

**NOTICE OF FINAL RULEMAKING  
MARICOPA COUNTY AIR POLLUTION CONTROL REGULATIONS  
RULE 300 – VISIBLE EMISSIONS**

**PREAMBLE**

**1. Sections affected**

Rule 300

**Rulemaking action**

Amend

**2. Statutory authority for the rulemaking:**

Authorizing statutes: A.R.S. §§ 49-474, 49-479, and 49-480

Implementing statute: A.R.S. § 49-112

**3. The effective date of the rule:**

Date of Adoption: March 12, 2008

**4. List of all previous notices appearing in the Register addressing the rulemaking:**

Notice of Rulemaking Docket Opening: 13 A.A.R. 3373, October 5, 2007

Notice of Proposed Rulemaking: 13 A.A.R. 3864, November 9, 2007

**5. The name and address of agency personnel with whom persons may communicate regarding the rulemaking:**

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**6. An explanation of the rule, including the agency's reasons for initiating the rulemaking:**

The Maricopa County Air Quality Department (MCAQD) revised Rule 300 to implement a control measure and increase compliance with existing rules for the Five Percent Plan for PM<sub>10</sub>. On June 6, 2007, the U.S. Environmental Protection Agency (EPA) finalized its finding that the Phoenix nonattainment area did not attain the 24-hour PM<sub>10</sub> standard by the deadline mandated in the Clean Air Act (CAA), December 31, 2006. (72 FR 31183, June 6, 2007). Under Section 189(d) of the CAA, serious PM<sub>10</sub> nonattainment areas that fail to attain are required to submit within 12 months of the

applicable attainment date, “plan revisions which provide for attainment of the PM<sub>10</sub> air quality standard and, from the date of such submission until attainment, for an annual reduction in PM<sub>10</sub> or PM<sub>10</sub> precursor emissions within the area of not less than 5% of the amount of such emissions as reported in the most recent inventory prepared for such area.” In accordance with the CAA section 179(d)(3), the attainment deadline applicable to an area that misses the serious area attainment date is as soon as practicable. The region submitted a Five Percent Plan for PM<sub>10</sub> by December 31, 2007.

**PM<sub>10</sub> Nonattainment Status History:**

The 1990 Clean Air Act Amendments initially classified Maricopa County as a "moderate" non-attainment area for PM<sub>10</sub> pollution. This classification required the Phoenix nonattainment area to show attainment of the PM<sub>10</sub> national ambient air quality standards (NAAQS) by December 31, 1994. The Maricopa County moderate PM<sub>10</sub> nonattainment area failed to attain the NAAQS by this deadline. Consequently, on May 10, 1996, the EPA reclassified Maricopa County as a serious PM<sub>10</sub> non-attainment area. The EPA partially disapproved the PM<sub>10</sub> SIP revision triggering a federal implementation plan (FIP) obligation. The EPA disapproved those sections of the SIP addressing unpaved roads, unpaved shoulders, unpaved parking lots, vacant lots, and agriculture. Under the court ordered consent decree, the EPA finalized a FIP in July 1998 for the Maricopa County PM<sub>10</sub> nonattainment area that addressed four of those categories. In response to the EPA’s disapproval, a SIP was prepared by the Arizona Department of Environmental Quality (ADEQ) to include implementation of Best Available Control Measures (BACM) demonstrating attainment of the PM<sub>10</sub> NAAQS by December 21, 2001.

Emission inventories and air quality modeling analysis of these control measures found a 16.4% PM<sub>10</sub> reductions shortfall, so attainment was not achieved by the December 2001 target date. A Serious Area Plan for PM<sub>10</sub> was submitted to EPA on July 9, 1999 containing 77 additional control measures. This revised serious area plan was approved by the EPA in April 2002 contingent on the completion of three commitments by Maricopa County. Revisions to Rule 310 adopted on April 7, 2004 addressed these commitments.

On July 2, 2002, the EPA found the SIP control inadequate to ensure the attainment of the PM<sub>10</sub> NAAQS at the Salt River air quality monitoring sites and three other microscale sites in the Maricopa County nonattainment area (Maryvale, Gilbert, and West Chandler). The EPA’s Aerometric Information Retrieval System (AIRS) continued to show exceedances at the Maricopa County PM<sub>10</sub> nonattainment area Salt River site, recording exceedances in 1999, 2000, and through three quarters of 2001. Consequently, the EPA required Arizona to submit a SIP revision to identify and implement corrective PM<sub>10</sub> control provisions in the Salt River Study Area and for similar significant sources in the Maricopa County PM<sub>10</sub> nonattainment area.

Arizona's Salt River SIP revision provided attainment by December 31, 2006, in accordance with CAA § 189(b)(1)(A) and 188(e), and was required to include control strategies that meet the Best Available Control Measures (BACM) test and the Most Stringent Measures (MSM) test for significant sources and source categories.

The Final Salt River PM<sub>10</sub> State Implementation Plan dated August 2004 included the following requirements, as described by the EPA in its Federal Register notice of disapproval (67 FR 44369, July 2, 2002):

- A modeling demonstration showing that the level of emissions reductions from application of BACM-MSM for all significant sources of PM<sub>10</sub> will result in attainment of the 24-hour NAAQS by December 31, 2006, at the Salt River PM<sub>10</sub> monitoring site, in accordance with CAA §189(b)(1)(A) and §188(e).
- Commitments to implement BACM-MSM for sources significantly contributing to exceedances of the 24-hour PM<sub>10</sub> standard in the Salt River area as expeditiously as possible (CAA §189(b)(1)(B)) and a commitment that all BACM and MSM control measures adopted and applied to sources in the Salt River Study Area will be applied to all similar sources throughout the Maricopa County PM<sub>10</sub> serious nonattainment area.
- A demonstration that the plan constitutes Reasonable Further Progress (RFP) up to the attainment deadline (December 31, 2006).
- A demonstration that all the requirements of the federal Clean Air Act Amendments that pertain to serious PM<sub>10</sub> nonattainment areas are met, including CAA §110(l), §110(a)(2)(E)(i), and 40 CFR §51.280 and §51.111).

**Explanation for Current Rulemaking Proposals:**

The Phoenix nonattainment area did not attain the 24-hour PM<sub>10</sub> standard by the deadline of December 31, 2006 mandated in the Clean Air Act (CAA) (72 FR 31183, June 6, 2007). Now, the required 5% Plan for PM<sub>10</sub> must demonstrate 5% reductions per year in emissions from the date of submission to the EPA.

The MCAQD conducted an analysis to identify additional measures to reduce emissions and/or improve compliance with existing requirements. In this analysis, the MCAQD reviewed current rules to determine the Most Stringent Measures (MSM) application of the 20% visible emission standard. This review included rules from Clark County, Nevada; South Coast Air Quality Management District, California (SCAQMD); and San Joaquin Unified Air Pollution Control District, California (SJUAPCD) in an effort to identify the differences between Maricopa County rules and rules from areas that successfully met the December 31, 2006 attainment date. The MCAQD also reviewed the

EPA's notice finalizing Method 203 (A), (B), and (C) (71 FR 55119, September 21, 2006). In the summary of that notice the EPA states: "The intended effect is to provide States with an expanded array of data reduction procedures for determining compliance with SIP opacity regulations." These areas that successfully met the December 31, 2006 attainment date administer rules that utilize a time-exception form of the standard expressed as "... shall not exceed 20% opacity for more than three minutes out of any 60-minute period." This form of data reduction for the 20% opacity standard limits the number of excursions over the 20% visible emission standard and results in a more consistent compliance with the standard.

**Section by Section Explanation of Changes:**

- Section 200: Added "See Rule 100 – General Provisions and Definitions of these rules for definitions of terms that are used but not specifically defined in this rule" and re-numbered definitions to be consistent with definition changes.
- Section 201: Deleted "Intermittent Source – A source which causes or discharges visible emissions for a duration of less than 6 consecutive minutes." Re-numbered definitions to be consistent with definition changes.
- Section 301: Deleted from heading "Opacity/General". Added "for a period aggregating more than three minutes in any 60-minute period" and added "of this rule" for reference purposes.
- Section 501: Deleted "except as provided in Section 502 of this rule" and added "as modified by EPA Reference Method 203B."
- Section 502: Deleted "Compliance Determination – Opacity of Visible Emissions From Intermittent Sources: Opacity of visible emissions from intermittent sources shall be determined by observations of visible emissions conducted in accordance with EPA Reference Method 9, except that at least 12 rather than 24 consecutive readings shall be required at 15-second intervals for the averaging time."

**7. Demonstration of compliance with A.R.S. §49-112:**

Under ARS §49-479(C), a county may not adopt a rule or ordinance that is more stringent than the rules adopted by the Director of the Arizona Department of Environmental Quality (ADEQ) for similar sources unless it demonstrates compliance with the requirements of ARS §49-112, which in Section (A) states:

When authorized by law, a county may adopt a rule, ordinance, or other regulation that is more stringent than or in addition to a provision of this title or rule adopted by the director or any board or commission authorized to adopt rules pursuant to this title if all the following conditions are met:

1. The rule, ordinance or other regulation is necessary to address a peculiar local condition;
2. There is credible evidence that the rule, ordinance or other regulation is either:

- (a) Necessary to prevent a significant threat to public health or the environment that results from a peculiar local condition and is technically and economically feasible.
- (b) Required under a federal statute or regulation, or authorized pursuant to an intergovernmental agreement with the federal government to enforce federal statutes or regulations if the County rule, ordinance, or other regulation is equivalent to federal statutes or regulations.

The MCAQD revised Rule 300 in order to address a peculiar local condition: EPA’s finding that the Phoenix nonattainment area did not attain the 24-hour PM<sub>10</sub> standard by the December 31, 2006 deadline mandated in the Clean Air Act (CAA; 72 FR 31183, June 6, 2007). The Phoenix nonattainment area is the only nonattainment area designated serious for PM<sub>10</sub> in Arizona. Consequently, stronger regulations must be adopted in this area to address a serious health threat. Under Section 189(d) of the CAA, serious PM<sub>10</sub> nonattainment areas that fail to attain are required to submit within 12 months of the applicable attainment date “plan revisions which provide for attainment of the PM<sub>10</sub> air quality standard and, from the date of such submission until attainment, for an annual reduction in PM<sub>10</sub> or PM<sub>10</sub> precursor emissions within the area of not less than 5% of the amount of such emissions as reported in the most recent inventory prepared for such area.” In accordance with the CAA Section 179(d)(3), the attainment deadline applicable to an area that misses the serious area attainment date is as soon as practicable. The region submitted a Five Percent Plan for PM<sub>10</sub> by December 31, 2007. The Phoenix nonattainment area is one of three areas in the entire country for which the EPA has issued a finding that Section 189(d) has been triggered. Because of this, the revisions to Maricopa County Rule 300 comply with A.R.S. § 49-112 (A)(1) and A.R.S. § 49-112 (A)(2).

**8. A reference to any study relevant to the rule that the agency reviewed and either proposes to rely on in its evaluation of or justification for the rule, where the public may obtain or review each study, all data underlying each study, and any analysis of each study and other supporting material:**

Not applicable.

**9. A showing of good cause why the rule is necessary to promote a statewide interest if the rule will diminish a previous grant of authority of a political subdivision:**

Not applicable.

**10. A preliminary summary of the economic, small business, and consumer impact:**

**Rule Identification:**

This rulemaking amends Rule 300 – Visible Emissions in the Maricopa County Air Pollution Control Regulations. The revision changes the data reduction methodology for the existing 20% opacity limit and reads “... shall not exceed 20% opacity for more than three minutes out of any 60-minute period.”

This form of data reduction for the 20% opacity standard limits the number of excursions over the 20% visible emission standard and results in a more consistent compliance with the standard.

**Entities Directly Impacted:**

Entities directly impacted by this rulemaking include certain permitted sources, pollution control vendors, contractors, consultants, lawyers, the County, private persons and consumers. The Maricopa County Air Quality Department (MCAQD) estimates that as few as 20 to 30 sources might be affected by this rulemaking. Although many industry categories, including woodworking operations, metallurgical operations, scrap metal operations, and cotton gins are potentially subject to Rule 300, most of these sources will be unaffected by this rule. Such sources either already comply with a form of data reduction for determining compliance with the standard, are already subject to the 20% opacity standard or lower opacity standards, or are regulated by New Source Performance Standards (NSPS) under Title 40, Part 60 of the Code of Federal Regulations.

**Probable Costs and Benefits:**

A. Costs to the state of Arizona:

If Arizona is unable to submit a plan that demonstrates a 5% per year reduction in PM<sub>10</sub> and is unable to demonstrate attainment at the monitors based on implemented control measures such as this rule, the EPA will be required to make a nondiscretionary finding that Arizona has failed to submit an approvable plan. If the County and Arizona fail to correct the identified deficiencies – described in the EPA’s nondiscretionary finding – within the timeframe specified in the EPA’s nondiscretionary finding, the sanctions under § 179 of the Clean Air Act (CAA) will be imposed. Sanctions include loss of highway funds and stricter emission offset requirements for major sources. In addition, under § 110(c) of the CAA, the EPA would then need to promulgate a Federal Implementation Plan (FIP) no later than 24 months after the date of publication of the notice of EPA’s nondiscretionary finding.

B. Potential Costs and Benefits to the Public:

The most obvious benefit arising from promulgation of this rule is reduction in the harmful effects of air pollution, most notably particulates. Air pollution harms lung function, damages lung tissue, and increases respiratory symptoms, such as coughing, shortness of breath, wheezing and asthma attacks, and can impair the body’s immune system response to inhaled particles. Results may include restricted activities, work time lost, revenues lost due to increased hospital admissions, illness, and death. PM associated health risks occur even more frequently in susceptible subpopulations, such as the elderly, children with asthma, and persons with cardiopulmonary disease, and may contribute to up to 65,000 excess deaths in the U.S. annually (STAPPA and ALAPCO, Controlling Particulate Matter Under the Clean Air Act: A Menu of Options, July 1996). Even very low concentrations of particulate matter may increase risk of early death, particularly in elderly populations with preexisting cardiopulmonary

diseases (STAPPA and ALAPCO, *supra*). Chronic obstructive pulmonary disease (COPD), a major cause of morbidity and mortality in the U.S., cost the country more than 32 billion dollars in 2002, a figure which does not include costs attributable to asthma (American Lung Assoc., “Trends in Chronic Bronchitis and Emphysema: Morbidity and Mortality,” Epidemiology and Statistics Unit, Research and Scientific Affairs, March 2003). Notably, asthma death rates in Arizona equaled or exceeded U.S. rates from 1991–98. In addition, in 1998, an estimated 316,200 Arizonans suffered breathing discomfort and asthma related stress (Arizona Department of Health Services, “Asthma Control Program,” Office of Nutrition and Chronic Disease Prevention Services, October, 2002). Therefore, Maricopa County expects the change in data reduction methodology; i.e., utilizing a time-exception form of the standard expressed as “. . . shall not exceed 20% opacity for more than three minutes out of any 60-minute period”, to translate into cost-saving benefits to the general public by reducing emissions-related adverse health effects and the concurrent lost revenue and health care costs. In addition to direct health-related effects, a statewide opacity limit of 20% will affect the general quality of life, particularly for those persons living near sources.

#### C. Potential Costs and Benefits to the Regulated Community:

The change in the data reduction methodology for the existing opacity standard in Rule 300 will require that owners/operators more closely monitor their activities, processes, and controls to ensure proper operation at all times. Areas that successfully met the December 31, 2006 PM<sub>10</sub> attainment date – including Clark County, Nevada; South Coast Air Quality Management District, California; San Joaquin Unified Air Pollution Control District, California; and six out of 14 western states that are members of the Western Regional Air Partnership (WRAP) – all administer rules that include the data reduction methodology adopted in Rule 300. These areas contain sources similar to sources in Maricopa County and such similar sources comply with the adopted standard.

Although each regulated facility is unique, the costs of compliance associated with the revision to Rule 300 are similar and may include: new capital equipment or modification of existing equipment, adjusting or enhancing operations and maintenance; replacing or modifying processes and designs; and indirect and administrative costs. Compliance might also result, however, in a variety of offsetting financial benefits for the source. Such benefits range from lower operation and maintenance costs, as a result of updated and more efficient equipment, to fewer man-hours lost and lower health care costs due to a decrease in pollution-exacerbated illnesses. During the informal workshop process for this rulemaking, the Maricopa County Air Quality Department (MCAQD) requested, from sources participating in the rulemaking process, information on source-specific costs to achieve compliance with these standards. The MCAQD did not receive any information.

#### **Small Business Analysis:**

The MCAQD has not identified all small businesses that could be affected by this rulemaking; however, several small business categories were represented during the rulemaking process for Rule 300 and such businesses did not express any reservations about compliance. The MCAQD has considered a variety of methods to reduce the impact of this rule on small businesses, including five methods prescribed by A.R.S. § 41-1035: (1) establish less stringent compliance or reporting requirements; (2) establish less stringent schedules or deadlines for compliance or reporting requirements; (3) consolidate or simplify the rulemaking's reporting requirements; (4) establish performance requirements to replace design or operational standards; or (5) exempt them from some or all of the rule requirements. For the reasons stated in Item #6 of this Notice of Final Rulemaking and due to the inherent difficulty in identifying all sources which are small businesses, including the possibility that such status may change from year to year, the MCAQD has determined that it is not feasible to apply a separate opacity standard to small businesses. The MCAQD does employ an ombudsman in the Business Resource Division, to whom small businesses may address their issues regarding compliance with the rule.

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Although each regulated facility is unique, the costs of compliance associated with the revision to Rule 300 are similar and may include: new capital equipment or modification of existing equipment, adjusting or enhancing operations and maintenance; replacing or modifying processes and designs; and indirect and administrative costs. Compliance might also result, however, in a variety of offsetting financial benefits for the source. Such benefits range from lower operation and maintenance costs, as a result of updated and more efficient equipment, to fewer man-hours lost and lower health care costs due to a decrease in pollution-exacerbated illnesses. During the informal workshop process for this rulemaking, the Maricopa County Air Quality Department (MCAQD) requested, from sources participating in the rulemaking process, information on source-specific costs to achieve compliance with these standards. The MCAQD did not receive any information.

**11. Name and address of department personnel with whom persons may communicate regarding the accuracy of the economic, small business, and consumer impact statement:**



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**12. Description of the changes between the proposed rule, including supplemental notices and final rule:**

Since the final draft of Rule 300 was published in the Notice of Proposed Rulemaking on November 9, 2007 and in response to formal comments received during the formal comment period (November–December 2007), the following changes to Rule 300 were made. These changes appear in the text of the final rule published in this Notice of Final Rulemaking:

Rule 300, Section 301.1: Moved new Section 301.1 to existing Section 301. In Section 301, deleted from heading “Opacity/General” and added “for a period aggregating more than three minutes in any 60-minute period.” Section 301 reads: “Limitations: No person shall discharge into the ambient air from any single source of emissions any air contaminant, other than uncombined water, in excess of 20% opacity for a period aggregating more than three minutes in any 60-minute period.”

Rule 300, Section 301.2: Deleted new Section 301.2: “No person shall cause, suffer, or allow visible emissions of particulate matter, including fugitive dust, beyond the property line within which the emissions are generated.”

**13 A summary of the comments made regarding the rule and the department response to them:**

The Maricopa County Air Quality Department (MCAQD) conducted two Public Workshops throughout the rulemaking process for Rule 300 (in April and August 2007), and received formal comments during the formal comment period (November–December 2007) from Arizona Public Service (APS) and Salt River Project (SRP), Arizona Associated General Contractors, Arizona Department of Agriculture, and Joint Environmental Task Force. The formal comments and the MCAQD’s responses to such formal comments are summarized below:

**Comment #1:**

APS and SRP are concerned with the proposed changes to this section as it relates to stack emissions. Based on information provided in the 2005 Maricopa County Emissions Inventory, modeling analyses performed by the Maricopa Association of Governments (MAG) and the Arizona Department of Environmental Quality (ADEQ), recommended Control Measures identified by the Air Quality Technical Advisory Committee of the MAG, and conditions set forth in Senate Bill 1552, it appears the intent of the five percent plan is to reduce particulate matter emissions from fugitive dust sources. However, the requirements set forth in this rule apply to emissions that have no applicable source-specific opacity requirement. It is clear that fugitive dust sources have a source specific opacity requirement under Rule 310 and 310.01; therefore, the changes in this rule do not address fugitive dust sources, but would instead impact point sources. As such, the changes set forth in this rule are beyond the scope of the five percent plan and do not reduce fugitive dust emissions.

**Response #1:**

The technical analysis associated with the Salt River Area PM<sub>10</sub> SIP revision submitted in 2005 determined that stationary sources contribute significantly to exceedances of the 24-hour PM<sub>10</sub> standard that occur under stagnant conditions. That analysis characterized the specific types, number, and size of sources present in the modeling domain; land use; the topography of the area; and the design day specific meteorological conditions present at the monitor recording the exceedance. Attainment demonstrations for nonattainment areas required under the Clean Air Act must to the greatest extent practical depict the actual conditions present that cause exceedances in the non-attainment area. Therefore, the nonattainment area plans for the Phoenix nonattainment area for PM<sub>10</sub> are required under the Clean Air Act, in effect, to address actual local conditions that are unique to a geographical area. Further, the EPA's latest particulate matter implementation rule, Clean Air Fine Particle Implementation Rule (72 FR 20586, April 25, 2007), identifies "revised opacity standard" in a list of possible stationary source measures. The rule also lists improved monitoring as a control measure. The EPA notes that improved monitoring control measures would require facilities to pay more attention to the operations of add-on air pollution control devices, work practices, and other control measure activities. The additional attention will reduce periods during which control devices and other control measures do not operate as intended or required. The result would be increased emissions reductions from implementing existing and new rules.

**Comment #2:**

The language "no person shall discharge" should be replaced with the phrase "an owner/operator shall take reasonable measures to prevent discharge into ambient air" in Section 301.1 and Section 301.2. There should be consistency when the phrase "reasonable measure" substitutes "no person shall discharge" in Rules 300, 310, and 310.01.

**Response #2:**

Using the term “reasonable” represents a relaxation of the State Implementation Plan (SIP). The term "reasonable" would not add to or clarify the meaning. Since "reasonable" is a qualitative term, it would simply lead to more ambiguity.

**Comment #3:**

With respect to Section 301.1, APS and SRP agree with the concerns regarding the legality of this change to the existing rule as stated in a letter from Mr. Roger Ferland, on behalf of the Business Coalition, to Mr. Robert Kard dated August 10, 2007:

“Under Method 9, the opacity is determined as the average of 24 consecutive observations recorded at 15-second intervals. As such, the opacity determination is based on a six-minute average of 24 observations. In Method 203B, the number of observations above the applicable standard are counted and multiplied by 0.25 to determine the number of minutes a source is above the opacity standard. In essence, the Method 203B calculation methodology eliminates the averaging effect of readings below the standard...Obviously a data reduction method that results in noncompliance is more stringent than one that does not. This increased stringency of the opacity limit rule is multiplied by the fact that your department has proposed to expand the applicability of Appendix C to include determining compliance with opacity limits applicable to point source emissions...”

“Under the provisions of A.R.S. §49-112(A), the County may only adopt rules that are more stringent than those adopted by the Arizona Department of Environmental Quality (ADEQ) if all conditions of [A.R.S. §49-112(A)] are met...The ADEQ regulations pertaining to the measurement of visible emissions from nonpoint sources (A.A.C. R18-2-614) and point sources (A.A.C. R18-2-702(B)) rely solely upon EPA Test Method 9 and not Method 203B to determine compliance with opacity limits. Thus, the MCAQD’s proposal to substitute Method 203B for Method 9 is subject to the requirements of A.R.S. §49-112(A)...”.

“To date we have seen nothing to suggest the MCAQD intends to provide the evidence or can provide the evidence necessary to meet the statutory requirements.”

It has been suggested that since the change in opacity test methods was bundled with a proposal for more stringent PM<sub>10</sub> regulations that the “peculiar local condition” referred to in the statute was somehow connected to PM<sub>10</sub>. However, this cannot be the case. Visible emissions limits are intended to indicate the proper operation of particulate control technologies such as baghouses or dust suppression technologies. They are not intended to measure and cannot measure PM<sub>10</sub> emissions or the

emissions of any other pollutant. For this reason, source category specific rules typically specify both an opacity limit and an emission limit...”

“Since there is no coincidence between PM<sub>10</sub> emissions and opacity, there is no reason to believe that a more stringent opacity limit, particularly one of the kind at issue here, would result in lower PM<sub>10</sub> (or any other) emissions...”

“Either the MCAQD must make the showings and provide the evidence required by statute (which we judge to be unlikely) or the proposal should be immediately withdrawn...”

**Response #3:**

The revision to the data reduction methodology to EPA Method 203B, which is associated with Maricopa County's 20% opacity standard, is intended to further efforts to increase compliance. This form of data reduction for the 20% opacity standard limits the number of excursions over the 20% opacity standard, which results in more consistent compliance with the existing standard. A rule effectiveness study conducted 2006 through 2007 by the MCAQD found that compliance with the existing rules is lower than anticipated.

The commenter also states that the proposed revisions to the data reduction methodology make the 20% opacity standard substantially more stringent than the current rule. The MCAQD disagrees and believes that the comment overstates the stringency of EPA Method 203B. Throughout the informal and formal rulemaking process, the MCAQD has repeatedly asked for examples of changes or modifications that would be necessary to comply with the proposed revision to Rule 300, using EPA Method 203B data reduction methodology. The MCAQD did not receive any additional information. Further, areas that successfully met the December 31, 2006 PM<sub>10</sub> attainment date – including Clark County, Nevada; South Coast Air Quality Management District, California; San Joaquin Unified Air Pollution Control District, California; and six out of 14 western states that are members of the Western Regional Air Partnership (WRAP) – all administer rules that include the data reduction methodology proposed in Rule 300. These areas contain sources similar to sources in Maricopa County and such similar sources comply with the adopted standard.

In addition, if EPA Method 203B were substantially more stringent than EPA Method 9, then the MCAQD would have been required to include the measure in the most stringent measure demonstration contained in the MAG Serious Area PM<sub>10</sub> Nonattainment Area Plan and Attainment Date Extension Request.

The technical analysis associated with the Salt River Area PM<sub>10</sub> SIP revision submitted in 2005 determined that stationary sources contribute significantly to exceedances of the 24-hour PM<sub>10</sub> standard that occur under stagnant conditions. That analysis characterized the specific types, number, and size of sources present in the modeling domain; land use; the topography of the area; and the design day specific meteorological conditions present at the monitor recording the exceedance. Attainment demonstrations for nonattainment areas required under the Clean Air Act must to the greatest extent practical depict the actual conditions present that cause exceedances in the nonattainment area. Therefore, the nonattainment area plans for the Phoenix nonattainment area for PM<sub>10</sub> are required under the Clean Air Act, in effect, to address actual local conditions that are unique to a geographical area. Further, the EPA's latest particulate matter implementation rule, Clean Air Fine Particle Implementation Rule (72 FR 20586, April 25, 2007), identifies "revised opacity standard" in a list of possible stationary sources measures. The rule also lists improved monitoring as a control measure. The EPA notes that improved monitoring control measures would require facilities to pay more attention to the operations of add-on air pollution control devices, work practices, and other control measure activities. The additional attention will reduce periods during which control devices and other control measures do not operate as intended or required. The result would be increased emissions reductions from implementing existing and new rules.

The MCAQD disagrees that there is no coincidence between PM<sub>10</sub> emissions and opacity. Within an individual source, a change in opacity indicates a change in PM emissions. It is not necessary to demonstrate a correlation between mass emissions and opacity across all source categories, when a goal of the standard is to demonstrate compliance with BACT, BACM, and MSM levels of control. Opacity has also long been used as an indicator of visible particulate pollution. In the discussion on improved monitoring control measures in the proposal for the fine particle implementation rule referenced above, the EPA states, "... visible emissions and the opacity of visible emissions are indicators of a change in PM emissions levels..." In the EPA's fact sheet on the rule finalizing Methods 203A, B, and C, the EPA states, "Evaluating the opacity of emissions serves as a surrogate for particulate emissions. Numerous state and federal regulations require that opacity of emissions be measured or monitored." In the EPA's Response to Comments on the Portland Cement Manufacturing NESHAP (page 227), the EPA states, "An opacity limit was established to ensure effective PM control, but opacity is a separately enforced pollutant ...". In other NESHAPs, where the EPA uses PM as a surrogate for hazardous air pollutants (HAPs), the EPA consistently states that opacity limits are separately enforceable emissions limits which represent and demonstrate continuous compliance with the MACT floor of particulate HAP control.

**Comment #4:**

We are opposed to a zero property line standard. To date we have received no guidance from the County on how this will be regulated with consistency. This requirement also needs to be enforced across all air permits – not just Rule 310 and Rule 316, including Non-Title V and Title V permit holders (their permits state they must follow Rule 310 as well), as well as Rule 310.01 sources, if the County is going to successfully achieve the PM10 reductions than all sources of trackout throughout the County need to be held to the same standard. Stopping drag-out from a site is going to be a constant challenge, either a permitted source is going to create mud at the exit and have trackout (new 25 foot standard) or it will be a little dry and will have property emissions because of drag-out.

**Response #4:**

The Maricopa County Air Quality Department (MCAQD) clarified the proposed property line standard to provide more consistent enforcement in Rules 310 and 310.01. The MCAQD withdrew the property line standard from Rule 300 as the routine dust generating operations at stationary sources are subject to Rule 310. The MCAQD will develop a policy/guideline and train compliance staff to ensure consistent enforcement of the property line standard.

As noted in the comment, Rule 310 applies to Non-Title V and Title V permit holders as well as Dust Control Permit holders. The MCAQD inspectors currently address and will continue to address stationary source dust generating operations during site inspections. The MCAQD has included the property line standard in Rule 310.01 that addresses sources that are not required to obtain permits. The MCAQD believes the property line provisions in Rules 310, 310.01 and 316 effectively cover all sources over which Maricopa County has jurisdiction. Un-permitted sources outnumber permitted sources. Many of the new measures in the Five Percent Plan include additional municipal codes and ordinances to address un-permitted sources. The MCAQD is also in the process of adding additional field staff to address un-permitted sources. The MCAQD intends to begin implementation of the new rule provisions upon adoption by the Board of Supervisors.

**Comment #5:**

With respect to Section 301.2, APS and SRP agree with the property line standard conclusion in the letter from the Arizona Chamber of Commerce and Industry Air Quality Subcommittee to Ms. Johanna Kuspert dated September 10, 2007. This letter states that promulgating a standard to not allow visible emissions across the property boundary line is unconstitutional and cited *Ross Neely Exp. v. ADE*, and *CF&U v. CAPCC*. Although the context of this letter was with Maricopa County Rule 310 and 310.01, the same legal analysis and conclusion are directly applicable to Rule 300. Section 301.2, as written, is unconstitutionally vague and unenforceable and should, therefore, be removed from this rule.

Furthermore, there is no indication that this requirement will result in any reduction in particulate matter emissions, since there is no credible link between opacity and particulate matter emissions.

“The MCAQD’s draft Rule 310.01 would relax the regulation of fugitive dust emissions from County-owned unpaved roads, compared to the current air quality requirements for County-owned unpaved roads (Rule 310.10, Section 304) that have been in effect for several years and already are part of the State Implementation Plan (SIP). This unusual proposal to reduce the existing level of fugitive dust regulation for County-owned property stands in contrast to the MCAQD’s efforts to increase the regulation of almost every other type of activity that emits fugitive dust within Maricopa County...The changes proposed in the draft rule would be an impermissible relaxation of the SIP. Moreover, the concept of decreasing regulation of County-owned sources of fugitive dust while increasing the regulation of so many other categories of emitters is inequitable.”

“In the draft rules, County-owned unpaved roads have fewer and less strict dust control requirements than do business-owned unpaved roads...If the MCAQD intends to impose increased obligations on the business sector, including requirements for business-owned unpaved roads that are more stringent than the requirements for County-owned unpaved roads, then the MCAQD should clearly justify the disparity...”

“At least two other jurisdictions have concluded that absolute prohibitions against visible emissions crossing the property line are unconstitutional. In *Ross Neely Exp. v. ADE*, the Alabama Supreme Court held that a state rule prohibiting visible emissions from crossing the property line: is clearly overbroad, encompassing every situation in which visible fugitive dust emissions move across a lot line, without regard to damage, injury, or inconvenience caused, reasonable attempts to control, etc. This invades the area of protected freedom, severely restricting the use of property, and creates a situation where discriminatory enforcement is almost inevitable. See also, *CF&U v. CAPCC*, 640 P.2d 238 (Colo. App. 1981) (holding that property boundary standard “contravenes fundamental due process rights”).”

**Response #5:**

The MCAQD withdrew the property line standard from Rule 300 and further clarified the property line standard in Rules 310 and 310.01 as it applies to fugitive dust. Since stationary sources regulated by Rule 300 are also subject to the fugitive dust limitations in Rule 310, the property line standard in Rule 300 was duplicative of the standard in Rule 310.

The Maricopa County Air Quality Department (MCAQD) does not agree that the property line standard is unconstitutionally vague and unenforceable and does not agree that the requirement will not

result in any emission reductions. In 1987, since both court decisions were issued, the EPA refined the national ambient air quality standard for particulate matter to inhalable particulate matter 10 microns or less in aerometric diameter. Unlike the two jurisdictions cited in the comment, the Phoenix PM<sub>10</sub> nonattainment area failed to meet the 24-hour PM<sub>10</sub> standard by December 31, 2006. As a result, residents still have the potential to be exposed to unhealthy levels of PM<sub>10</sub>. Exceedances are recorded under both stagnant and elevated wind conditions. Since secondary aerosols are not significant contributors to the exceedances recorded in Maricopa County, geologic material (e.g. dust) remains the dominant constituent of PM<sub>10</sub>. Locally generated PM<sub>10</sub> significantly contributes to recorded exceedances of the PM<sub>10</sub> standard and can be released from dust generating activities or any unstabilized surface exposing residents to unhealthy levels of particulates.

The property line standard can serve as a simple visual technique to monitor the dust released by the operation. To address the feasibility concerns expressed, the MCAQD clarified the property line standard in Rules 310 and 310.01.

The MCAQD disagrees that there is no credible link between opacity and particulate matter emissions. In fact, the next sentence in the EPA notice cited by the comment states, “Nonetheless, because there is at least an indirect relationship between opacity and PM emissions, including the use of opacity to track the effectiveness of PM control equipment operation ...” The MCAQD’s goal with the change in Rule 300 is to improve the monitoring of dust control measures by providing a simple visual tool that can be applied by employees as well as the MCAQD to evaluate the effectiveness of the dust control measure.

**Comment #6:**

Include to the Exceptions section, "The provisions of this rule shall not apply to normal farm cultural practices according to Arizona Revised Statutes (ARS) § 49-457 and ARS § 4957" [*sic*]. This exemption is currently found in Rule 310 and Rule 310.01, Section 103.

**Response #6:**

The intent of Rule 300 is to cover sources of visible emissions that are not covered by source-specific rules like Rule 310 and Rule 310.01. Therefore, source-specific exemptions like agricultural activities or construction activities are not included in the Rule 300.

**Comment #7:**

Rule 300, Section 302.2 Emergency Diesel Generators and Equipment: All emissions from such sources should be taken into account as sources of PM10? Emergency generators and “non-road” engines are exempted. Large engines put out significant amounts of pollution and should be counted.



**Response #7:**

This exemption is very limited in scope as it only applies to emergency diesel generators and equipment at nuclear power facilities. All other emergency diesel generators and equipment are subject to the standards of Section 300.

**Comment #8:**

With respect to Rule 300, Section 501, APS and SRP agree with the concerns regarding the legality of this change to the existing rule as stated in a letter from Mr. Roger Ferland, on behalf of the Business Coalition, to Mr. Robert Kard dated August 10, 2007. A copy of this letter has been attached for your convenience.

**Response #8**

See Response #3 regarding revision from time averaging to time exception data reduction.

**Comment #9:**

There are not classes offered to agricultural producers or livestock owners to become qualified in EPA Reference Method 9, which includes determining 20% opacity. Therefore producers should not be required to comply with a standard for which no training is available. For example a Maricopa County 4-H member (age 9-18) who is raising goats or a community member who keeps horses would be totally unfamiliar with this standard.

**Response #9:**

At least two training providers in Maricopa County offer EPA Method 9 Visible Emissions Observation Certification Training to anyone required to complete periodic visible emissions observations: The ASU Environmental Technology Management (ETM) program offers EPA Method 9 Certification training. Information on the ETM training can be found at <http://www.azdeq.gov/environ/air/compliance/smoke.html> or by calling 480-727-1322. In addition, Arizona Smoke School offers Method 9 training. Information on Arizona Smoke School can be found at <http://www.arizonasmokeschool.com/> or by calling 480-226-0945.

**Comment #10:**

Reduction in the number of readings for Determination of Visual Opacity (EPA Method 9) from 12 to 24 readings. We believe this along with disallowing the zero readings to become part of the count sets the permitted source up for failure of the opacity test. Once recorded this becomes a possible violation for the permitted source.

**Response #10:**

The revision to the data reduction methodology to EPA Method 203B, which is associated with Maricopa County's 20% opacity standard, is intended to further efforts to increase compliance. This form of data reduction for the 20% opacity standard limits the number of excursions over the 20% opacity standard, which results in more consistent compliance with the existing standard.

In 2006 through 2007, the MCAQD conducted a rule effectiveness study and found that compliance with the existing rules is lower than anticipated. The MCAQD conducted an analysis to identify additional measures to reduce emissions and/or improve compliance with existing requirements. In this analysis, the MCAQD reviewed current rules to determine the Most Stringent Measures (MSM) application of the 20% visible emission standard. This included a review of rules from Clark County, Nevada; South Coast Air Quality Management District, California (SCAQMD); and San Joaquin Unified Air Pollution Control District, California (SJUAPCD) in an effort to identify the differences between Maricopa County rules and rules from areas that successfully met the December 31, 2006 attainment date. The MCAQD also reviewed the EPA's notice finalizing Method 203 (A), (B), and (C) (71 FR 55119, September 21, 2006). In the summary of that notice the EPA states, "The intended effect is to provide States with an expanded array of data reduction procedures for determining compliance with SIP opacity regulations." These areas that successfully met the December 31, 2006 attainment date administer rules that utilize a time-exception form of the standard expressed as "...shall not exceed 20% opacity for more than three minutes out of any 60-minute period." This form of data reduction for the 20% opacity standard limits the number of excursions over the 20% visible emission standard and results in a more consistent compliance with the standard.

Areas that successfully met the December 31, 2006 PM<sub>10</sub> attainment date – including Clark County, Nevada; South Coast Air Quality Management District, California; San Joaquin Unified Air Pollution Control District, California; and six out of 14 western states that are members of the Western Regional Air Partnership (WRAP) – all administer rules that include the data reduction methodology adopted in Rule 300. These areas contain sources similar to sources in Maricopa County and such similar sources comply with the proposed standard.

**Comment #11:**

Define the term "immediately". This term needs a reasonable timeframe and consistency in draft Rules 300, 310, and 310.01.

**Response #11:**

The term "immediately" is not used in Rule 300.

**Comment #12:**

Opacity should be measured whenever a plant is operating. Checking opacity at night should be implemented. Using the word “visible” should not limit opacity measurements to sunny days. Find a technique that works at night and use it.

**Response #12:**

The MCAQD has set up a class for inspectors to be certified to read opacity at night. After successfully completing the class, inspectors will be certified to measure opacity at night.

**Comment #13:**

Item #7 of the Preamble involves “demonstration of compliance with ARS 49-112”. This should not be a consideration since A.R.S. § 49-112 conflicts with the Clean Air Act.

**Response #13:**

The MCAQD is required to demonstrate compliance with A.R.S. § 49-112 as part of changes to or updates to rules and regulations that are part of a State Implementation Plan (SIP). It is unclear to the MCAQD why the commenter believes A.R.S. § 49-112 conflicts with the federal Clean Air Act.

**14 Any other matters prescribed by the statute that are applicable to the specific department or to any specific rule or class of rules:**

No

**15 Incorporation by reference and their location in the rule:**

EPA Reference Method 9 Rule 300, Section 501

EPA Reference Method 203B Rule 300, Section 501

**16 Was this rule previously an emergency rule?**

No

**17 The full text of the rule follows:**

**REGULATION III – CONTROL OF AIR CONTAMINANTS**

**RULE 300**

**VISIBLE EMISSIONS**

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MARICOPA COUNTY  
AIR POLLUTION CONTROL REGULATIONS  
REGULATION III – CONTROL OF AIR CONTAMINANTS  
RULE 300  
VISIBLE EMISSIONS

SECTION 100 – GENERAL

- 101 PURPOSE:** To limit the emission of air contaminants into the ambient air by establishing standards for visible emissions and opacity.
- 102 APPLICABILITY:** This rule applies to visible emissions from sources for which no source-specific opacity requirements apply. Exceptions to this rule are described in Section 302 of this rule.

**SECTION 200 – DEFINITIONS:** For the purpose of this rule, the following definitions shall apply. See Rule 100 – General Provisions and Definitions of these rules for definitions of terms that are used but not specifically defined in this rule.

- ~~201~~ **INTERMITTENT SOURCE** – ~~A source which causes or discharges visible emissions for a duration of less than 6 consecutive minutes.~~
- ~~202~~**201** **OPACITY** – A condition of the ambient air, or any part thereof, in which an air contaminant partially or wholly obscures the view of an observer.
- ~~203~~**202** **PERCENT OPACITY** – The degree to which an effluent plume or any other emission of air contaminants obscures the transmission of light expressed as a percentage.
- ~~204~~**203** **SHUTDOWN** – The cessation of operation of any air pollution control equipment and/or process equipment for any purpose, except routine phasing out of process equipment.
- ~~205~~**204** **STARTUP** – The setting into operation of any air pollution control equipment and/or process equipment for any purpose, except routine phasing in of process equipment.
- ~~206~~**205** **UNCOMBINED WATER** – Condensed water containing no more than analytical trace amounts of other chemical elements or compounds.

## SECTION 300 – STANDARDS

**301 LIMITATIONS —~~OPACITY/GENERAL~~:** No person shall discharge into the ambient air from any single source of emissions any air contaminant, other than uncombined water, in excess of 20% opacity for a period aggregating more than three minutes in any 60-minute period.

### **302 EXCEPTIONS:**

**302.1 Charging Electric Arc Furnaces:** When charging or back-charging any electric arc furnace for which construction commenced prior to February 2, 1963, a person may discharge air contaminants, other than uncombined water, in excess of the applicable opacity limit in Section 301 of this rule for no more than an aggregate of three minutes in any 45-minute period; however, visible emissions resulting from such discharge of air contaminants shall not exceed 40% opacity.

**302.2 Emergency Diesel Generators (EDGs) and Equipment:** When emergency diesel generators (EDGs) and equipment must run for safety reasons and/or for safety and operational tests to meet the requirements legally imposed by the Nuclear Regulatory Commission, a person may discharge air contaminants, other than uncombined water, in excess of the applicable opacity limit in Section 301 of this rule. Any discharge of air contaminants, other than uncombined water, in excess of the opacity limit in Section 301 of this rule should not contribute to a violation of the national ambient air quality standard.

**302.3 Firing of Ordnance at Test Facilities:** Visible emissions exceeding the opacity standards for short periods of time resulting from firing test rounds in enclosed bunkers at ordnance test facilities which do not exceed six minutes in length shall not constitute a violation of Section 301 of this rule.

**302.4 Opacity Training:** Equipment or processes used to train individuals in opacity observations shall be exempt from opacity standards during the preparation for and/or during the actual training session(s).

## SECTION 400 – ADMINISTRATIVE REQUIREMENTS (NOT APPLICABLE)

## SECTION 500 – MONITORING AND RECORDS

**501 COMPLIANCE DETERMINATION – OPACITY:** Opacity shall be determined by observations of visible emissions conducted in accordance with EPA Reference Method 9, ~~except as provided in Section 502 of this rule~~ as modified by EPA Reference Method 203B.

~~502 COMPLIANCE DETERMINATION – OPACITY OF VISIBLE EMISSIONS FROM INTERMITTENT SOURCES:~~ Opacity of visible emissions from intermittent sources shall be determined by observations of visible emissions conducted in accordance with EPA Reference Method 9, except that at least 12 rather than 24 consecutive readings shall be required at 15-second intervals for the averaging time.