# MARICOPA COUNTY AIR POLLUTION CONTROL REGULATIONS REGULATION III – CONTROL OF AIR CONTAMINANTS

#### RULE 316 NONMETALLIC MINERAL PROCESSING

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## MARICOPA COUNTY AIR POLLUTION CONTROL REGULATIONS REGULATION III – CONTROL OF AIR CONTAMINANTS

#### RULE 316 NONMETALLIC MINERAL PROCESSING

#### SECTION 100 – GENERAL

- **PURPOSE:** To limit the emission of particulate matter into the ambient air from any nonmetallic mineral processing plant and any related operations.
- 102 APPLICABILITY: The provisions of this rule shall apply to any commercial and/or industrial nonmetallic mineral processing plant and any related operations. Compliance with the provisions of this rule shall not relieve any person subject to the requirements of this rule from complying with any other applicable rules, including New Source Performance Standards and National Emission Standards for Hazardous Air Pollutants. Whenever more than one rule, regulation, or emission limit applies to nonmetallic mineral processing and any related operations subject to this rule, the more stringent standard applies.
- **EXEMPTIONS:** The provisions of this rule do not apply to:
  - **103.1** Dry material transfer facilities.
  - **103.2** Water treatment facilities.

**SECTION 200 – DEFINITIONS:** For the purpose of this rule, the following definitions shall apply, in addition to those definitions found in Rule 100 (General Provisions and Definitions) of these rules. In the event of any inconsistency between any of the Maricopa County air pollution control rules, the definitions in this rule take precedence.

- **AFFECTED OPERATION:** An operation that processes nonmetallic minerals or that is related to such processing and process sources including, but not limited to: excavating, crushers, grinding mills, screening equipment, conveying systems, elevators, transfer points, bagging operations, storage bins, enclosed truck and railcar loading stations, and truck dumping.
- **AGGREGATE TRUCK:** Any truck with an open top used to transport the products of nonmetallic mineral processing plants.
- **APPROVED EMISSION CONTROL SYSTEM (ECS):** A system for reducing particulate emissions, consisting of collection and/or control devices which are approved in writing by the Control Officer and are designed and operated in accordance with good engineering practice.
- **AREA ACCESSIBLE TO THE PUBLIC:** Any paved parking lot or paved roadway that can be entered or used for public travel primarily for purposes unrelated to the dust-generating operations.

- **ASPHALTIC CEMENT:** The dark brown to black cementitious material (solid, semisolid, or liquid in consistency), of which the main constituents are naturally occurring bitumens or bitumens resulting from petroleum refining.
- **ASPHALTIC CONCRETE PLANT/ASPHALT PLANT:** Any facility used to manufacture asphaltic concrete by mixing graded aggregate and asphaltic cements.
- **BAGGING OPERATION:** The mechanical process by which bags or other containers are filled with nonmetallic minerals or dry materials.
- **BATCH TRUCK:** Any truck that loads and transports products produced by batch.
- **BELT CONVEYOR:** A conveying device that transports material from one location to another by means of an endless belt that is carried on a series of idlers and routed around a pulley at each end.
- **BERMS:** Piles or mounds of material along an elevated roadway capable of moderating or limiting the force of a vehicle in order to impede the vehicle's passage over the bank of the roadway.
- **BLASTING OPERATIONS:** Operations that break or displace soil and/or rock by means of explosives.
- **BLUE SMOKE:** A combination of hydrocarbons and particulate matter that is produced when asphaltic cement is heated.
- **BULK MATERIAL:** Any material including, but not limited to: earth, rock, silt, sediment, sand, gravel, soil, fill, aggregate less than two inches in length or diameter (i.e., aggregate base course (ABC)), dirt, mud, demolition debris, cotton, trash, cinders, pumice, saw dust, feeds, grains, fertilizers, fluff (from shredders), and dry concrete, that is capable of producing fugitive dust.
- **CEMENT**: A powder consisting of, but not limited to, alumina, silica, lime, iron oxide, and/or magnesium oxide burned together in a kiln and finely pulverized and used as an ingredient of mortar, concrete, and/or other similar product including, but not limited to, any hydraulic cement such as Portland cement.
- **215 COHESIVE HARD SURFACE:** One of the following materials applied and maintained as a roadway surface:
  - 215.1 Pavement, including but not limited to, asphalt, concrete, asphaltic concrete, concrete pavement, chip seal, or rubberized asphalt.
  - **215.2** Recycled asphalt mixed with a binder.
  - 215.3 Continuous gravel cover which is at least six inches deep to which water is applied during the workday.
  - 215.4 A dust suppressant other than water, which is applied in accordance with the methods and frequencies specified in the approved Dust Control Plan, which produces or creates a mass in which the soil particles are tightly and uniformly stuck

- together such that visible emissions are not produced by wind blowing across the surface or by motor vehicles or equipment driving on the surface.
- 215.5 Another material, which is applied and maintained in accordance with the approved Dust Control Plan, which creates a roadway surface such that visible emissions are not produced by wind blowing across the surface or by motor vehicles or equipment driving on the surface.
- **216 CONCRETE PLANT:** Any facility used to manufacture concrete by mixing water, aggregate, and cement.
- **217 CONVEYING SYSTEM:** A device for transporting materials from one piece of equipment or location to another location within a facility. Conveying systems include, but are not limited to: feeders, belt conveyers, bucket elevators and pressure control systems.
- **CRUSHER:** A machine used to crush <del>any nonmetallic minerals or products made with nonmetallic minerals including, but not limited to, the following types: jaw, gyratory, cone, roll, rod mill, hammermill, and impactor.</del>
- **DELIVERY TRUCK:** Any truck (including any non-motorized attachment to a truck, such as a trailer or other conveyance connected to or propelled by the actual motorized portion of the truck) that holds, stores, or delivers products or materials to or from nonmetallic mineral processing or any related operations.
- **DISTURBED SURFACE AREA:** A portion of the earth's surface (or material placed thereupon) which has been physically moved, uncovered, destabilized, or otherwise modified from its undisturbed native condition if the potential for the emission of fugitive dust is increased by the movement, destabilization, or modification.
- **DRY MATERIAL:** Cement, fly ash, lime, and other pozzolan materials to which water or other liquids have not been added.
- **DRY MIX CONCRETE PLANT:** Any facility used to manufacture a mixture of aggregate and cements without the addition of water.
- **DUST-GENERATING OPERATION:** Any activity capable of generating fugitive dust including, but not limited to: land clearing, earthmoving, weed abatement by discing or blading, excavating, construction, demolition, bulk material handling, storage and/or transporting operations, vehicle use and movement, the operation of any outdoor equipment, or unpaved parking lots. For the purpose of this rule, landscape maintenance and playing on or maintaining a field used for non-motorized sports shall not be considered a dust-generating operation. However, landscape maintenance shall not include grading, trenching, or any other mechanized surface disturbing activities performed to establish initial landscapes or to redesign existing landscapes.
- **DUST SUPPRESSANT:** Water, hygroscopic material, solution of water and chemical surfactant, foam, non-toxic chemical stabilizer, or any other dust palliative, which is not prohibited for ground surface application by the EPA or the Arizona Department of

- Environmental Quality (ADEQ), or any applicable law, rule, or regulation, as a treatment material for reducing fugitive dust emissions.
- 225 ENCLOSED TRUCK OR RAILCAR LOADING STATION: That portion of a nonmetallic mineral processing plant where nonmetallic mineral are loaded by an enclosed conveying system into enclosed trucks or railcars.
- **END OF WORK DAY:** The end of a working period that may include one or more work shifts. If working 24 hours a day, the end of a working period is considered no later than 8 pm.
- **FABRIC FILTER BAGHOUSE:** A device in which particulates are removed from the stream of exhaust gases using permeable fabric bags.
- **FACILITY:** All the pollutant-emitting equipment and activities that are located on one or more contiguous or adjacent properties, and that are under the control of the same person or persons under common control.
- **FLY ASH:** Any product of coal combustion that is recovered for use as a cement or lime additive, absorbent, gas scrubber, plastics filler or any other beneficial use and that is exempt from regulation as a hazardous waste under 40 CFR 261.4.
- **FREEBOARD:** The vertical distance between the top edge of a cargo container area and the highest point at which the bulk material contacts the sides, front, and back of a cargo container area.
- **FUGITIVE DUST CONTROL MEASURE:** A technique, practice, or procedure used to prevent or minimize the generation, emission, entrainment, suspension, and/or airborne transport of fugitive dust.
- **FUGITIVE DUST CONTROL TECHNICIAN:** A person with the authority to expeditiously employ sufficient fugitive dust control measures to ensure compliance with this rule at a facility where nonmetallic mineral processing or any related operations occur.
- **FUGITIVE DUST EMISSION:** Particulate matter not collected by a capture system that is entrained in the ambient air and is caused from human and/or natural activities.
- **GRAVEL PAD:** A layer of washed gravel, rock, or crushed rock, which is at least one inch or larger in diameter and at least six inches deep. A Gravel pad shall be at least 30 feet wide, and 50 feet long or the length of the longest haul truck, whichever is greater, with a stabilizing mechanism/device (i.e., curbs or structural devices along the perimeter of the gravel pad), and shall dislodge mud, dirt, and/or debris from the tires of motor vehicles and/or haul trucks, prior to leaving a facility. If an unpaved surface exit does not have adequate width to install a 30-foot wide gravel pad, then the width of the gravel pad shall cover the full width of the unpaved surface exit and such shorter width shall be adequate to prevent trackout.
- **GRINDING MILL:** A machine used for the wet or dry fine crushing of any nonmetallic mineral. Grinding mills include, but are not limited to, the following types: hammer, roller,

- rod, pebble and ball, and fluid energy. The grinding mill includes the air conveying system, air separator, or air classifier, where such systems are used.
- 236 HAUL/ACCESS ROAD: Any unpaved road that is used by haul trucks to carry materials from the quarry or pit to different locations within the facility. For the purpose of this rule, haul/access roads are not in permanent areas of a facility.
- 237 HAUL TRUCK: Any fully or partially open-bodied self-propelled vehicle including any non-motorized attachments, such as but not limited to: trailers or other conveyances that are connected to or propelled by the actual motorized portion of the vehicle used for transporting bulk materials.
- 238 INFREQUENT OPERATIONS: Operations that have state mine identification, approved reclamation plans and bonding as required by State Mining and Reclamation Act of 1975, and only operate on an average of 52 days per year over the past three years.
- **LIME**: Any calcinated limestone including, but not limited to, hydraulic lime.
- **MATERIAL STORAGE AND SILO LOADING OPERATIONS:** Any combination of processes or equipment used for storing dry materials and/or loading dry materials into silos.
- **MIXER TRUCK:** Any truck that mixes cement and other ingredients in a drum to produce concrete.
- **MOTOR VEHICLE:** A self-propelled vehicle for use on the public roads and highways of the State of Arizona and required to be registered under the Arizona State Uniform Motor Vehicle Act, including any non-motorized attachments, such as but not limited to: trailers or other conveyances which are connected to or propelled by the actual motorized portion of the vehicle.
- **NEW FACILITY:** A facility that commenced nonmetallic mineral processing or any related operations on or after June 8, 2005. A facility that commenced nonmetallic mineral processing or any related operations before June 8, 2005 does not become a new facility due to the addition of new equipment, processes, or operations.
- **NONMETALLIC MINERAL:** Any of the following minerals or any mixture of which the majority is any of the following minerals:
  - 244.1 Crushed and broken stone, including limestone, dolomite, granite, rhyolite, traprock, sandstone, quartz, quartzite, marl, marble, slate, shale, oil shale, and shell.
  - **244.2** Sand, gravel and quarried rocks.
  - 244.3 Clay including kaolin, fireclay, bentonite, fuller's earth, ball clay, and common clay.
  - **244.4** Rock salt.
  - **244.5** Gypsum.
  - 244.6 Sodium compounds including sodium carbonate, sodium chloride, and sodium sulfate.

- **244.7** Pumice.
- 244.8 Gilsonite.
- **244.9** Talc and pyrophyllite.
- **244.10** Boron including borax, kernite, and colemanite.
- **244.11** Barite.
- 244.12 Fluorspar.
- **244.13** Feldspar.
- 244.14 Diatomite.
- **244.15** Perlite.
- 244.16 Vermiculite.
- **244.17** Mica.
- **244.18** Kyanite including andalusite, sillimanite, topaz, and dumortierite.
- **244.19** Coal.
- 245 NONMETALLIC MINERAL PROCESSING PLANT: Any facility utilizing any combination of equipment or machinery to mine, excavate, separate, combine, crush, or grind any nonmetallic mineral including, but not limited to: lime plants, steel mills, asphalt plants, concrete plants, raw material storage and distribution, and sand and gravel plants.
- 246 OPEN STORAGE PILE: Any accumulation of bulk material with a 5% or greater silt content that has a total surface area of 150 square feet or more and that at any one point attains a height of three feet. Silt content is assumed to be 5% or greater unless a person can show, by testing in accordance with ASTM Method C136-06 or other equivalent method approved in writing by the Control Officer and the Administrator, that the silt content is less than 5%. For the purpose of this rule, the definition of open storage pile does not include berms that are installed to comply with 30 Code of Federal Regulations (CFR) 56.93000.
- **OVERBURDEN REMOVAL OPERATION:** An operation that removes and/or strips soil, rock, or other materials that lie above a natural nonmetallic mineral deposit and/or inbetween a natural nonmetallic mineral deposit.
- **OVERFLOW WARNING SYSTEM/DEVICE:** A properly functioning system or device that sends a signal indicating that the level of material in a silo is approaching or at maximum capacity. The system/device shall be designed to automatically stop silo filling operations, or alert the operator(s) to stop the loading operation, when the level of material in a silo is approaching or at maximum capacity.
- **PARTICULATE MATTER EMISSIONS:** Any and all finely divided solid or liquid materials other than uncombined water released to the ambient air as measured by the applicable state and federal test methods.

- **PAVE:** To apply and maintain asphalt, concrete, or other similar material, including, but not limited to, asphaltic concrete, concrete pavement, chip seal, rubberized asphalt, or recycled asphalt mixed with a binder, to the surface of a roadway or parking lot.
- **PERMANENT AREAS OF A FACILITY:** Areas that remain in-place for 180 days or more in 12 consecutive months. Permanent areas of a facility include the following areas: entrances, exits, parking areas, office areas, warehouse areas, maintenance areas (not including maintenance areas that are in the quarry or pit), concrete plant areas, asphaltic plant areas, and roads leading to and from such areas.
- **PERMANENT FACILITY:** Any facility that remains in-place for 180 days or more in 12 consecutive months.
- **POZZOLAN:** Any of finely divided siliceous or siliceous and aluminous materials that react chemically with slaked lime at ordinary temperature and in the presence of moisture to form a strong, slow-hardening cement.
- **PRESSURE CONTROL SYSTEM:** System in which loads are moved in the proper sequence, at the correct time, and at the desired speed through the use of valves that control the direction of air flow, regulate actuator speed, or respond to changes in air pressure.
- **PROCESS:** One or more operations including those using equipment and technology in the production of goods or services or the control of by-products or waste.
- **PROCESS SOURCE:** The last operation of a process or a distinctly separate process which produces an air contaminant and which is not a pollution abatement operation.
- **PRODUCTION WORK SHIFT:** An eight-hour operating period based on the 24-hour operating schedule.
- **RELATED OPERATIONS:** The use, handling, or storage of dry materials or nonmetallic minerals at a facility that produces other products or materials, or the preparation and maintenance of a facility subject to this rule. Related operations may include, but are not limited to:
  - **258.1** Asphaltic concrete plants, asphalt plants, concrete plants, and dry mix concrete plants.
  - **258.2** Material storage and silo loading operations that occur at asphaltic concrete plants, asphalt plants, concrete plants, and dry mix concrete plants.
  - **258.3** Bagging operations.
  - 258.4 Handling, processing, or disposal of returned products.
  - 258.5 Processing of materials made with nonmetallic minerals or dry materials, including, but not limited to, concrete crushing.
  - 258.6 Installing, constructing, or maintaining unpaved roads, parking lots, or pads for processing equipment at a facility subject to this rule.
  - 258.7 Dust-generating operations that occur at a facility subject to this rule.

- **258.8** Blasting operations.
- **RETURNED PRODUCTS:** Left-over concrete or asphalt products that were not used at a job site and were returned to the facility.
- **RUMBLE GRATE:** A system that produces a vibration such that mud, dirt, and/or debris are shaken off the tires and the exterior surfaces of a motor vehicle as a motor vehicle passes over the system. The minimum length of a rumble grate shall be 20 feet in the direction of vehicle travel or the circumference of the largest tire of a motor vehicle as a motor vehicle passes over such rumble grate, whichever is greater. The width of a rumble grate shall cover the full width of the exit. A rumble grate shall consist of raised dividers (e.g., rails, pipes, or grates), which shall meet all of the following specifications:
  - **260.1** The height of each divider shall measure no less than three inches;
  - 260.2 The width of each divider shall measure no more than four inches; and
  - 260.3 The distance between each divider (i.e., from the outer edge of a divider to the outer edge of a divider next to such divider) shall measure no less than six inches.
- **SATURATED MATERIAL:** Mineral material with sufficient surface moisture such that particulate matter emissions are not generated from processing of the material through screening operations, bucket elevators, and belt conveyors. Material that is wetted solely by wet suppression systems is not considered to be "saturated" for the purpose of this rule.
- **SCREENING OPERATION:** A device (such as a shaker screen) that mechanically separates material according to its size by passing undersize material through one or more mesh surfaces (screens) in series and retaining oversize material on the mesh surfaces (screens).
- **SILO:** An elevated storage container with or without a top that releases material thru the bottom.
- **SILT:** Any aggregate material with a particle size less than 75 micrometers in diameter, which passes through a No. 200 sieve.
- **SPILLAGE:** Material caused or allowed, intentionally or unintentionally, to flow, run, or fall out, over or off of vehicles or equipment, where such spilled materials have the potential to generate or cause fugitive dust emissions.
- **STACK EMISSIONS:** Emissions that are released to the atmosphere from a capture system through a building vent, stack or other point source discharge, including particulate matter or other emissions which have the potential to become particulate matter when released into the atmosphere and combined with other emissions from the same source.
- **STAGING AREA:** A place where aggregate trucks and mixer trucks temporarily queue for their loading or unloading.

- **STORAGE BIN:** A facility enclosure, hopper, silo, or surge bin for the storage of nonmetallic minerals or products made with nonmetallic minerals prior to further processing or loading.
- **TRACKOUT:** Any materials that have the potential to produce fugitive dust and to adhere to and agglomerate on the surfaces of motor vehicles, haul trucks, and/or equipment (including tires) and that have fallen or been deposited onto an area accessible to the public.
- **TRACKOUT CONTROL DEVICE:** A gravel pad, grizzly, wheel washer, rumble grate, paved area, truck washer, or other equivalent trackout control device located at the point of intersection of an unpaved area and an area accessible to the public that controls and prevents trackout and/or removes particulate matter from tires and the exterior surfaces of aggregate trucks, haul trucks, and/or motor vehicles that traverse a facility.
- **TRANSFER FACILITY:** A facility that exclusively receives, stores, and distributes dry materials that remain within enclosed systems (such as hoses and silos) at all times.
- **TRANSFER POINT:** A point in a conveying system where materials are transferred from or to a belt conveyor, except for transfer to a stockpile.
- **TRUCK DUMPING:** The unloading of nonmetallic minerals or products made with nonmetallic minerals from movable vehicles designed to transport nonmetallic minerals or products made with nonmetallic minerals from one location to another. Movable vehicles include, but are not limited to: trucks, front end loaders, skip hoists, and railcars.
- **TRUCK WASHER:** A system that is used to wash the entire surface and the tires of a truck.
- **UNPAVED PARKING LOT:** Any area that is not paved and that is designated for parking or storing motor vehicles and equipment in the Dust Control Plan or that is used for parking or storing motor vehicles and equipment.
- **UNPAVED ROAD:** Any road or equipment path that is not paved. For the purpose of this rule, an unpaved road is not a horse trail, hiking path, bicycle path, or other similar path used exclusively for purposes other than travel by motor vehicles.
- **VENT:** An opening through which there is mechanically or naturally induced air flow for the purpose of exhausting air carrying particulate matter.
- **WET MATERIAL PROCESSING OPERATION:** Either of the following:
  - 278.1 Wet screening operations and subsequent screening operations, bucket elevators, and belt conveyors in the production line that process saturated materials up to the next crusher, grinding mill, or storage bin in the production line; or
  - 278.2 Screening operations, bucket elevators, and belt conveyors in the production line downstream of wet mining operations that process saturated materials up to the first crusher, grinding mill, or storage bin in the production line.

- **WET MINING OPERATION:** A mining or dredging operation designed and operated to extract any nonmetallic mineral from deposits existing at or below the water table, where the nonmetallic mineral is saturated with water.
- **WET SCREENING OPERATION:** A screening operation which removes unwanted material or which separates marketable fines from the product by a washing process which is designed and operated at all times such that the product is saturated with water.
- **WHEEL WASHER:** A system that is capable of washing the entire circumference of each wheel of the vehicle.
- **WIND-BLOWN DUST:** Visible emissions, from any disturbed surface area, process source, or operation, which are generated by wind action alone.

#### **SECTION 300 - STANDARDS**

## 301 CRUSHING AND SCREENING – PROCESS EMISSION LIMITATIONS AND CONTROLS:

- **Process Emission Limitations:** An owner, operator, or person subject to this rule shall not discharge, cause, or allow to be discharged into the ambient air:
  - **a.** Stack emissions:
    - (1) Exceeding 7% opacity; or
    - (2) Containing more than 0.014 grains/dry standard cubic foot (gr/dscf) of particulate matter.
  - **b.** Fugitive dust emissions exceeding the applicable opacity limits in Table 316-1.

TABLE 316-1 FUGITIVE DUST EMISSION LIMITS FOR CRUSHING AND SCREENING

|                                             | OPACITY LIMITS                             |                            |
|---------------------------------------------|--------------------------------------------|----------------------------|
|                                             | At a facility that commenced construction, |                            |
| EMICCION COUDCE                             | modification, or reconstruction            |                            |
| EMISSION SOURCE                             | Before April 22, 2008                      | On or after April 22, 2008 |
| (1) Any transfer point on a conveying       |                                            |                            |
| system                                      | 7%                                         | 7%                         |
| (2) Any crusher                             | 15%                                        | 12%                        |
| (3) Truck dumping directly into any         |                                            |                            |
| screening operation, feed hopper, or        |                                            |                            |
| crusher                                     | 20%                                        | 20%                        |
| (4) Any other affected operation or process |                                            |                            |
| source                                      | 10%                                        | 7%                         |

- **301.2 Controls:** An owner, operator, or person subject to this rule shall implement process controls described in Section 301.2(a), Section 301.2(b), Section 301.2(c), and Section 301.2(d) of this rule or shall implement process controls described in Section 301.2(a) and Section 301.2(e) of this rule:
  - a. Enclose sides of all shaker screens.

- **b.** Permanently mount watering systems (including, but not limited to, spray bars, a fogging system, or a misting system) on all of the points listed below, excluding wet material processing operations:
  - (1) At every location of fugitive dust emissions from all crushers including, but not limited to, the inlet and outlet of all crushers;
  - (2) At the outlet of all shaker screens;
  - (3) At all material transfer points, excluding transfer points located within a surge tunnel; and
  - (4) At the exit of each surge tunnel, unless a watering system is permanently mounted at all transfer points within the surge tunnel.
- **c.** Operate watering systems, as necessary, on the points listed in Section 301.2(b) of this rule to continuously maintain the applicable minimum moisture content listed below. Compliance shall be demonstrated by conducting moisture testing as specified in Section 312 of this rule.
  - (1) 2% minimum moisture content at all points in a process line where washed feed products are directly feeding a hot mix asphalt plant;
  - (2) 2.5% minimum moisture content at all points in a process line where unwashed feed products are directly feeding a hot mix asphalt plant; and
  - (3) 4% minimum moisture content at all other points in a process line, unless an alternative minimum moisture content has been approved by the Control Officer and the Administrator.
  - (4) An alternative minimum moisture content requested in a permit application and approved by the Control Officer and the Administrator prior to implementation. When requesting an alternative minimum moisture content, the owner, operator, or person subject to this rule shall submit to the Control Officer documentation that justifies the alternative minimum moisture content. Documentation may include, but is not limited to: economic analyses, emissions rates, water availability, and technical feasibility.
- **d.** Maintain watering systems in good operating condition, as verified by daily inspections on days when process equipment is operating, and investigate and correct any problems before continuing and/or resuming operation of process equipment.
- **e.** Enclose and exhaust the regulated process to a properly sized fabric filter baghouse.

### 302 ASPHALTIC CONCRETE PLANTS - PROCESS EMISSION LIMITATIONS AND CONTROLS:

- **Process Emission Limitations:** An owner, operator, or person subject to this rule shall not discharge, or cause, or allow to be discharged into the ambient air:
  - **a.** When producing non-rubberized asphaltic concrete, stack emissions:
    - (1) Exceeding 5% opacity; or

- (2) Containing more than 0.04 gr/dscf (90 mg mg/dscm) of particulate matter.
- **b.** When producing rubberized asphaltic concrete, stack emissions:
  - (1) Exceeding 20% opacity; or
  - (2) Containing more than 0.04 gr/dscf (90 mg/dscm) of particulate matter;
- **c.** When producing rubberized asphaltic concrete, fugitive emissions of blue smoke from the drum dryer exceeding 20% opacity.
- **d.** Fugitive dust emissions exceeding 10% opacity from any affected operation, or process source, excluding truck dumping.
- **e.** Fugitive dust emissions exceeding 20% opacity from truck dumping directly into any asphalt plant feed hopper.
- **302.2 Controls:** An owner, operator, or person subject to this rule shall control and vent exhaust from all drum dryers to a properly sized fabric filter baghouse.

## 303 MATERIAL STORAGE AND SILO LOADING OPERATIONS, CONCRETE PLANTS, AND-BAGGING OPERATIONS - PROCESS EMISSION LIMITATIONS AND CONTROLS:

- **Process Emission Limitations:** An owner, operator, or person subject to this rule shall not discharge or cause or allow to be discharged into the ambient air:
  - a. Stack emissions exceeding 5% opacity; or
  - **b.** Fugitive dust emissions exceeding 10% opacity from any affected operation, or process source, excluding truck dumping.
- **303.2 Controls:** An owner, operator, or person subject to this rule shall implement the following process controls:
  - **a.** On all dry material storage silo(s), install and operate an overflow warning system/device.
  - **b.** On all dry material storage silos installed after June 8, 2005, install a properly sized fabric filter baghouse or equivalent device designed to meet a maximum outlet grain loading of 0.01 gr/dscf.
  - **c.** On dry mix concrete plant loading stations, when loading truck mixed product, implement one of the following process controls:
    - (1) Install and use a rubber fill tube;
    - (2) Install and operate a water spray;
    - (3) Install and operate a properly sized fabric filter baghouse or delivery system;
    - (4) Enclose mixer loading stations such that no visible emissions occur; or
    - (5) Conduct mixer loading stations in an enclosed process building such that no visible emissions from the building occur during the mixing activities.
  - **d.** On each cement storage silo filling process/loading operation, install a pressure control system designed to shut-off the cement silo filling process/loading

- operation if pressure from the delivery truck is excessive, as defined in the approved Operation and Maintenance (O&M) Plan.
- e. On each dry material storage silo filling process/loading operation installed after November 7, 2018, install a pressure control system designed to shut-off the silo filling process/loading operation if pressure from the delivery truck is excessive, as defined in the approved O&M Plan.

#### **304 OTHER OPERATIONS:**

- **304.1** For all dust-generating operations not specifically listed in Sections 301, 302, or 303 of this rule, the owner, operator, or person subject to this rule shall implement fugitive dust control measures to comply with Section 306 and Section 307 of this rule.
- 304.2 Dust-generating operations at a facility subject to the requirements of this rule shall not commence until the owner, operator, or person subject to this rule has obtained an air pollution control permit in accordance with Rule 200 of these rules.
- 304.3 Dust-generating operations that occur before or while portable equipment subject to the requirements of this rule is located at a facility shall not commence until the owner, operator, or person subject to this rule has obtained an air pollution control permit and submitted a move notice in accordance with Rule 200 of these rules.
  - **a.** With each portable source move notice, the owner, operator, or person subject to this rule shall submit, to the Control Officer, a Dust Control Plan that meets the requirements of Section 311 of this rule.
  - **b.** With each portable source move notice, the owner, operator, or person subject to this rule shall submit, to the Control Officer, an O&M Plan that meets the requirements of Section 305 of this rule.

#### 305 AIR POLLUTION CONTROL EQUIPMENT AND APPROVED EMISSION **CONTROL SYSTEM (ECS):** An owner, operator, or person subject to this rule shall provide, properly install and maintain in calibration, in good working order, and in operation air pollution control equipment required by this rule. When selecting air pollution control equipment required by this rule, the owner, operator, or person subject to this rule may consider the site-specific and/or material-specific conditions and logistics of a facility. When doing so, some air pollution control equipment may be more reasonable to implement than others. Regardless, any air pollution control equipment that is installed must achieve the applicable standard(s) required by this rule, as determined by the corresponding test method(s), as applicable, and must achieve other applicable standard(s) set forth in this rule. The owner, operator, or person subject to this rule may submit a request to the Control Officer and the Administrator for the use of alternative air pollution control equipment. The request shall include the proposed alternative air pollution control equipment, the air pollution control equipment that the alternative would replace, and a detailed statement or report demonstrating that the air pollution control equipment would result in equivalent or better emission control than the equipment prescribed in this rule. Nothing in this rule shall be construed to prevent an owner, operator, or person subject to this rule from making such demonstration. Following a decision by the Control Officer and the Administrator to grant the petition, the owner, operator, or person subject to this rule shall incorporate the

alternative air pollution control equipment in any required Operation and Maintenance (O&M) Plan.

- **305.1** Operation and Maintenance (O&M) Plan Requirements for an ECS: For each ECS that is used to comply with this rule or an air pollution control permit, the owner, operator, or person subject to this rule shall:
  - **a.** Submit to the Control Officer for approval an O&M Plan for each ECS and for each ECS monitoring device that is used pursuant to this rule or an air pollution control permit. The O&M Plan(s) shall include all of the following information:
    - (1) ECS equipment manufacturer name and model designation;
    - (2) ECS equipment serial number, or a unique identifier assigned by the owner; and
    - (3) Key system operating parameters, such as temperatures, pressures and/or flow rates, necessary to determine the ECS is functioning properly and operating within design parameters, as well as the acceptable operating range, monitoring frequency, and recording method for each operating parameter.
    - **(4)** Descriptions of maintenance procedures that will be performed on each ECS and ECS monitoring device and the frequency of each maintenance procedure.
  - **b.** Provide and maintain, readily available on-site at all times, the approved O&M Plan(s) for each ECS and each ECS monitoring device that is used pursuant to this rule or to an air pollution control permit.
  - **c.** Install, maintain, and accurately calibrate monitoring devices described in the approved O&M Plan(s). The monitoring devices shall measure pressures, rates of flow, and/or other operating conditions necessary to determine if the control devices are functioning properly.
  - **d.** Fully comply with all the identified actions and schedules provided in each O&M Plan.
  - e. Upon receipt of written notice from the Control Officer that an O&M Plan is deficient or inadequate, submit a revised O&M Plan to the Control Officer within 5 working days of receipt of the Control Officer's written notice, unless such time period is extended by the Control Officer, upon written request, for good cause. During the time that the owner, operator, or person subject to this rule is preparing revisions to the O&M Plan, the owner, operator, or person subject to this rule shall comply with all requirements of this rule.
- **FUGITIVE DUST EMISSION LIMITATIONS:** An owner, operator, or person subject to this rule shall comply with the following limitations at all times and in all areas of a site, unless otherwise specified.
  - 306.1 20% Opacity Limitation: For emissions that are not already regulated by an opacity limit, an owner, operator, or person subject to this rule shall not discharge, cause, or allow to be discharged into the ambient air fugitive dust emissions exceeding 20% opacity, in accordance with the test methods described in Section 503 of this rule and in Appendix C-Fugitive Dust Test Methods of these rules.

- **306.2 Visible Emission Limitation Beyond Property Line:** An owner, operator, or person subject to this rule shall not discharge, cause, or allow to be discharged visible emissions of particulate matter, including fugitive dust beyond the property line within which the emissions are generated.
- **306.3 Wind-Blown Dust:** The fugitive dust emission limitations described in Section 306.1 and Section 306.2 of this rule shall not apply to wind-blown dust, if the owner, operator, or person subject to this rule meets the following conditions:
  - **a.** Has implemented the fugitive dust control measures described in Section 307 of this rule, as applicable, and the fugitive dust emissions cannot be prevented by better application, operation, or maintenance of these fugitive dust control measures;
  - **b.** Has compiled and retained records, in accordance with Section 501.4 of this rule; and
  - **c.** Has implemented the following control measures, as applicable:
    - (1) For an active operation, implement one of the following fugitive dust control measures:
      - (a) Cease operation of any equipment or activity that may contribute to an exceedance of the fugitive dust emission limitations described in Section 306.1 of this rule; or
      - **(b)** Apply water or other suitable dust suppressant to keep the soil visibly moist.
    - (2) For an inactive open storage pile, implement one of the following fugitive dust control measures:
      - (a) Maintain a soil crust by applying water or other suitable dust suppressant or by implementing another fugitive dust control measure, in sufficient quantities to meet the stabilization standards described in Section 505 of this rule.
      - **(b)** Cover open storage pile with tarps, plastic, or other material such that wind will not remove the covering, if open storage pile is less than eight feet high.
    - **(3)** For an inactive-disturbed surface area, implement one of the following fugitive dust control measures:
      - (a) Uniformly apply and maintain surface gravel or a dust suppressant other than water; or
      - **(b)** Maintain a soil crust by applying water or other suitable dust suppressant or by implementing another fugitive dust control measure, in sufficient quantities to meet the stabilization standards described in Section 505 of this rule.
- 306.4 Stabilization Standards for Unpaved Roads and Unpaved Parking Lots and Unpaved Staging Areas: An owner, operator, or person subject to this rule shall not allow silt loading equal to or greater than 0.33 oz/ft² for unpaved roads, unpaved

parking lots, and unpaved staging areas. However, if silt loading is equal to or greater than 0.33 oz/ft², the owner, operator, or person subject to this rule shall not allow:

- a. Silt content to exceed 6% for unpaved roads; or
- **b.** Silt content to exceed 8% for unpaved parking lots and staging areas.
- **306.5 Stabilization Standards for all other areas:** An owner, operator, or person subject to this rule shall stabilize all areas of the facility, excluding unpaved roads, unpaved parking lots, and unpaved staging areas, in order to meet at least one of the standards listed below, as applicable:
  - a. Maintain visible soil moisture;
  - **b.** Maintain a soil crust;
  - **c.** Maintain a threshold friction velocity (TFV) for disturbed surface areas corrected for non-erodible elements of 100 cm/second or higher;
  - **d.** Maintain a flat vegetative cover (i.e., attached (rooted) vegetation or unattached vegetative debris lying on the surface with a predominant horizontal orientation that is not subject to movement by wind) that is equal to at least 50%;
  - **e.** Maintain a standing vegetative cover (i.e., vegetation that is attached (rooted) with a predominant vertical orientation) that is equal to or greater than 30%;
  - **f.** Maintain a standing vegetative cover (i.e., vegetation that is attached (rooted) with a predominant vertical orientation) that is equal to or greater than 10% and where the threshold friction velocity is equal to or greater than 43 cm/second when corrected for non-erodible elements:
  - **g.** Maintain a percent cover that is equal to or greater than 10% for non-erodible elements; or
  - **h.** Comply with a standard of an alternative test method, upon obtaining the written approval from the Control Officer and the Administrator.
  - i. If a facility contains more than one type of visibly distinguishable stabilization characteristics, soil textures, vegetation, or other characteristics, each representative surface area will be evaluated separately for stability, in accordance with the appropriate test methods described in Section 505 of this rule and in Appendix C-Fugitive Dust Test Methods of these rules.
- 307 FUGITIVE DUST CONTROL MEASURES: An owner, operator, or person subject to this rule shall implement the fugitive dust control measures described in Sections 307.1 through 307.12 of this rule, as applicable. When selecting a fugitive dust control measure(s), an owner, operator, or person subject to this rule may consider the site-specific and/or material-specific conditions and logistics of a facility. When doing so, some fugitive dust control measures may be more reasonable to implement than others. Regardless, any fugitive dust control measure that is implemented must achieve the applicable standard(s) described in Section 306 of this rule, as determined by the corresponding test method(s), as applicable, and must achieve other applicable standard(s) set forth in this rule. An owner, operator, or person subject to this rule may submit a request to the Control Officer and the Administrator for the use of alternative control measure(s). The request shall include the

proposed alternative control measure, the control measure that the alternative would replace, and a detailed statement or report demonstrating that the measure would result in equivalent or better emission control than the measures prescribed in this rule. Nothing in this rule shall be construed to prevent an owner, operator, or person subject to this rule from making such demonstration. Following a decision by the Control Officer and the Administrator to grant the petition, the facility shall incorporate the alternative control measure in any required Dust Control Plan.

- **307.1 Open Storage Piles and Material Handling:** An owner, operator, or person subject to this rule shall implement all of the following fugitive dust control measures, as applicable. For the purpose of this rule, open storage pile(s) and material handling does not include berms that are installed to comply with 30 CFR 56.93000. However, such berms shall be installed and maintained in compliance with Section 306.1, Section 306.2, and Section 306.5 of this rule.
  - **a.** Prior to, and/or while conducting loading, unloading, and excavating operations, implement one of the following fugitive dust control measures:
    - (1) Spray material with water, as necessary; or
    - (2) Spray material with a dust suppressant other than water, as necessary.
  - **b.** When not conducting loading, unloading, and excavating operations, implement one of the following fugitive dust control measures:
    - (1) Spray material with water, as necessary;
    - (2) Maintain a 1.5% or more soil moisture content of the open storage pile(s);
    - (3) Locate open storage pile(s) in a pit/in the bottom of a pit;
    - (4) Arrange open storage pile(s) such that storage pile(s) of larger diameter products are on the perimeter and act as barriers to/for open storage pile(s) that could create fugitive dust emissions;
    - (5) Construct and maintain wind barriers, storage silos, or a three-sided enclosure with walls, whose length is no less than equal to the length of the pile, whose distance from the pile is no more than twice the height of the pile, whose height is equal to the pile height, and whose porosity is no more than 50%;
    - (6) Cover open storage piles with tarps, plastic, or other material to prevent wind from removing the coverings; or
    - (7) Maintain a visible crust.
  - **c.** When installing new open storage pile(s), an owner, operator, or person subject to this rule shall implement all of the following fugitive dust control measures:
    - (1) Install the open storage pile(s) 25 feet or more from the property line. An owner, operator, or person subject to this rule may be allowed to install the open storage pile(s) less than 25 feet from the property line, if the owner, operator, or person subject to this rule can demonstrate to the Control Officer that there is not adequate space to install the open storage pile(s) 25

- feet or more from the property line. Such demonstration shall be made in writing and approved by the Control Officer; and
- (2) Limit the height of the open storage pile(s) to less than 45 feet.
- **d.** For any open storage pile(s) that are more than eight feet high and that are not covered, the owner, operator, or person subject to this rule shall install, use, and maintain a water truck or other method that is capable of completely wetting the surfaces of the open storage pile(s).
- 307.2 Unpaved Parking Lots, Staging Areas, and Areas Where Support Equipment and Vehicles Operate: An owner, operator or person subject to this rule shall implement one of the following fugitive dust control measures on areas other than the areas identified in Section 307.3 and Section 307.4 of this rule where loaders, support equipment, and vehicles operate.
  - a. Apply and maintain water;
  - **b.** Apply and maintain a dust suppressant, other than water; or
  - **c.** Apply and maintain a layer of washed gravel that is at least six inches deep.

#### 307.3 Haul/Access Roads that Are Not in Permanent Areas of a Facility:

- **a.** An owner, operator or person subject to this rule shall implement one of the following fugitive dust control measures, as applicable, before engaging in the use of haul/access roads. Compliance with the provisions of this section of this rule shall not relieve any person subject to the requirements of this section of this rule from complying with any other federally enforceable requirements (i.e., a permit issued under Section 404 of the Clean Water Act).
  - (1) Install and maintain bumps, humps, or dips for speed control and apply water, as necessary;
  - (2) Limit vehicle speeds and apply water, as necessary;
  - (3) Install and maintain a paved surface;
  - (4) Apply and maintain a layer of washed gravel that is six inches deep;
  - (5) Apply a dust suppressant, other than water; or
  - (6) Install and maintain a cohesive hard surface.
- b. For a new facility, if it is determined that none of the fugitive dust control measures described in Section 307.3(a) of this rule can be technically and feasibly implemented, then the owner, operator, or person subject to this rule shall maintain a distance of 25 feet or more between the property line and haul/access roads associated with the new facility. Such determination shall be made and approved in writing by the Control Officer and the Administrator and shall be approved in the Dust Control Plan.

#### 307.4 On-Site Traffic:

**a.** An owner, operator, or person subject to this rule shall require all batch trucks and delivery trucks to remain on roads with paved surfaces or cohesive hard surfaces.

- **b.** An owner, operator, or person subject to this rule shall require all aggregate trucks to remain on paved surfaces or cohesive hard surfaces, except when driving on roads leading to and from aggregate loading areas/loading operations, as approved in the Dust Control Plan.
- c. An owner, operator, or person subject to this rule shall require all batch trucks and delivery trucks to exit the facility/operation only through exits that comply with the trackout control device requirements in Section 307.6 of this rule.
- **d.** An owner, operator, or person subject to this rule shall pave or install a cohesive hard surface on permanent areas of a facility on which vehicles drive, as approved in the Dust Control Plan.

#### 307.5 Hauling and/or Transporting Bulk Material:

- **a.** When hauling and/or transporting bulk material off-site, an owner, operator, or person subject to this rule shall implement all of the following control measures:
  - (1) Load all haul trucks such that the freeboard is not less than three inches;
  - (2) Prevent spillage or loss of bulk material from holes or other openings in the cargo compartment's floor, sides, and/or tailgate(s); and
  - (3) Cover haul trucks with a tarp or other suitable closure.
- **b.** When hauling and/or transporting bulk material within the boundaries of the facility, an owner, operator, or person subject to this rule shall implement one of the following control measures:
  - (1) Limit vehicle speed to 15 miles per hour or less while traveling within the facility;
  - (2) Apply water to the top of the load; or
  - (3) Cover haul trucks with a tarp or other suitable closure.
- c. When hauling and/or transporting bulk material within the boundaries of a facility and crossing or accessing an area accessible to the public, an owner, operator, or person subject to this rule shall implement all of the following control measures:
  - (1) Load all haul trucks such that the freeboard is not less than three inches;
  - (2) Prevent spillage or loss of bulk material from holes or other openings in the cargo compartment's floor, sides, and/or tailgate(s); and
  - (3) Cover haul trucks with a tarp or other suitable closure.

#### 307.6 Trackout Control Devices, Trackout, and Spillage:

a. Trackout Control Devices for Facilities with 60 or More Trucks Exiting on Any Day: An owner, operator, or person subject to this rule shall install, maintain, and use a rumble grate and wheel washer, in accordance with all of the following conditions, as applicable at a permanent facility with 60 or more aggregate trucks, mixer trucks, delivery trucks and/or batch trucks exiting the facility on any day onto paved areas accessible to the public.

- (1) An owner, operator, or person subject to this rule shall locate a rumble grate within 10 feet from a wheel washer.
  - (a) The rumble grate and wheel washer shall be located no less than 30 feet prior to each exit that leads to a paved area accessible to the public and that is used by aggregate trucks, mixer trucks, delivery trucks, and/or batch trucks.
  - **(b)** An owner, operator, or person subject to this rule may be allowed to install a rumble grate and wheel washer less than 30 feet prior to each exit if the owner, operator, or person subject to this rule can demonstrate to the Control Officer that there is not adequate space to install a rumble grate and wheel washer no less than 30 feet prior to each exit and that a rumble grate and wheel washer at a shorter distance will be adequate to prevent trackout.
  - (c) A vehicle wash and/or a cosmetic wash may be substituted for a wheel washer, provided such vehicle wash and/or cosmetic wash has at least 40 pounds per square inch (psi) water spray from the nozzle, meets the definition of wheel washer (i.e., is capable of washing the entire circumference of each wheel of the vehicle), is operated in such a way that visible deposits are removed from the entire circumference of each wheel of the vehicle exiting the wash, is installed, maintained, and used in accordance with criteria in Section 307.6(a)(1)-(6) of this rule, and is approved in the Dust Control Plan for the facility.
- (2) An owner, operator, or person subject to this rule shall ensure that all aggregate trucks, mixer trucks, delivery trucks, and/or batch trucks exit the facility via the rumble grate first and then the wheel washer.
- (3) An owner, operator, or person subject to this rule shall post a sign by the rumble grate and wheel washer to designate the speed limit as 5 miles per hour.
- (4) An owner, operator, or person subject to this rule shall pave the roads from the rumble grate and wheel washer to the facility exits leading to paved areas accessible to the public.
- (5) An owner, operator, or person subject to this rule shall ensure that all aggregate trucks, mixer trucks, delivery trucks, and/or batch trucks remain on the paved roads between the rumble grate and wheel washer and the facility exits leading to paved areas accessible to the public.
- **(6)** An owner, operator, or person subject to this rule shall have a water pressure gauge available on-site to measure nozzle pressure if a vehicle wash and/or cosmetic wash is substituted for a wheel washer.
- b. Trackout Control Devices for Facilities with Less than 60 Trucks Exiting on Any Day: An owner, operator, or person not subject to Section 307.6(a) of this rule shall install, maintain, and use a rumble grate, wheel washer, or truck washer in accordance with all of the following:

- (1) A rumble grate, wheel washer, or truck washer shall be located no less than 30 feet prior to each exit that leads to a paved area accessible to the public and that is used by aggregate trucks, mixer trucks, delivery trucks, and/or batch trucks.
  - (a) An owner, operator, or person subject to this rule may be allowed to install a rumble grate, wheel washer, or truck washer less than 30 feet prior to each exit if the owner and/or operator of a facility can demonstrate to the Control Officer that there is not adequate space to install a rumble grate, wheel washer, or truck washer no less than 30 feet prior to each exit and that a rumble grate, wheel washer, or truck washer at a shorter distance will be adequate to prevent trackout.
- (2) An owner, operator, or person subject to this rule shall ensure that all aggregate trucks, mixer trucks, delivery trucks, and/or batch trucks exit the facility via a rumble grate, wheel washer, or truck washer.
- (3) An owner, operator, or person subject to this rule shall post a sign by the rumble grate, wheel washer, or truck washer to designate the speed limit as 5 miles per hour.
- (4) If haul/access roads are unpaved between the rumble grate, wheel washer, or truck washer and the facility exits leading to paved areas accessible to the public, a gravel pad shall be installed, maintained, and used from the rumble grate, wheel washer, or truck washer to such paved areas accessible to the public. The gravel pad shall be flushed with water or completely replaced as necessary to comply with the trackout threshold described in Section 307.6(d) of this rule.

#### c. Exemptions from Trackout Control Device Requirements:

- (1) An owner, operator, or person subject to his rule shall not be required to install, maintain, and use a wheel washer at a facility that has all paved roads and meters aggregate or related materials directly to a ready-mix or hot mix asphalt truck, with the exception of returned products. The owner, operator, or person subject to this rule shall install, maintain, and use a rumble grate.
- (2) An owner, operator, or person subject to his rule shall not be required to install, maintain, and use a wheel washer at a facility that is less than 5 acres in land size and handles recycled asphalt and recycled concrete exclusively. An owner, operator, or person subject to this rule shall install, maintain, and use a rumble grate and a gravel pad on all unpaved roads leading to the facility exits leading to paved areas accessible to the public.
- (3) An owner, operator, or person subject to his rule shall not be required to install, maintain, and use a wheel washer at a facility that has a minimum of <sup>1</sup>/<sub>4</sub> mile paved roads leading from a rumble grate to the facility exits leading to paved areas accessible to the public.
- (4) An owner, operator, or person subject to his rule shall not be required to install, maintain, and use a wheel washer at a facility that meets the definition of infrequent operations, as defined in Section 238 of this rule. An owner, operator, or person subject to this rule shall install, maintain, and use a

rumble grate and a gravel pad. The gravel pad shall be installed for a distance of no less than 100 feet from the rumble grate to the facility exits leading to paved areas accessible to the public. An owner, operator, or person subject to this rule shall keep records in accordance with Section 500 of this rule, as applicable. An owner, operator, or person subject to this rule shall notify the Control Officer in the event that the facility will operate more than 52 days per year based on the average rolling 3-year period after June 8, 2005 and the owner, operator, or person subject to this rule shall comply with Section 307.6 of this rule, as applicable.

- (5) An owner, operator, or person subject to this rule shall not be required to install, maintain, or use a wheel washer, rumble grate, or other trackout control device specified in Section 307.6(a)-(b) of this rule, where the only possible fugitive dust release from the facility may be generated from a process that is otherwise vented or controlled through an approved emission control system and provided the following controls are in place:
  - (a) A paved surface is installed and maintained on all internal travel, parking, and vehicle maneuvering areas;
  - **(b)** All emissions from processes that create dust are captured by an approved emission control system operated in accordance with Section 305.1 of this rule;
  - **(c)** All dry material storage silos are equipped with an overflow warning system/device and a pressure control system which prevents spillage during silo loading;
  - **(d)** All material from rail car bottom dumping, for rail car unloading, is contained in areas where no vehicle use or maneuvering is permitted; and
  - **(e)** All material transfer operations are conducted in a manner that prevents spillage of material to the ground.

#### d. Trackout Distance:

- (1) An owner, operator, or person subject to this rule shall not allow trackout to extend a cumulative distance of 25 linear feet or more from all facility exits onto paved areas accessible to the public.
- **(2)** An owner, operator, or person subject to this rule shall clean up all trackout at the end of the work day.
- e. Cleaning Paved Roads Identified in the Dust Control Plan: An owner, operator, or person subject to this rule shall clean all paved roads identified in the Dust Control Plan for a facility in accordance with all of the following as applicable:
  - (1) An owner, operator, or person subject to this rule at a facility with 60 or more aggregate trucks, mixer trucks, delivery trucks, and/or batch trucks exiting the facility on any day shall sweep the paved roads with a street sweeper by the end of each production work shift, if there is evidence of dirt and/or other bulk material extending a cumulative distance of 12 linear feet or more on any paved road.

- (2) An owner, operator, or person subject to this rule at a facility with less than 60 aggregate trucks, mixer trucks, delivery trucks, and/or batch trucks exiting the facility on any day shall sweep the paved roads with a street sweeper by the end of every other work day, if there is evidence of dirt and/or other bulk material extending a cumulative distance of 12 linear feet or more on any paved road. On the days that paved roads are not swept, if there is evidence of dirt and/or other bulk material extending a cumulative distance of 12 linear feet or more on any paved road, an owner, operator, or person subject to this rule shall remove the dirt and/or other bulk material from the paved internal road by the end of the work day.
- (3) An owner, operator or person subject to this rule who purchases street sweepers after June 8, 2005, shall purchase street sweepers that meet the criteria of PM<sub>10</sub>-efficient South Coast Air Quality Management Rule 1186 certified street sweepers.
- (4) An owner, operator, or person subject to this rule shall use South Coast Air Quality Management Rule 1186 certified street sweepers to sweep paved roads at a new facility.
- **f. Spillage:** An owner, operator, or person subject to this rule shall comply with the following requirements:
  - (1) Maintain all spillage in a stabilized condition with dust suppressants until removal.
  - (2) Clean-up all spillage at the end of the work day.
- **307.7 Weed Abatement by Discing or Blading:** An owner, operator, or person subject to this rule shall implement all of the following fugitive dust control measures before, during, and after weed abatement by discing or blading:
  - a. Before weed abatement by discing or blading occurs, apply water;
  - b. While weed abatement by discing or blading is occurring, apply water; and
  - **c.** After weed abatement by discing or blading occurs, pave, apply gravel, apply water, apply a suitable dust suppressant other than water, or establish vegetative ground cover.
- **307.8 Demolition:** An owner, operator, or person subject to this rule shall implement all of the following fugitive dust control measures for demolition activities:
  - a. Apply water to demolition debris immediately following demolition activity; and
  - **b.** After demolition, apply water to all soil surfaces to establish a visible crust and to prevent wind erosion.
- **307.9 Blasting Operations:** An owner, operator, or person subject to this rule shall prewater and maintain surface soils in a stabilized condition where support equipment and vehicles will operate when conducting blasting operations.
- **307.10 Other Dust-Generating Operations:** An owner, operator, or person subject to this rule shall implement the following control measures, as applicable, when conducting dust-generating operations not specifically listed in Section 307.1 through Section

307.9 of this rule, or when a dust-generating operation is finished for a period of 30 days or longer:

- **a.** Before disturbed surface areas are created, implement one of the following control measures:
  - (1) Pre-water site to depth of cuts, allowing time for penetration; or
  - (2) Phase work to reduce the amount of disturbed surface areas at any one time.
- **b.** While disturbed surface areas are being created, implement one of the following control measures:
  - (1) Apply water or other suitable dust suppressant other than water to keep the soil visibly moist;
  - (2) Apply water to maintain a soil moisture content at a minimum of 12%, as determined by ASTM Method D2216-05 or other equivalent method as approved by the Control Officer and the Administrator. For areas that have optimum moisture content for compaction of less than 12%, as determined by ASTM Method D1557-02e1 or other equivalent method approved by the Control Officer and the Administrator, maintain at least 70% of the optimum soil moisture content; or
  - (3) Implement control measures described in Section 307.10(b)(1) or Section 307.10(b)(2) of this rule and construct fences or three-foot to five-foot high wind barriers with 50% or less porosity adjacent to roadways or urban areas to reduce the amount of wind-blown material leaving a site.
- c. When a dust-generating operation is finished for a period of 30 days or longer, the owner, operator, or person subject to this rule shall implement one of the following control measures on the disturbed surface area within ten days after cessation nonmetallic mineral processing, related operations, or any other dust-generating operations.
  - (1) Pave, apply gravel, or apply a suitable dust suppressant other than water;
  - (2) Establish vegetative ground cover;
  - (3) Implement control measures described in Section 307.10(c)(1) or Section 307.10(c)(2) of this rule and restrict vehicle access to the area;
  - **(4)** Apply water and prevent access by fences, ditches, vegetation, berms, or other suitable barrier or means sufficient to prevent vehicle access as approved by the Control Officer;
  - (5) Restore area such that the vegetative ground cover and soil characteristics are similar to adjacent or nearby undisturbed native conditions.
- **307.11 Nighttime Operations:** An owner, operator or person subject to this rule shall implement, maintain, and use fugitive dust control measures between sunset and sunrise so as to meet all of the applicable requirements in this rule, and shall identify in the Dust Control Plan such fugitive dust control measures.
- **307.12 Soil Moisture:** If water is the chosen control measure in an approved Dust Control Plan, the owner, operator, or person subject to this rule shall operate a water

application system (e.g. a water truck) at the facility while conducting any operations that have the potential to generate fugitive dust emissions, unless a visible crust is maintained or the soil is sufficiently damp to prevent loose grains of soil from becoming dislodged.

- **FACILITY INFORMATION SIGN:** An owner, operator, or person subject to this rule shall erect and maintain a facility information sign at the main entrance such that members of the public can easily view and read the sign at all times. Such sign shall have a white background, have black block lettering that is at least four inches high, and shall contain at least all of the following information:
  - **308.1** Facility name and permittee's name;
  - 308.2 Current number of the air quality permit or of authority to operate under a general permit;
  - 308.3 Name and local phone number of person(s) responsible for dust control matters; and
  - 308.4 Text stating: "Dust complaints? Call Maricopa County Air Quality Department (Insert the accurate Maricopa County Air Quality Department complaint line telephone number)."
- 309 FUGITIVE DUST CONTROL TECHNICIAN: An owner, operator, or person subject to this rule with a rated or permitted capacity of 25 tons or more of material per hour or with five acres or more of disturbed surface area subject to a permit, whichever is greater, shall have in place a Fugitive Dust Control Technician, who shall meet all of the following qualifications:
  - 309.1 Be authorized by the owner, operator, or person subject to this rule to have full authority to ensure that fugitive dust control measures are implemented on-site and to conduct routine inspections, recordkeeping, and reporting to ensure that all fugitive dust control measures are installed, maintained, and used in compliance with this rule.
  - 309.2 Be trained in accordance with the Comprehensive Dust Control Training Class conducted or approved by the Control Officer, successfully complete, at least once every three years, such Comprehensive Dust Control Training Class, and have a valid dust training certification identification card readily accessible on-site while acting as a Fugitive Dust Control Technician.
  - 309.3 Be authorized by the owner, operator, or person subject to this rule to install, maintain, and use fugitive dust control measures, deploy resources, and shutdown or modify equipment or operations as needed.
  - 309.4 Be on-site at all times during primary dust-generating operations related to the purposes for which the permit was obtained.
  - 309.5 Be certified to determine opacity as visible emissions in accordance with the provisions of the EPA Method 9 as specified in 40 CFR, Part 60, Appendix A.
  - 309.6 Be authorized by the owner, operator, or person subject to this rule to ensure that the site superintendent or other designated on-site representative of the owner,

operator, or person subject to this rule and water truck and water pull drivers for each site be trained in accordance with the Basic Dust Control Training Class conducted or approved by the Control Officer with jurisdiction over the site and successfully complete, at least once every three years, such Basic Dust Control Training Class.

#### 310 BASIC DUST CONTROL TRAINING CLASS:

- 310.1 At least once every three years, the plant manager, foreman, or other designated onsite representative of the permit holder, if present at a site that has more than one acre of disturbed surface area that is subject to a permit issued by the Control Officer requiring control of PM<sub>10</sub> emissions from dust-generating operations shall successfully complete a Basic Dust Control Training Class conducted or approved by the Control Officer.
- 310.2 At least once every three years, water truck and water-pull drivers shall successfully complete a Basic Dust Control Training Class conducted or approved by the Control Officer.
- 310.3 Completion of the Comprehensive Dust Control Training Class, as required in Section 309.2 of this rule, shall satisfy the requirement of this section of this rule.
- 310.4 For water truck drivers hired on or after November 7, 2018, basic training is required within 60 days from the date of hire unless such time period is extended by the Control Officer, upon written request, for good cause.

#### 311 DUST CONTROL PLAN:

- An owner, operator, or person subject to this rule shall submit, to the Control Officer, a Dust Control Plan that includes, at a minimum, the following information:
  - **a.** Name(s), address(es), and phone numbers of person(s) responsible for the submittal and implementation of the Dust Control Plan and responsible for the dust-generating operation.
  - **b.** Equipment associated with any process fugitive emissions to be implemented, in order to comply with Sections 301, 302, and 303 of this rule.
  - **c.** Fugitive dust control measures to be implemented, in order to comply with Sections 305, 306, and 307 of this rule.
  - **d.** Appropriate control measures, or a combination thereof, for every actual and potential source of fugitive dust; and
  - **e.** Fugitive dust control measures to be implemented for other affected operations not identified in this rule, as applicable.
  - **f.** Installation date of trackout control device, if applicable;
  - **g.** Dust suppressants to be applied, including all of the following product specifications or label instructions for approved usage:
    - (1) Method, frequency, and intensity of application;
    - (2) Type, number, and capacity of application equipment; and

- (3) Information on environmental impacts and approvals or certifications related to appropriate and safe use for ground application.
- h. Operation and maintenance procedures for process controls and fugitive dust control measures, including but not limited to, gravel pads, wheel washers, truck washers, rumble grates, watering systems, and street sweepers, that are used to comply with this rule or an air pollution control permit.
- i. A drawing, on  $8\frac{1}{2}$ " x 11" paper, that shows all of the following information:
  - (1) Property boundaries and project site boundaries with linear dimensions;
  - (2) Location, linear dimensions, and specific surfaces treatment(s) and/or control measures utilized (i.e., install and maintain a paved surface or a cohesive hard surface) for staging areas, open storage piles, haul/access roads, parking areas, and permanent areas of the facility;
  - (3) Location and type of trackout control device, if applicable;
  - (4) Nearest public roads;
  - (5) North arrow;
  - (6) Planned exit locations onto areas accessible to the public; and
  - (7) Unpaved parking lot(s).
- j. The method that will be used for soil moisture testing: ASTM C566-97 (2004) "Standard Test Method for Total Evaporable Moisture Content of Aggregate by Drying" or Speedy Moisture Meter.
- **k.** A process diagram that identifies the progression of material containing aggregate material less than 0.25 inch in diameter through the process and that includes all of the following information:
  - (1) Identification of all screen outlets of aggregate material less than 0.25 inch in diameter:
  - (2) Identification of all crusher outlets of aggregate material less than 0.25 inch in diameter;
  - (3) Identification of all stacker points of aggregate material less than 0.25 inch in diameter;
  - **(4)** Identification of sample points for soil moisture tests required by Section 312 of this rule; and
  - (5) Identification of the applicable minimum soil moisture content required by Section 301.2(c) of this rule for each sample point for soil moisture tests.
- An owner, operator, or person subject to this rule shall submit to the Control Officer a revised Dust Control Plan at each of the following times:
  - **a.** At the time such owner, operator, or person subject to this rule submits an application for an air pollution control permit to the Control Officer;

- **b.** Prior to commencing dust generating operations, nonmetallic mineral processing, or any related operations in areas of a facility that were not previously identified in the approved Dust Control Plan;
- **c.** Prior to installing, maintaining, or using new roads (excluding new roads within a pit), new parking areas, or new staging areas that were not previously identified in the approved Dust Control Plan;
- **d.** Prior to modifying any dust control measures specified in the approved Dust Control Plan;
- **e.** Prior to implementing changes to the soil moisture testing protocol in the approved Dust Control Plan, except as allowed in Section 312 of this rule; and
- **f.** Prior to commencing construction or demolition projects that were not previously described in the approved Dust Control Plan.
- 311.3 The Control Officer shall approve, disapprove, or conditionally approve the Dust Control Plan, in accordance with the criteria used to approve, disapprove or conditionally approve a permit. Failure to comply with the provisions of an approved Dust Control Plan shall be deemed a violation of this rule.
- 311.4 The Control Officer shall provide written notification to the owner, operator, or person subject to this rule, if the Control Officer determines any of the following:
  - a. That a Dust Control Plan is incomplete;
  - **b.** That the Dust Control Plan is conditionally approved; or
  - **c.** That an approved Dust Control Plan has been followed, yet fugitive dust emissions still exceed the standards of this rule and, therefore, a revised Dust Control Plan is required.
- 311.5 The owner, operator, or person subject to this rule, who receives a notice as described in Section 311.4 of this rule, shall make written revisions to the Dust Control Plan and shall submit such revised Dust Control Plan to the Control Officer within three working days of receipt of the Control Officer's written notice, unless such time period is extended by the Control Officer, upon written request, for good cause. During the time that such owner, operator, or person subject to this rule is preparing revisions to the Dust Control Plan, such owner, operator, or person shall still comply with all requirements of this rule.
- The owner, operator, or person subject to this rule shall keep a complete copy of the approved Dust Control Plan on-site at all times.
- An owner, operator, or person subject to this rule shall make available the approved Dust Control Plan to all contractors and subcontractors at a facility who are engaged in nonmetallic mineral processing or related operations that are subject to this rule.

#### 312 CRUSHING AND SCREENING - MOISTURE TESTING REQUIREMENTS:

**Moisture Testing Procedures:** An owner, operator, or person subject to this rule shall conduct moisture tests as follows:

- **a.** Moisture testing shall be conducted on aggregate material less than 0.25 inch in diameter at the sampling points specified in Section 312.1(a)(1)-(3) of this rule.
  - (1) At the beginning of the process line from the feed entering the line;
  - (2) At a point between the initial shaker screen and the final stack point; and
  - (3) From each stacker point or material placed on the stacker conveyor containing aggregate material less than 0.25 inch in diameter.
  - (4) An owner, operator, or person subject to this rule may request in writing that moisture testing be conducted at sampling points other than those specified in Section 312.1(a)(1)-(3). In the request, the owner, operator, or person subject to this rule shall submit to the Control Officer documentation regarding the requested sampling points. The request shall include the following explanation(s): (1) safety issues (i.e., worker exposure to moving equipment) and/or feasibility issues (i.e., guards on transfer points) affecting the sampling location(s), (2) proposed alternative sampling location(s) with explanation that such alternative sampling location(s) will ensure compliance with all other moisture testing procedures in this rule, and (3) identification of such alternative sampling location(s) in the approved Dust Control Plan or in a revision approved to the Dust Control Plan.
  - (5) An owner, operator, or person subject to this rule may request in an application for an air pollution control permit, with explanation, an alternative plan that justifies conducting fewer soil moisture tests. In the request, the owner, operator, or person subject to this rule shall submit to the Control Officer documentation regarding conducting fewer soil moisture tests than are required, including, but not limited to, economics, emissions rates, water availability, and technical feasibility. In addition, the owner, operator, or person subject to this rule shall demonstrate that the proposed alternative compliance\_demonstration plan will be equivalent in determining compliance with the soil moisture content requirements. Prior approval from the Control Officer and the Administrator shall be received before implementing the plan.
- **b.** Moisture testing shall be conducted in accordance with the following requirements:
  - (1) Moisture testing shall be conducted in accordance with the requirements of ASTM C566-97 (2004) "Standard Test Method for Total Evaporable Moisture Content of Aggregate by Drying" with the exception that smaller sample portions may be used.
  - (2) As an alternative to Section 312.1(b)(1) of this rule, an owner, operator, or person subject to this rule may use the Speedy Moisture Meter after receiving written approval from the Control Officer and after submitting to the Control Officer a written request that includes the following information:
    - (a) A description of the alternative testing equipment, including the display range, maintenance requirements, and any limitations;

- **(b)** A correlation analysis conducted using 20 samples from the Speedy Moisture Meter and the results using ASTM C566-97 (2004). A separate correlation analysis shall be done for each unit (serial number shall be specified);
- **(c)** A description of the calibration procedures that includes the following information:
  - (i) Calibration of each Speedy Moisture Meter (serial number shall be specified) on at least a biweekly basis against ASTM C566-97 (2004) as a standard;
  - (ii) Identification of at least three sampling points per process line to be used for calibration in the Dust Control Plan required by Section 311 of this Rule. The three sampling points shall be at the beginning of the process line, at a point between the primary shaker and the final stack point, and at the end of the process.
- **(d)** An agreement to revert to ASTM C566-97 (2004) if the Speedy Moisture Meter results do not correlate with ASTM C566-97 (2004); and
- (e) Modification of the site-specific O&M Plan or Dust Control Plan to include the information described in Sections 312.1(b)(2)(c) and (d) of this rule.

#### 312.2 Moisture Testing Frequency:

- **a.** If the owner, operator, or person subject to this rule is required to have in place a Fugitive Dust Control Technician according to Section 309 of this rule, then soil moisture tests shall be conducted twice daily.
- **b.** If the owner, operator, or person subject to this rule is not required to have in place a Fugitive Dust Control Technician according to Section 309 of this rule, then soil moisture tests shall be conducted once daily.
- **c.** On days when moisture testing is required, an owner, operator, or person subject to this rule shall collect a sample from each location identified in the approved Dust Control Plan within one hour after startup of the crushing and screening operation.
- **d.** On days when twice daily moisture testing is required, an owner, operator, or person subject to this rule shall collect a sample from each location identified in the approved Dust Control Plan at 3 pm or within one hour before shutdown of the crushing and screening operation.
- e. When crushing and screening operations continue for more than 16 hours on a day when twice daily moisture testing is required, an additional soil moisture sample shall be collected from each sampling location identified in the approved Dust Control Plan such that soil moisture samples are collected no less frequently than once in every 8-hour period.

#### 312.3 Reduction in Moisture Testing Frequency:

**a.** If the owner, operator, or person subject to this rule demonstrates that the applicable moisture contents listed in Section 301.2(c) of this rule are maintained

for a minimum of 20 consecutive soil moisture samples collected from each of the sampling locations identified in the approved Dust Control Plan, then soil moisture tests may be conducted weekly in accordance with the test methods described in Section 312.1 of this rule, without prior approval from the Control Officer.

- **b.** If the owner, operator, or person subject to this rule fails to comply with the opacity limitations described in Sections 301.1, 306.1, or 306.2 of this rule and/or if two consecutive soil moisture tests result in a moisture level below the applicable moisture contents listed in Section 301.2(c) of this rule, then the owner, operator, or person subject to this rule shall resume the sampling frequency specified in Section 312.2 of this rule, as applicable.
- c. Each time a portable crushing operation or a portable screening operation is moved, the owner, operator, or person subject to this rule shall resume the sampling frequency specified in Section 312.2 of this rule, as applicable. The owner, operator or person subject to this rule shall repeat the procedures in Section 312.3(a) of this rule each time the portable crushing or screening operation is moved before reducing the frequency of moisture testing.
- **Moisture Testing Exemption:** Moisture testing is not required on a crusher and/or screen plant that is enclosed and exhausted to a properly sized fabric filter baghouse.

# 313 STANDARDS OF PERFORMANCE FOR NONMETALLIC MINERAL PROCESSING: An owner, operator, or person subject to this rule shall comply with all applicable requirements of 40 CFR Part 60 Subpart OOO—Standards of Performance for Nonmetallic Mineral Processing Plants.

#### **SECTION 400 – ADMINISTRATIVE REQUIREMENTS**

## 401 COMPLIANCE SCHEDULE FOR NEWLY AMENDED PROVISIONS OF THIS RULE: The newly amended provisions of this rule shall become effective upon adoption of this rule except as follows:

**401.1 Process Controls:** Process controls required by Sections 301.2, 302.2, and 303.2 of this rule shall be implemented by February 7, 2019.

#### 401.2 O&M Plan:

- **a.** If modifications to an O&M Plan are required to achieve compliance with the requirements of this rule, an owner, operator, or person subject to this rule shall revise/update all O&M Plans by February 7, 2019.
- **b.** The Control Officer shall take final action on an O&M Plan revision/update to address the newly amended provisions of this rule within 30 calendar days of the filing of the complete O&M Plan revision/update. The Control Officer shall notify the applicant in writing of his approval or denial.

#### 401.3 Dust Control Plan:

**a.** An owner, operator, or person subject to this rule shall revise/update all Dust Control Plans required by this rule by February 7, 2019.

- **b.** The owner and/or operator of a new facility shall submit to the Control Officer a Dust Control Plan at the time such owner and/or operator submits a permit application to the Control Officer.
- c. The Control Officer shall take final action on a Dust Control Plan revision/ update to address the newly amended provisions of this rule within 30 calendar days of the filing of the complete Dust Control Plan revision/update. The Control Officer shall notify the applicant in writing of his approval or denial.
- **401.4 Rumble Grates:** Rumble grates that are installed or moved on or after November 7, 2018 shall meet the requirements described in Section 260 of this rule. If a rumble grate installed prior to November 7, 2018, as identified by an installation date in the Dust Control Plan, is modified (e.g., rumble grate dividers are raised), such rumble grate is not subject to the requirements in Section 260 of this rule. However, should a source receive two or more violations for trackout during any consecutive 24-month period, then the owner, operator, or person subject to this rule shall meet the requirements described in Section 260 of this rule.

#### SECTION 500 - MONITORING AND RECORDS

- **MONITORING, RECORDKEEPING AND REPORTING:** An owner, operator, or person subject to this rule shall comply with the following requirements. Records shall be retained for five years.
  - 501.1 Operational information required by this rule shall be kept on-site, in written or electronic format, and in a complete and consistent manner and shall be made available without delay to the Control Officer upon request. Paper or electronic copies of records required by this rule shall be made available to the Control Officer upon request.
  - **501.2** Records of the following process and operational information, as applicable, are required:
    - **a. General Data:** Daily records shall be kept for all days that process equipment is operating. Records shall include all of the following:
      - (1) Hours of operation;
      - (2) Type of batch operation (wet, dry, central);
      - (3) Throughput per day of materials including sand, aggregate, and cement (tons/day);
      - **(4)** Volume of concrete produced per day (cubic yards/day) and amount of asphaltic concrete produced per day (tons/day);
      - (5) Amount of aggregate mined per day (tons/day);
      - **(6)** Amount of each nonmetallic mineral and amount of each dry material delivered per day (tons/day or cubic yards/day);
      - (7) For facilities that assert to be below the thresholds in Section 307.6(a) and Section 307.6(e)(1) of this rule, the number of aggregate trucks, mixer trucks, delivery trucks, and/or batch trucks exiting the facility; and

**(8)** Description of operating condition of process controls as required in Section 301.2(d) of this rule.

#### b. Soil Moisture Testing:

- (1) The date, time, and location for each soil moisture sample collected;
- (2) Results of each soil moisture test; and
- (3) Corrective actions taken when soil moisture test results are below the applicable minimum moisture content in Section 301.2(c) of this rule.
- **501.3 O&M Plan Records:** An owner, operator, or person subject to this rule shall maintain all of the following records in accordance with the approved O&M Plan:
  - a. For Any ECS and Any ECS Monitoring Devices that are Used Under this Rule or Under an Air Pollution Control Permit:
    - (1) Periods of time that an approved ECS is operating to comply with this rule;
    - (2) Periods of time that an approved ECS is not operating;
    - (3) Flow rates;
    - (4) Pressure drops;
    - (5) Other conditions and operating parameters necessary to determine if the approved ECS is functioning properly;
    - **(6)** Results of visual inspections;
    - (7) Correction action taken, if necessary; and
    - (8) Dates of all service or maintenance related activities for each approved ECS.
- 501.4 Dust Control Plan Records: An owner, operator, or person subject to this rule shall compile, maintain, and retain a written record of self-inspection of all fugitive dust control measures implemented, in order to comply with the Dust Control Plan, on each day that any activity capable of generating fugitive dust is conducted at the facility. Self-inspection records shall include daily inspections for crusted or damp soil, trackout conditions and clean-up measures, daily water usage for dust control measures, and dust suppressant application. Such written records shall also include the following information:
  - **a.** Method, frequency, and intensity of application or implementation of the control measures;
  - **b.** Method, frequency, and amount of water application to the site;
  - **c.** Street sweeping frequency;
  - **d.** Types of surface treatments applied to and maintenance of trackout control devices, gravel pads, fences, wind barriers, and tarps;
  - e. Types and results of test methods conducted;
  - **f.** If contingency control measures are implemented, actual application or implementation of contingency control measures and why contingency control measures were implemented;

- **g.** List of subcontractors' names and registration numbers, if applicable, updated when changes are made; and
- **h.** Names of employee(s) who successfully completed dust control training class(es) required by Sections 309 and 310 of this rule, and the date of the class(es) that such employee(s) successfully completed.
- 501.5 Basic Dust Control Training Class Records: An owner, operator, or person subject to this rule shall compile, maintain, and retain a written record for each employee subject to Section 310 of this rule. Such written records shall include the name of the employee, the date of the Basic Dust Control Training Class that such employee successfully completed, and the name of the agency/representative who conducted such class.

#### 502 COMPLIANCE DETERMINATION FOR PROCESS EMISSIONS AND

**CONTROLS:** Compliance determinations for activities regulated by Sections 301 (excluding Section 301.1(b)(3)), 302, and/or 303 of this rule shall be made according to the test methods for those subparts of 40 CFR Part 60, Appendix A, as listed below. Such subparts of 40 CFR Part 60, Appendix A and 40 CFR Part 51, Appendix M are incorporated by reference as indicated. The EPA test methods as they exist in the CFR, as listed below, are incorporated by reference in Appendix G of these rules. This incorporation by reference includes no future editions or amendments. Copies of test methods referenced in Section 502 of this rule are available at the Maricopa County Air Quality Department. When more than one test method is permitted for a compliance determination, then an exceedance of the limits established in this rule, determined by any of the applicable test methods, constitutes a violation of this rule.

**Grain Loading:** Particulate matter concentration shall be determined using the applicable EPA Reference Method 5, 40 CFR Part 60, Appendix A.

#### 502.2 Opacity Observations:

- a. Opacity observations to measure visible emissions from activities regulated by Sections 301 (excluding truck dumping directly into any screening operation, feed hopper, or crusher), 302 (excluding truck dumping directly into any screening operation, feed hopper, or crusher), and/or 303 of this rule shall be conducted in accordance with the techniques specified in EPA Reference Method 203B (Visual Determination of Opacity of Emissions from Stationary Sources for Time-Exception Regulations), 40 CFR Part 51, Appendix M. The EPA test methods as they exist in the CFR are incorporated by reference in Appendix G of these rules. Emissions shall not exceed the applicable opacity standards described in Section 301, Section 302, and Section 303 of this rule for a period aggregating more than three minutes in any 60-minute period.
- COMPLIANCE DETERMINATION FOR EMISSIONS AND CONTROLS THAT ARE REGULATED BY SECTION 301.1(B)(3), SECTION 302.1(E) AND/OR SECTION 306 OF THIS RULE: To determine compliance with the fugitive dust emission limitations described in Section 301.1(b)(3), Section 302.1(e), and/or Section 306 of this rule, opacity observations shall be conducted in accordance with the techniques specified in Appendix C-Fugitive Dust Test Methods of these rules.

## 504 COMPLIANCE DETERMINATION FOR SOIL MOISTURE CONTENT AND SOIL COMPACTION CHARACTERISTICS TEST METHODS INCORPORATED BY REFERENCE:

- 504.1 ASTM Method D2216-05 ("Standard Test Method for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass"), 2005 edition.
- 504.2 ASTM Method D1557-02e1 ("Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft³ (2,700 kN-m/m³))"), 2002 edition.
- 504.3 ASTM C566-97 (2004) "Standard Test Method for Total Evaporable Moisture Content of Aggregate by Drying".
- 505 COMPLIANCE DETERMINATION FOR STABILIZATION STANDARDS
  TEST METHODS INCORPORATED BY REFERENCE: The stabilization standards described in Section 306 of this rule shall be determined by using the following test methods in accordance with Appendix C-Fugitive Dust Test Methods of these rules:
  - 505.1 Appendix C, Section 2.1.2 (Silt Content Test Method) of these rules to estimate the silt content of the trafficked parts of unpaved roads (not to exceed 6%) and unpaved parking lots (not to exceed 8%).
  - 505.2 Appendix C, Section 2.3 (Test Methods for Stabilization-Soil Crust Determination (The Drop Ball Test)) of these rules for a soil crust.
  - 505.3 Appendix C, Section 2.4 (Test Methods for Stabilization-Determination of Threshold Friction Velocity (TFV) (Sieving Field Procedure)) of these rules for threshold friction velocity (TFV) corrected for non-erodible elements of 100 cm/second or higher.
  - Appendix C, Section 2.5 (Test Methods for Stabilization-Determination of Flat Vegetative Cover) of these rules for flat vegetation cover (i.e., attached (rooted) vegetation or unattached vegetative debris lying on the surface with a predominant horizontal orientation that is not subject to movement by wind) that is equal to at least 50%.
  - 505.5 Appendix C, Section 2.6 (Test Methods for Stabilization-Determination of Standing Vegetative Cover) of these rules for standing vegetation cover (i.e., vegetation that is attached (rooted) with a predominant vertical orientation) that is equal to or greater than 30%.
  - 505.6 Appendix C, Section 2.6 (Test Methods for Stabilization-Determination of Standing Vegetative Cover) of these rules for standing vegetation cover (i.e., vegetation that is attached (rooted) with a predominant vertical orientation) that is equal to or greater than 10% and where the threshold friction velocity is equal to or greater than 43 cm/second when corrected for non-erodible elements.
  - 505.7 Appendix C, Section 2.7 (Test Methods for Stabilization-Rock Test Method) of these rules for a percent cover that is equal to or greater than 10%, for non-erodible elements.
  - 505.8 An alternative test method approved in writing by the Control Officer and the Administrator.

#### 506 CERTIFIED STREET SWEEPING EQUIPMENT LIST INCORPORATED BY

**REFERENCE:** The list of street sweeping equipment (as of July 9, 2004) that has met the South Coast Air Quality Management Rule 1186 certification standards is found in support documents for the South Coast Air Quality Management District Regulation XI-Source Specific Standards, Rule 1186-PM<sub>10</sub> Emissions from Paved and Unpaved Roads and Livestock Operations and is incorporated by reference. A copy of the list of certified street sweeping equipment can also be obtained at the Maricopa County Air Quality Department.