

## COUNTY NOTICES PURSUANT TO A.R.S. § 49-112

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### PINAL COUNTY

COMBINED  
NOTICE OF PROPOSED RULEMAKING  
PURSUANT TO A.R.S. §§ 49-112 AND 49-471.01 et seq.  
AND  
NOTICE OF ORAL PROCEEDING  
PURSUANT TO A.R.S. § 49-471.06

[M08-368]

#### 1. Preamble

##### **A. Introduction.**

(1) Background Explanation. As a brief background, this rulemaking proposes a new set of PM<sub>10</sub>-related construction rules for that portion of Pinal County that lies within the Phoenix Planning Area Serious PM<sub>10</sub> Nonattainment Area. The affected areas consists of the Apache Junction township, Township 1 North, Range 8 East, Gila and Salt River Base and Meridian, Pinal County, Arizona. (Hereafter "T1N R8E".)

To provide context, the affected area encompasses a 36-square-mile township in northern Pinal County. About 2/3 lies within the City of Apache Junction, and 1/3 in unincorporated Pinal County. About 1/4 of the entire area is State Trust land, which is fenced and stands largely as native desert. The privately held areas are largely developed. Even at the height of the recent building boom, in 2006 there were only a combined 206 single family building permits issued, and 24 new commercial building permits. In 2007, there were a combined 281 single family building permits issued, and 40 new commercial building permits. Since then, building activity has dropped off significantly.

Pinal County currently has a construction-site-permitting program in place, but this regulatory proposal differs in several particulars. This proposal imposes more stringent objective standards. For example, the proposal newly adopts objective standards for stabilization of disturbed areas, and adopt a more stringent 0% lot-line opacity limitation rather than the current 20% limitation. The proposal also requires a more extensive permitting program, including a requirements that an application include a dust control plan covering site-wide control of dust, and well as a requirement for a dust control plan covering any scheduled earthmoving activity. The dust control plans require that the applicant commit to specific recordkeeping to demonstrate compliance with the plan commitments. And lastly, the proposal calls for submittal of the revised program as a proposed element of the Arizona State Implementation Plan.

This proposal does formalize the existing system for allowing multiple permits for a single site. In doing so, the proposal relies on the existing schedule to establish permit fees.

(2) Background; The August 1, 2007 EPA Action In a serious PM<sub>10</sub> nonattainment area, Clean Air Act ("CAA") §189(b)(1)(B) requires BACM for all significant source categories. In 2007, the EPA promulgated a partial disapproval of an effective renumbering of Pinal County's air quality rules that had been previously submitted for approval as elements of the state implementation plan ("SIP"). See 72 FR 41896 (8/1/07). The EPA specifically cited the failure of the renumbered "reasonable precaution" rules to qualify as "best available control measures" ("BACM") for significant source categories as required in a serious PM<sub>10</sub> nonattainment area, including T1N R8E. "The BACM is the maximum degree of emissions reduction of PM-10 and PM-10 precursors from a source (except ... [for *de minimis* sources]) which is determined on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, to be achievable for such source through application of production processes and available methods, systems, and techniques for control of each such pollutant." 59 Fed. Reg. 41998, 42010 (8/16/94).

In the notice, the EPA further dictated that the required revisions incorporate adequate recordkeeping requirements, noting that recordkeeping requirements constitute "the main instrument for effective enforcement of regulatory requirements." 72 Fed. Reg. @ 41897 (8/1/2007).

As benchmark references, the notice specifically referred to construction rules from several other jurisdictions, most notably: Maricopa County, Arizona; Clark County, Nevada; and the San Joaquin Air Pollution Control District in California. In further discussions, the EPA made clear that notwithstanding the relatively modest levels of actual construction activity in T1N R8E, throughout the whole of the Phoenix Planning Area Serious PM<sub>10</sub> Nonattainment Area construction qualified as a significant source of PM<sub>10</sub> emissions. The EPA made clear that Pinal County must therefore adopt PM<sub>10</sub> BACM rules regulating construction activity.

Significantly, that action also triggered a "sanction clock" under the Clean Air Act. Failure to achieve a timely EPA approval of curative rules will result in the imposition of sanctions under the Clean Air Act, as well as eventual imposition by the EPA of a Federal Implementation Plan ("FIP") regulating the same source categories covered by the notice.

(3) Summary; The Pinal County Proposal. Pinal County has surveyed the substance, form and compliance requirements under the rules cited by the EPA. In turn, Pinal County has amalgamated a draft rule proposal with the intent of satisfying the EPA's mandates that Pinal County adopt PM<sub>10</sub> BACM rules regulating construction activity and that recordkeeping requirements be adequate to enable effective enforcement. Given the complexity of trying to amalgamate rules from multiple jurisdictions, the proposal raises a number of questions and issues regarding both standards and implementation of those standards.

Independent of this notice, Pinal County also has a predecessor draft version of the new Article 4 provisions spelled out below. That predecessor draft includes various footnotes, providing citations to analogous rule language, and also raising a number of questions regarding the optimal interpretation and application of the proposed rules. Copies are available by contacting the Planning Manager, identified below.

Among other matters, Pinal County specifically invites comment on whether the Clark County "drop ball test" should be identified as an alternative, rather than an additive, method to objectively demonstrate stabilization of active areas. See §4-4-172.C.2 and .3. Also, since Clark County has expressly excluded their instantaneous opacity assessment method from their applicable State Implementation Plan, Pinal also invites comment on the propriety or necessity of adopting Clark County's instantaneous opacity assessment method for inclusion in the Arizona SIP as it applies to Pinal. See §§4-4-171.B, 4-4-172.A.4, 4-4-174.A.4, and 4-4-174.A.5.

**B. Intent of This Notice. The intent of this notice is threefold:**

(1) First, it is the intent of this rule proposal to alert all persons who may be affected by this rule proposal, namely anyone who owns a development site or a construction site, or manages or engages in any activity on a development site or a construction site that may cause PM<sub>10</sub> emissions, that they should understand that the resulting rules will, with or without further modification or revisions to a final rule, affect their interests;

(2) Second, it is the intent of this notice to alert all persons who may be affected by this rule proposal that the subject matter of the proposal is to impose regulations, standards and substantive and procedural restrictions on anyone who owns a development site or a construction site, or manages or engages in any activity on a development site or a construction site that may cause PM<sub>10</sub> emissions, such that the resulting final rule will qualify for approval by the EPA as constituting PM<sub>10</sub> BACM for the affected area; and

(3) Third, it is the intent of this notice to alert all persons who reside, own property, do business, or may do business in the affected area and who may be affected by the rule proposal that the intended effects of the proposed rule include imposition of whatever substantive or procedural burdens may be required achieve a resulting final rule that will both qualify for approval by the EPA as constituting PM<sub>10</sub> BACM and establish similarly approvable record keeping requirements, and that any revision that may be required to a final rule in order to achieve those ends falls fairly within the scope of this notice.

**C. Proposal.**

(1) Authority. The District proposes that the Board of Supervisors adopt or amend certain rules under authority of A.R.S. §§49-479 and 49-480, which respectively authorize the board to adopt rules to control air pollution and to adopt a stationary source permit program.

(2) Sections Affected

§1-1-105	Amend
§4-4-160	New
§4-4-162	New
§4-4-164	New
§4-4-166	New
§4-4-167	New
§4-4-170	New
§4-4-171	New
§4-4-172	New
§4-4-174	New
§4-4-176	New
§4-4-178	New
§4-4-180	New
§4-4-182	New

§4-4-184	New
§4-4-186	New
§4-4-188	New
§4-4-190	New

**D. Rulemaking Process.**

(1) Procedure. The rule making process will consist of an initial administrative rule development process, including this notice, a 30 day public comment period, and an oral proceeding before the Control Officer or his designee. The date and location for the oral proceeding are set forth below. Written comments are due prior to the close of the comment period and the close of the record, which shall be the close-of-business on the day of the oral proceeding. The final step in the rule adoption process will be a hearing before the Board of Supervisors, which hearing will be separately scheduled and noticed in accord with A.R.S. §49-479, and, where applicable, the requirements of 40 C.F.R. §51.102. That hearing before the Board of Supervisors is tentatively scheduled for December 10, 2008.

(2) Access to Copies of Proposal; Communications. Persons may obtain a full copy of the proposed rules, existing rules, or other relevant information from Scott DiBiase, Planning Manager, Pinal County Air Quality, 31 North Pinal St., Building F, Florence, Arizona, 520-866-6929. To the extent possible, the District will also post information on the County's website, [www.co.pinal.az.us](http://www.co.pinal.az.us), under the "air quality" link.

(3) Date, time, and location of further proceedings: scheduled public workshops and hearings:

a. Oral Proceeding. An oral proceeding is scheduled for October 28, 2008, 9:00 a.m. at the Emergency Operations Center Hearing Room, Administration Building F, 31 North Pinal Street, Florence, Arizona. The nature of the meeting will be an oral proceeding before the Control Officer or his designee, in accord with A.R.S. §49-471.06(C) to consider public comments upon any or all of this proposal.

b. Board of Supervisors Hearing (Tentative). A hearing before the Board of Supervisors is tentatively scheduled for December 10, 2008, 9:30 a.m., at the Board of Supervisors Hearing Room, Administration Building A, 31 North Pinal Street, Florence, Arizona. The nature of the meeting will be a public hearing pursuant to A.R.S. §49-471.07 and 49-479 to consider adoption or rejection of any or all of this proposal.

(4) Proposed Effective Date. In accord with A.R.S. §49-471.07(F), except as specifically provided otherwise, the proposed changes will take effect upon approval by the Board of Supervisors.

**E. Supporting Studies.** There are no specific studies relied upon to justify the proposed changes.

**F. Economic, Small Business and Consumer Impact Statement. A.R.S. §§ 9-471.05.6; 41-1055(A), (B) and (C).**

(1) This Impact Statement is included within the notice of proposed rulemaking, and identifies those who may be burdened by the proposed rules. Given the supervening mandate from the EPA to adopt these revisions, this statement makes no attempt to engage in detailed conjecture about the actual future economic impact of the proposal. Lastly, if any person wishes to request or submit further information regarding this Impact Statement, they may contact the District's Planning Manager, identified above.

(2) Economic, Small Business and Consumer Impact Statement.

(a) Identification of the proposed rulemaking; see ¶1 of this Preamble.

(b) Identification of persons affected by, bearing costs as a result of, or benefitting from the proposed rule. Builders, property owners and the implementing agency will all be affected by, and bear costs, as a result of this proposal. Citizens should benefit from cleaner air. The community at large should benefit by avoiding the threatened sanctions under the Clean Air Act.

(c) A cost benefit analysis follows, projecting:

i. Costs and benefits to the implementing agency and other agencies. Pinal County Air Quality is an operating division of Pinal County, a political subdivision of the State of Arizona. As such, the implementing department is not technically an "agency." Still, from the perspective of the implementing department, a more detailed permitting program will entail substantive review of applications, and administration of more stringent substantive standards will require added effort. Those efforts will involve costs, which will be recovered to a greater or lesser extent from permit fees or penalties.

ii. Costs and benefits to political subdivisions. To the extent political subdivisions engages in construction or development, they will incur the same burdens and benefits as businesses, described below.

iii. Costs and benefits to businesses. Businesses will incur permitting costs (e.g. preparation of applications, application fees); implementation costs (e.g. additional watering, trackout monitoring and cleanup); compliance costs (e.g. self-verification of compliance, recordkeeping, reporting, cooperation with inspectors). Also see community-wide benefits, below.

iv. Community-wide benefits. Citizens, businesses and the community at large will benefit from maintaining healthy air, conforming to prevailing requirements under the CAA, and avoiding sanctions and direct regulation under a FIP promulgated by the EPA.

d. A projection of impact on private and public employment among affected public and private entities. Compliance will require additional effort, which may translate into additional employment. On the other hand, compliance will also entail additional expense, which may reduce overall business activity. Pinal County has no means to assess whether that balance will encourage or discourage employment.

e. A projection of probable impact on small businesses, including consideration of possible exemption of or cost mitigation for such businesses, as well as a projection of costs and benefits to consumers. Since Pinal County already has a construction permit program in place based on the same 0.1 acre disturbance threshold, additional impact on small businesses should not be large. Given that existing program, and the EPA's mandate to regulate construction activity, there does not appear to be a viable window for exempting small businesses. As to consumer costs and benefits, see ¶ c. above.

f. A projection of probable effect on state revenues. Pinal County has not basis to predict any meaningful impact on state revenues.

g. A description of less intrusive ways to achieve the stated objective. Given that the essence of the mandate from the EPA is to adopt a more intrusive program, there is no way to respond to that mandate with a less intrusive program.

(3) Data Limitations. Aside from the obvious conclusion that more specific and more stringent objective standards, as well as more detailed permitting requirements, will all impose additional burden and expense upon builders, consumers and the implementing agency, Pinal County lacks any means to project detailed future costs for implementation of these revisions. On the other hand, since the EPA has threatened to impose BACM by means of a FIP if the County does not act, it would seem that the inevitable burdens on owners, builders and consumers will not differ substantially whether these requirements are imposed by a local governing body or by the EPA.

#### **G. Other Matters**

1. Justification for "More Stringent" Rules; A.R.S. §49-112. To the extent these rules are more stringent than those of ADEQ, Pinal County submits that the double-barrelled reality of a prevailing serious PM<sub>10</sub> nonattainment designation, coupled with the EPA's threat of sanctions and a FIP, combine to satisfy the conditions set forth in A.R.S. §49-112(A)(1) and A(2)(a).

2. Compliance With the Fee-limitations of A.R.S. §49-112 (A) or (B). Based on information and belief, the Director of the Pinal County Air Quality Control District affirms the following:

a. Initially, the projected fees and other charges associated with the proposed rule revisions are based on the existing fee structure utilized for the existing construction site dust registration program. Currently revenues from the construction site registration program have fallen significantly. Assessed in the context of the administration of the County's air quality program as a whole, the need for a reasonable operating reserve, and foreseeable swings in market conditions, the Control Officer affirms that long-term revenues are expected to do no more than meet on-going expenses.

b. Based on a review of the operating costs of the Pinal County Air Quality Control District, the air quality challenges facing Pinal County, and any reasonable projection of total of revenues resulting from the fees and other charges that would be assessed under any or all of the rule revisions proposed above, the Control Officer finds that there is no real risk that in the aggregate revenues will exceed the cost of program administration. With respect to sources affected by the revised dust permit program, the Control Officer finds that projected revenues from existing fees reasonably reflect the anticipated costs of administering those programs. Thus, implementation of any or all of the rule changes proposed above will still not violate the fee-limitations of A.R.S. §§49-112(A)(3), 49-112(B) or 49-480(E).

3. Prior AAR Notices. An advanced notice of proposed rulemaking was previously published in the Arizona Administrative Register. 14 A.A.R. 2937 (7/25/2008).

## **2. The full text of the proposed changes follows:**

### **1-1-105. SIP list**

A. As a declaration of Board policy rather than a rule, and subject to the limitations of paragraphs B. and C. of this section, the Board of Supervisors expressly designates the following list of sections within this Code, to be presented to the Governor of Arizona for transmittal to the Administrator of the EPA with a request that they be included as elements in the Arizona SIP:

1. Chapter 1
  - a. Article 1.(As amended 5/14/97 and 5/27/98), except for §§1-1-105 and 1-1-107.
  - b. Article 2. (As amended 5/14/97 and 7/12/00) except for §1-2-110.

- c. Article 3. (As amended 5/14/97, 5/27/98 and 10/27/04, except for §1-3-130 and the definition in §1-3-140.82 (10/12/95) of "maximum achievable control technology.")
  - 2. Chapter 2
    - a. Article 1. (As amended 10/12/95).
    - b. Article 2. (As amended 5/14/97).
    - c. Article 3. (As amended 10/12/95).
    - d. Article 4. (As amended 10/12/95).
    - e. Article 5. (As amended 10/12/95).
    - f. Article 6. (As amended 10/12/95).
    - g. Article 7. (As amended 10/12/95).
    - h. Article 8. (As amended 5/18/05).
  - 3. Chapter 3
    - a. Article 1. (As amended 5/14/97, and 5/27/98 and 7/12/00), excluding:
      - i. §3-1-020
      - ii. §3-1-045
      - iii. §3-1-080
      - iv. §3-1-100
    - b. Article 2. (As amended 10/12/95, 5/27/98 and 7/29/98).
    - c. Article 3. (As amended 10/12/95).
    - d. Article 8. (As amended 10/12/95 and 10/27/04).
  - 4. Chapter 4
    - a. Article 1. (As amended 2/22/95).
    - b. Article 2. (As amended 5/14/97, 7/12/00 and 10/27/04, excluding §§4-2-020 and 4-2-030).
    - c. Reserved.
    - d. Article 4. (As amended 12/10/08).
- B. Notwithstanding the approval as elements of the SIP of those provisions of the Code identified in paragraph A of this section, those provisions, save §3-1-084 which shall be expressly exempted from the limitation of this paragraph, shall operate as elements of the SIP only insofar as they pertain to:
- 1. "construction," as defined in Nov. '93 Code §1-3-140.28; or
  - 2. "modification," as defined in Nov. '93 Code §1-3-140.85; and
- C. Notwithstanding the approval as elements of the SIP of those provisions of the Code identified in paragraph A of this section, neither those provisions nor any permit conditions imposed pursuant to those provisions shall:
- 1. Operate as elements of the SIP insofar as they pertain to other than "conventional pollutants," as defined in §1-3-140.33;
  - 2. Operate as elements of the SIP insofar as they pertain only to a requirement arising under, or pertain to a source subject to regulation exclusively by virtue of a requirement arising under:
    - a. §111 of the Clean Air Act; or
    - b. Title IV of the 1990 amendments to the Clean Air Act; or
    - c. Title VI of the 1990 amendments to the Clean Air Act; or
    - d. Any section of this Code that is not a part of the SIP;
  - 3. Operate as an element of the SIP, at least insofar as they impose a "fee";
  - 4. Operate as an element of the SIP, at least insofar as they require a "certification";
  - 5. Operate as an element of the SIP, at least insofar as they impose obligations pertaining to "renewals";
  - 6. Operate as an element of the SIP, at least insofar as they impose requirements regarding "excess emissions"; or
  - 7. Operate as an element of the SIP, at least insofar as they impose requirements regarding "compliance plans."
- D. As a renumbering and reconciliation of previously approved SIP provisions as elements of this Code, the Board of Supervisors additionally designates the following list of sections within this Code, to be presented to the Governor of Arizona for transmittal to the Administrator of the EPA with a request that they be included as elements in the Arizona SIP without operational limitation:
- 1. §§1-1-010.C (2/22/95) and 1-1-010.D (2/22/95) *Declaration of Policy*
  - 2. Chapter 2, Article 8 (As amended 5/14/97) *Visibility Limiting Standard*
  - 3. Chapter 3, Article 8 (2/22/95) *Open Burning*
  - 4. [Reserved]
  - 5. [Reserved]

6. [Reserved]
7. [Reserved]
8. [Reserved]
9. [Reserved]
10. [Reserved]
11. [Reserved]
12. §5-18-740 (2/22/95) *Storage of Organic Compounds - Organic Compound Emissions*
13. §5-19-800 (2/22/95) *Loading of Volatile Organic Compounds - Organic Compound Emissions*
14. §5-21-920 (2/22/95) *Fossil Fuel Fired Industrial and Commercial Equipment Standard Applicability*
15. §5-21-930 (2/22/95 and 7/12/00) *Fossil Fuel Fired Industrial and Commercial Equipment Particulate Emission Standard*
16. §5-22-950 (2/22/95) *Fossil Fuel Fired Steam Generator Standard Applicability*
17. §5-22-960 (2/22/95) *Fossil Fuel Fired Steam Generator Sulfur Dioxide Emission Limitation*
18. §5-24-1030.F (2/22/95) *Generally Applicable Federally Enforceable Minimum Standard of Performance - Organic Compound Emissions*
19. §5-24-1030.I (2/22/95) *Generally Applicable Federally Enforceable Minimum Standard of Performance - Carbon Monoxide*
20. §5-24-1032 (2/22/95) *Federally Enforceable Minimum Standard of Performance - Process Particulate Emissions*
21. §5-24-1040 (2/22/95) *Carbon Monoxide Emissions - Industrial Processes*
22. §5-24-1045 (2/22/95) *Sulfite Pulp Mills - Sulfur Compound Emissions*
23. §5-24-1050 (2/22/95, as amended June 20, 1996) *Reduced Sulfur Emissions - Default Limitation*
24. §5-24-1055 (2/22/95) *Pumps and Compressors - Organic Compound Emissions*

#### ARTICLE 4. CONSTRUCTION SITES IN NONATTAINMENT AREAS - FUGITIVE DUST

##### 4-4-160. 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. As used in this Article:

1. "Aggregate area" means, for purposes of assessing either disturbed area or overall project size, the relevant area or areas under common control and contained within a planned area development, within a legal subdivision, and or adjoining parcels undergoing concurrent development activity. Parcels shall be considered adjoining if they are either contiguous or separated only by a privately or publicly owned easement or right-of-way.
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, grubbed materials, cinders, pumice, and dry concrete, which are capable of producing fugitive dust at an industrial, institutional, commercial, governmental, construction and/or demolition site.
3. "Construction" means building, maintaining or modifying a capital improvement resting upon, connected to or buried in the earth. Construction includes, but is not limited to, building construction, installing underground utilities, installing above-ground utilities, and building physical infrastructure including roads, highways, railways, flood structures, drainage works and irrigation works.
4. "Construction site" means any lot, parcel, easement, or right-of-way where an owner or anyone on behalf of the owner or one operating on behalf of an owner causes construction to occur.
5. "Development activity" or "Development activities" are defined as follows:
  - A. Development activities include:
    1. Earthmoving;
    2. Construction;
    3. When conducted on an active construction site, any of:
      - a. use of vehicles or self-propelled equipment for material handling or storage off of a dustproof paved surface;
      - b. use of vehicles or self-propelled equipment for transporting materials or personnel;
      - c. movement of vehicles or self-propelled equipment off of a dustproof paved surface;
      - d. parking a vehicle or self-propelled equipment off of a dustproof paved surface;
    4. Generating trackout as a result of any other development activity.

- B. Notwithstanding subparagraph A., development activities shall not include:
1. Normal farm cultural practices, including leveling of fields.
  2. Permit-regulated non-fugitive emission points and permit-regulated fugitive emission sources at any stationary facility operating under authority of a permit issued pursuant to ARS §§49-426 or 49-480, provided that this Article 4 shall apply to development activity not specifically regulated under the permit.
  3. Permit-regulated non-fugitive emission points at a portable source operating on a construction site under this Article pursuant to a permit issued pursuant to ARS §§49-426 or 49-480, provided that this Article shall still apply to such a permitted portable source with respect to fugitive emissions from any other development activities as defined under this Article.
  4. Emergency action taken to stabilize a situation, including the emergency repair of utilities.
  5. In the case of a legitimate vehicle or equipment test and development facility operated by or for a vehicle or equipment manufacturer having sales exceeding \$10,000,000 per year, operations which require dust exposure in order to test and validate the design integrity, product quality and/or commercial acceptance.
  6. Road maintenance activities, but only if the maintenance does not include cutting, filling or the import or export of material.
  7. Hauling activities outside of a construction site.
  8. Weed abatement.
  9. Blasting.
  10. Demolition.
  11. Maintenance of established utility easements, rights-of-way and access roads, but only if the maintenance does not include cutting, filling or the import or export of material.
6. "Development site" means any lot, parcel, easement, or right-of-way where development activities occur.
7. "Development site permit" or 'site permit' means a permit as defined in §4-4-184.
8. "Disturbed surface" or "disturbed area" means any portion of the earth's surface that has as a result of anthropogenic activity been initially physically moved, uncovered, destabilized, or otherwise modified from its undisturbed natural condition, thereby increasing the potential for emission of fugitive dust.
- A. If a construction site contains disturbed surfaces areas exhibiting visibly distinguishable soils, vegetative cover, or other stabilization characteristics, the owner and/or operator shall treat each such distinguishable area separately for purposes of assessing the necessary stabilization for that soil type or condition.
  - B. 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 have 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.
  - C. 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.
9. "Dust suppressant" means 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 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.
10. "Earthmoving" means use of vehicles or self-propelled equipment for: land stripping; trenching; grading; cutting and filling earthen materials; excavating; land leveling; drilling; back filling; contouring the earth; open stockpiling of bulk materials; loading or unloading bulk material; grubbing foundations or slabs; or any of the foregoing in connection with landscaping a site.
11. "Earthmoving Activity Permit" means a permit as defined in §4-4-186.
12. "Earthmoving activity operator" means any person or entity who owns, leases, operates, controls, or supervises an earthmoving activity on a construction site.
13. "Fugitive dust" as used in this rule, means 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.
14. "Objective requirements" or "objective standards" mean those standards which either establish a numerical performance standard, or which have a formal compliance assessment method established under this Article. Examples include opacity standards, surface stabilization standards and length and pack-thickness limitations on visible trackout.

15. "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. See §4-4-180.A for specific methods for assessing opacity.
16. "Operator" means any person who owns, leases, operates, controls, or supervises any development activity other than earthmoving. This definition is intended to separately identify those operating mechanized equipment used for purposes other than earthmoving, such as passenger vehicles, service trucks, forklifts, etc., from those operating mechanized earthmoving equipment (See separate definition of "earthmoving activity operator").
17. "Owner" means the owner of record of a parcel of land, an easement or a right-of-way upon which development activities are occurring.
18. "PAD" means an approved planned area development.
19. "Paved public roadway" means either:
  - A. A publicly owned paved roadway, as evidenced by a formal acceptance by the state or a political subdivision of the state of either:
    1. An on-going maintenance obligation for the roadway; or
    2. A title or easement for the roadway; or
  - B. Within a PAD or subdivision, a paved private roadway that is open to travel by the public. Where active construction operations continue within a PAD or subdivision, development site plan holder or other management entity with control of privately owned roadway areas within such a PAD or subdivision may post signs to close selected paved roadways within the still-constructing areas to travel by the public. However, at least one road must furnish required paved access to every parcel within the PAD or subdivision that has received a certificate of occupancy, and every such required paved access road shall constitute a "paved public roadway" notwithstanding any signage to the contrary.
20. "Permittee" means the person or legal entity who has obtained either a development site permit and/or an earthmoving activity permit as required under this Article.
21. "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.
22. "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.
23. "Source" as used in this rule, means 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.
24. "Stockpile" as used in this rule, is an open 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 shall be assumed to be 5% or greater unless the affected party can show, by: testing in accordance with ASTM method C136-96a; testing in accord with the silt content method of §4-4-180.B; or testing by other equivalent method approved in writing by the Control Officer and the EPA Administrator, that the silt content is less than 5%.
25. "Subdivision" means a platted subdivision.
26. "Suppressant" means dust suppressant.
27. "Trackout" means visible material deposited by traffic leaving a construction site on any paved public roadway, as defined in this Article.
28. "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.
29. "Unpaved haul/access road" as used in this rule, means any on-site unpaved road used by commercial, industrial, institutional, and/or governmental traffic.
30. "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. For the purpose of this definition, an "equipment path" associated with active earthmoving activity does not constitute an unpaved road.
31. "Work practice standards" mean those standards which have neither a numerical performance standard or a compliance assessment method established. Compliance with work practice standards is assessed on a pass/fail basis.

**4-4-162. Violations.**

- A. Failure by any person to comply with the applicable requirements of this Article shall constitute a violation subject to penalty as provided in these rules and A.R.S. Title 49, Chapter 3, Article 3, A.R.S. §49-471 et seq.
- B. Violations include, but are not limited to:
  1. Causing, allowing or conducting development activity that results in an aggregate disturbed area greater than 0.1 acres on a construction site that is not covered by a development site permit or a block permit.

2. Causing, allowing or conducting earthmoving activity that results in an aggregate disturbed area greater than 0.1 acres on a construction site that is not covered by a earthmoving activity permit or a block permit.
3. On any construction site, violating any:
  - a. Objective site standard;
  - b. Obligatory site work practice standard;
  - c. Objective earthmoving activity standard; or
  - d. Obligatory earthmoving work practice standard.
4. Violating the terms of, or failing to comply with the obligations under, any permit required under this Article.
5. Failing to conform to the provisions of any dust management plan submitted under this Article

#### 4-4-164. General Provisions

- A. Intent. The intent of this Article is to avoid violations of the prevailing PM<sub>10</sub> standard and additionally minimize nuisance impacts by improving control of excessive fugitive dust emissions. The Article focuses on emissions from process activity, site activity and a lack of adequate surface stabilization, all associated with construction, earthwork or land development.
- B. Relationship to other rules. The provisions of this Article supplement and do not supplant the other provisions of these rules.
- C. Effective Date. The rules set forth in this Article 4 shall become effective 60 days after the final publication in the Arizona Administrative Register.

#### 4-4-166. Geographic Applicability

This Article 4 applies in the Pinal County portion of the Phoenix PM<sub>10</sub> Serious Nonattainment area, more specifically Township 1 North, Range 8 East, Gila & Salt River Base and Meridian ("T1N R8E").

#### 4-4-168. Functional Applicability; Development Activities

- A. The objective standards and work practice requirements applicable to development sites and earthmoving activity under this Article shall apply to any construction site.
- B. The development site and earthmoving activity permit requirements under this Article shall apply to any construction site which includes an aggregate area of more than 0.1 acres that has been or will be disturbed by development activities.

#### 4-4-170. Personal Applicability

##### A. Affected Parties

Each of the following constitutes an affected party under this Article, subject to the limitation that notwithstanding that a single person or entity may qualify under more than one category, multiple obligations do not attach as a result:

1. the owner;
2. an operator;
3. an earthmoving activity operator;
4. a development site permittee;
5. an earthmoving activity permittee.

##### B. Owner Applicability

1. Onset and duration
  - a. Onset. An owner shall comply with the requirements of this Article when development activity begins on the owner's construction site.
  - b. Duration and Termination. The Owner's obligations continue until all of the following occur:
    - i. Development activity has ceased.
    - ii. All disturbed portions of the development site have been stabilized as required under §4-4-172.
    - iii. The Control Officer approves closure of any stand-alone earthmoving activity permit for the construction site.
    - iv. The Control Officer approves closure of any development site permit, including closure of any earthmoving activity permit issued as part of the development site permit.
2. Owner's obligations. With respect to any construction site, an owner shall:
  - a. Obtain, or cause to be obtained:
    - i. A development site permit for any site with a disturbed area exceeding 0.1 acres.
    - ii. An earthmoving activity permit covering every earthmoving activity for any site with a disturbed area exceeding 0.1 acres.
  - b. Until termination of the owner's obligations, comply with, or cause compliance with:
    - i. applicable objective site standards.
    - ii. applicable obligatory site work practice standards.

- iii. applicable objective earthmoving activity standards.
    - iv. applicable obligatory earthmoving activity work practice standards.
  - 3. Owner's obligations; exemption  
To the extent dust management plans are submitted in support of a permit application by a permit applicant other than an owner, and those plans include commitments that go beyond the obligatory work practice standards defined under this Article, the owner is not responsible for assuring compliance with those additional work practice commitments.
- C. Operator Applicability
  - 1. Onset and Duration
    - a. An operator shall comply with the requirements under this Article when the operator causes, allows or conducts any development activity, other than earthmoving, that causes disturbance of an area on a construction site.
    - b. The operator's obligations continue until all of the following occur:
      - i. Development activity attributable to the operator has ceased in fact.
      - ii. All disturbed portions of the construction site attributable to the operator have been stabilized.
  - 2. Operator's obligations. With respect to any construction site, every operator shall comply with:
    - a. Objective site standards.
    - b. Obligatory site work practice standards.
- D. Earthmoving Activity Operator Applicability
  - 1. Onset and Duration
    - a. An earthmoving activity operator shall comply with this Article when the operator causes, allows or conducts earthmoving activity that causes disturbance of an area on a construction site.
    - b. The earthmoving activity operator's obligations continue until all of the following occur:
      - i. Development activity attributable to the operator has ceased in fact.
      - ii. All disturbed portions of the construction site attributable to the operator have been stabilized.
      - iii. Closure of any relevant earthmoving activity permit obtained by the earthmoving activity operator.
  - 2. Earthmoving activity operator's obligations. With respect to any construction site, in addition to the obligations of a mere operator, every earthmoving activity operator shall:
    - a. Only conduct earthmoving activity after a corresponding earthmoving activity permit has been approved.
    - b. Comply with the provisions of the earthmoving activity permit, including the dust management plan.
    - c. Comply with objective site standards.
    - d. Comply with obligatory site work practice standards.
    - e. Comply with objective earthmoving activity standards.
    - f. Comply with obligatory earthmoving activity work practice standards.

**4-4-171. Objective Standards; Un-permitted Development Sites**

- A. Applicability. The owner and any operator or earthmoving activity operator causing or contributing to an exceedance shall each be liable for any violation of this standard.
- B. 0% at 100' Opacity Standard. Opacity attributable to any activity or any earthmoving activity at a construction site that should be, but is not, covered by a development site permit shall, in addition to meeting any other applicable opacity standard, not exceed 0% opacity at a distance of 100 feet from the activity, based on an instantaneous observation method. See §4-4-180.A.4.

**4-4-172. Objective Standards; Development Sites**

- A. Opacity Limitations; Non-earthmoving Activity. Opacity directly attributable to development activity other than earthmoving activity or resulting from any disturbed areas, whether stabilized or unstabilized, caused by development activities other than earthmoving activity, shall not exceed any of the following limitations:
  - 1. 0% Property Line Opacity. Subject to the exemptions below, the net opacity contribution from any development activities or disturbed areas caused by development activities subject to this Article shall not violate a 0% opacity standard at the boundary of the parcel for more than 30 seconds in any continuous six-minute period.
    - a. "Net opacity contribution" means the difference between opacity leaving the site and opacity entering the site.
    - b. For purposes of this limitation, unless development activity is actually occurring within a legal or de facto easement, the parcel boundary shall exclude the area within any such easement that is in actual use

for roadway or other purposes such that opacity observations may not be practically or safely made at the gross boundary.

- c. This limitation shall not apply to earthmoving operations conducted with 25 feet of a parcel boundary.
  - d. For purposes of this property line opacity standard, opacity shall be determined based on a time-aggregation method. See §4-4-180.A.3.
- 2. 20% opacity for any continuous plume, as assessed by a time-averaging method, based on observations every 15 seconds over a 3-minute span. See §4-4-180.A.1.
  - 3. 20% opacity for any intermittent plume, as assessed by the average of a set of six paired observations, spaced by five seconds and conducted within a one-hour period. See §4-4-180.A.2;
  - 4. 50% opacity based on an instantaneous observation method. See §4-4-180.A.4.; or
  - 5. Opacity excursions solely resulting from wind acting upon a stabilized surface shall be exempt from these standards, provided the owner or development site permittee can objectively establish that the offending areas were in fact maintained condition adequate to meet the drop ball test requirement of §4-4-172.C.3.

B. Trackout Limitations.

- 1. Continuous visible trackout from any construction site onto a paved public roadway shall not exceed 25' in length or exhibit a trackout pack-depth greater than 0.25". Trackout in the form of a discernable trail of clods leading back to the development site shall not exceed 50' in length.
- 2. On-site Trackout Control System. For any period of time when a project has more than two acres of area disturbed, or on any day that more than 100 cubic yards of bulk material is shipping in or out of the construction site, the owner and/or development site permittee shall install and maintain a trackout control system that prevents trackout. Where such a trackout control system is required, visible trackout exceeding 5' in length shall conclusively establish that the owner and permittee failed to comply with the requirement.

C. Active Area (Non-earthmoving Area) Stabilization Requirements

- 1. Applicability; Affected Areas; Exemption
  - a. General stabilization requirements apply to disturbed areas affected by on-site parking, vehicular traffic, equipment traffic, material transport, or equipment transport.
  - b. Internal roadway and staging areas are exempt from stabilization requirements if the site dust management plan limits traffic speeds to 15 mph and limits overall traffic to an aggregate of no more than 20 vehicle or equipment trips per day.
- 2. All disturbed areas affected under this Active Area Stabilization Requirement shall be stabilized such that every disturbed area shows compliance at all times with the following objective standards:
  - a. Silt loading shall not exceed 0.33 oz/ft<sup>3</sup>; or
  - b. Silt content shall not exceed:
    - 1. 6% for roads; or
    - 2. 8% for parking and working areas.
- 3. All disturbed areas affected under this Active Area Stabilization requirement shall be stabilized such that every disturbed area shows compliance at all times with the drop ball test of 4-4-180.
- 4. The Owner and Permittee shall maintain such stabilization for those active areas to meet the foregoing standards until the activity ceases and the affected area site has been stabilized to meet stabilization standards.

D. Stabilization Requirement for Inactive and Post-operation Areas

The owner and/or operator of any disturbed surface area on which no activity is occurring shall meet at least one of the standards described below. If areas of the site exhibit visibly distinguishable surface characteristics, which each areas shall be separately assessed for stability. Stability shall be assessed in accord with the appropriate test methods described in §4-4-180. The owner and/or operator of such disturbed surface area on which no activity is occurring shall be considered in violation of this rule if the area is not maintained in a manner that meets at least one of the standards listed below, as applicable.

- 1. Maintain stabilization or a soil crust adequate to pass the drop ball test;
- 2. [Maintain 100 cm/sec. threshold friction velocity] Maintain a threshold friction velocity (TFV) for disturbed surface areas corrected for non-erodible elements of 100 cm/second or higher;
- 3. [Maintain 50% flat vegetative cover] 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%;
- 4. [Maintain 30% standing vegetative cover. aintain a standing vegetative cover (i.e., vegetation that is attached (rooted) with a predominant vertical orientation) that is equal to or greater than 30%;
- 5. [Maintain 10% standing vegetative cover and 43 cm/sec. TFV]. 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;

6. Maintain a percent cover that is equal to or greater than 10% for non-erodible elements as measured by the "rock test";
  7. Restrict access, and apply gravel, or apply a suitable dust suppressant other than water;
  8. Apply water and prevent access by fences, ditches, vegetation, berms, or other suitable barrier or means sufficient to prevent trespass as approved by the Control Officer;
  9. [Implement an approved alternative] Comply with a standard of an alternative test method, upon obtaining the written approval from the Control Officer and the Administrator.
- E. Duration of Stabilization Obligation.  
The Owner and/or Development Site Permittee shall continue to bear the obligation of site stabilization until the Control Officer approves closure of the Development Site Permit under Rule §4-4-184.

**4-4-174. Objective Standards; Earthmoving Activity**

- A. Opacity Limitations; Earthmoving Activity. Opacity directly attributable to earthmoving activity, or from any disturbed areas resulting from earthmoving activities, shall not exceed any of the following limitations:
1. 0% Property Line Opacity. Subject to the exemptions below, the net opacity contribution shall not violate a 0% opacity standard at the boundary of the parcel for more than 30 seconds in any continuous six-minute period.
    - a. "Net opacity contribution" means the difference between opacity leaving the site and opacity entering the site.
    - b. For purposes of this limitation, unless development activity is actually occurring within a legal or de facto easement, the parcel boundary shall exclude the area within such easement that is in actual use for roadway or other purposes such that opacity observations may not be practically or safely made at the gross boundary.
    - c. This limitation shall not apply to earthmoving operations conducted within 25 feet of a parcel boundary.
    - d. For purposes of this property line opacity standard, opacity shall be determined in accord with §4-4-180.A.3.
  2. 20% opacity for any continuous plume, as assessed by a time-averaging method, based on observations every 15 seconds over a 3-minute span. See §4-4-180.A.1
  3. 20% opacity for any intermittent plume, as assessed by the average of a set of six paired observations, spaced by five seconds and conducted within a one-hour period. See §4-4-180.A.2;
  4. 50% opacity based on an instantaneous observation method. See §4-4-180.A.4; or
  5. 0% opacity at a distance of 100 yards from the activity, based on an instantaneous observation method. See §4-4-180.A.4.
  6. Opacity excursions solely resulting from wind acting upon a stabilized surface shall be exempt from these standards, provided the owner or earthmoving activity permittee can objectively establish that the offending areas were in fact maintained condition adequate to meet the drop ball test stabilization requirement of §4-4-180.B.3.
- B. Stabilization Upon Completion.
1. Upon completion of earthmoving activity, the earthmoving activity operator shall stabilize disturbed areas sufficiently to meet at least one of the standards of either §4-4-172.C.2 (silt loading/content) or §4-4-172.D (general stabilization methods) and shall maintain that stabilization until the Control Officer approves closure of the underlying earthmoving activity permit.
  2. Opacity excursions solely resulting from wind acting upon a stabilized surface shall be exempt from these standards, provided the owner or earthmoving activity permittee can objectively establish that the offending areas were in fact maintained condition adequate to meet the drop ball test requirement of §4-4-180.B.3.

**4-4-176. Obligatory Work Practice Standards; Development Sites**

- A. Project Access Control.  
For any project having a disturbed area greater than one acre in size, the Owner and/or Development Site Permittee shall define, clearly mark, and enforce ingress and egress points for traffic into and out of the construction site.
- B. Dust suppression for active (non-earthmoving) working areas and roadways  
The owner or Development Site Permittee shall implement at least one of the following to manage dust from working areas and roadways:
1. Apply water.
  2. Apply dust suppressants.
  3. Limit speed to 15 mph and traffic to no more than 20 trips/day.
- C. Trackout; Monitoring and Cleanup.

The Owner and/or Development Site Permittee shall monitor trackout length at each egress point, and shall promptly clean up any trackout that violates the length or pack-thickness limitations of 4-4-172.D. Allowing over-length or over-thickness trackout to remain for more than one hour shall additionally violate this clean-up requirement.

D. Signage

At all sites that are five acres or larger, the Owner and/or Development Site Permittee 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"

1. Project Name
2. Name and phone number of person(s) responsible for conducting project
3. Text stating: "Dust Complaints? Call Pinal County Air Quality Control District at (520) 866-6929."

E. Training

1. Dust Coordinator  
On any site and/or any contiguous site under common control of five acres or more of disturbed surface area subject to a permit shall, the Owner and/or Site Permittee shall assure that at all times during earthmoving activity operations related to the purposes for which an Earthmoving Activity Permit is required, have on-site at least one individual qualified under a Control-Office-approved Dust Control Coordinator training program.
2. Superintendent and Water Pull Drivers  
The Owner and/or Site Permittee shall assure that the site superintendent or other designated on-site representative of the Site Permit holder, and any water truck or water pull driver maintaining site stabilization shall have successfully completed a Control-Officer-approved Basic Dust Control Training Class.

F. Subcontractor Registration Verification

An Owner and/or Development Site Permittee shall be obligated to assure that any subcontractors engaged in earthmoving activity on the development site have registered with Pinal County Air Quality as a subcontractor.

**4-4-178. Obligatory Work Practice Standards; Earthmoving Activity**

A. Conform to Project Access Control.

The earthmoving activity operator shall utilize only the ingress and egress defined by the owner or development site permittee.

B. Dust suppression during bulk excavation operations

1. Pre-water is required for primary earthmoving cut-operations; and
2. Apply water "as necessary" during activity.

C. Load stabilization required during transport of bulk excavated materials

1. Limit speed;
2. Stabilize loads with water or a dust suppressant; or
3. Tarp the load with a tight-fitting cover.

D. Bulk material stacking, stockpiling operations

1. For a stockpile larger than 100 cubic yards, the required earthmoving dust control plan shall characterize material, characterize emission potential, and define a methodology to meet 20% opacity standard during stacking and to meet the 0% lot-line contribution limitation during wind events; and
2. Apply water or suppressant sprays.

E. Training

1. Dust Coordinator  
Not applicable.
2. Superintendent and Water Pull Drivers  
The Earthmoving Activity Permittee shall assure that the superintendent or other designated on-site representative of the Permit holder, and any water truck or water pull driver maintaining earthmoving activity dust control or stabilization shall have successfully completed a Control-Officer-approved Basic Dust Control Training Class.

F. Subcontractor Registration Verification

An earthmoving activity permittee shall be obligated to assure that any subcontractors engaged in earthmoving activity have registered with Pinal County Air Quality as a subcontractor.

**4-4-180. Compliance Determination Methods**

A. Opacity

1. Time averaged method - regularly spaced observations

An observer qualified, in accordance with §4-4-180.A.5, shall use the following procedures for visually determining the opacity of continuous dust plumes caused by equipment and activities including but not limited to graders, trenchers, paddlewheels, blades, clearing, leveling, and raking:

a. Position: Stand at least 25 feet from the dust-generating operation to provide a clear view of the emissions with the sun oriented in the 140° sector to your back. Following the above requirements, make opacity observations so that the line of vision is approximately perpendicular to the dust plume and wind direction.

b. Dust Plume: Evaluate the dust plume generation and determine if the observations will be made from a single plume or from multiple related plumes.

1. If a single piece of equipment is observed working, then all measurements should be taken off the resultant plume as long as the equipment remains within the 140° sector to the back.

2. If there are multiple related sources or multiple related points of emissions of dust from a particular activity, or multiple pieces of equipment operating in a confined area, opacity readings should be taken at the densest point within the discrete length of equipment travel path within the 140° sector to the back. Readings can be taken for more than one piece of equipment within the discrete length of travel path within the 140° sector to the back.

c. Initial Fallout Zone: The initial fallout zone within the plume must be identified. Record the distance from the equipment or path that is your identified initial fallout zone. The initial fallout zone is that area where the heaviest particles drop out of the entrained fugitive dust plume. Opacity readings should be taken at the maximum point of the entrained fugitive dust plume that is located outside the initial fallout zone.

d. Field Records: Note the following on an observational record sheet:

1. Location of the dust-generating operation, type of operation, type of equipment in use and activity, and method of control used, if any;

2. Observer's name, certification data and affiliation, a sketch of the observer's position relative to the dust-generating operation, and observer's estimated distance and direction to the location of the dust-generating operation; and

3. Time that readings begin, approximate wind direction, estimated wind speed, description of the sky condition (presence and color of clouds).

e. Observations: Make opacity observations, to the extent possible, using a contrasting background that is perpendicular to the line of vision. Make opacity observations at a point beyond the fallout zone. The observations should be made at the densest point. Observations will be made every 15 seconds until at least 12 readings have been recorded. Do not look continuously at the plume, but observe the plume momentarily at 15-second intervals. If the equipment generating the plume travels outside the field of observation or if the equipment ceases to operate, mark an "X" for the 15-second reading interval. Mark an "X" when plumes are stacked or doubled, either behind or in front, or become parallel to line of sight. Opacity readings identified as "X" shall be considered interrupted readings.

f. Recording Observations: Record the opacity observations to the nearest 5% on an observational record sheet. Each momentary observation recorded represents the average opacity of emissions for a 15-second period.

g. Data Reduction: Average 12 consecutive opacity readings together to obtain the time-averaged opacity.

2. Intermittent method - selectively taken paired observations

An observer qualified, in accordance with §4-1-180.A.5, shall use the following procedures for visually determining the opacity of non-continuous dust plumes caused by activities including, but not limited to, bulk material loading/unloading, non-conveyorized screening, or trenching with backhoes:

a. Position: Stand at least 25 feet from the dust-generating operation in order to provide a clear view of the emissions with the sun oriented in the 140° sector to the back. Choose a discrete portion of the operation for observation, such as the unloading point, not the whole operation. 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. Initial Fallout Zone: The initial fallout zone within the plume must be identified. Record the distance from the equipment or path that is your identified initial fallout zone. The initial fallout zone is that area where the heaviest particles drop out of the entrained fugitive dust plume. Opacity readings should be taken at the maximum point of the entrained fugitive dust plume that is located outside the initial fallout zone.

c. Field Records: Note the following on an observational record sheet:

(1) Location of dust-generating operation, type of operation, type of equipment in use and activity, and method of control used, if any;

(2) Observer's name, certification data and affiliation, a sketch of the observer's position relative to the dust-generating operation, and observer's estimated distance and direction to the location of the dust-generating operation;

3) Time that readings begin, approximate wind direction, estimated wind speed, description of the sky condition (presence and color of clouds); and

(4) Color of the plume and type of background.

d. Observations. Make opacity observations, to the extent possible, using a contrasting background that is perpendicular to the line of vision. Make two observations per discrete activity, 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.

e. Recording Observations: Record the opacity observations to the nearest 5% on an observational record sheet. Each momentary observation recorded represents the average opacity of emissions for a five-second period. Repeat observations until you have recorded at least a total of 12 consecutive opacity 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 (e.g., vehicle traveled in front of path, plume doubled over).

f. Data Reduction: Average 12 consecutive opacity readings together. If the average opacity reading equals 20% or lower, the dust-generating operation is in compliance.

3. Time aggregation method - EPA method 22

To assess visible emissions crossing the property line, opacity observations of any visible emissions beyond the property line shall be conducted in accordance with EPA Reference Method 22.

4. Instantaneous method

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 Pinal 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.

5. Observer Qualifications

To demonstrate compliance with or violation of any of the foregoing opacity standards, an observer shall have a current certification in accord with Reference Method 9, 40 CFR Part 60, Appendix A.

B. Stabilization

1. The "silt loading" test.

See §4-4-180.B.2.

2. The "silt content" test.

Silt Content Test Method: The purpose of this test method is to estimate the silt content of the trafficked parts of unpaved roads and unpaved parking lots. The higher the silt content, the more fine dust particles that are released when cars and trucks drive on unpaved roads and unpaved parking lots.

a. Equipment:

- (1) A set of sieves with the following openings: 4 millimeters (mm), 2 mm, 1 mm, 0.5 mm and 0.25 mm (or a set of standard/commonly available sieves), a lid, and collector pan.
- (2) A small whisk broom or paintbrush with stiff bristles and dustpan 1 ft. in width (The broom/brush should preferably have one, thin row of bristles no longer than 1.5 inches in length).
- (3) A spatula without holes.
- (4) A small scale with half-ounce increments (e.g. postal/package scale).
- (5) A shallow, lightweight container (e.g., plastic storage container).
- (6) A sturdy cardboard box or other rigid object with a level surface.
- (7) A basic calculator.
- (8) Cloth gloves (optional for handling metal sieves on hot, sunny days).
- (9) Sealable plastic bags (if sending samples to a laboratory).
- (10) A 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 < 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.

At this point, you can choose to place the sample 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 up 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, re-stack 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, 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 (Section 2.1.2(c) of this appendix) 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 3 samples collected, average your results together.

j. Step 9: Examine Results. If the average silt loading is less than 0.33 oz/ft<sup>2</sup>, the surface is STABLE. If the average silt loading is greater than or equal to 0.33 oz/ft<sup>2</sup>, then proceed to examine the average percent silt

content. If the source is an unpaved road and the average percent silt content is 6% or less, the surface is STABLE. If the source is an unpaved parking lot and the average percent silt content is 8% or less, the surface is STABLE. If your field test results are within 2% of the standard (for example, 4%–8% silt content on an unpaved road), it is recommended that you collect 3 additional samples from the source according to Step 1 (Section 2.1.2(b) of this appendix) and take them to an independent laboratory for silt content analysis.

k. Independent Laboratory Analysis: You may choose to collect 3 samples from the source, according to Step 1 (Section 2.1.2(b) of this appendix), 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: U.S. Environmental Protection Agency (1995), "Procedures for Laboratory Analysis of Surface/Bulk Dust Loading Samples", (AP-42 Fifth Edition, Volume I, Appendix C.2.3 "Silt Analysis"), Office of Air Quality Planning and Standards, Research Triangle Park, North Carolina.

3. Soil Crust Determination. The "drop ball test."

a. [Drop ball method and standard] Drop a steel ball with a diameter of 0.625 (5/8<sup>th</sup>) inch and a mass ranging from 0.56-0.60 ounce from a distance of one (1) foot directly above the soil surface. If blowsand is present, clear the blowsand from the surfaces on which the soil crust test method is conducted. Blowsand is defined as thin deposits of loose uncombined grains covering less than 50% of a project site that have not originated from the representative surface being tested. If material covers a visible crust, which is not blowsand, apply the test method in for Determination Of Threshold Friction Velocity of this Rule to the loose material to determine whether the surface is stabilized.

A sufficient crust is defined under the following conditions: once a ball has been dropped according to this Rule, the ball does not sink into the surface, so that it is partially or fully surrounded by loose grains and, upon removing the ball, the surface upon which it fell has not been pulverized, so that loose grains are visible.

b. [Test repetition and data averaging] Randomly select each representative disturbed surface for the drop ball test by using a blind "over the shoulder" toss of a throwable object (e.g., a metal weight with survey tape attached). Using the point of fall as the lower left hand corner, measure a one (1) foot square area. Drop the ball three times within the 1-foot by 1-foot square survey area, using a consistent pattern across the survey area. The survey area shall be considered to have passed the Soil Crust Determination Test if at least two out of the three times that the ball was dropped, the results met the criteria of this Rule. Select at least two other survey areas that represent a random portion of the overall disturbed conditions of the site, and repeat this procedure. If the results meet the criteria of this Rule for all of the survey areas tested, then the site shall be considered to have passed the Soil Crust Determination Test and shall be considered sufficiently crusted.

c. [Investigation of all representative areas required] At any given site, the existence of a sufficient crust covering one portion of the site may not represent the existence or protectiveness of a crust on another portion of the site. Repeat the soil crust test as often as necessary on each portion of the overall conditions of the site using the random selection method set forth in this Rule for an accurate assessment.

4. The "threshold friction velocity" ("TFV") test.

Determination of Threshold Friction Velocity (TFV): For disturbed surface areas that are not crusted or vegetated, determine threshold friction velocity (TFV) according to the following sieving field procedure (based on a 1952 laboratory procedure published by W. S. Chepil).

a. Obtain and stack a set of sieves with the following openings: 4 millimeters (mm), 2 mm, 1 mm, 0.5 mm, and 0.25 mm or obtain and stack a set of standard/commonly available sieves. Place the sieves in order according to size openings, beginning with the largest size opening at the top. Place a collector pan underneath the bottom (0.25 mm) sieve. Collect a sample of loose surface material from an area at least 30 cm by 30 cm in size to a depth of approximately 1 cm using a brush and dustpan or other similar device. Only collect soil samples from dry surfaces (i.e. when the surface is not damp to the touch). Remove any rocks larger than 1 cm in diameter from the sample. Pour the sample into the top sieve (4 mm opening) and cover the sieve/collector pan unit with a lid. Minimize escape of particles into the air when transferring surface soil into the sieve/collector pan unit. Move the covered sieve/collector pan unit by hand using a broad, circular arm motion in the horizontal plane. Complete twenty circular arm movements, ten clockwise and ten counter-clockwise, at a speed just necessary to achieve some relative horizontal motion between the sieves and the particles. Remove the lid from the sieve/collector pan unit and disassemble each sieve separately beginning with the largest sieve. As each sieve is removed, examine it for loose particles. If loose particles have not been sifted to the finest sieve through which they can pass, reassemble and cover the sieve/collector pan unit and gently rotate it an additional ten times. After disassembling the sieve/collector pan unit, slightly tilt and gently tap each sieve and the collector pan so that material aligns along one side. In doing so, minimize escape of particles into the air. Line up the sieves and collector pan in a row and visibly inspect the relative quantities of catch in order to determine which sieve (or whether the collector pan) contains the greatest volume of material. If a visual determination of relative volumes of catch among sieves is difficult, use a graduated cylinder to

measure the volume. Estimate TFV for the sieve catch with the greatest volume using Table 1 of this rule, which provides a correlation between sieve opening size and TFV.

**Table 1. Determination of Threshold Friction Velocity**

1. Tyler Sieve No. 5; ASTM 11 Sieve No. 5; Opening 4 mm; TFV 135 cm/sec.
2. Tyler Sieve No. 9; ASTM 11 Sieve No. 10; Opening 2 mm; TFV 100 cm/sec.
3. Tyler Sieve No. 16; ASTM 11 Sieve No. 18; Opening 1 mm; TFV 76 cm/sec.
4. Tyler Sieve No. 32; ASTM 11 Sieve No. 35; Opening 0.5 mm; TFV 58 cm/sec.
5. Tyler Sieve No. 60; ASTM 11 Sieve No. 60; Opening 0.25 mm; TFV 43 cm/sec.
6. Collector pan; ASTM 11 Sieve n/a; Opening n/a mm; TFV 30 cm/sec.

b. Collect at least three soil samples which represent random portions of the over-all conditions of the site, repeat the above TFV test method for each sample and average the resulting TFVs together to determine the TFV uncorrected for non-erodible elements. Non-erodible elements are distinct elements, in the random portion of the overall conditions of the site, that are larger than 1 cm in diameter, remain firmly in place during a wind episode, and inhibit soil loss by consuming part of the shear stress of the wind. Non-erodible elements include stones and bulk surface material but do not include flat or standing vegetation. For surfaces with non-erodible elements, determine corrections to the TFV by identifying the fraction of the survey area, as viewed from directly overhead, that is occupied by non-erodible elements using the following procedure. For a more detailed description of this procedure, see Test Methods for Stabilization-Rock Test Method under this Rule. Select a survey area of 1 meter by 1 meter that represents a random portion of the overall conditions of the site. Where many non-erodible elements lie within the survey area, separate the non-erodible elements into groups according to size. For each group, calculate the overhead area for the non-erodible elements according to the following equations:

Average Length × Average Width = Average Dimensions Eq. 1

Average Dimensions × Number of Elements = Overhead Area Eq. 2

Overhead Area of Group 1 + Overhead Area of Group 2 (etc.) = Total Overhead Area Eq. 3

Total Overhead Area ÷ 2 = Total Frontal Area Eq. 4

(Total Frontal Area ÷ Survey Area) × 100 = Percent Cover of Non-Erodible Elements Eq. 5

Note: Ensure consistent units of measurement (e.g., square meters or square inches) when calculating percent cover. Repeat this procedure on an additional two distinct survey areas that represent a random portion of the overall conditions of the site and average the results. Use Table 2 of this rule to identify the correction factor for the percent cover of non-erodible elements. Multiply the TFV by the corresponding correction factor to calculate the TFV corrected for non-erodible elements.

**Table 2. Correction Factors for Threshold Friction Velocity**

1. Greater than or equal to 10% cover of non-erodible elements; correction factor = 5.
  2. Greater than or equal to 5%, but less than 10% cover of non-erodible elements; correction factor = 3.
  3. Greater than or equal to 1%, but less than 5% cover of non-erodible elements; correction factor = 2.
  4. Less 1% cover of non-erodible elements; correction factor = 1.
5. The "flat vegetative cover" test.

Determination of Flat Vegetative Cover: Flat vegetation includes attached (rooted) vegetation or unattached vegetative debris lying on the surface with a predominant horizontal orientation that is not subject to movement by wind. Flat vegetation, which is dead but firmly attached, shall be considered equally protective as live vegetation. Stones or other aggregate larger than 1 centimeter in diameter shall be considered protective cover in the course of conducting the line transect test method. Where flat vegetation exists, conduct the following line transect test method.

a. Line Transect Test Method: Stretch a 100-foot measuring tape across a survey area that represents a random portion of the overall conditions of the site. Firmly anchor both ends of the measuring tape into the surface using a tool such as a screwdriver, with the tape stretched taut and close to the soil surface. If vegetation exists in regular rows, place the tape diagonally (at approximately a 45° angle) away from a parallel or perpendicular position to the vegetated rows. Pinpoint an area the size of a 3/32 inch diameter brazing rod or wooden dowel centered above each 1-foot interval mark along one edge of the tape. Count the number of times that flat vegetation lies directly underneath the pinpointed area at 1-foot intervals. Consistently observe the underlying surface from a 90° angle directly above each pinpoint on one side of the tape. Do not count the underlying surface as vegetated if any portion of the pinpoint extends beyond the edge of the vegetation underneath in any direction. If clumps of vegetation or vegetative debris lie underneath the pinpointed area, count the surface as vegetated, unless bare soil is visible

directly below the pinpointed area. When 100 observations have been made, add together the number of times a surface was counted as vegetated. This total represents the percent of flat vegetation cover (e.g., if 35 positive counts were made, then vegetation cover is 35%). If the survey area that represents a random portion of the overall conditions of the site is too small for 100 observations, make as many observations as possible. Then multiply the count of vegetated surface areas by the appropriate conversion factor to obtain percent cover. For example, if vegetation was counted 20 times within a total of 50 observations, divide 20 by 50 and multiply by 100 to obtain a flat vegetation cover of 40%.

b. Conduct the line transect test method, as described in Line Transect Method of this rule, an additional two times on areas that represent a random portion of the overall conditions of the site and average results.

6. The "standing vegetative cover" test.

Incorporate by reference Maricopa Rule (Rule 310) Appendix C, §2.6.

7. The "rock test."

The Rock Test Method examines the wind-resistance effects of rocks and other non-erodible elements on disturbed surfaces. Non-erodible elements are objects larger than 1 centimeter (cm) in diameter that remain firmly in place even on windy days. Typically, non-erodible elements include rocks, stones, glass fragments, and hard-packed clumps of soil lying on or embedded in the surface. Vegetation does not count as a non-erodible element in this method. The purpose of this test method is to estimate the percent cover of non-erodible elements on a given surface to see whether such elements take up enough space to offer protection against windblown dust. For simplification, the following test method refers to all non-erodible elements as "rocks".

a. Select a 1-meter × 1-meter survey area that represents the general rock distribution on the surface. (A 1-meter × 1-meter area is slightly greater than a 3-foot × 3-foot area). Mark off the survey area by tracing a straight, visible line in the dirt along the edge of a measuring tape or by placing short ropes, yard sticks, or other straight objects in a square around the survey area.

b. Without moving any of the rocks or other elements, examine the survey area. Since rocks >3/8 inch (1 cm) in diameter are of interest, measure the diameter of some of the smaller rocks to get a sense for which rocks need to be considered.

c. Mentally group the rocks >3/8 inch (1 cm) diameter lying in the survey area into small, medium, and large size categories. Or, if the rocks are all approximately the same size, simply select a rock of average size and typical shape. Without removing any of the rocks from the ground, count the number of rocks in the survey area in each group and write down the resulting number.

d. Without removing rocks, select one or two average-size rocks in each group and measure the length and width. Use either metric units or standard units. Using a calculator, multiply the length times the width of the rocks to get the average dimensions of the rocks in each group. Write down the results for each rock group.

e. For each rock group, multiply the average dimensions (length times width) by the number of rocks counted in the group. Add the results from each rock group to get the total rock area within the survey area.

f. Divide the total rock area by two to get frontal area. Divide the resulting number by the size of the survey area (making sure the units of measurement match), and multiply by 100 for percent rock cover. For example, the total rock area is 1,400 square centimeters, divide 1,400 by 2 to get 700. Divide 700 by 10,000 (the survey area is 1 meter by 1 meter, which is 100 centimeters by 100 centimeters or 10,000 square centimeters), and multiply by 100. The result is 7% rock cover. If rock measurements are made in inches, convert the survey area from meters to inches (1 inch = 2.54 centimeters).

g. Select and mark off two additional survey areas and repeat the procedures described in a. through f. above. Make sure the additional survey areas also represent the general rock distribution on the site. Average the percent cover results from all three survey areas to estimate the average percent of rock cover.

#### 4-4-182. Nonattainment-Area Dust Permit Program; General Provisions

##### A. Permittee's Universal Obligations

A permittee under this Article shall be bound to comply with:

1. applicable objective and work practice standards,
2. the commitments in a dust control plan submitted in support of the application,
3. the application acknowledgments required for a particular permit, and
4. the obligations, standards, and commitments in a permit.

##### B. Permit Types

1. Development Site Permits
2. Earthmoving Activity Permits
3. Nonattainment Area Block Permits

4. Any site subject to a permit requirement under this rule shall not require an additional registration under §4-3-080, the existing county-wide dust registration program.
- C. Application Review and Approval; Dust Control Plan Merger; Limited Effect of Approval
1. Following submittal of a complete application under this Article, including payment of any necessary fee, the Control Officer shall within 10 working days approve, disapprove, or conditionally approve the permit application, in accordance with the requirements of this Article.
  2. Upon approval of any permit under this Article, the provisions of any dust control plan submitted as part of the application shall be merged as part of the permit, and any commitments in the dust control plan shall constitute enforceable requirements under the permit.
  3. Approval of a permit under this Article shall not excuse, or act as a shield with respect to, a violation of any requirement or limitation under these rules, including the provisions of this Article.

D. Fees

Issuance of every permit shall be subject to payment of a fee as specified in Appendix C.

1. Development Site Permits shall be assessed a fee based on project area and the fee specified in Earthmoving Category A. If the Development Site Permit incorporates the Earthmoving Activity Permit(s) for specific earthmoving activities, no additional fee will be due.
2. Stand-alone Earthmoving Activity Permits shall be assessed a fee based on the nature and scope of the activity and the applicable provisions of Appendix C.
3. Block permits shall be assessed a fee based on Appendix C, Earthmoving Category D.
4. Roadway maintenance permits shall be assessed a fee based on Appendix C, Earthmoving Category D.
5. Permit transfers shall be approved without a fee.
6. Permit revisions shall be assessed a fee based on the time required to process the revision application, with a minimum billing of one hour, and a maximum revision fee of \$1000.00.
7. Late-filed applications are subject to the late filing fee specified in Appendix C.
8. Fee waivers are not allowed.

E. Permit Duration

All permits shall have a one-year permit term.

F. Permit Revisions

A permittee may request revision of a permit or a transfer of the permit by filing an amended application. A transfer request shall bear the signatures of authorized representatives for both the transferor and the transferee, and shall further properly identify the transferee.

G. Renewals

Should a construction project last longer than the term of a permit, the permittee shall re-apply for a Dust Control Permit at least 14 calendar days prior to the expiration date of the original permit term. For good cause show, the Control Officer may extend that renewal application deadline. Provided the applicant has a rational system for the completion status of individual parcels within a project, a single permit renewal may cover derivative parcels even though they are no longer contiguous. The renewal fee shall be based on the un-completed area of the project.

H. Right of entry and inspection.

Subject to the requirements of 49-471.03, any site covered by a permit issued pursuant to this Article is subject to inspection without prior notice by the Control Officer.

I. Application signatures.

Every application shall be signed by an individual, and that signature shall constitute a personal representation that the signer has authority to commit the named permit applicant ("Permittee") to comply with the provisions of this Article.

**4-4-184. Development Site Permits**

A. Applicability

1. Onset. Before development activity begins on a site that will involve a disturbance of an aggregate area of more than 0.1 acres, the owner or someone with privity to the owner shall apply for and obtain a Development Site Permit ("Site Permit") from the Control Officer.
2. Duration/Termination. The Development Site Permit shall be maintained until all of the following occur:
  - a. Development activity has ceased.
  - b. All disturbed portions of the development site have been stabilized.
  - c. Closure of the Development Site Permit in accord with this rule.

B. Application Requirements

Unless waived by the Control Officer, a Development Site Permit application shall include each of:

1. Application coversheet

The applicant shall present an application on a form approved by the Control Officer, and shall include all essential identification information as specified on that form, including a proper legal identification of the applicant and the property owner, and the assessor's parcel number(s) for the project. A separate application is required for each site location not contiguous to the location on the original application form.

2. Plot plan or site plan

Each application shall 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 assessor's parcel number(s), the street address(es), the direction north, indicate the areas to be disturbed, and include a calculation of the area to be disturbed. The plan should show:

- a. Entire project site/facility boundaries,
- b. Acres to be disturbed with linear dimensions,
- c. Nearest public roads,
- d. North arrow, and
- e. Planned exit locations onto paved areas accessible to the public.

3. Identification of surface-disturbing Activities

The Development Site Permit Application shall separately identify all activities that may cause a surface disturbance, specifically including planned earthmoving activities and other planned activities that may cause a disturbed surface.

- a. Non-earthmoving Activities. The Development Site Permit application shall identify planned non-earthmoving activity, including any of:
  - i. Vehicle traffic
  - ii. Equipment traffic
  - iii. Parking
  - iv. Material storage and handling
  - v. Other activities.
- b. Earthmoving Activities. The Site Permit application shall identify planned earthmoving activity, including any of:
  - i. Primary mass grading operations
  - ii. Excavations for new footings, pads and concrete work
  - iii. Grubbing existing foundations, slabs or structures
  - iv. Installation of underground utilities
  - v. Landscaping
  - vi. Other earthmoving activities.

4. Permit applicability form

- a. The applicant shall include an applicability form indicating which earthmoving activities will be covered by a stand-alone permit, and which, if any, earthmoving activities will be permitted as part of the Development Site Permit.
- b. If the Development Site Permit will extend to any earthmoving activities, the Site Permit application shall additionally include a supplemental Earthmoving Activity Permit application in accord with §4-4-182 for each such designated earthmoving activity.

5. Development site dust control plan.

The applicant shall include in the application a Development Site Dust Control Plan, explaining the mitigation measures that will be used to control dust from every covered activity to be conducted on the site. At a minimum, the Development Site Dust Control Plan must address:

- a. How will access to the site be controlled?
- b. Will the project require a trackout control system? If not, how will trackout be controlled at each of the access points?
- c. How will the Site Permittee assure that every earthmoving operation is covered by an Earthmoving Activity Permit?
- d. Apart from earthmoving, how will the Site Permittee assure and maintain stabilization of roadways, and areas used for site traffic, parking, and the handling and storage of materials?
- e. If the applicant proposes to achieve stabilization by limiting speeds and traffic volume, how will those limits be enforced?
- f. Once earthmoving is complete are completed, how will those areas be stabilized?
- g. If stabilization will depend upon restricting access or preventing trespass, how will that be achieved?
- h. How often will records of water volume usage be recorded?
- i. How often will site opacity observations be conducted and corresponding records recorded?

- j. How often will site stabilization observations be conducted and corresponding records recorded?
- k. How often will trackout inspections be conducted and corresponding records recorded?

6. Phased Close-out Plan

A Site Permit applicant may propose, as an element of the site dust control plan, a tracking system to define which individual parcels within a PAD or subdivision have qualified for Permit Closeout with respect to that parcel. Subject to the approval of the Control Officer, the tracking system proposal may include an electronic spreadsheet and linked electronic map maintained at the PAD or subdivision site. Closeout with respect to any parcel cannot take effect before the Site Permittee provides notice to the Control Officer regarding that parcel. Implementation of any such phased plan requires the express approval of the Control Officer.

C. Development Site Permittee's Obligations

1. Application Acknowledgments. By signing an application, the Development Site Permittee acknowledges obligations to:
  - a. Assure that any earthmoving activity on the site is covered by an Earthmoving Activity Permit;
  - b. With respect to the development site:
    - i. Comply with objective development site standards of §4-4-172.
    - ii. Comply with obligatory development site work practice standards of §4-4-176.
    - iii. Comply with commitments in the dust management plan submitted in support of a Development Site Permit application.
  - c. For earthmoving activity covered by the Development Site Permit:
    - i. comply with applicable objective earthmoving activity standards of §4-4-174.
    - ii. comply with applicable obligatory earthmoving activity work practice standards of §4-4-178.
    - iii. comply with commitments in the dust management plan submitted in support of the earthmoving activity permit application.
2. Permit must be available on-site. A complete copy of the Development Site Permit, including the dust control plan, shall be kept on the project site at all times that Construction Activities occur and shall be made available upon request of the Control Officer.
3. Recordkeeping. Unless an alternative frequency is presented in a dust control plan and approved in a permit on any day when disturbed surfaces remain on the site and any earthmoving or construction activity occurs, the Permittee shall maintain daily logs showing:
  - a. Records verifying integrity of entrance/exit definitions.
  - b. Records of trackout compliance inspections.
  - c. Water/suppressant truck hours of operation and water or suppressant application rates. Permittee may use whatever metrics will reasonably reflect actual application rates.
  - d. Records of opacity observations, including notation of methods utilized.
  - e. Records of location and results of surface stabilization assessments, including notation of methods utilized.
  - f. Compliance with Development Site Permit dust control plan
4. Basic Dust Control Training Requirement. No later than December 31, 2008, a site superintendent or other designated on-site representative of the permit holder and water truck and water pull drivers for each site shall have successfully completed a Control-Officer-approved Basic Dust Control Training Class.
5. Dust Control Coordinator Requirement. Any site and/or any contiguous site under common control of five acres or more of disturbed surface area subject to a permit shall, at all times during earthmoving activity operations related to the purposes for which an Earthmoving Activity Permit is required, have on-site at least one individual qualified under a Control-Office-approved Dust Control Coordinator training program.

D. Permit Closeout

1. Site-wide Project Closure; Closure of Owner's Obligation.

An owner may attain a project-wide closeout ("project closure") by obtaining from the Control Officer a written Approval of Certificate of Project Completion based upon a showing of final stabilization following completion of all development activities.
2. Site-wide Project Closure; Closure of Site Permittee's Obligation.

A Site Permittee may terminate his liability under this Article by obtaining from the Control Officer a written Approval of Certificate of Project Completion, based upon the contractor's showing of:

  - a. final stabilization following completion of contracted project-wide development activities;
  - b. Other equitable grounds (i.e. Termination of contractor's involvement with project).

3. Phased Closure.

An owner and a Site Permittee may both terminate liability and obligation under this Article with respect to a specific lot or parcel within a development, by complying with the terms of a Control-Officer-approved phased closure plan.

**4-4-186. Earthmoving Activity Permits**

**A. Applicability**

1. Onset. Before earthmoving activity begins on a site that requires a Development Site Permit, the owner or someone with privity to the owner shall apply for and obtain an Earthmoving Activity Permit from the Control Officer.
2. Duration/Termination. The Earthmoving Activity Permit shall be maintained until all of the following occur:
  - i. Earthmoving activity has ceased.
  - ii. All portions of the construction site disturbed by the earthmoving activity have been stabilized.
  - iii. Closure of the Earthmoving Activity Permit.

**B. Application Requirements**

Unless waived by the Control Officer, a Development Site Permit application shall include each of:

1. Link to Development Site Permit. The Earthmoving Activity Permit application shall specifically identify the number of the underlying Development Site Permit.
2. Application coversheet  
The applicant shall present an application on a form approved by the Control Officer, and shall include all identification information as specified on that form, including a proper legal identification of the applicant and the property owner, and the assessor's parcel number(s) for the project. A separate application is required for each site location not contiguous to the location on the original application form.
3. Plot plan or site plan  
Provided the Development Site Permit shows and quantifies areas to be disturbed by earthmoving activity, the application may include a copy of that plot plan. Otherwise, each Earthmoving Activity Permit application shall 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 assessor's parcel number(s), the street address(es), the direction north, indicate the areas to be disturbed by earthmoving, and include a calculation of the area to be disturbed.
  - a. Entire project site/facility boundaries,
  - b. Acres to be disturbed with linear dimensions,
  - c. Nearest public roads,
  - d. North arrow, and
  - e. Planned exit locations onto paved areas accessible to the public.
4. Identification of surface-disturbing activities  
The Earthmoving Activity Permit Application shall identify planned earthmoving activities including any of:
  - a. Earthmoving Activities, including any of:
    - i. Primary mass grading operations
    - ii. Excavations for new footings, pads and concrete work
    - iii. Grubbing existing foundations, slabs or structures
    - iv. Installation of underground utilities
    - v. Landscaping
    - vi. Other activities that qualify as earthmoving; see §4-4-160.
5. Permit applicability form
  - a. The Earthmoving Activity Permit Application shall identify whether the application applies to specific activities or to all earthmoving activities.
6. Earthmoving Activity dust control plan.  
The application shall include an Earthmoving Activity Dust Control Plan, explaining the mitigation measures that will be used to control dust from every earthmoving to be conducted on the site. At a minimum, the Earthmoving Activity Dust Control Plan must address:
  - a. How will access to the site plan be controlled?
  - b. Will the earthmoving activity operator be responsible for installing and/or maintaining a trackout control system?
  - c. For every identified earthmoving activity, how will dust be controlled by actions taken prior to or during that activity?
  - d. Once earthmoving is complete, how will those areas disturbed by earthmoving be stabilized?
  - e. How often will records of water volume usage be recorded?
  - f. How often will property line and earthmoving activity opacity observations be conducted and corresponding records recorded?

- g. How often will site stabilization observations be conducted and corresponding records recorded?
- h. How often will trackout inspections be conducted and corresponding records recorded?

C. Earthmoving Activity Permittee's Obligations

1. Application Acknowledgments. By signing an application, the Earthmoving Activity Permittee acknowledges obligations to:
  - a. Assure that any earthmoving activity on the site conducted by the Permittee is covered by an Earthmoving Activity Permit;
  - b. With respect to the development site:
    - i. Comply with objective earthmoving activity standards of §4-4-174, including the post-operation stabilization requirement.
    - ii. Comply with obligatory earthmoving activity work practice standards of §4-4-178.
    - iii. Comply with commitments in the dust management plan submitted in support of the Earthmoving Activity Permit application.
2. Permit must be available on-site. A complete copy of the Earthmoving Activity Permit, including the earthmoving activity dust control plan, shall be kept on the project site at all times that earthmoving activities occur and made available upon request of the Control Officer.
3. Recordkeeping  
Unless an alternative frequency is presented in a dust control plan and approved in a permit, on any day when earthmoving activity occurs the Permittee shall maintain daily logs showing:
  - a. Water/suppressant truck hours of operation and water or suppressant application rates. Permittee may use whatever metrics reasonably show application rates.
  - b. Records of opacity observations, including notation of methods utilized.
  - c. Records of location and results of post-operation surface stabilization assessments, including notation of methods utilized.
  - d. Compliance with Earthmoving Activity Permit dust control plan.
4. Basic Dust Control Training Requirement. No later than December 31, 2008, a site superintendent or other designated on-site representative of the permit holder and water truck and water pull drivers for each site shall have successfully completed a Control-Officer-approved Basic Dust Control Training Class.

D. Permit Closeout

1. Notice of Extended Cessation. The Earthmoving Activity Permittee shall notify the Control Officer in writing within ten working days of any project cessation that will last for thirty days or more.
2. Earthmoving Activity Permit Closure  
An Earthmoving Activity Permittee may terminate his liability under this Article by obtaining from the Control Officer a written Approval of Certificate of Project Completion, based upon the Permittee's showing of:
  - a. Stabilization following completion of contracted project-wide earthmoving activities, coupled with the Development Site Permittee's written acknowledgment of responsibility for on-going site stabilization; or
  - b. Other equitable grounds (i.e. Termination of contractor's involvement with project).

**4-4-188. Nonattainment Area Block Permits**

A. Applicability

1. Nonattainment Area Block Permits shall only available for earthmoving activity associated with:
  - a. maintenance of existing underground or above-ground lines
  - b. effecting end-user connections
  - c. utility line extensions not exceeding 500' in length
2. Nonattainment Area Block Permits shall only be available to:
  - a. Political subdivisions
  - b. Public Utility Corporations regulated by the Arizona Corporation Commission

B. Application Requirements

Unless waived by the Control Officer, a Development Site Permit application shall include each of:

1. Application coversheet  
The applicant shall present an application on a form approved by the Control Officer, and shall include all identification information as specified on that form, including a proper legal identification of the applicant.
2. Plot plan or site plan - Not required.
3. Identification of surface-disturbing activities  
The Block Permit Application shall acknowledge that applicability is limited to installation of underground utilities and any associated landscaping.

4. Permit applicability form  
Not required.
5. Block Permit dust control plan.  
The application shall include a Block Permit Dust Control Plan, explaining the mitigation measures that will be used to control dust from every earthmoving to be conducted. At a minimum, the Earthmoving Activity Dust Control Plan must address:
  - a. How will trackout be managed?
  - b. For every identified earthmoving activity, how will dust be controlled by actions taken prior to or during that activity?
  - d. Once earthmoving is complete, how will those areas disturbed by earthmoving be stabilized?
  - e. How often will records of water volume usage be recorded?
  - f. How often will property line and earthmoving activity opacity observations be conducted and corresponding records recorded?
  - g. How often will site stabilization observations be conducted and corresponding records recorded?
  - h. How often will trackout inspections be conducted and corresponding records recorded?

C. Block Permittee's Obligations

1. Application Acknowledgments. By signing an application, the Block Permittee acknowledges an obligation to:
  - a. Assure that any earthmoving activity on the site conducted by the Permittee is covered by an Block Permit;
  - b. With respect to every development site:
    - i. Comply with objective earthmoving activity standards of §4-4-174, including the post-operation stabilization requirement.
    - ii. Comply with obligatory earthmoving activity work practice standards of §4-4-178.
    - iii. Comply with commitments in the dust management plan submitted in support of the Block Permit application.
2. The Block Permittee shall provide the Control Officer with notice of the start and completion of each project conducted under the Block Permit. The notice shall be provided in a format approved by the Control Officer.
3. Permit must be available on-site. A complete copy of the Block Permit, including the Block Permit dust control plan, shall be available on every project site at all times that earthmoving activities occur and made available upon request of the Control Officer.
4. Permittee responsible for compliance. The permittee is responsible for ensuring that all Persons abide by the conditions of the Block Permit and these regulations such that the site remains in compliance with the Block Permit.
5. Recordkeeping  
Unless an alternative frequency is presented in a dust control plan and approved in a permit, on any day when earthmoving activity occurs the Permittee shall maintain daily logs showing:
  - a. Water/suppressant truck hours of operation and water or suppressant application rates. Permittee may use whatever metrics reasonably reflect application rates.
  - b. Records of opacity observations, including notation of methods utilized.
  - c. Records of location and results of post-operation surface stabilization assessments, including notation of methods utilized.
  - d. Compliance with Block Permit dust control plan.
6. Basic Dust Control Training Requirement. A site superintendent or other designated on-site representative of the Block Permit holder and water truck and water pull drivers for each site shall have successfully completed a Control-Officer-approved Basic Dust Control Training Class.

D. Permit Closeout

Not applicable.

**4-4-190. Recordkeeping and Records Retention**

- A. Requirement to furnish records upon request. Upon verbal or written request by the Control Officer, the log or the records and supporting documentation required under this Article shall be provided as soon as possible but no later than 48 hours, excluding weekends. If the Control Officer is at the site where requested records are kept, records shall be provided without delay.
- B. Records Retention.: Any person subject to a record-keeping requirement shall retain copies of approved Dust Control Plans, control measures implementation records, and all supporting documentation for at least six months following the termination of the dust-generating operation and for at least two years from the date such records were initiated.