

SECTION 92: FUGITIVE DUST FROM UNPAVED PARKING LOTS AND STORAGE AREAS

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92.0 Fugitive Dust from Unpaved Parking Lots and Storage Areas

92.1 Applicability

- (a) The provisions of this regulation shall apply to Unpaved Parking Lots and storage areas which are 5,000 square feet or larger and are located in Hydrographic Areas 212 (Las Vegas Valley), 216 or 217 (Apex Valley), or in any other Hydrographic Area upon it being designated as nonattainment for PM₁₀; or in any other Hydrographic Area that becomes subject to a PM₁₀ maintenance plan as defined under Title 42, Section 7505a of the U.S. Code (42 U.S. Code § 7505a), and is not regulated by Section 94 of the Clark County Air Quality Regulations (AQRs).
- (b) Unpaved Parking Lots and storage areas include automobile impound yards, wrecking yards, automobile dismantling yards, salvage yards, material handling yards, equestrian staging areas, and storage yards.
- (c) These provisions shall not apply to Stationary Sources as defined in Section 0, except that the Control Measures and stabilization standards in Section 92.3.4 and 92.4 shall apply to the control of Fugitive Dust Emissions, and be enforced by the terms and conditions of the Stationary Source permit.

92.2 Definitions

The following terms have the meanings set forth below for the purposes of Section 92. Any term not defined in these paragraphs shall have the meaning given in Section 0 or the Clean Air Act.

“Alternative asphalt paving” means the application of milled recycled asphalt pavement material in accordance with department specifications that are preapproved in writing by the Control Officer.

“Clean gravel” means a mineral or rock aggregate ranging in size from 0.25-inch to 3-inch on its longest dimension that is either natural or the product of a mineral processing operation and contains no more than 6% silt, by weight.

“Equestrian staging area” means the area(s) used exclusively to load, unload, and saddle horses; organize riders before a ride; and park vehicles used to transport horses.

“Existing unpaved parking lot(s) and(or) storage area(s)” means parking and storage areas that existed prior to January 1, 2003, in Hydrographic Areas 212, 216, or 217; in any other Hydrographic Area upon its being designated as nonattainment for PM₁₀; or in any other Hydrographic Area

that becomes subject to a PM₁₀ maintenance plan, as defined under 42 U.S.C. § 7505a, and is in compliance with all applicable state and local regulations and codes, including those related to land use and zoning.

92.3 Requirements

92.3.1 New Parking Lots or Storage Areas

- (a) New parking lots constructed after January 1, 2003 in Hydrographic Areas 212, 216, or 217; in any other Hydrographic Area upon its being designated as nonattainment for PM₁₀; or in any other Hydrographic Area that becomes subject to a PM₁₀ maintenance plan, as defined under 42 U.S.C. § 7505a, must be Paved.
- (b) New storage areas constructed after January 1, 2003 in Hydrographic Areas 212, 216, or 217; in any other Hydrographic Area upon its being designated as nonattainment for PM₁₀; or in any other Hydrographic Area that becomes subject to a PM₁₀ maintenance plan, as defined under 42 U.S.C. § 7505a, must comply with the control measures described in Sections 92.3.4 (a), (b) or (d)

92.3.2 Existing Unpaved Parking Lot(s) or Storage Area(s)

The owner and/or operator of existing Unpaved Parking Lot(s) or storage area(s) shall implement one or more of the control measures in Section 92.3.4 as needed to comply with the stabilization standards in Section 92.4.

92.3.3 Exempt New and Existing Unpaved Parking Lot(s) or Storage Area(s)

The following activities shall be exempt from the paving requirement in Section 92.3.1(a), but must comply with one or more of the control measures in Section 92.3.4.

- (a) Parking lots for rural public facilities, such as trailheads, campgrounds, and similar facilities where paved parking lots would conflict with the rural nature of these facilities. A rural public facility shall not include any facility located within the BLM Disposal Boundary.
- (b) An area used for storing and handling of landscaping, aggregate, and other similar bulk materials, provided that all access, parking, and loading areas used by on-road vehicles are paved.
- (c) An area used primarily for storage of non-rubber tired vehicles or tracked or heavy equipment that the Control Officer has determined to be of such weight as to damage or destroy pavement (e.g., heavy equipment), provided that all access, parking, and loading areas primarily used by rubber-tired vehicles are paved.

- (d) Equestrian staging areas designed and used exclusively for the loading, unloading, and saddling of horses for equestrian activities. Posted speed limits for vehicles using such designated areas shall not exceed 10 miles per hour.
- (e) An Unpaved Parking Lot and storage areas utilized intermittently, i.e., for a period of 35 days or less during the calendar year.

92.3.4 Control Measures

For the purpose of this regulation, the control measures set forth below shall be considered effectively implemented when the Unpaved Parking Lot or storage area meets the stabilization standards described in Section 92.4.

- (a) Pave, as defined in Section 0.
- (b) Apply alternative asphalt paving.
- (c) Uniformly apply and maintain clean gravel to a depth of two inches.
- (d) Apply and maintain an alternative control measure with prior written approval from the Control Officer.

92.4 Stabilization Standards

- (a) Fugitive dust emissions from unpaved parking lots or storage areas shall not exceed 20 percent opacity based on the opacity test method described in Section 92.6.1 or 50 percent opacity based on the instantaneous method described in Section 92.6.2, 0.33 oz/ft² silt loading, or 6 percent silt content, as determined by Section 92.6.3, except in areas on which clean gravel has been applied under the provisions of Section 92.3.4 (c).
- (b) No owner and/or operator of an unpaved parking lot or storage area shall permit a dust plume from it to cross a property line.

92.5 Recordkeeping & Reporting

- (a) Any person subject to the requirements of this regulation shall compile and retain records that provide evidence of control measure application, by indicating (1) type of treatment or control measure, (2) extent of coverage, and (3) date applied. The records and supporting documentation shall be made available to the Control Officer within 24 hours of a written request.
- (b) Copies of the records required by Section 92.5(a) shall be retained for at least one year. Facilities subject to Section 12.5 shall maintain records in accordance with the recordkeeping requirements of Title 40, Part 70 of the Code of Federal Regulations.

92.6 Test Methods

92.6.1 Opacity Test Method

The purpose of this test method is to estimate the percent opacity of fugitive dust plumes caused by vehicle movement on Unpaved Parking Lots and storage areas. This method can only be conducted by an individual who has received certification as a qualified Visible Emissions Evaluator.

- (a) **Position:** Stand at least 16.5 feet from the fugitive dust source in order to provide a clear view of the emissions, with the sun oriented in the 140-degree sector to the back. Following the above requirements, make opacity observations so that the line of vision is approximately perpendicular to the dust plume and wind direction. If multiple plumes are involved, do not include more than one plume in the line of sight at one time.
- (b) **Field Records:** Record the fugitive dust source location, source type, method of control used (if any), evaluator's name, certification data and affiliation, and a sketch of the observer's position relative to the fugitive dust source. Also, record the time, estimated distance to the fugitive dust source location, approximate wind direction, estimated wind speed, description of the sky condition (presence and color of clouds), and color of the plume and type of background on the visible emission observation form when opacity readings are both initiated and completed.
- (c) **Observations:** Make opacity observations, to the extent possible, using a contrasting background that is perpendicular to the line of vision. Make opacity observations approximately 1 meter above the surface from which the plume is generated. Note that the observation is to be made at only one visual point upon generation of a plume, as opposed to visually tracking the entire length of a dust plume as it is created along a surface. Make two observations per vehicle, beginning with the first reading at zero seconds and the second reading at five seconds. The zero-second observation should begin immediately after a plume has been created above the surface involved. Do not look continuously at the plume but, instead, observe the plume briefly at zero seconds and then again at five seconds.
- (d) **Record Observations:** Record the opacity observations to the nearest 5 percent on an observational record sheet. Each momentary observation recorded represents the average opacity of emissions for a five-second period. While it is not required by the test method, EPA recommends that the observer estimate the size of vehicles that generate dust plumes for which readings are taken

(e.g., mid-size passenger car or heavy-duty truck) and the approximate speeds the vehicles are traveling when readings are taken.

- (e) Repeat steps (c) and (d) until you have recorded a total of 12 consecutive opacity readings. This will occur once six vehicles have driven on the source in your line of observation for which you are able to take proper readings. The 12 consecutive readings must be taken within the same period of observation, but must not exceed one hour. Observations immediately preceding and following interrupted observations can be considered consecutive.
- (f) Average the 12 opacity readings together. If the average opacity reading equals 20 percent or lower, the source is in compliance with the opacity standard described in this regulation.

92.6.2 Instantaneous Method

This is a non-federal procedure for evaluation of Fugitive Dust Emissions: This procedure is for the instantaneous determination of the Opacity of Fugitive Dust Emissions by a qualified observer. This method is a Clark County local requirement and is not submitted as part of the applicable State Implementation Plan. The qualified observer should do the following:

- (a) **Position:** Stand at a position at least twenty (20) feet from the Fugitive Dust source in order to provide a clear view of the Emissions with the sun oriented in the 140° sector to the back. Consistent as much as possible with maintaining the above requirements, make Opacity observations from a position such that the line of sight is approximately perpendicular to the plume and wind direction. The observer may follow the Fugitive Dust plume generated by mobile earth moving equipment, as long as the sun remains oriented in the 140° sector to the back. As much as possible, do not include more than one plume in the line of sight at one time.
- (b) **Field Records:** Record the name of the site, Fugitive Dust source type (e.g., earthmoving, grading, storage pile, material handling, transfer, loading, sorting), method of control used, if any, observer's name, certification data and affiliation, and a sketch of the observer's position relative to the Fugitive Dust source. Also, record the time, estimated distance to the Fugitive Dust source location, approximate wind direction, estimated wind speed, description of the sky condition (presence and color of clouds), observer's position relative to the Fugitive Dust source, and color of the plume and type of background on the visible emission observation when Opacity readings are initiated and completed.

- (c) Observations: Make Opacity observations, to the extent possible, using a contrasting background that is perpendicular to the line of sight. Make Opacity observations at a point just beyond where material is no longer being deposited out of the plume (normally three (3) feet above the surface from which the plume is generated).
- (d) Recording Observations: Record the Opacity observations to the nearest 5%.
- (e) Data Reduction for Instantaneous Regulations: Evaluate all observations for conformance with the instantaneous regulation.

92.6.3 Silt Content Test Method

The purpose of this test method is to estimate the silt content of the trafficked parts of Unpaved Parking Lots and storage areas. The higher the silt content, the greater the amount of fine dust particles that are entrained into the atmosphere when cars and trucks drive on Unpaved Parking Lots or storage areas.

- (a) Equipment:
 - (1) Set of sieves with the following openings: 4 millimeters (mm), 2 mm, 1 mm, 0.5 mm, and 0.25 mm; a lid; and collector pan;
 - (2) Small whiskbroom or paintbrush with stiff bristles and dustpan one foot in width (the broom/brush should preferably have one thin row of bristles no longer than 1.5 inches in length);
 - (3) Spatula without holes;
 - (4) Small scale with half-ounce increments (e.g., postal/package scale);
 - (5) Shallow, lightweight container (e.g., plastic storage container);
 - (6) Sturdy cardboard box or other rigid object with a level surface;
 - (7) Basic calculator;
 - (8) Cloth gloves (optional for handling metal sieves on hot, sunny days);
 - (9) Sealable plastic bags (if sending samples to a laboratory); and
 - (10) Pencil/pen and paper.
- (b) Look for a routinely traveled surface, as evidenced by tire tracks (only collect samples from surfaces that are not damp due to precipitation or dew). This statement is not meant to be a standard in itself for dampness where watering is being used as a control measure; it is only intended to ensure that surface testing is done in a

representative manner. Use caution when taking samples to ensure personal safety with respect to passing vehicles. Gently press the edge of a dustpan (1 foot in width) into the surface four times to mark an area that is 1 square foot. Collect a sample of loose surface material using a whiskbroom or brush and slowly sweep the material into the dustpan, minimizing escape of dust particles. Use a spatula to lift heavier elements such as gravel. Only collect dirt/gravel to an approximate depth of 3/8 inch or 1 cm in the 1 square foot area. If you reach a hard, underlying subsurface that is greater than 3/8 inch in depth, do not continue collecting the sample by digging into the hard surface. In other words, you are only collecting a surface sample of loose material down to 1 cm. In order to confirm that samples are collected to 1 cm in depth, a wooden dowel or other similar narrow object at least one foot in length can be laid horizontally across the survey area while a metric ruler is held perpendicular to the dowel.

- (1) At this point, the sample can be collected into a plastic bag or container and taken to an independent laboratory for silt content analysis. Paragraph (k) below references the procedure the laboratory is required to follow.
- (c) Place a scale on a level surface. Place a lightweight container on the scale. Zero the scale with the weight of the empty container on it. Transfer the entire sample collected in the dustpan to the container, minimizing escape of Dust particles. Weigh the sample and record its weight.
- (d) Stack a set of sieves in order according to the size openings specified above, beginning with the largest size opening (4 mm) at the top. Place a collector pan underneath the bottom (0.25 mm) sieve.
- (e) Carefully pour the sample into the sieve stack, minimizing escape of Dust particles by slowly brushing material into the stack with a whiskbroom or brush (on windy days, use the trunk or door of a car as a wind barricade). Cover the stack with a lid. Lift the sieve stack and shake it vigorously up, down, and sideways for at least 1 minute.
- (f) Remove the lid from the stack and disassemble each sieve separately, beginning at the top. As each sieve is removed, examine it to make sure that all material has been sifted to the finest sieve through which it can pass: i.e., the material in each sieve (besides the top one, which captures a range of larger elements) should look the same size. If this is not the case, restack the sieves and collector pan, cover the stack with the lid, and shake it again for at least one minute. (Only reassemble the sieve(s) containing material that requires further sifting).

- (g) After disassembling the sieves and collector pan, slowly sweep the material from the collector pan into the empty container originally used to collect and weigh the entire sample. Take care to minimize escape of Dust particles. Do not do anything with material captured in the sieves, only that from the collector pan. Record the weight of the container with the material from the collector pan.
- (h) If the source is an unpaved road, multiply the resulting weight by 0.38. If the source is an Unpaved Parking Lot or storage area, multiply the resulting weight by 0.55. The resulting number is the estimated silt loading. Divide by the total weight of the sample recorded in step (b) and multiply by 100 to estimate the percent silt content.
- (i) Select another two routinely traveled portions of the unpaved road or Unpaved Parking Lot and repeat this test method. Once you have calculated the silt loading and percent silt content of the three samples collected, average the results.
- (j) Examine the results. If the average silt loading is less than 0.33 oz/ft², the surface is stable. If the average silt loading is greater than or equal to 0.33 oz/ft², examine the average percent silt content. If the source is an Unpaved Parking Lot or storage area and the average percent silt content is 8% or less, the surface is stable. If field test results are within 2% of the standard (e.g., 6–10% silt content on an Unpaved Parking Lot or storage area), collect three additional samples from the source (see step (b)) and take them to an independent laboratory for silt content analysis.
- (k) Another option is to collect three samples from the source in accordance with Section 92.6.3(b) and send them to an independent laboratory for silt content analysis. The laboratory is required to use the test process described in Volume 1, Appendix C.2.3 (“Silt Analysis”) of *Procedures for Laboratory Analysis of Surface/Bulk Loading Samples* (EPA 1995, 5th edition).

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