

## ARTICLE 3. CONSTRUCTION SITES - FUGITIVE DUST

### 4-3-060. General Provisions

#### A. Intent; Applicability; Exceptions

##### 1. Intent

The intent of this section is to improve the control of excessive fugitive dust emissions that have been traditionally associated with construction, earthwork and land development, and thereby minimize nuisance impacts.

##### 2. Effective Date

Except for the registration requirements noted in A. 6(e), the approval date of the regulations and prohibitions set forth in this section is the date the Board of Supervisors adopts the final rule, unless the board of Supervisors specifies a later date. The rules will become effective 60 days after the final publication in the Arizona Administrative Register.

##### 3. Geographic Scope

These rules shall be effective throughout Pinal County.

##### 4. Affected Activities

Within the meaning of this section, land stripping, earthmoving, blasting, trenching, road construction, grading, landscaping, stockpiling excavated materials, storing excavated materials, loading excavated materials, or any other activity associated with land development which results in a disturbed surface area or dust generating operations, shall all constitute "affected activities" if the disturbed surface area is greater than 0.1 acre.

##### 5. Affected Parties

The requirements and prohibitions of this rule shall independently apply to the land owner, and to any contractor or subcontractor operating on the job site, provided that full compliance with this rule by one of those parties shall operate to the benefit of each.

##### 6. Exceptions

Subject to the exceptions below, the prohibitions, registration requirements and performance standards of this section shall apply to all affected activities.

Specific exceptions include:

- a. The registration requirements of this section shall not apply to any facility operating under authority of a permit issued pursuant to ARS §§49-426 or 49-480.
- b. In the case of an emergency, action may be taken to stabilize the situation before submitting an air quality earthmoving activity registration form. Upon stabilizing the emergency situation, an air quality earthmoving activity registration form shall be submitted.
- c. In the case of legitimate vehicle test and development facilities and operations conducted by or for an equipment manufacturer, where dust is required to test and validate the design integrity, product quality and/or commercial acceptance, those activities shall be exempt from the registration requirements under this rule.
- d. The registration requirements of this section shall not apply to road maintenance activities. However, road maintenance activities must include control measures and work practices to reduce dust generation. A dust control plan must be prepared and available upon request, which shall contain an explanation of the control measures and work practices to be utilized on the project or site.
- e. The registration requirements of this section shall apply to public contracts, for work located outside of "Area A," bid on or after December 30, 2002, and private contracts bids on the date the contract is signed.
- f. The registration requirements shall not apply with respect to affected activities associated with the emergency repair of utilities.

## B. General Prohibition

Subject to the exemptions set forth in this section, it constitutes a violation of this rule for any person to cause or permit the use of any powered equipment for the purpose of conducting any affected activity, without:

1. Providing an earthmoving registration form to the control officer, obtaining a written acknowledgement from the control officer, and complying with the provisions of the registration notice; and
2. Complying with the universal performance standard defined in this rule (see 4-3-090).

## 4-3-070. Definitions

See Article 3 (General Provisions and Definitions) of this code for definitions of terms that are used but not specifically defined in this rule.

1. "Affected Area" as used in this rule, means a job or construction site which is greater than 0.1 acres and where affected activities associated with land development disturb the surface of the earth in Pinal County.
2. "Bulk material" as used in this rule, means any material including but not limited to earth, rock, silt, sediment, sand, gravel, soil, fill, aggregate less than 2 inches in length or diameter, dirt, mud, demolition debris, trash, cinders, pumice, saw dust, and dry concrete, which are capable of producing fugitive dust at an industrial, institutional, commercial, governmental, construction and/or demolition site.
3. "Bulk material handling, storage and/or transporting operation" as used in this rule, means the use of equipment, haul trucks, and/or motor vehicles, such as but not limited to, the loading, unloading, conveying, transporting, piling, stacking, screening, grading, or moving of bulk materials, which are capable of producing fugitive dust at an industrial, institutional, commercial, governmental, construction, and/or demolition site.
4. "Carry-out/ trackout" as used in this rule means, any and all bulk materials that adhere to and agglomerate on the exterior surface of motor vehicles, haul trucks, and/or equipment (including tires) and that have fallen onto a paved roadway.
5. "Control measure" as used in this rule means, a preemptive or concurrent technique, practice, or procedure used to minimize the generation, emission, entrainment, suspension, and/or airborne transport of fugitive dust. Control measures include the following:

<b>Control Measure</b>	<b>Description</b>
a. Watering (pre-wetting)	Application of water by means of trucks, hoses, and/or sprinklers prior to conducting any land clearing. This will increase the moisture content of the soils and increase stability of the soil.
b. Watering (operational control)	In active earth-moving areas water should be applied at sufficient intervals and quantity to prevent visible emissions from extending more than 100 feet from the site's boundaries, as noted on the plot plan.
c. Watering (site stabilization)	Wind erosion control for inactive sites where there is no activity for seven (7) days or more.
d. Chemical stabilizers/dust suppressants	Effective in areas which are not subject to daily disturbances. Vendors can supply information on application methods and concentrations.
e. Wind barriers	Three to five-foot barriers (with 50% or less porosity), berms or equipment located adjacent to roadways or urban areas to reduce the amount of windblown material that leaves the site. Wind

	barriers must be implemented with watering or dust suppressants.
f. Cover haul vehicles	Entire surface area of hauled bulk materials should be covered with an anchored tarp, plastic or other material when the cargo container is empty or full.
g. Reduce speed limits	15 miles per hour maximum.
h. Gravel pad	A layer of washed gravel, rock, or crushed rock which is at least one inch or larger in diameter, maintained at the point of the intersection of a paved public roadway and a work site entrance to dislodge mud, dirt, and/or debris from the tires of motor vehicles, and/or haul trucks, prior to leaving the work site.
i. Grizzly	A device (i.e. rails, pipes, or grates) used to dislodge mud, dirt, and/or debris from the tires and undercarriage of motor vehicles and/or haul trucks prior to leaving the work site.
j. Wind sheltering	Enclose storage piles in silos or protected three sided barriers equal to bulk material height; line work site boundaries adjacent to roadways or urban areas with wind barriers.
k. Altering load-in/load-out procedures	Confine load-in-load out procedures to downwind side of the material and mist material with water prior to loading. Empty loader slowly and keep bucket close to the truck while dumping.
l. Other measures as proposed by registrant	Specific measures that are adequate to address nuisance issues at the earth moving activity site.

6. "Disturbed Surface Area" as used in this rule, means any portion of the earth's surface that has been physically moved, uncovered, destabilized, or otherwise modified from its undisturbed natural condition, thereby increasing the potential for emission of fugitive dust.

a. For trenches that are less than four feet in depth, it is assumed that a six (6) foot wide path of surface material will be disturbed as the trench is dug. Once the trench exceeds a length of 726 feet, 0.1 acres of surface area has been disturbed. For trenches that are four feet or greater in depth, it is assumed that a twelve (12) foot wide path of surface material will be disturbed as the trench is dug. Once the trench exceeds a length of 363 feet, 0.1 acres of surface area has been disturbed. If the registrant identifies situations in which the amount of surface area should be calculated differently, a case-by-case determination would be made.

b. For calculations of disturbed surface areas for land clearing or earthmoving activities, 25 feet will be added to each dimension of all structures, driveways, concrete pads, and other construction projects being built on the site to allow for an equipment utilization zone. If this final figure exceeds 4,356 square feet, a dust registration is required for the site.

7. "Dust generating operation" as used in this rule, means any activity capable of generating fugitive dust, including but not limited to, land clearing, earthmoving, weed abatement by discing or blading, excavating, construction, demolition, 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/or playing on a ballfield shall not be considered a dust generating operation. However, landscape maintenance shall not include grading, trenching, nor any other mechanized surface disturbing activities performed to establish initial landscapes or to redesign existing landscapes.

8. "Dust suppressant" as used in this rule, means water, hygroscopic material, solution of water and chemical surfactant foam, non-toxic chemical stabilizer or any other dust palliative, which is not prohibited by the U. S. Environmental Protection Agency (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.
9. "Earthmoving activity" as used in this rule, means any land stripping, earthmoving, blasting, trenching, road construction, grading, landscaping, stockpiling excavated materials, storing excavated materials, loading excavated materials, or any other activity associated with land development where the objective is to disturb the surface of the earth, which shall all constitute " affected activities" if the job site is greater than 0. 1 acre. (See 4. 3. 600.A. 4 - General Provisions)
10. "Earthmoving operation" as used in this rule, means the use of any equipment for an activity which may generate fugitive dust, such as but not limited to cutting and filling, grading, leveling, excavating, trenching, loading or unloading bulk material, demolishing, blasting, drilling, adding to or removing bulk materials from open storage piles, back filling, soil mulching, landfill operations, or weed abatement by discing or blading.
11. "Freeboard" as used in this rule, means the vertical distance between the top edge of a cargo container and the highest point at which the bulk material contacts the sides, front, and back of the container.
12. "Fugitive dust" as used in this rule, means the regulated particulate matter, which is not collected by a capture system, which is entrained in the ambient air, and which is caused from human and/or natural activities, such as but not limited to, movement of soils, vehicles, equipment, blasting, and wind. For the purpose of this rule, fugitive dust does not include particulate matter emitted directly from the exhaust of motor vehicles and other internal combustion engines, from portable brazing, soldering, or welding equipment, and from piledrivers.
13. "Gravel pad" as used in this rule, means a layer of washed gravel, rock, or crushed rock which is at least one inch or larger in diameter, maintained at the point of intersection of a paved public roadway and a work site or source entrance to dislodge mud, dirt, and/or debris from the tire of the motor vehicles or haul trucks prior to leaving the work site.
14. "Grizzly" as used in this rule, means a device maintained at the point of intersection of a paved public roadway and a work site or source entrance to dislodge mud, dirt and/or debris from the tires of the motor vehicles or haul trucks prior to leaving the work site.
15. "Haul truck" as used in this rule, is any fully or partially open-bodied self-propelled vehicle 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 used for transporting bulk materials.
16. "Motor vehicle" as used in this rule, is 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 and other conveyances which are connected to or propelled by the actual motorized portion of the vehicle.
17. "Nuisance" as used in this rule, means to discharge from any source whatsoever one or more air contaminants or combinations thereof, in such concentration and of such duration as are to may tend to be injurious or to adversely affect human health or welfare, animal life, vegetables, or property, or as to interfere with the normal use and enjoyment of animal life, vegetation, or property.
18. "Off-road vehicle" as used in this rule, is any self-propelled conveyance specifically designed for off-road use, including but not limited to, off-road or all-terrain equipment, trucks, cars, motorcycles, motorbikes, or motorbuggies.

19. "Opacity" as used in this rule, means the degree to which emissions reduce the transmission of light and obscure the view of an object in the background.
20. "Owner, general contractor, and/or subcontractor" as used in this rule, is any person who owns, leases, operates, controls, or supervises a dust generating operation subject to the requirements of this rule.
21. "Public roadway" as used in this rule, means any roadways that are open to public travel.
  
22. "Road Construction" as used in this rule, means the use of any equipment for the paving or new construction of a road surface, street or highway.
23. "Road Maintenance" as used in this rule, means the use of any equipment for the repair and preservation of an old road surface, street or highway.
24. " Sensitive area" as used in this rule, means a neighborhood with man-made structures utilized for human residence or business.
25. "Source" as used in this rule, mans the construction site which is under common control or ownership, and all fixed or moveable objects on such site, which is a potential point of origin of fugitive dust.
26. " Stockpile" as used in this rule, is an open accumulation of bulk material with a 5% or greater silt content which in any one point attains a quantity greater than 10 cubic yards and is located on a disturbed surface area that is greater than 0.1 acres. Silt content shall be assumed to be 5% or greater unless the affected party can show, by testing in accordance with ASTM method C136-96a or other equivalent method approved in writing by the Control Officer and the EPA Administrator, that the silt content is less than 5%.
27. "Trackout control device" as used in this rule, means a gravel pad, grizzly, wheel wash system, or a paved area, located at the point of intersection of an unpaved area and a paved roadway, that controls or prevents vehicular trackout.
28. "Traffic hazard" as used in this rule, means a discharge from any source whatsoever such quantities of air contaminants, uncombined water, or other materials, which cause or have a tendency to cause interference with normal road use.
29. "Trench" as used in this rule, mans a long, narrow excavation dug in the earth (as for drainage).
30. "Unpaved haul/access road" as used in this rule, means any on-site unpaved road used by commercial, industrial, institutional, and/or governmental traffic.
31. "Unpaved parking lot" as used in this rule, means any area larger than 5,000 square feet that is not paved and that is used for parking, maneuvering, or storing motor vehicles.
32. "Unpaved road" as used in this rule, means 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.
33. "Visible emissions" as used in this rule, means any emissions which are visually detectable without the aid of instruments and which contain particulate matter.
34. "Visibility impairment" as used in this rule, means any humanly perceptible change in visibility from that which would have existed under natural conditions.
35. "Wind barrier" as used in this rule, means any structure put up along a source's boundaries to reduce the amount of wind blown dust leaving the site. Creating a wind barrier includes but is not limited to installing wind fencing, construction of berms, or parking on-site equipment so that it blocks the wind.
36. "Wind-blown dust" as used in this rule, means visible emissions from any disturbed surface area, which are generated by wind action alone.
37. "Wind event" as used in this rule, means when the 60-minute average time and wind speed is greater or equal to 20 miles per hour, or such other wind speed/duration exemption threshold as may apply under Pinal County' s Natural Events Action Plan (NEAP) dated November 25, 1997:
  1. An 8-hour average wind speed in excess of 20 miles per hour (m. p. h.)
  2. A 1-1/2 hour average wind speed in excess of 22 m. p. h.

3. A 1-hour average wind speed in excess of 25 m. p. h.
4. A 15 minute average wind speed in excess of 30 m. p. h.
38. "Wind fencing" as used in this rule, means a 3 to 5 foot barrier with 50% or less porosity located adjacent to roadways or urban areas.
39. "Work site" as used in this rule, means any property upon which dust generating operations and/or earthmoving operations occur.
40. "Work practices" as used in this rule, means a technique or operational procedure used to minimize the generation, emission, entrainment, suspension, and/or airborne transport of fugitive dust. Work practices include the following:

<b>Specific Activity</b>	<b>Work Practice</b>
Bulk Material Hauling off-site onto paved public roadway	1. Load all trucks such that the freeboard is not less than three inches; and prevent spillage or loss of bulk material from holes or other openings in the conveyance; cover all haul trucks (empty or full) with a tarp or other suitable anchored material.
Bulk material hauling on-site (within work site)	2. Limit the vehicle speed to less than 15 mph; or apply water to the top of the load; or cover the hauled material.
Spillage, carry-out, erosion, and/or trackout	3. Install a suitable trackout control device from all work sites with a disturbed area of 5 acres or more and from all work sites where 100 cubic yards of bulk materials are hauled on/or off site per day.
Cleanup spillage, carry-out, erosion and/or trackout on the following schedule:	4. Immediately, when spillage, carry-out, and/or trackout extend a cumulative distance of 50 linear feet or more; or at the end of the work day.
Unpaved easements, right-of-way, and access roads	5. Inside PM <sub>10</sub> nonattainment area, restrict vehicular speeds to 15 miles per hour.
Open storage piles	6. During stacking, loading and unloading operations, apply water as necessary and/or construct and maintain wind barriers, storage silos, or a three-sided enclosure to surround pile and whose height is equal to the pile.
Weed abatement by discing or blading	7. Apply water before and during weed abatement.
Other work activities as provided by the registrant	8. Specific work practices that are adequate to address nuisance issues at the earth moving activity site.

#### **4-3-080. Registration Requirements**

Prior to engaging in affected activities on a job site, at least one affected party shall file a registration form with the Control Officer, pay the appropriate fee in Appendix C, and receive a registration notice from the Control Officer.

##### **1. Registration Form:**

- a. The applicant shall present a registration on a form approved by the Control Officer, and shall include all essential identification information as specified on that form. A separate registration form is

- required for each site location not contiguous to the location on the original registration form, unless an annual block registration is approved.
- b. Each registration shall also include a plot plan with linear dimensions in feet. The plot plan must be on 8-1/2 by 11 inch paper, and may be on one or more sheets. The plan should identify the parcel, the street address, the direction north, the total area to be disturbed and indicates the sources of fugitive dust emission on the plot plan (delivery, transport and storage areas).
  - c. Using the options on the registration form or in the applicant's own words, each registration application shall contain an explanation of how the applicant will demonstrate compliance with this rule, by demonstrating after-the-fact that the control measures and work practices proposed in the registration were in fact utilized on the project. A demonstration of compliance would typically include a daily written log at the work site, or the maintenance of invoices and/or payments reflecting the cost of control measures.
  - d. Annual Block Registration: The land owner, contractor, or subcontractor operating on the job site may submit to the Control Officer one Earthmoving Registration application for more than one earthmoving operation at which construction will commence within 12 months of registration issuance. The earthmoving operations must consist of routine operations: the expansion or extension of utilities, paved roads, unpaved roads, road shoulders, and/or alleys, and public right-of-ways at non-contiguous sites.
    - i. An annual block registration must include all the requirements listed above in this subsection (1 a. through 1 c.) and a description of each site and type of earthmoving activity to be conducted.
    - ii. For any project not listed in the Earthmoving Annual Block Registration Application, the applicant must notify the Control Officer in writing at least three working days prior to commencing the earthmoving activity. Such notification must include the site location, size, and type of earthmoving activity, and start date.
  - e. Registration Renewal: The first registration obtained for an affected project must cover a contiguous area (unless it is an "annual block registration") and it is valid for one year from the date of issue. If the project has not been completed at the end of the one-year period, the dust registration must be renewed. Upon renewal, the total acreage covered by the dust registration does not have to be contiguous, although all acreage covered by the renewed dust registration must have been included in the original dust registration.

## 2. Registration acknowledgment:

- a. The registration acknowledgment from the control officer will contain the universal performance standard and conditions regarding the necessary control measures and work practices specific to the applicable project as proposed by the registrant.
- b. The registration acknowledgment shall contain a provision that all registrants keep records documenting the actual application or implementation of the control measures delineated in the registration application for at least 30 days following the termination of the registration acknowledgment.
- c. The registration acknowledgment shall be valid for a period of not more than one year from the date of issue, and may be renewed by providing the Control Officer a new registration application and payment of the appropriate fee.
- d. Registrants shall notify the Control Officer within five working days of the start and completion of the project.
- e. At all sites that are five acres or larger, registrants shall erect a project information sign at the main entrance that is visible to the public or at each end of the road construction project site. The sign shall be a minimum of 24 inches tall by 30 inches wide, have a white background, and have the words "DUST CONTROL" shown in black block lettering which is at least four inches high, and shall contain the following information in legible fashion
  - i. Project Name
  - ii. Name and phone number of person(s) responsible for conducting project
  - iii. Text stating: "Dust Complaints? Call Pinal County Air Quality Control District at (520) 866-6929. "

#### **4-3-090. Universal Performance Standards**

1. Within the affected area, a landowner or contractor shall not conduct or allow dust generating operations:
  - a. in a manner such that an unreasonable amount of dust is blown into sensitive areas so as to create a public nuisance;
  - b. in a manner such that opacity of the dust leaving the property exceeds twenty percent (20% ) or greater as measured using Test Method 9 (40 CFR 60, Appendix A) or an equivalent test method approved by the Control Officer and the EPA Administrator;
  - c. in a manner that will produce visibility impairment that could threaten public safety.
2. Failure to comply with these requirements shall presumptively constitute cause for the Control Officer or his authorized representative to order a halt to the offending activity. Failure by an owner, contractor or facility operator to respond to such an order from the Control Officer shall constitute a violation of this rule.
3. Violations: Generally any land owner, contractor, or subcontractor operating on the job site, who violates any Pinal County Air Quality Control District rule may be subject to an order of abatement, a civil action for injunctive relief or civil penalties, or may be found guilty of a Class I Misdemeanor.
4. Violation Exemptions:
  - a. Wind Event: exceedances of the opacity limit that occur due to a wind event shall be exempted from enforcement action if the owner/general contractor demonstrates all of the following conditions:
    - i. All control measures required in the registration acknowledgment were followed and one or more of the work practices were applied and maintained;
    - ii. The 20% opacity exceedance could not have been prevented by better application, implementation, operation or maintenance of the control measures;
    - iii. The occurrence of a wind event on the day(s) in question is documented by records of the Pinal County Air Quality Control District monitoring station in the affected area, from any other certified meteorological station, or by a wind instrument that is calibrated to the manufacturer' s standards and that is located at the site being investigated.
  - b. No opacity violation shall apply to emergency maintenance of flood control channels and water retention basins, provided that control measures were being implemented.
5. Limited scope of rule  
Nothing in this rule shall authorize or permit any practice which is in violation of any statute, ordinance, rule or regulation.