

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

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92.1 Fugitive Dust from Unpaved Parking Lots and Storage Areas

92.1.1 Purpose

The purpose of this section is to limit the emission of particulate matter into the ambient air from unpaved parking lots, including storage areas as defined in Section 0.

92.1.2 Applicability

The provisions of this regulation shall apply to unpaved parking lots and storage areas which are located in a PM₁₀ nonattainment area, an area subject to a PM₁₀ maintenance plan defined under 42 U.S. Code § 7505a, or in the Apex Valley (hydrographic areas 216 and 217), and which are not regulated by Section 94. Unpaved parking lots and storage areas include automobile impound yards, wrecking yards, automobile dismantling yards, salvage yards, material handling yards, equestrian staging facilities, and storage yards. For the purposes of this regulation, maneuvering shall not include military maneuvers or exercises conducted on federal facilities. Nothing in Sections 92.1 through 92.6 shall be construed to prevent enforcement of Section 40 (“Prohibition of Nuisance Conditions”). The provisions of this regulation shall not apply to stationary sources as defined in Section 0, except that these control measures shall be considered as part of a BACT determination.

92.2 Definitions

- (a) The following term has 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.
- (b) “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.

92.3 Requirements

- 92.3.1** The owner and/or operator of an existing unpaved parking lot or storage area in a PM₁₀ nonattainment area, an area subject to a PM₁₀ maintenance plan defined under 42 U.S. Code § 7505a, or in the Apex Valley (hydrographic areas 216 and 217) shall implement one or more of the control measures described in Section 92.3.1.2 as necessary to comply with the stabilization standards of Section 92.4.1. For unpaved parking lots and storage areas that are utilized intermittently, for a period of 35 days or less during the calendar year, the owner and/or operator shall implement one or more of the control measures described in Section 92.3.1.2 during the period that the unpaved parking lot or storage area is

utilized for vehicle parking or storage. For the purpose of this regulation, the control measures set forth in Section 92.3.1.2 shall be considered effectively implemented when the unpaved parking lot or storage area meets the stabilization standards described in Section 92.4.1.

92.3.1.1 New Unpaved Parking Lots or Storage Areas

No unpaved parking lots or storage areas may be constructed in hydrographic areas 212, 216, or 217 as of January 1, 2003; or in any other hydrographic area upon it being designated as nonattainment for PM₁₀; or in any other hydrographic area upon it being subject to a PM₁₀ maintenance plan defined under 42 U.S. Code § 7505a except as provided in this section.

- (a) **Exemptions.** The requirements of this Section shall not be applicable to 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, provided such unpaved parking lot is stabilized in accordance with Sections 92.3.1.2(b) through (d) prior to being used. For the purposes of this Section, a rural public facility shall not include any facility located within the BLM Disposal Boundary.
- (b) **Material Storage and Handling Areas.** If an area is used for storing and handling of landscaping, aggregate, and other similar bulk materials, the owner and/or operator shall implement one or more of the control measures described in Section 92.3.1.2, subject to the approval of the Control Officer, provided, however, that all access, parking, and loading areas used by on-road vehicles shall be paved.
- (c) **Tracked, Non-Rubber Tired Vehicle, or Heavy Equipment Storage Areas.** If an area is used primarily for storage of non-rubber tired vehicles or equipment that the control officer has determined to be of such weight as to damage or destroy pavement (e.g., heavy equipment), the owner and/or operator shall implement one or more of the control measures described in Section 92.3.1.2, subject to the approval of the Control Officer, provided, however, that all access, parking, and loading areas primarily used by rubber-tired vehicles shall be paved.
- (d) **Equestrian Staging Areas:** Areas designed and used exclusively for the loading, unloading, and saddling of horses for equestrian activities shall be exempt from the paving requirements of this section if control measures applied to the designated areas meet the performance standards of Section 92.4. Posted vehicle speed

limits for vehicles using such designated areas shall not exceed 10 miles per hour.

92.3.1.2 Control Measures

- (a) Pave;
- (b) Apply dust palliatives, in compliance with the stabilization standards set forth in Section 92.4.1;
- (c) Apply dust palliatives to vehicle travel lanes within the parking lot or storage area in compliance with the stabilization standards set forth in Section 92.4.1, and uniformly apply and maintain surface gravel or recycled asphalt to a depth of two inches on the vehicle parking areas;
- (d) Apply and maintain an alternative control measure approved in writing by the Control Officer and the EPA Region 9 Administrator.

92.4 Performance Standards

92.4.1 Stabilization Standards

For the purpose of this regulation, control measures shall be considered effectively implemented when stabilization observations for fugitive dust emissions from unpaved parking lots or storage areas do not exceed 20 percent opacity and do not equal or exceed 0.33 oz/ft² silt loading, or do not exceed 8 percent silt content, as determined by Section 92.6 (“Test Methods”), except in areas on which gravel has been applied under the provisions of Section 92.3.1.2(c).

92.4.2 Prohibition of Dust Over Property Line

Where Best Available Control Measures provided for in this regulation have not been applied, no owner and/or operator of an unpaved parking lot or storage area shall permit a dust plume from that unpaved parking lot or storage area to cross a property line.

92.5 Recordkeeping Requirements

92.5.1 Recordkeeping

Any person subject to the requirements of this regulation shall compile and retain records that provide evidence of control measure application, by indicating type of treatment or control measure, extent of coverage, and date applied. The records and supporting documentation shall be made available to the Control Officer within 24 hours of a written request.

92.5.2 Records Retention

Copies of the records required by Section 92.5.1 shall be retained for at least one year. Facilities subject to Section 12.5 (“Part 70 Operating Permit Requirements”) shall maintain records in accordance with Part 70 record keeping requirements.

92.6 Test Methods

92.6.1 Stabilization Test Methods for Unpaved Parking Lots and Storage Areas

92.6.1.1 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) Step 1: 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) Step 2: 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) Step 3: 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) Step 4: 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) Step 5: Repeat Steps 3 and 4 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) Step 6: 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.

92.6.1.2 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) Step 1: 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 take it to an independent laboratory for silt content analysis. A reference to the procedure the laboratory is required to follow is at the end of this section.
- (c) Step 2: 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) Step 3: 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) Step 4: 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) Step 5: Remove the lid from the stack and disassemble each sieve separately, beginning with the top sieve. As you remove each sieve, examine it to make sure that all of the material has been sifted to the finest sieve through which it can pass; e.g., material in each sieve (besides the top sieve that 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 1 minute (you only need to reassemble the sieve(s) that contain material, which requires further sifting).
- (g) Step 6: 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. You do not need to do anything with material captured in the sieves; only the collector pan. Weigh the container with the material from the collector pan and record its weight.
- (h) Step 7: 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. Then, divide by the total weight of the sample you recorded earlier in Step 2 and multiply by 100 to estimate the percent silt content.
- (i) Step 8: 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 your results together.
- (j) Step 9: Examine the results. If the average silt loading is less than 0.33 oz/ft^2 , the surface is stable. If the average silt loading is greater than or equal to 0.33 oz/ft^2 , then 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 percent or less, the surface is

stable. If your field test results are within 2 percent of the standard (for example, 6-10 percent silt content on an unpaved parking lot or storage area), it is recommended that you collect three additional samples from the source according to Step 1 and take them to an independent laboratory for silt content analysis.

- (k) You may choose to collect three samples from the source, according to Step 1, and send them to an independent laboratory for silt content analysis rather than conduct the sieve field procedure. If so, the test method the laboratory is required to use is described in Volume 1, Appendix C.2.3 (“Silt Analysis”) of EPA’s *Procedures For Laboratory Analysis of Surface/Bulk Loading Samples* (1995, fifth edition).

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