Surface soils will be excavated, relocated, or removed from the project site during construction. Construction activities which may result in fugitive dust emissions along the project alignment include, but are not necessarily limited to:

- Earth moving activities, clearing of existing structures, and preparation of the work site, including tunnel boring machine (TBM) operations
- Saw cutting
- Drilling activities
- Vehicle traffic on unpaved construction roads in and out of the site
- Excavation of soils and transfer to temporary storage piles in different parts of the site
- Stockpile management of excavated soil prior to disposal. For volatile organic compounds (VOC) contaminated excavated soils, procedures outlined in Rule 1166, will be implemented.
- Import and placement of backfill soils
- Transfer of stockpiled soil onto trucks
- Hauling of stockpiled soils offsite
- Demolition of existing structures

2.2 Criteria for Fugitive Dust

The following criteria and precautions provide the basis for this Fugitive Dust Emissions Control Plan.

2.2.1 Qualitative and Quantitative Criteria

The following qualitative and quantitative criteria apply:

- Emissions of fugitive dust from transport, handling, construction, or storage activities are not to remain visible in atmosphere beyond property line of the emission source
- Particulate matter will not exceed 50 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) when determined as the difference between upwind and downwind samples collected on high volume particulate matter samplers at the property line for a five-hour period during the

time of active operations. The 50 µg /m³ criterion is anticipated to be achieved by implementation of the measures described in this Fugitive Dust Emissions Control Plan.

2.2.2 Precautions

Precautions will be taken in order to prevent visible particulate matter from being deposited upon the following areas as a direct result of operations:

- Public roadways
- Sidewalks
- Private driveways and parking areas
- Buildings/Residences adjacent to work sites

Precautions include removal of particulate matter from equipment before movement to paved streets or prompt (within one hour per Project Specification, Section 01 57 19) removal of material from paved streets onto which such material has been deposited.

Precautions will also be taken in order to minimize fugitive dust emissions from operations involving:

- Demolition, including saw cutting
- Excavation, transfer, stockpiling and off hauling of excavated material
- Clearing of land
- Drilling
- Tunneling
- Disposal of solid waste
- Backfill

2.3 Related Submittals – Pollution Prevention

In addition to the specific measures described in this Fugitive Dust Emissions Control Plan, standard pollution prevention procedures will be implemented as described in the Stormwater Pollution Prevention Plan (SWPPP). The Contractor is required to implement Best Management Practices (BMPs) per the SWPPP. The SWPPP also addresses tracking and wind erosion controls (BMPs).

Section 3 - DUST POLLUTION CONTROL

This section describes the procedures and techniques to be implemented so as to minimize potential dust pollution impacts as a result of Project activities. The Construction Site Environmental Manager or their Designee will be responsible for Plan compliance, and to evaluate each activity, through daily inspection, to ensure that dust control measures are effective in reducing air pollution.

3.1 Dust Control Procedures and Techniques

To reduce the amount of particulate matter entrained in the ambient air as a result of the various activities, one or more BACMs (also described in Section 5.0) will be used to minimize dust emissions from each fugitive dust source. This section will describe these measures and how they will be implemented in accordance with Rule 403.

Trucks:

- A tarpaulin will be used to cover soil, sand, and other excavated or backfill materials, when transported in trucks to off-site locations.
- Loose material from loads will be trimmed or removed before leaving worksite.
- Trucks that haul from site will be regularly cleaned as needed to prevent/reduce fugitive dust and maintained as required. The anticipated location for the truck wash is currently at the South La Brea station yard for trucks exiting the yard onto La Brea Avenue
- To reduce the likelihood of fugitive dust, trucks will be operated on paved surfaces to the greatest extent possible so as to minimize accumulation of mud and debris on the vehicles and subsequent track-out from the site. Visible roadway dust tracked out on paved roadway will be removed at the end of each work day (when active operations cease).
- The use of stabilized construction exits, which are constructed using of layers of rock and/or metal rumble racks, will also reduce track-out from trucks. Wheel/undercarriage-washing equipment, or a functional equivalent, will be installed for tunnel excavations as the first method by which to ensure that haul trucks have clean wheels and undercarriages before entering public roadways.
- Traffic speeds on all unpaved roads will be no greater than 15 miles per hour.

Haul Routes:

- Haul routes will be approved by the city of Los Angeles, City of Beverly Hills; or other jurisdictions and will be maintained by the contractor by sweeping access points and surrounding areas as needed no less than daily.

Street Maintenance:

- Operable standard size street sweepers capable of operating efficiently within the traffic conditions and compliant with all applicable environmental standards will be available.
- Street sweeping will be performed on all public roadways, sidewalks, and private driveways and parking areas when affected by construction activities.
- Spills of transported material on public or private streets, roads, and parking areas will be promptly (within one hour per Project Specification, Section 01 57 19) cleaned up.

Good Housekeeping:

- Watering of construction areas will be performed to reduce emissions and deposition of particulate matter, as required, for dust suppression during handling of excavation soil or debris and during handling and transfer of materials.
- Watering as necessary will be conducted for earth-moving activities to prevent visible dust emissions.
- Areas of potential disturbed soil will be wetted down, or covered in order to minimize dust.
- Exposed slopes and soil stockpiles will be protected as needed from wind erosion and possible release of fugitive dust.
- Burning of wastes is prohibited; all waste and scrap materials will be disposed of in accordance with laws, codes, regulations, and ordinances.

Stormwater Pollution Control:

- Prevent runoff of all water used for dust control from entering storm drains.
- Do not sluice particulate matter into storm drains.

Construction Fencing:

- Certain site boundaries will have fences with privacy screens in some areas for site security. The fencing/screening may also provide some sheltering of the site areas from wind driven fugitive dust.

Regulatory Agency Compliance:

- A maintenance record log of the BACMs will be completed and will be maintained on-site as a project record in accordance with SCAQMD Rule 403.

Other Vehicles and Equipment:

- Operate vehicles and equipment so as to minimize generation of fugitive dust to the greatest extent practicable.

- Vehicle traffic speeds will be limited on unpaved road surfaces to 15 miles per hour
- Vehicles and equipment will be properly maintained in accordance with manufacturer's specifications in order to minimize the release of particulate matter.
- Use construction equipment designed and equipped to prevent or control air pollution in conformance with most restrictive regulations of EPA, State and local authorities.
- Equipment design and maintenance records will be maintained and made available to Metro upon request.

3.2 Other Provisions

Dust control and visual monitoring will be provided as required to abate dust nuisance on and about the site that is a result of construction activities. Per Specification 01 57 19 3.01, if SCAQMD samples for PM-10, the Contractor is responsible for payment of the Ambient Air Analysis fees imposed by SCAQMD under Rule 304.1.

Dust control measures will be overseen by the Project Environmental Manager, Kurt Kroner and designated Air Pollution Control Representative and will also be provided as required at:

- Portions of the site which are temporarily inactive
- Existing properties with potential to be impacted by dust generated a result of construction activities

Additional provisions for dust control will include:

- Prevent runoff of all water used for dust control from entering storm drains by utilizing appropriate BMPs
- Make equipment for fugitive dust control available as required
- Visible roadway dust tracked-out upon public sidewalks, roadways, private driveways, and parking areas will be removed at the conclusion of each shift.
- Apply Best Available Control Technology (BACT) method or use alternative forms of bentonite such as pellets, granules, or biodegradable gel. If bentonite is used in a powder form, implement measures to ensure that PM-10 emissions do not exceed permissible levels. Additional measures may include:

1. Bulk Transport: transport bentonite by pneumatic means or enclosed trucks;
2. Enclosed Handling and Storage: unload bentonite pneumatically or by enclosed conveyors and chutes. Store bentonite in enclosed containers or silos with fabric filters; and

3. Enclosed Slurry Batch Mixing: Use a mixer that is equipped with a pneumatic loader and a fabric filter or a mixer in an enclosed structure equipped with fabric filters at ventilation openings.

- If conveyors are used, cover transfer points along conveyor system moving soil. Minimize drop height to the stockpile. Provide a sprinkler system and apply water to soils to retard dust development. This process does not include the slurry separation system (if used).

3.3 Personnel Responsible for Plan Implementation

Environmental Manager and designated Air Pollution Control Representative: Responsible for Fugitive Dust Emissions Control Plan compliance and coordination.

Kroner Environmental Services, Inc.; Kurt Kroner, CPESC, CPSWQ, Certified Fugitive Dust Inspector

Mobile: (213) 248-1091; Email: kkroner@kronerenvironmental.com

Section 4 – RECORD KEEPING AND REPORTING

4.1 Recordkeeping and Reporting

As described in Section 3, a maintenance record log of the BACMs will be completed and will be maintained on-site as a project record in accordance with SCAQMD Rule 403. Similarly, project specifications, Section 01-57-19, states that reports of daily monitoring of fugitive dust emissions and control will be submitted to Metro on a monthly basis. Potential applicable permits will also be obtained and requirements implemented.

Records of a routine maintenance program for internal combustion engine powered vehicles and equipment used on Project will be established/maintained and made available to Metro upon request.

Section 5 – RULE 403 SCAQMD DUST CONTROL PLAN DOCUMENTS / BACM

5.1 DOCUMENT No. 1 EARTH-MOVEMENT

Best Available Control Measures (BACM):

| Control Measure | Control Action |
|------------------------|--|
| Watering | <u>Number of watering trucks/water hoses/water source:</u> A water source will be made available where needed. <u>Frequency of application:</u> As required to prevent fugitive dust <u>Sprinkler/hose system:</u> Water hose and/or other application system <u>Describe:</u> Watering during active construction, active construction includes: excavation, trenching, stockpiling, loading, backfilling, drilling, and any other soil moving activities will occur as is required. |
| Chemical Stabilization | <u>Type of product:</u> N/A <u>Frequency of application:</u> N/A <u>Concentration:</u> N/A <u>Describe:</u> Chemicals are not intended to be used. |
| Wind Fencing | <u>Location:</u> Fences at some site boundaries <u>Height:</u> varies <u>Describe:</u> Some portions of fencing will have screens that may help in minimizing the fugitive dust. |
| Haul Vehicles | <u>Operator of haul vehicles, if other than site operator:</u> Various haul operators are anticipated. Loads will be covered with tarpaulin. Loose material will be swept from trucks before exiting the site. |
| Wheel washers | <u>Location:</u> Exits to public roadways, if required <u>Describe:</u> Tracking controls (stabilized roadways, rumble plates, and/or stone) will be installed at excavation vehicle exits onto public roadways to remove bulk material from tires, wheels, and undercarriages. |

Other:

Soil stockpiles will be protected as needed, and per the SWPPP, to minimize dust generation. Haul trucks will be covered prior to offsite soil transport.

TBM operations will generate dust, however the dust is typically generated within enclosed spaces. Nonetheless, similar dust control and management strategies will be implemented as needed.

It may be necessary to temporarily suspend a dust generating activity during high wind conditions. According to Rule 403, high wind conditions “means that instantaneous wind speeds exceed 25 miles per hour.”

Contingency Measures:

Increase the use of water and or the watering frequency for controlling fugitive dust.

If necessary, attach additional information.

5.2 DOCUMENT No. 2 UNPAVED ROAD TRAVEL

Best Available Control Measures:

| Control Measure | Control Action |
|------------------------|--|
| Paving | Portions of unpaved roads heavily used (roads used daily) may be stabilized with rock-base or compacted to remove silt sized particles. |
| Chemical Stabilization | <u>Type of product:</u> N/A <u>Frequency of application:</u> N/A <u>Concentration:</u> N/A <u>Describe:</u> Chemicals are not currently intended to be used. Water will likely be the primary means for dust suppression. |
| Watering | <u>Frequency of application:</u> As needed to minimize fugitive dust <u>Describe:</u> If any visible dust is observed the frequency of watering the unpaved roads may be increased. |
| Reduce speed | <u>Maximum speed limit:</u> 15 miles per hour <u>How are speeds controlled:</u> Briefings to workers <u>X</u> |
| Trip reduction | <u>Describe how achieved:</u> Haul trucks will be fully loaded to the greatest extent practicable subject to construction scheduling. |
| Gravel | <u>Depth of gravel:</u> site specific |

Other (specify):

Street sweeping - Street sweeping will be performed when active operations show a visible buildup (generated from vehicle track-out or aurally deposited dust) on adjacent roadways.

Describe: A combination of street sweeper, water truck, shovels and brooms may be used to prevent soil build-up on the adjacent paved roads.

Contingency Measures:

Increase the frequency of watering. Apply clean crushed aggregate to high volume unpaved road surfaces. Driveway control will be implemented to minimize track-out.

5.3 DOCUMENT No. 3 STORAGE PILES

Best Available Control Measures:

| Control Measure | Control Action |
|------------------------|--|
| Wind Sheltering | <u>Location</u> : Fences at site boundaries <u>Height</u> : 8 ft. <u>Describe</u> : Some portions of fencing will have screens that may help in minimizing the fugitive dust. |
| Watering | <u>Method of application</u> : Hose or spray bar. <u>Frequency of application</u> : As needed to minimize fugitive dust. <u>Describe</u> : Storage piles will be watered with a hose or spray bar as needed to minimize visible emissions. |
| Chemical Stabilization | <u>Type of product</u> : N/A <u>Frequency of application</u> : N/A <u>Concentration</u> : N/A <u>Describe</u> : Chemicals are not currently intended to be used. Water will likely be the primary means for dust suppression. |
| Load-in/load-out | <u>Orientation of load-in/load-out procedures</u> : see description <u>Describe</u> : Where practical, the load in/load out will be performed on the prevailing downwind side of the storage piles. |
| Coverings | <u>Types of coverings</u> : Mulch, plastic sheeting, or equivalent. <u>Describe</u> : Inactive stockpiles may be stabilized using soil binder mulch or plastic sheeting, or equivalent. |

Other:

Protect loose stockpiled construction materials that are not being used (i.e. soil, spoils, aggregate, hydrated lime, etc.).

Contingency Measure(s):

The watering frequency may be increased. If watering is ineffective then temporary covers or other protective measures will be used.

5.4 DOCUMENT No. 4 VEHICULAR TRACK-OUT

Best Available Control Measures:

| Control Measure | Control Action |
|----------------------|---|
| Wheel Washers | <p><u>Location:</u> Each potential track-out area</p> <p><u>Describe:</u> Tracking controls (stabilized roadways, rumble plates, and/or stone) will be installed at excavation vehicle exit areas to remove bulk material from tires, wheels, and undercarriages prior to the vehicles exiting the site.</p> <p>Install wheel/undercarriage-washing equipment, or a functional equivalent, for tunnel excavations as the first method by which to ensure that haul trucks have clean wheels and undercarriages before entering public roadways.</p> |
| Sweep/Clean Roadways | <p><u>Frequency:</u> Continuous to remove bulk material and roadway dust.</p> <p><u>Type of equipment:</u> Street sweeper, water truck, brooms, and shovels.</p> <p><u>Describe:</u> If bulk material is deposited onto public roadways as a result of active operations, (via aurally deposited dust or vehicle track-out) it will be removed as soon as possible and no later than at the conclusion of each workday or evening shift.</p> |
| Haul Vehicles | <p><u>Operator of haul vehicles, if other than site operator:</u> Various haul operators are anticipated. All loads will be covered with tarpaulin. Haul vehicles may also be equipped with bed liners. Freeboard will be in compliance with California Highway Patrol and local jurisdictional requirements.</p> |

Other:

Stabilized construction exits will be used at the entrances/exits to help minimize the track-out.

Contingency Measure(s):

Increase the frequency of sweeping if needed. Increase length of the stabilized exits to public roadways if needed.

5.5 DOCUMENT No. 5 DISTURBED SURFACES

Best Available Control Measures:

| Control Measure | Control Action |
|-----------------------------|--|
| Chemical Stabilization | <u>Type of product:</u> N/A <u>Frequency of application:</u> N/A <u>Concentration:</u> N/A <u>Describe:</u> Chemicals are not currently intended to be used. Water will likely be the primary means for dust suppression. |
| Watering | <u>Method of application:</u> Water truck/hoses (or functional equivalent) <u>Frequency:</u> As needed to minimize wind driven fugitive dust (daily if there is evidence of wind driven fugitive dust) <u>Describe:</u> As needed to minimize wind driven fugitive dust. Areas anticipated to be left undisturbed for a period of time will have water or mulch applied and a crust allowed to form to help minimize subsequent fugitive dust. |
| Wind Fencing | <u>Location:</u> Fences at site boundaries <u>Height:</u> 8 ft. <u>Describe:</u> Some portions of fencing will have screens that may help in minimizing the fugitive dust. |
| Vegetation Re-establishment | <u>Location:</u> N/A <u>Plant type:</u> N/A <u>Describe:</u> When active operations are complete the areas will be paved with asphalt or concrete. Some small areas will receive landscaping and tree replacement where space is available. |
| Gravel | <u>Location:</u> TBD <u>Depth of gravel:</u> TBD <u>Describe:</u> TBD |

Other:

All inactive areas (areas of construction activity that have been disturbed and are not scheduled to be re-disturbed for at least 14 days) and all finished slopes, open space, utility backfill and completed lots will be monitored and protected as needed.

Contingency Measure:

Increase frequency of watering as needed to reduce dust emissions.

5.6 DOCUMENT No. 6 Demolition

Best Available Control Measures:

| Control Measure | Control Action |
|------------------------|---|
| Watering | <p><u>Number of watering trucks/Water hoses:</u> A water source will be provided where needed.</p> <p><u>Frequency of application:</u> As required to prevent fugitive dust</p> <p><u>Sprinkler/hose system:</u> Water hose or equivalent</p> <p><u>Describe:</u> A water truck, or hydrant, or equivalent will supply water for watering during active demolition operations</p> |
| Chemical Stabilization | <p><u>Type of product:</u> N/A</p> <p><u>Frequency of application:</u> N/A</p> <p><u>Concentration:</u> N/A</p> <p><u>Describe:</u> Chemicals are not currently intended to be used. Water will likely be the primary means for dust suppression.</p> |
| Wind Fencing | <p><u>Location:</u> Fences at site boundaries</p> <p><u>Height:</u> 8 ft.</p> <p><u>Describe:</u> Some portions of fencing will have screens that may help in minimizing the fugitive dust.</p> |
| Haul Vehicles | <p><u>Operator of haul vehicles, if other than site operator:</u> Various haul operators are anticipated. All loads will be covered with tarpaulin. Loose material will be swept from trucks before exiting the site.</p> |
| Wheel washers | <p><u>Location:</u> Exits to public roadways, if required</p> <p><u>Describe:</u> Tracking controls (stabilized roadways, rumble plates, and/or stone) will be installed at demolition vehicle exits onto public roadways to remove bulk material from tires, wheels, and undercarriages.</p> |

Other:

Debris stockpiles that are going to remain onsite during periods of inactivity greater than 14 days, or less depending on the potential for dust generation; will be monitored and protected as needed to minimize dust generation. Haul trucks will be covered with a tarpaulin prior to offsite transport.

Contingency Measures:

Increase the use of water and or the watering frequency for controlling fugitive dust.

Attachment 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) PM₁₀ 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 PM₁₀ 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 PM₁₀ 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 PM₁₀ 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 PM₁₀.
 - (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 PM₁₀ 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. | <ul style="list-style-type: none"> ✓ 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. | <ul style="list-style-type: none"> ✓ 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. | <ul style="list-style-type: none"> ✓ 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. | <ul style="list-style-type: none"> ✓ 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. | <ul style="list-style-type: none"> ✓ 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. | <ul style="list-style-type: none"> ✓ 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 | <ul style="list-style-type: none"> ✓ 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. | <ul style="list-style-type: none"> ✓ 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. | <ul style="list-style-type: none"> ✓ 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 | <ul style="list-style-type: none"> ✓ 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. | <ul style="list-style-type: none"> ✓ 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. | <ul style="list-style-type: none"> ✓ 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. | <ul style="list-style-type: none"> ✓ Limit size of staging area ✓ Limit vehicle speeds to 15 miles per hour ✓ Limit number and size of staging area entrances/exits |
| 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. | <ul style="list-style-type: none"> ✓ 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. | <ul style="list-style-type: none"> ✓ 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. | <ul style="list-style-type: none"> ✓ 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) | <ul style="list-style-type: none"> ✓ 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. | <ul style="list-style-type: none"> ✓ 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) | <p>(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</p> <p>(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.</p> |
| Earth-moving: Construction fill areas: | <p>(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.</p> |

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 | <p>(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</p> <p>(4b) Water all roads used for any vehicular traffic once daily and restrict vehicle speeds to 15 miles per hour; OR</p> <p>(4c) Apply a chemical stabilizer to all unpaved road surfaces in sufficient quantity and frequency to maintain a stabilized surface.</p> |
| Open storage piles | <p>(5a) Apply chemical stabilizers; OR</p> <p>(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</p> <p>(5c) Install temporary coverings; OR</p> <p>(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.</p> |
| All Categories | <p>(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.</p> |

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). |