

FUGITIVE DUST CONTROL PLAN FOR SMP-32

APRIL 18, 2016

Prepared by:

Prepared for:

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TABLE OF CONTENTS

1	INTRODUCTION	1
2	PURPOSE AND SCOPE	1
3	FACILITY GENERAL INFORMATION	1
4	DESCRIPTION OF OPERATIONS	1
5	APPLICABLE RULES AND REGULATIONS	1
	5.1 State Laws and Regulations	1
	5.2 Local Laws and Regulations	2
	5.2.1 Bay Area Air Quality Management District	2
	5.2.2 Alameda County General Plan	2
	5.2.3 Alameda County Surface Mining Ordinance	3
	5.2.4 Alameda County Surface Mining Permits	4
6	FUGITIVE DUST SOURCES AND BEST MANAGEMENT PRACTICES	5
	6.1 Mining	5
	6.1.1 Grading and Excavation (overburden stripping and mining)	5
	6.1.2 Transport of Raw Materials	5
	6.1.3 Transfer Process Involving a Free Fall of Any Mined, Purchased, or Manufactured Materials	5
	6.1.4 Inactive Areas	6
	6.2 Processing	6
	6.2.1 Processing Operations	6
	6.2.2 Stockpile Management	6
	6.3 Loading and Transport	6
	6.3.1 Truck Loading	6
	6.3.2 Off-Site Transport	6
	6.3.3 Track-Out Control	6
7	ADMINISTRATIVE CONTROLS	7
	7.1 Inspection and Maintenance Procedures	7
	7.2 Employee Training	7
	7.3 Monitoring	7
	7.4 Detection, Correction, Reporting, and Cleanup	8
	7.5 Plan Review	8
	APPENDICES	9
	Appendix A Plan Review	9
	Appendix B Monitoring Records	10

1. INTRODUCTION

The fugitive dust control plan (Plan) at SMP-32 consists of dust mitigation measures to control fugitive dust emission generated by activities at the facility and their potential impacts on the environment and the surrounding community. This plan does not address particulate or gaseous emissions from a kiln, clinker cooler, or other permitted point sources. The purpose of this plan is to establish and implement dust control measures to limit particulate emissions from material handling operations, nonpoint sources and area sources that may occur during operation and maintenance activities.

Preventing fugitive dust emissions is the prime objective. This plan is intended to work in conjunction with [list any relevant plans].

The Plan is intended to provide guidelines for the implementation of control procedures and the creation of a training program at SMP-32 and will further enable the facility to comply with the Bay Area Air Quality Management District's (BAAQMD's) visible emissions regulation and Public Nuisance Rule. The Plan outlines techniques and practices for monitoring and preventing dust emissions, guidelines for employee training, and procedures that can be used during operations and maintenance activities.

2. PURPOSE AND SCOPE

This Plan provides facility contact information, applicable rules and regulations, and a description of site operations. In addition, this Plan identifies potential sources of fugitive dust and documents the facility's best management practices (BMPs) for dust control. The Plan also identifies administrative controls, including monitoring and training procedures and procedures for periodic review and update.

3. FACILITY GENERAL INFORMATION

Facility Name:	Mission Valley Rock
Facility Address:	7999 Athenour Way, Sunol, CA 94586
Site Contacts:	Marcelo Barajas
Applicable Permits:	SMP-32, CA Mine ID #91-01-0011
Agency Contacts:	BAAQMD: (415) 771-6000 Alameda County Community Development Agency: (510) 670-5333

4. DESCRIPTION OF OPERATIONS

Aggregate mine. Materials transported via conveyor to an existing processing plant located at SMP-24.

5. APPLICABLE RULES AND REGULATIONS

Operations are subject to State and local laws and regulations, including BAAQMD, the *Alameda County General Plan*, Alameda County Surface Mining Ordinance (ACSMO), and Alameda County surface mining permit requirements, as set forth below.

5.1 State Laws and Regulations

California Health and Safety

Code Section 41700. Except as otherwise provided in Section 41705, no person shall discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.

Section 41701. Except as otherwise provided in Section 41704, or Article 2 (commencing with Section 41800) of this chapter other than Section 41812, or Article 2 (commencing with Section 42350) of Chapter 4, no person shall discharge into the atmosphere from any source whatsoever any air contaminant, other than uncombined water vapor, for a period or periods aggregating more than three minutes in any one hour which is: (a) As dark or darker in shade as that designated as No. 2 on the Ringelmann Chart, as published by the United States Bureau of Mines, or (b) Of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in subdivision (a).

California Vehicle Code

Section 23114 requires: No vehicle shall transport any aggregate material upon a highway unless the material is covered. Exception 23114(e) (4): Vehicles transporting loads of aggregate materials shall not be required to cover their loads if the load, where it contacts the sides, front, and back of the cargo container area, remains six inches from the upper edge of the container area, and if the load does not extend, at its peak, above any part of the upper edge of the cargo container area. For purposes of this section, "aggregate material" means rock fragments, pebbles, sand, dirt, gravel, cobbles, crushed base, asphalt, and other similar materials.

5.2 Local Laws and Regulations

5.2.1 Bay Area Air Quality Management District

Operations are subject to the following BAAQMD rules and regulations pertinent to fugitive dust, in addition to other applicable local, state, and federal requirements:

Regulation 1, General Provisions and Definitions, Rule 1-301, Public Nuisance:

1-301 Public Nuisance: No person shall discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons or the public; or which endangers the comfort, repose, health or safety of any such persons or the public, or which causes, or has a natural tendency to cause, injury or damage to business or property. For purposes of this section, three or more violation notices validly issued in a 30 day period to a facility for public nuisance shall give rise to a rebuttable presumption that the violations resulted from negligent conduct.

Regulation 6, Particulate Matter, Rule 1, General Requirements:

6-1-301 Ringelmann No. 1 Limitation: Except as provided in Sections 6-1-303, 6-1-304 and 6-1-306, a person shall not emit from any source for a period or periods aggregating more than three minutes in any hour, a visible emission which is as dark or darker than No. 1 on the Ringelmann Chart, or of such opacity as to obscure an observer's view to an equivalent or greater degree.

6-1-302 Opacity Limitation: Except as provided in Sections 6-1-303, 6-1-304 and 6-1-306, a person shall not emit from any source for a period or periods aggregating more than three minutes in any hour an emission equal to or greater than 20% opacity as perceived by an opacity sensing device, where such device is required by District regulations.

5.2.2 Alameda County General Plan

The *Alameda County General Plan* includes the following policies and actions related to fugitive dust:

Policy 12.1-5 Air Quality Requirements for Construction and Demolition Activities.

Reduce combustion emissions and release of suspended and inhalable particulate matter during construction and demolition phases.

Action 12.1-4 BAAQMD’s Dust Abatement Approach.

Require sponsors of individual development projects requiring site development and/or environmental review to implement the BAAQMD’s approach to dust abatement through conditions of approval. This calls for “basic” control measures that should be implemented at all construction sites, “enhanced” control measures that should be implemented in addition to the basic control measures at construction sites greater than four acres in area, and “optional” control measures that should be implemented on a case-by-case basis at construction sites that are large in area, located near sensitive receptors or which, for any other reason, may warrant additional emissions reductions (BAAQMD 1999).

5.2.3 Alameda County Surface Mining Ordinance

Operations are subject to the ACSMO (County Code Section 6.80 et seq.), which is intended to ensure the continued availability of important mineral resources, while regulating surface mining operations as required by the Surface Mining and Reclamation Act (SMARA) (Public Resources Code §2710 et seq.) and its implementing regulations (California Code of Regulations §3500 et seq.). In turn, compliance with the ACSMO would ensure:

- A. Prevention or mitigation of adverse effects on the environment, including air pollution, impedance of groundwater movement and water quality degradation, damage to aquatic or wildlife habitat, flooding, erosion, sedimentation effects and excessive noise;
- B. Progressive reclamation concurrent with mining so that mined lands are returned to a condition adaptable for alternate land uses, with no residual hazards to public health or safety and with land and water resources maintained in a state beneficial to society; and
- C. Consistency with mineral resource management policies of the general plan.

The ACSMO includes the following provisions that are relevant to the regulation of fugitive dust:

Section 6.80.210, Mining:

- H. Erosion, Sedimentation and Pollutant Discharge.
 - 2. Stockpiles of overburden and minerals shall be managed to minimize water and wind erosion.
 - 3. The removal of vegetation and overburden in advance of surface mining shall be kept to a minimum.
- I. Control of Noise, Dust and Bright Lights. All activities of mining and processing minerals shall be conducted in a manner that noise, dust and bright lights do not exceed levels compatible with the uses of adjacent lands as determined by the planning commission in the issuance of the surface mining permit or as a result of its periodic review of any permit.

Section 6.80.240, Reclamation and Reclamation Plans:

- C. Disposal of Overburden and Mining Waste.
 - 1. Permanent piles or dumps of overburden and waste rock placed on the land surface shall be made stable, shall not block natural drainage without provision for diversion, shall have an overall smooth or even profile and, where practical, shall be placed in the least

visible location. Old equipment and similar inert mining wastes shall be removed or buried. Toxic materials shall be removed or protected to prevent leaching.

- H. Revegetation. All permanently exposed lands that have been denuded by mining operations shall be revegetated unless any such revegetation is determined by the planning commission to be technically infeasible or not beneficial with respect to the intent of this chapter. Revegetation methods and plant materials utilized shall be appropriate for the topographical, soil and eliminate conditions present at the site. Native species shall be used wherever practical.

5.2.4 Alameda County Surface Mining Permits

Operations are also subject to the dust control requirements (conditions of approval) set forth in Alameda County Quarry Permit SMP-32, as described below.

- 59. Measures shall be taken to reduce dust emissions to the maximum extent possible through the implementation of the Fugitive Dust Control Plan for SMP-32. In addition to using water as a dust suppressant, other measures shall be used if practicable such as commercially available dust suppressants, and temporarily halting stripping activities during high wind periods that create a visible dust plume. Permittee shall describe measures undertaken in each Annual Report furnished to the Community Development Agency Director.
- 60. Adequate soil moisture shall be maintained in all activity areas within the site or watered to reduce dust to an insignificant level, as determined by the Community Development Agency Director and Bay Area Air Quality Management District.
- 61. All surface mining operations emitting smoke, vapors, dust and other airborne contaminants shall be provided with all necessary control measures and devices as required by the Community Development Agency Director, Alameda County Health Care Services Agency and the Bay Area Air Quality Management District to prevent the occurrence of nuisance and undue pollution of the air.
- 62. If, at any time, high wind or dry weather create potentially hazardous conditions on surrounding roads and highways or in the town of Sunol as a result of windblown dust from the site, the causative activity must cease and corrective measures must be taken. Adequate water and equipment shall be maintained on-site for this purpose. The event must also be reported to the California Highway Patrol, and the County Community Development Agency, and Public Works Agency within 48 hours.
- 63. Permittee shall maintain all quarry-operated equipment in accordance with manufacturers' recommendations to reduce exhaust emissions from heavy equipment and haul trucks. 64. Permittee shall ensure that the quarry conforms to all requirements of the Bay Area Air Quality Management District, and shall document compliance as part of the Annual Report.
- 65. If complaints about off-site dust are received by the County, an investigation shall be conducted to determine whether a reasonable nuisance or hazard exists, if the SMP-32 quarry and/or surrounding buffer lands on the project site is the cause of the dust, and, if so, what corrective actions are required to correct the problem. Permittee shall comply with the decision of the Community Development Agency Director regarding the appropriate corrective action, which may include but is not limited to changes in the method of operation, hours of operation, or other elements of the project.

The requirements of the ACSMO are addressed in Section 4.3, above. Because the ACSMO incorporates SMARA by reference, no need exists to separately enumerate SMARA standards.

6 FUGITIVE DUST SOURCES AND BEST MANAGEMENT PRACTICES

Primary dust generating activities include mining, processing, and loading and transport. The facility implements both engineering controls and operational controls to mitigate dust emissions from these activities, as identified below. The BMPs outlined below are intended to supplement, not replace, the requirements found in this facility's Air Permit to Operate. When implemented consistently, these BMPs should ensure compliance with the applicable rules and regulations set forth in Section 4.0, above, as well as serve to minimize the effects of fugitive dust.

6.1 Mining

6.1.1 Grading and Excavation (overburden stripping and mining)

- Prewater areas to be stripped or excavated. During the dry season, this shall be at least once daily prior to major operations and as required to eliminate visible dust emissions.
- Apply water or chemical stabilizers/dust suppressants to active areas as needed to limit visible dust emissions to 10% opacity (Ringelmann 0.5).
- Water truck operations may be curtailed during wet weather.
- Phase work as feasible to reduce the maximum daily acreage of disturbed soil.
- Minimize the removal of vegetation and overburden in advance of surface mining.
- Suspend grading and excavation activity when wind speeds exceed 25 miles per hour.
- For temporary overburden stockpiles (prior to placement within a permanent fill area), water stockpiles as needed.
- For permanent overburden placement, plant vegetative ground cover (fast-germinating native grass seed). Water appropriately until vegetation is established.

6.1.2 Transport of Raw Materials

- Apply water or chemical stabilizers/dust suppressants to haul roads as needed to limit visible dust emissions to 10% opacity (Ringelmann 0.5).
- Limit vehicle speeds on unpaved roads to 15 miles per hour.
- Provide appropriate training, on-site enforcement, and signage.
- For customers or visitors deemed to be travelling in excess of posted speed limits, the following actions are taken in progressive order: (1) warning, (2) facility access limited, and then (3) facility access denial.
- For employees deemed to be travelling in excess of posted speed limits, the following actions are taken in progressive order: (1) warning and then (2) progressive discipline up to and including termination.
- For contractors and subcontractors deemed to be travelling in excess of posted speed limits, the following actions are taken in progressive order: (1) warning and then (2) site removal with access denial.

6.1.3 Transfer Process Involving a Free Fall of Any Mined, Purchased, or Manufactured Materials

These operations/processes may involve material pile addition/reclamation using fixed or mobile equipment. Examples are stockpiling from belt (tripper) conveyors, front-end loading of materials to vehicular transport, and bin transfer to vehicular transport. Fugitive dust emissions will be controlled with the following mitigation measures:

- Minimized drop heights when dropping any mined, purchased or manufactured materials. This is a practice for all front-end loaders transferring materials for mobile transportation (quarry haul truck, transfer truck, bulk truck).
- Incorporate wind breaks, enclosures, and area covers.
- Install temporary or permanent water sprays systems.
- For infrequent material transfer operations, a water truck may be incorporated to increase material moisture content and/or suppress fugitive dust emission from transfer operation.

6.1.4 Inactive Areas

- Apply water or nontoxic chemical soil stabilizers/dust suppressants to inactive areas to limit visible dust emissions to 10% opacity (Ringelmann 0.5).
- For reclaimed areas, reestablish vegetative ground cover (fast-germinating native grass seed). Water appropriately until vegetation is established.
- Limit vehicular access to inactive areas through the use of signage and vehicular access barricades.

6.2 Processing

6.2.1 Processing Operations

- Use water spray and dust suppression systems to limit visible dust emissions to 10% opacity (Ringelmann 0.5).
- Clean up, as necessary, materials (such as dust or aggregate materials) that have accumulated beneath processing plant components, such as conveyors, screens, and crushers.

6.2.2 Stockpile Management

- Apply water and/or nontoxic soil stabilizers to stockpiles as needed to maintain adequate moisture to minimize wind-blown dust.
- Water may be supplied by mobile water truck operations and/or temporary/permanent water spray equipment.

6.3 Loading and Transport

6.3.1 Truck Loading

- Apply water to stockpiles as needed to maintain adequate moisture to minimize wind-blown dust and fugitive emissions from load-out operations.
- Use water trucks or spray systems to adequately wet materials prior to loading haul trucks.
- If loaded materials are subject to dust generation, drivers shall be requested to moisten loads at facilities to be conveniently located and maintained on-site.

6.3.2 Off-Site Transport

- Cover or maintain at least 2 feet of freeboard space on aggregate haul truck loads.
- Customers, visitors, employees, and subcontractors shall observe posted speed limits. All loaded materials shall be required to pass over a material shakedown area with berm, bumper, ditches, or rumble strips provided.
- Signs notifying drivers of these requirements shall be posted at the scale location.
- Provisions contained in this section shall be mandatory for vehicles owned by, or under the control of the quarry. Drivers not cooperating with this provision shall be discouraged from hauling materials from the site.
- Haulage roads and loading areas shall be paved, oiled, or watered to maintain a dust-free condition.

6.3.3 Track-Out Control

- Maintain rumble strips near exits onto public roads to minimize the potential for trackout.
- Use wet method and/or HEPA-equipped vacuum street sweepers to remove any visible trackout mud or dirt onto adjacent public roads at least once a day. Dry “kick-broom” style street sweepers shall not be used.
- Wheel and vehicle washers are installed where customer vehicles and/or equipment, if it traveled on unpaved roads, must pass before exiting onto public paved streets.

- Company vehicles and/or equipment shall be washed before each trip onto public paved streets.
- Where customer vehicles and/or equipment do not travel on unpaved roads, an optional vehicle wash is installed and available.
- Any visible track-out on the paved roadway between the plant entrance and the facility boundary will be removed using a street sweeper on a daily basis.

7. ADMINISTRATIVE CONTROLS

In addition to implementation of the site-specific BMPs outlined above, implements procedural and administrative controls to ensure employees, subcontractors, and customers observe applicable dust control measures, including applicable rules, regulations, and permit conditions. The following sections detail BMPs related to inspection and maintenance procedures, employee training, monitoring, and periodic review and update of this Plan.

7.1 Inspection and Maintenance Procedures

The following inspection and maintenance procedures are intended to ensure the proper operation and implementation of dust control measures:

- Conduct daily inspection of water spray and dust suppression systems (e.g., nozzles and spray bars) to ensure proper function. These inspections may be conducted as part of routine plant inspections, including safety inspections.
- Timely repair or replace malfunctioning dust control systems.

7.2 Employee Training

The following employee training procedures are intended to ensure the proper implementation of dust control measures and conformance with applicable rules, regulations and permit conditions:

- At least once per month, during tailgate meetings, plant personnel meetings, and/or personnel training sessions, discuss and educate plant personnel on identification and implementation of corrective dust control measures. The specific elements of training could include the following:
 - proper procedures for identifying and reporting dust emissions;
 - when reporting dust issues, employee provision of information related to the location, source, and possible solutions to the issue;
 - proper shut-down procedures in the event fugitive dust becomes unmanageable (e.g., during periods of high winds);
 - general housekeeping BMPs;
 - preventative maintenance for dust control systems;
 - proper means of managing dust during periods of equipment breakdown/malfunction;
 - at least once per year, a review of this Plan with personnel working on-site.
- Encourage plant personnel to report dust control issues and share potential solutions with plant management personnel.
- Have at least one on-site employee trained in visual emissions evaluation (VEE) who will monitor opacity from processing equipment and ensure compliance with permit limits.

7.3 Monitoring

The following monitoring procedures are intended to instill the importance of consistent adherence to dust control measures, including conformance with applicable rules, regulations, and permit conditions:

- For customers, visitors, employees, and subcontractors who are deemed to be travelling in excess of posted speed limits, a warning will first be provided followed by progressive discipline up to denial of site access or termination of employees.

- Post a publicly visible sign with the telephone number and person to contact at the lead agency and BAAQMD regarding dust complaints. Upon receiving complaints, the plant manager, environmental manager, or company designee shall respond and take corrective action as soon as feasible, but no later than 48 hours from receiving a complaint.
- Maintain copies of dust-related complaints and recorded opacity readings in Appendix B, "Monitoring Records," of this Plan. Monitoring data records should be kept for a period of at least 2 years (or longer if required by applicable permits, rules, or regulations).

7.4 Detection, Correction, Reporting, and Cleanup

7.4.1 Detection

Detection of airborne dust is everyone's job. Dust sources can be classified as either "point source" or "fugitive dust" emissions. "Fugitive dust" is defined, for the purpose of this program, as dust which has no specific "point source." This type of dust usually is a result of wind blowing, vehicular or pedestrian traffic, malfunctioning dust collection equipment, or poor/dirty work habits. "Point source" emissions are emissions from a specific "point," such as a dust collector discharge duct. They may be the result of damaged or faulty equipment or carelessness in operation of said equipment. The key to minimizing point source emissions is early detection. Early detection will result from particulate matter inspections, routine tours by operators and management, and by observant employees performing their regular tasks.

7.4.2 Correction

Point source and fugitive dust emissions are to be corrected as soon as possible. In some instances, shutting down a piece of equipment will be necessary. At other times, closing a hatch, sealing a hole, or just sweeping up a pile of dust is all that is required for correction.

7.4.3 Reporting

It is necessary to report fugitive dust emissions resulting from maintenance and/or servicing activities. The same rules apply as shown in Section 7.2, "Employee Training," regarding reporting dust issues.

7.4.4 Cleanup

Prompt cleanup after an operational spill or maintenance job is the first line of defense in preventing fugitive dust emissions. The second line of defense is containment. If an employee realizes that a certain amount of material will be spilled, that employee should take immediate steps to contain such a spill, thereby, reducing the human effort and equipment needed to perform the cleanup. This also prevents fugitive dust.

7.5 Plan Review

In addition to the measures outlined above, implement the following plan review procedures:

- At least annually, conduct a review of this Plan, involving an examination/evaluation of the effectiveness of engineering and administrative control measures. This review shall be used to determine if existing controls are in good repair, whether existing controls adequately mitigate fugitive dust, and whether additional controls are warranted.
- Document the findings of the annual plan review, including review date, persons conducting inspection, and follow-up actions in the table provided herein in Appendix A, "Plan Review."
- Maintain a current copy of this Plan on-site, and make it available for review to County or BAAQMD inspectors upon request.

APPENDIX A
PLAN REVIEW

Review Date:
Field-Verification Conducted:
Current Plan Deemed Effective:

Plan Reviewer(s):
YES / NO (circle one)
YES / NO (circle one)

Key Findings:

Plan Changes:

Review Date:
Field-Verification Conducted:
Current Plan Deemed Effective:

Plan Reviewer(s):
YES / NO (circle one)
YES / NO (circle one)

Key Findings:

Plan Changes:

[ATTACH ADDITIONAL SHEETS AS NEEDED]

APPENDIX B
MONITORING RECORDS

[ATTACH ADDITIONAL SHEETS AS NEEDED]