

**NOTICE OF FINAL RULEMAKING**  
**MARICOPA COUNTY AIR POLLUTION CONTROL REGULATIONS**  
**RULE 314 – OPEN OUTDOOR FIRES AND INDOOR FIREPLACES AT**  
**COMMERCIAL AND INSTITUTIONAL ESTABLISHMENTS**

**PREAMBLE**

**1. Sections affected**

Rule 314

**Rulemaking Action**

Amend

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

Authorizing Statutes: A.R.S. §§ 11-251.63, 11-871, 49-112 (A), 49-479, and 49-501

Implementing Statute: A.R.S. §§ 9-479 and § 9-501

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

March 12, 2008

**4. List of all previous notices appearing in the register addressing the final rule:**

Notice of Rulemaking Docket Opening: 13 A.A.R., 2600, July 20, 2007

Notice of Proposed Rulemaking: 13 A.A.R., 3880, November 9, 2007

**5. Name and address of department personnel with whom persons may communicate regarding the rulemaking:**

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**6. Explanation of the rule, including the department's reasons for initiating the rule:**

Maricopa County is amending Rule 314 in response to the passage of Senate Bill 1552 by the Arizona Legislature in June 2007. The County is also amending this rule due to the statutory requirements listed in the recently enacted Senate Bill 1552 and also in relation to commitments made in the Five Percent Plan for PM<sub>10</sub>. Since the area did not attain the PM<sub>10</sub> standard by December 31, 2006, the area must submit to the U.S. Environmental Protection Agency (EPA) a Five Percent Plan for PM<sub>10</sub> by December 31, 2007. The Five Percent

Plan for PM<sub>10</sub> must demonstrate 5% reductions per year in emissions from the date of submission to the EPA. As part of this rulemaking authority, the County may add, delete, or modify additional rules and ordinances as necessary.

The amended rule prohibits certain types of open outdoor burning in Maricopa County except the types of open outdoor burning listed in Sections 302, 303, 304, 305 and the Appendix to Rule 314. The amended Rule 314 limits certain types of open burning during restricted-burn periods and further prohibits some types of open burning during the period from May 1 to September 30 of each year (during the ozone season). These restrictions will reduce the emissions of air contaminants such as particulate matter, nitrogen oxides (NO<sub>x</sub>) and volatile organic carbon (VOC), by limiting certain types of open burning by non-residential sources during these times of the year when the ozone is expected to exceed standards.

The amended rule also prohibits all indoor burning using fireplaces in commercial, non-residential establishments, such as hotels and restaurants, during Restricted-Burn Periods with the exception of those that use gaseous fuels.

Maricopa County is amending the requirements and specifications for air curtain destructors in Rule 314 and in the Appendix to Rule 314. The use of air curtain destructors is prohibited in the amended rule if there is no firebox in the air curtain destructor wherein the burning takes place. Open pits above or underground are prohibited in the amended rule. Open outdoor fires for the burning of indigenous scrub cleared for the purpose of construction operations is no longer allowed. This would also apply to air curtain destructors used for this purpose. Air curtain destructors will still be allowed to be used in agricultural operations. Many agricultural operations using air curtain destructors take place in non-attainment areas while pre-construction clearance is common in all areas of Maricopa County.

The federal New Source Performance Standard 40 CFR, Part 60, Subpart EEEE and the federal emission guideline, Subpart FFFF, were promulgated on December 16, 2005 by the EPA. Subpart EEEE mandates Title V permits for certain types of air curtain destructors, both existing and new. The amended Rule 314 also mandates that sources obtain Title V permits if using an air curtain destructor and approval of a submitted Burn Plan by the Control Officer prior to burning. Arizona Department of Environmental Quality (ADEQ) is the state agency that will be issuing the Title V permits for air curtain destructors and it will be a General Permit.

There is also some amended text listed in the Appendix to Rule 314. These amendments are considered good management practices for outdoor burns in air curtain destructors and are concerned with the proper placement and functioning of these units.

The amendments also add four new definitions: Area A, firebox, prohibited fuels, and wood-burning chimineas.

**Section by Section Explanation of Changes for the Amended Rule 314:**

Title: Changes the title of the rule to reflect the addition of indoor fireplaces at commercial and institutional establishments.

Section 101: Adds text to include the indoor fireplaces at commercial and institutional establishments.

Section 201: Adds text to redefine air curtain destructors.

Section 202: Adds a definition for "Area A" and thus the remaining definitions are renumbered.

Section 207: Adds the definition of "firebox" to the rule and thus the remaining definitions are renumbered.

Section 209: Deletes the word "construction" from the text.

Section 211: Adds the definition of "prohibited materials" to the text and thus the remaining definitions are renumbered.

Section 213: Adds the text " or when there is increased fire danger" to the end of the definition.

Section 214: Adds the definition of "wood-burning chimineas" to the rule.

Section 301: Adds a reference to the Appendix of Rule 314.

Section 302: Changes the title of the Section to "Open Outdoor Fires Required to Obtain a Burn Permit" and clarifies and streamlines the language that was originally in Section 302 regarding outdoor fires that require a permit. Also deletes text regarding Title V, non- Title V, and General Permits which has been placed in Section 402.5.

Section 302.1: Amends the text to reflect a new category of fires that are prohibited during Restricted-Burn Periods in Maricopa County but allowed during May 1 to September 30 of each year in Area A. Subsection 302.1(c) adds the phrase "fire-fighting training areas and structures" to this section and changes the reference to Section 303.2b.

Subsection 302.2: Amends the text to reflect a new category of fires that are prohibited during Restricted-Burn Periods in Maricopa County and also prohibited from May 1 to September 30 Each Year in Area A.

Section 303: Renames the section heading from "EXEMPTIONS" to "OPEN OUTDOOR FIRES NOT REQUIRED TO OBTAIN A BURN PERMIT."

Section 303.1: Amends the text to reflect the category of fires that are allowed at any time in Maricopa County or Area A.

Section 303.2: Amends the text to reflect the type of fires prohibited during Restricted-Burn Periods in Maricopa County.

Section 303.3: This amendment amends the text to reflect the type of fires prohibited during Restricted-Burn Periods in Maricopa County and also prohibited from May 1 to September 30 of each year in Area A.

Section 304: Adds text that addresses open outdoor fires in an air curtain destructor.

Section 305: Adds text that addresses conditions that apply to the type of fires allowed per Sections 302, 303 and 304.

Section 306: Prohibits indoor burning in fireplaces in commercial establishments with the exception of those using natural gas.

Section 400: Adds text to expand the title of "Administrative Requirements" for Burn Permits and Burn Plans.

Section 401: Adds text to include air curtain destructors' burn plans.

Section 402.4: Deletes the text stating that the County cannot issue permits for its own burning activities. It also adds text stating that permission for setting any fire given by a public officer in the performance of official duty shall be given in writing.

Section 402.5: Adds the text regarding Title V, Non-Title V, and General permits which is removed from Section 302 and also adds text that addresses burn plans.

Section 406: Adds text describing the Burn Plan application and the length of time given to the Control Officer to approve the plan.

Section 406.1: Adds text stating that a separate, site-specific Burn Plan application is required for each burn site location.

Section 406.2: Adds text that lists the minimum requirements that should be contained in a Burn Plan application.

Section 406.3: Adds text to state that an on-site inspection shall be conducted before the Control Officer shall approve the Burn Plan application.

Section 406.4: Adds text to state that the issuance of an approved Burn Plan shall not relieve the permittee from any other requirements that the local fire department may impose on the source.

Section 406.5: Adds text to state that the Control Officer may impose additional conditions in order to comply with Federal and State laws as well as Rule 314.

Section 406.6: Adds text to state that the Control Officer shall deny a Burn Plan application if the material or operations of the source do not meet the criteria described in this rule.

Section 501.1: These amendments delete the Subsection references that were previously listed in this Subsection and replaces them with the Subsection references that are now relevant or pertinent to the specific reference.

Section 503: Adds Section 503: Program Review. Text in this section includes text from previous Sections 502.3 and 502.4, which have been deleted.

Section 503.1: This amendment places the text from the adopted Rule 314, subsection 502.3 into a new subsection 503.1.

Section 503.2: Places the text from the adopted Rule 314, subsection 502.4 into a new subsection 503.2.

**Appendix to Rule 314:**

Title: This amended text deletes the term "Burn Pit" and replaces it with the term "Firebox."

Section A: Deletes the word "burn pit requirements" and replaces it with the words "Air Curtain Destructor Requirements" and also states that the air curtain destructor rather than the pit must be approved by the Control Officer.

Section A 1: Replace the text "The pit must not exceed the length of the plenum" with the text "The length of the firebox must not exceed the length of the plenum."

Section A 2: Deletes the provision stating that the width of the pit must not exceed 8 feet and replaces it with text that states that the firebox shall be lined with refractory materials.

Section A 3: Deletes the text stating that the depth of the pit shall be a minimum of 15 feet and replaces it with text stating that the depth of the firebox shall be of such a distance as to be below the curtain of air created by the air curtain destructor.

Section A 4: Deletes the text stating that the maximum erosion width must not exceed 12 feet and replaces it with text stating that the width of the firebox shall not extend beyond the length of the nozzle action.

Section A 5: Adds text stating that the sides of the pit shall have four stable vertical sides.

Section A 6: Adds text stating that if the location of an air curtain destructor shall be moved, the location will first be inspected by the Control Officer.

Section A 7: Deletes text stating location of a pit shall be changed, the location will first be inspected by the Control Officer. The text is now in Section A-6

Section B 1: Adds text stating that a firebox and not a pit or trench shall be used to conduct burning in an air curtain destructor.

Section B 2: Deletes the word "pit" and replaces it with the term "firebox."

Section B 3: Adds text stating the minimum amount of feet (1,000 ft.) allowed between two air curtain destructors.

Section B 4: Adds text stating that there shall be at least 500 feet from any air curtain destructor to any residence or building structure.

Section B 5: Adds text stating that there shall be at least 500 feet from any air curtain destructor to any pipeline or fuel storage area.

Section B 6: Adds text stating that there shall be at least 250 feet from any air curtain destructor to any power lines.

Section B 7: Adds text stating that material to be burned or stockpiled shall be kept at least 75 feet from the air curtain destructor while a burn is taking place.

Section C 1: States that the proper blower speed shall be maintained according to manufacturer's specifications and deletes the text stating that the speed must be maintained to meet emission standards.

Section C 2: Deletes the word "pit" and replaces it with the term "firebox".

Section D: Deletes the word "pit" and replaces it with the term "firebox".

Section D 1: Deletes the word "pit" and replaces it with the term "firebox".

Section D 2: Deletes the word "pit" and replaces it with the term "firebox".

Section D 3: Deletes the word "pit" and replaces it with the term "firebox".

Section E: This amendment deletes the word "pit" and replaces it with the term "firebox".

Section F: Change the times allowed for open outdoor burning by changing the possible time of starting an open outdoor fire to 10 a.m. from 8 a.m. and also by removing the clause stating that rubber and plastic are prohibited from being burning. There is now a definition for prohibited materials in Section 211 which includes rubber and plastic.

**7. Demonstration of compliance with A.R.S. § 9-112:**

Under A.R.S. § 9-479(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 A.R.S. § 9-112.

**A.R.S. § 9-112 (A)**

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 Phoenix metropolitan area is the only area of the state currently designated as a nonattainment area for the 8-hour ozone National Ambient Air Quality Standards (NAAQS). The area was also reclassified to attainment and is implementing a maintenance plan approved by EPA to ensure that the area continues to attain the carbon monoxide (CO) standard. Maricopa County Air Quality Department (MCAQD) is proposing revisions to Rule 314 in order to address EPA's 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). 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 percent 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 Maricopa Association of Governments submitted a Five Percent Plan for PM<sub>10</sub> to the U.S. EPA in December 2007. The Phoenix nonattainment area is one of three areas in the entire country for which EPA has issued a finding that Section 189(d) has been triggered. Because of these factors, the revision complies with A.R.S. §§ 49-112(A)(1) and (A)(2). Several of the revisions to Rule 314 are required by A.R.S. § 49-501 that was recently enacted in Senate Bill 1552. Therefore a demonstration of compliance with A.R.S. § 49-112 as required by the County's general grant of rulemaking and ordinance authority in A.R.S. § 49-479 does not apply to these rule provisions.

**8. Reference to any study relevant to the rule that the department reviewed and either relied on in its evaluation of or justification for the rule or did not 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:**

No studies were used.

**9. 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 of this state:**

Not applicable.

**10. Summary of the economic, small business, and consumer impact:**

**Rule Identification**

Amended Rule 314 prohibits certain types of open outdoor burning in Maricopa County and also prohibits burning in indoor fireplaces that use fuels other than natural gas at commercial and institutional establishments

during restricted-burn days and/or during the ozone season of May 1 to September 30 in Area A (Area A is defined in the amended rule in Section 202). Section 300 of the amended rule states that any open outdoor fires are prohibited unless they are listed in Sections 303, 304, 305, and Appendix 314 of amended Rule 314. The use of air curtain destructors is not allowed in the County for the purpose of clearing out vegetative shrub and debris for pre-construction clearance operations. The amendments to Rule 314 now restricts the times of the year and the hours of the day when some of these open burning activities will be allowed to be conducted, whether the activity requires a Burn Permit or does not. In addition, all sources allowed to conduct open outdoor burning are now required to call the Control Officer and local fire department prior to initiating the burn in order to either obtain permission to burn for each day of the planned burning event (those that require a Burn Permit); or to find out if a Restricted-Burn Day has been declared (those that do not require a Burn permit). Some of the open outdoor fire activities that need to obtain a Burn Permit shall also be restricted from burning during the ozone season from May 1 to September 30 each year in Area A: namely the destruction of tumbleweeds for the prevention of fire hazards and the burning of tumbleweeds prior to conducting agricultural operations.

#### **Entities Affected**

Open outdoor burning may be done by many entities for a variety of purposes such as dangerous material disposal, fire-fighting training, site preparation, weed control, and disease and pest prevention. Open outdoor burning has been conducted by a broad range of entities including members of the agricultural community, cities and counties, state and federal agents, law enforcement departments, private industries that burn debris in vegetative debris in air curtain destructors, private industries that conduct fire extinguisher training, fire fighters, companies who test explosive-containing products for commercial, military and law enforcement uses, cattlemen and ranchers who brand animals, military service, and veteran institutions that properly dispose of American flags, and groups who conduct cinematic and theatrical functions using fireworks. The amendments to Rule 314 also affects the agencies that issue Burn Permits such as MCAQD and ADEQ and private industries such as those who either manufacture, market, or use chimineas and air curtain destructors. Also included in the amended rule are amendments which would limit burning in indoor fireplaces except if using natural gas for a fuel in hotels, restaurants, and clubs for ambience and warmth during Restricted-Burn Periods.

#### **Potential Impact**

There have been a total of 18 Restricted-Burn Days in each of the years 2006 and 2005, and only 1 in 2004. Therefore there is little or no anticipated financial impact on a source by moving a scheduled burn to another day when the air quality is forecasted to be good rather than burn on a Restricted-Burn Day when the dispersion is not as great. The amount of total burning will most likely remain the same.

The restrictions on the times of year to conduct open outdoor burning are not expected to have any effect on revenues or payroll expenditures of the sources that are subject to the sections of the amended Rule 314 refraining from open outdoor burning since the restrictions are to prohibit this activity during a certain time of

the year only. The amendments to the rule also involve mandating a phone call to the Control Officer before performing certain types of outdoor burning either to ask permission for a burn or to check to see if a Restricted-Burn Day has in fact been declared. This phone call is not expected to impact payroll expenditures of the sources involved either.

The restrictions on chimineas are not expected to impact revenues of chimenea manufacturers or marketers in any measurable amount. Weather conditions in the Phoenix area are exceedingly hot and sunny from May to September. Temperatures range from the high 90's to the mid 100's during this time in the day when chimeneas are to be prohibited. Therefore residents and businesses are not apt to use their chimeneas in the evening or night from May to September when temperatures are still in the 80's and 90's.

Chimeneas are now prohibited from burning on Restricted-Burn days, but the number of Restricted-Burn days has been averaging 7 days each year in the years of 2005 and 2006. Seven days of restricted burning should not be a financial burden for the chimenea industry in the area.

Hotels and restaurants that wish to burn any fuel other than natural gas in fireplaces also are subject to a prohibition during Restricted-Burn Periods and this also involves a call to the County to determine whether there is a Restricted-Burn Day. This phone call should not be a financial burden on the sources affected by this rulemaking. Thus there should be minimal time and costs associated with the act of calling the County or checking their web site. If a Restricted-Burn day has been declared, then the hotel or restaurant is not able to use their indoor fireplace on these days unless it is natural gas. This should not cause any impact on their revenues or financial burden on them.

The requirement to obtain a General Title V permit for an air curtain destructor under the new general permit issued by the ADEQ will cost a source \$840 and the cost of obtaining a Burn Plan approved by the Control Officer will cost \$350. There were only a total of 7 air curtain destructor burn permits issued last year in Maricopa County. With the amendments to Rule 314 regarding banning air curtain destructors for the purposes of construction preparation, there will even be less air curtain destructor permits issued in Maricopa County. Air curtain destructors are only one method used for land clearance; there are other alternatives for land clearance such as chipping, mulching, composting, and landfilling.

By Maricopa County banning air curtain destructors for land clearance for construction purposes, the sources that use these means will have to use other methods for land clearance.

The other amendments that are listed in the Appendix of the Rule 314 dealing with air curtain destructors should not bring any financial burden to the owners or operators of these units that are using them for agricultural operations because the amendments deal with location requirements (e.g. how close to a residence

or power line that an air curtain destructor shall be set up, how deep the firebox shall be, and that the air curtain destructor shall be operated according to manufacturer's specifications). These are considered good operating techniques for managing a fire using an air curtain destructor and many of them are already in practice.

### **County Costs**

Enforcement of the amendments to Rule 314 by MCAQD may result in a slight increase in costs to Maricopa County. There will not be an increase in the cost for the number of phone calls to the Department to determine if a Restricted-Burn Day has been declared because the phone line is an automated one, but there will be an increase in time for approval of Burn Plans that would be submitted by an owner or operator of an air curtain destructor for agricultural purposes. There were a total of 7 air curtain destructor permits issued in 2005 and a total of 19 air curtain destructor permits issued in 2006 in Maricopa County. Therefore it is plausible that approximately 19 Burn Plans will be approved next year due to the prohibition of the use of air curtain destructors for construction purposes. It is estimated that it will take from 2–4 hours to approve one Burn Plan; therefore the costs to the County would be approximately 38 hours per year or one week of manpower. It is not expected to require the hiring of any more County personnel to perform this task.

### **State Costs**

As stated in the Notice of Proposed Rulemaking, Maricopa County is tasked with the compliance and enforcement of Rule 314 in the County. ADEQ is the agency that will issue the General Title V Permits for Air Curtain Destructors. In the Notice of Proposed Rulemaking for this Rule 314, it was stated that the number of manpower hours for the Arizona Department of Environmental Quality (ADEQ) to process General Permits for Air Curtain Destructors would be quantified. The ADEQ General Permit is already in place and ADEQ is not affected by the amendments to MCAQD's Rule 314; therefore there will be no costs associated with the adoption of Rule 314 to ADEQ. It is estimated that the number of hours to add an owner or operator to the general permit from ADEQ will be 2-4 hours, but ADEQ would issues these anyway whether Maricopa County made any changes to the rule or not.

No significant impact on state revenues from the amended rule shall be expected since the majority of the amendments to the rule prohibit certain types of burning during Restricted-Burn periods and the ozone season.

### **Health Impacts**

The 2005 PM<sub>10</sub> emission inventory estimates that open burning produces 11.5 tons/year of PM<sub>10</sub>. 0 This source category represents 0.013% of the inventory for the nonattainment area. This estimate, however, only accounts for emissions from permitted burns. No estimate of the emissions produced by unpermitted burns is included in the inventory. There is no data in the County on the frequency of occurrence of unpermitted open burns. A review of the complaint files at the County is roughly double the number of permitted burns. Assuming the

same material is burned in unpermitted burns and the complaints quantify the extent of the activity, the level of PM<sub>10</sub> emitted is roughly 23 tons/year.

This amended rulemaking reduces the amount of certain priority pollutants such as particulate matter, carbon monoxide and volatile organic carbon (VOC) during Restricted-Burn Periods and from the ozone season from May 1 to September 30 of each year. On average, approximately 200 pounds of particulate matter emission per acre are generated from prescribed wildland burning. The amendment to shift burning to days that are not restricted burn days will shift emissions from days of poor dispersion to days that have good capacity to safely disperse smoke and resultant emissions. This should result in health benefits to the public. Health benefits accrue to the general public whenever enforcement of environmental laws takes place. Adverse health effects from air pollution result in a number of economic and social consequences, including:

1. Medical costs: These include personal out-of-pocket expenses of the affected individual (or family), plus costs paid by insurance or Medicare, for example.
2. Work loss: This includes lost personal income, plus lost productivity whether the individual is compensated for the time or not. For example, some individuals may perceive no income loss because they receive sick pay, but sick pay is a cost of business and reflects lost productivity.
3. Increased costs for chores and caregiving: These include special caregiving and services that are not reflected in medical costs. These costs may occur because some health effects reduce the affected individual's ability to undertake some or all normal chores, and she or he may require caregiving.
4. Other social and economic costs: These include restrictions on or reduced enjoyment of leisure activities, discomfort or inconvenience, pain and suffering, anxiety about the future, and concern and inconvenience to family members.

Improvement in air quality will generate cost-saving benefits by avoiding adverse-health effects, such as emergency room visits, hospital admissions, acute pediatric bronchitis, chronic adult bronchitis, acute respiratory symptom days, and even premature death. Potential benefits arising from a reduction in PM and other pollutants emitted into the atmosphere can be inferred from data associated with the reduction of any airborne PM.

Some of the health effects of human exposure to PM can be quantified while others cannot. Quantified adverse-health effects include: mortality, bronchitis (chronic and acute), new asthma cases, hospital admissions (respiratory and cardiovascular), emergency room visits for asthma, lower and upper respiratory illness, shortness of breath, respiratory symptoms, minor restricted activity days, days of work loss, moderate or worse

asthma status of asthmatics. Unquantifiable adverse-health effects include: neonatal mortality, changes in pulmonary function, chronic respiratory diseases (other than chronic bronchitis), morphological changes, altered host defense mechanisms, cancer, and non-asthma respiratory emergency room visits (U.S. EPA, “The Benefits and Costs of the Clean Air Act 1990 to 2010,” Chapter 5, “Human Health Effects of Criteria Pollutants,” Table 5-1, Report to Congress, November 1999).

Epidemiological evidence shows that particulates have negative health impacts in a variety of ways, including: increased mortality and morbidity; more frequent hospital admissions, emergency room and clinician visits; increased need and demand for medication; and lost time from work and school. There is also increasing evidence that ambient air pollution can precipitate acute cardiac episodes, such as angina pectoris, cardiac arrhythmia, and myocardial infraction, although the majority of PM-related deaths are attributed to cardiovascular disease (The EPA’s Particulate Matter (PM) Health Effects Research Center Program, prepared by PM Centers Program staff, January 2002).

New evidence also links exposure to ambient PM concentrations to airway inflammation that in turn produces systemic effects, such as acute phase response with increased blood viscosity and coagulability, as well as increased risk of myocardial infraction in patients with coronary artery disease. Chronic effects of repeated airway inflammation may also cause airway remodeling, leading to irreversible lung disease. Individuals with asthma and chronic obstructive pulmonary disease may be at even higher risk from repeated exposure to particulates (The EPA’s Particulate Matter (PM) Health Effects Research Center Program).

The Health Effects Institute confirmed the existence of a link between particulate matter and human disease and death (premature mortality). The data revealed that long-term average mortality rates, even after accounting for the effects of other health effects, were 17-26% higher in cities with higher levels of airborne PM (Health Effects of Particulate Air Pollution: What Does The Science Say? Hearing before the Committee on Science, House of Representatives, 107th Congress of the U.S., second session, May 8, 2002). Data further reveal that every 10-microgram increase in fine particulates per cubic meter produces a 6% increase in the risk of death by cardiopulmonary disease, and an 8% increase for lung cancer. Even very low concentrations of PM can increase the risk of early death, particularly in elderly populations with preexisting cardiopulmonary disease (STAPPA and ALAPCO, Controlling Particulate Matter Under the Clean Air Act: A Menu of Options, July 1996).

In 2007, the national estimated annual cost for chronic obstructive pulmonary disease \$42.6 billion costs (American Lung Assoc., Trends in Chronic Bronchitis and Emphysema: Morbidity and Mortality, Epidemiology and Statistics Unit, Research and Scientific Affairs, September 2007). This cost includes direct health care expenditures of \$26.7 billion, \$8.0 billion in indirect morbidity costs and \$7.9 billion in indirect mortality costs.

In Arizona, deaths attributable to asthma have equaled or exceeded national rates from 1991-1998. In 1998, some 316,200 Arizonans suffered breathing discomfort or asthma related stress (Arizona Department of Health Services, Asthma Control Program, Office of Nutrition and Chronic Disease Prevention Services, October, 2002).

Maricopa County expects that a reduction in PM potentially will create commensurate cost-saving benefits to the general public by contributing towards reducing these emissions-related health problems. The amendments to Rule 314 will help improve the general quality of life for citizens of Arizona, particularly those residing near sources that will have reduced PM emissions and other air pollutants associated with open outdoor burning during Restricted-Burn Periods and during the ozone season from May 1 to September 30 each year.

The total emissions reductions from the ban on open burning during the ozone season is expected to be 8 tons per year of VOC, 4 tons per year of NO<sub>x</sub> and 6 tons per year of particulate matter. The total emissions reduction on outdoor burning during Restricted-Burn Periods is expected to be 12 tons per year of particulate matter.

Health benefits can be expressed as avoided cases of PM related-health effects and assigned a dollar value. EPA used an average estimate of value for each adverse-health effect of criteria pollutants. Table 6-1 contains valuation estimates from the literature reported in dollars per case of chronic bronchitis avoided. For example, the Table shows a value of \$401,000 (2006 dollars) per case of chronic bronchitis avoided. An individual's health status and age prior to exposure impacts his/her susceptibility. At risk persons include those who have suffered a stroke or have cardiovascular disease. Some age cohorts are more susceptible to air pollution than others (i.e. children and the elderly).

**Table 6-1. Monetized Adverse-Health Effects Avoided From Exposure to PM**

<b>Adverse Health Effect *</b>	<b>Per Case Valuation (1990 dollars)</b>	<b>Per Case Valuation (2006 dollars)</b>
Mortality	\$4,800,000	\$7,403,800
Chronic bronchitis	\$260,000	\$401,000
Hospital admissions for respiratory conditions	\$6,900	\$10,640
Hospital admissions for cardiovascular conditions	\$9,500	\$14,650
Emergency room visits for asthma	\$194	\$299
Acute Bronchitis	\$45	\$69
Asthma attack	\$32	\$49
Moderate or worse asthma day	\$32	\$49
Acute respiratory symptom	\$18	\$28
Upper respiratory symptom	\$19	\$29
Lower respiratory symptom	\$12	\$19
Shortness of breath, chest tightness, or wheeze	\$5	\$8
Work loss day	\$83	\$128
Mild restricted activity day	\$38	\$59

\* An individual's health status and age prior to exposure impacts his/her susceptibility. At risk persons include those who have suffered a stroke or have cardiovascular disease. Some age cohorts are more susceptible to air pollution than others, i.e., children and elderly.

Source: Derived from U.S. EPA, 1999b. According to EPA, cost values of these illnesses tend to underestimate the true value of avoiding these adverse-health effects. Mean estimates of willingness-to-pay (WTP) were used to derive values, unless WTP values were not available, in which case, the cost of treating or mitigating the effects was used. The value of an avoided asthma attack, for example, would be a person's WTP to avoid that symptom.

Mortality in Table 6-1 actually refers to statistical deaths, or inferred deaths due to premature mortality. The values have been adjusted for inflation. According to the Consumer Price Index for all urban consumers ( U.S. Department of Labor, Bureau of Labor Statistics), the purchasing power of the dollar has declined about 54 percent between 1990 and 2006.

A small decline in the risk for premature death will have a certain monetary value for individuals, and as such, they will be willing to pay a certain amount to avoid premature death. For instance, if PM emissions are reduced so that the mortality risk on the exposed population is decreased by one in one-hundred thousand, then among 100,000 persons, one less person will be expected to die prematurely. If the average willingness-to-pay (WTP) per person for such a risk reduction were \$75.00, the implied value of the statistical premature death avoided would be 7.5 million dollars.

This economic impact statement (EIS) was developed to estimate the impact of the final rule. This impact statement is comprised of potential costs and benefits.

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

In the Notice of Proposed Rulemaking (NPR), there were some typographical errors in that some of the amended or new text in the proposed rule was not underlined and shown as new text. In that document the new, amended text was listed in the preamble as being new text and in the list of changes, Section 5, of the NPR. In this Draft Notice of Final Rulemaking the text is correctly shown as underlined text. The sections listed below were the following sections that were not underlined:

Section 101: The text "and from indoor fireplaces at commercial and institutional establishments" needs to be shown as new text and underlined.

Section 102: The text "and burning in indoor fireplaces at commercial and institutional establishments" needs to be shown as new text and underlined.

Section 201: The words "firebox" and the word "burning" are new text. The second sentence is new text: "Above-ground air curtain destructors are the only type of air curtain destructor that are allowed in Maricopa County."

Section 202: The entire definition of Area A is new text and needs to be underlined.

Section 302: The title: "Fires Prohibited During Restricted-Burn Periods in Maricopa County, But Allowed From May 1 to September 30 Each Year in Area A" needs to be shown as new text and underlined.

Section 303.1: The title "Fires Allowed At Any Time of The Year In Maricopa County or Area A" needs to be shown as new text and underlined.

Section 400: The section title "FOR BURN PERMITS AND BURN PLANS" needs to be shown as new text and underlined.

Appendix Sections A and B: The text in Section A, Number 1-6 and B, Number 1-7 needs to be shown as new text and underlined.

**The changes between the proposed rule and the final rule are the following:**

Section 211: The term "sensitive or classified wastes" has been deleted from the definition of prohibited materials.

Section 211: The term "green plants" has been deleted from the definition of prohibited materials.

Section 302: The word "both" after the word "call" in the second sentence has been added and the term "owner or operator" was changed to "person conducting the fire."

Section 302.1(d): The text "In addition " has been added to the text.

Subsection 302.1d (4): The term "by the Control Officer" has been added to the first and the last sentences.

Subsection 302.1d(3): The term "by the Control Officer" has been added to the sentence.

Subsection 303.3: The term "owner or operator of any type of fire" has been deleted and replaced with "The person".

Section 304: The text "conducting an open outdoor fire in an air curtain destructor the owner or "has been added to the text after the words "prior to."

Section 503.1: The term " annually" has been added to the text that was inadvertently omitted from the original rule.

Appendix: The text limiting the size of an air curtain destructor to 10 feet has been removed from Section A.

None of the changes between the Notice of Proposed Rulemaking and the Notice of Final Rulemaking are substantive.

**12. Summary of the comments made regarding the rule and the department response to them:**

**Comment #1:**

Section 201: One commenter submitted two comments regarding permits and suggested that the in last sentence that the word "permitted" be substituted for "allowed." The commenter further asked whether air curtain destructors will be allowed to operate with out a permit. Could a general permit be developed to encompass multiple burn sites?

**Response #1:**

The term "allowed" in this definition is being used as a verb in the most common use of the term (see Webster's New Collegiate Dictionary). A definition in a rule is not a standard. In Maricopa County Rules, the need to obtain a permit from the County is important enough to be addressed in the Standards section (Section 300) of a rule and not in the Definitions section of a rule (Section 200). In this particular case, the intent of this definition is to show that only above ground types of air curtain destructors are to be used in Maricopa County and not open pits in the ground.

The County is not planning on developing a general permit at this time. Arizona Department of Environmental Quality (ADEQ) has a general permit at this time. The general permit does encompass multi-sites, but the general permit requires an individual burn plan specific to one single location.

**Comment #2:**

Section 205: One commenter submitted four comments on air curtain destructors. They suggested that the operation of an air curtain destructor be included as an ERT. The air blowers add oxygen and turbulence to promote a more complete burn of the material and thereby reduce the production of particulate and also suggested that "Proper operation of an air curtain destructor does not constitute open burning" be added. Slash pile fires, fence row fires are characterized by smoke and elevated VOCs. A properly operated air curtain destructor would have considerably less emissions compared to open burning. In Great Britain, the operation of an air curtain destructor was used to incinerate cow carcasses infected with mad cow disease.

They also suggested that in § 302.1 the subsection will be revised to read: Open outdoor fires, including the operation of an air curtain destructor, for the control of weeds and other vegetation for the prevention of fire and other hazards when such fires are declared necessary by a public official in the performance of their official duties and in § 305.7 we suggest that an air curtain destructor be allowed to burn less than 6" diameter material upon Control Officer written approval. Also allow the burning of prohibited material in an air curtain destructor upon written request and written approval. In the case of natural disasters, national emergencies, and military operations, the operation of an air curtain destructor may be a key component in a governmental response plan. Great Britain authorized the operation of air curtain destructors to destroy cow carcasses infected with bovine spongiform encephalopathy (BSE) or "mad cow disease."

And in § 303.2, is it MCAQD's intention to restrict open burning and the operation of air curtain destructors outside the boundaries of non-attainment areas in Maricopa County? The proposed language suggests western non-urbanized areas, particularly are included in such a ban.

**Response #2:**

We continue to consider burning in an air curtain destructor (ACD) a type of open burning even if properly operated. It is a type of controlled open burning. Arizona Revised Statutes § A.R.S. 49-501 (B) defines "open

outdoor fires as used in this section, means any combustion of combustible material of any type outdoors, in the open where the products of combustion are not directed through a flue." A flue is also defined in this Rule 314 as "any duct or passage for air or combustion gases, such as a stack or chimney." The type of ACD that has been operating in Maricopa County does not vent to a flue or stack, but rather vents via an open top directly to the atmosphere.

Air curtain destructors (ACDs), if operated correctly, do result in less emissions than other methods of open burning. But unfortunately due to the highly transient nature of the ACD combustion process coupled with a minimal degree of operational control and significant variability in debris properties, the prediction of ACD emissions is quite variable. Granted that some local air quality agencies have listed them as Emission Reduction Techniques or ERTs, Maricopa County considers the use of an ACD to be an open burn and prohibits their use for land clearance for pre-construction purposes. Rule 314 also further restricts their usage by imposing operational and siting requirements in the Appendix to Rule 314 even when used for agricultural clearance. Maricopa County has received many citizen complaints about the operation and location of ACDS. Some ACDS have even been used in direct proximity to a hospital.

The County is not totally banning the use of air curtain destructors. Use of an air curtain destructor is allowed in Maricopa County for certain activities addressed in the rule. Use of an ACD is not allowed in the County for one activity any longer after March 12, 2008 and that one activity is land clearance for construction purposes only.

Maricopa County is not prohibiting the burning of these smaller materials in an air curtain destructor per subsection 305.7. Maricopa County is stating that an air curtain destructor must be used if the pieces of vegetative material are greater than 6 inches. 6 inches is a common cutoff size in the realm of agricultural burning drying times for vegetation before burning it. Material greater than 6 inches takes a longer time to dry (up to six weeks), while material smaller than 6 inches will take 3–6 weeks to dry.

In the case of national disasters, national emergencies and military operations, subsection 305.1 of Rule 314 does allow for burning of prohibited materials per the activities listed in subsections 303.2, 303.2(b) 303.2 (c), 303.2 (d) and 303.2 (e). In subsections 302.1(a) and 302.1(b) of Rule 314, it states that the County Agricultural agent can declare necessary such fires that have been determined as essential for the purposes of disease and/or pest prevention and for the control of weeds for the prevention of fire hazards when such fires are declared necessary by a public officer in the performance of his official duties.

Maricopa County Air Pollution Rules and Regulations have long applied to the entire Maricopa County. Maricopa County is now restricting open burning in Area A with some time restraints and some seasonal

restraints per amended Rule 314. Area A is still located in Maricopa County. Furthermore, Maricopa County is not totally banning the use of ACDs but rather restricting the purpose of their use and the time of their use.

**COMMENT #3:**

**Section 211**

Within the list of prohibited materials, what is meant by "sensitive or classified wastes"? What is meant by "green plants"? Brush and trees would fall into this prohibition of burning green plants.

**Response #3:**

We will remove the term "sensitive or classified waste" and the term "green plants." The term "sensitive or classified waste" was a term used in the first Rule 314 and carried through to subsequent rulemakings. After a search for the terms and their meaning and origin, we decided to strike the term from the rulemaking package. The inclusion of the term "green plants" in Rule 314's definition of prohibited fuels, Section 211, was done in order to coincide with the "prohibited fuels" list in Maricopa County's Residential Woodburning Restriction Ordinance which was revised in 1999. This in turn was done in order to ensure that only dried materials are burned since the wetter or greener the material, the more noxious the fumes that it gives off.

**Comment #4:**

Section 302: Insert "both" after "call" in the second sentence.

**Response #4:**

We have inserted the word "both" after the word "call" in the second sentence.

**Comment #5:**

In Section 302.1d(1), there should be a definition of "high-temperature mechanical burner."

**Response #5:**

A high-temperature mechanical burner is widely used in agriculture and is frequently called a weed burner or a propane burner.

**Comment #6:**

Section 302.1.d (2): Suggest that "or safety" be added to the last clause.

**Response #6:**

Maricopa County believes that the phrase "necessary to thwart or prevent a hazard that cannot be properly managed by any other means" addresses the safety issue in this subsection and therefore does not need to be repeated at the end of the sentence.

**Comment #7:**

Section 302.1d(4): Suggest that "by county representatives" be added after "conducted" in last sentence.

**Response #7:**

We have added the term "by the Control Officer."

**Comment #8:**

The paragraph immediately preceding 302.2 appears not to have a paragraph number.

**Response #8:**

The subsection is numbered "e" but there is a spacing problem and is difficult to see the "e". It will be corrected.

**Comment #9:**

One commenter asked two questions about locations: in Section 302.2 b.1., what is the scope of the "geographical location"? Also, the phrase in Section 406.1, "contiguous to the location", is confusing.

**Response #9:**

The geographic location would be the fixed place where the source operates and generates regulated air pollutants under common control. In Rule 100 (General Provisions and Definitions), Section 200.101 there is a definition of the term "source" which is defined as a building, structure, facility or installation. Section 200.26 of Rule 100 further defines a building, structure, facility or installation as one whose pollutant-emitting equipment and activities belong to the same industrial grouping and are located on one or more contiguous or adjacent properties and are under the control of the same person or persons under common control. Contiguous refers to the same source, same site. In the context of Subsection 406.1, contiguous means on the same site and under the same source or owner/operator where there is common control.

**Comment #10:**

Section 304: Suggest "operations", the owner/operator "be inserted before "shall" and "submit" be inserted after "and" and "for" be inserted after "Plan."

**Response #10:**

This was an error and will be corrected in this final version of the rule.

**Comment #11:**

Sections 402.2 and 406.4: What is the fire department validation process?

**Response #11:**

A fire department validation process would be any procedures that a person must follow to obtain approval from the appropriate fire department having jurisdiction over the property where the open fire will be ignited. The onus of responsibility is on the person conducting the fire to follow any fire department procedures that may be required before performance of a burn. This may include submission of the County Burn Permit to the local fire department for validation dependent upon the local fire department's procedures.

**Comment #12:**

Section 405: Suggest that another term be added to this list. Highway and Roadside maintenance. 1 year from date of issuance. [*sic*]

**Response #12:**

Thank you for your input. At this point in the rulemaking process (proposed and final rulemaking notices), it is too late to add this provision to the rule because this change would involve opening up the dockets for Rule 200 and 280 also. The rulemaking process for Rule 314 started in 2007. Had this comment been made earlier in the rulemaking process (the docket was opened on July 20, 2007), the change would most likely have been made by the County. The County will keep this comment in mind and consider it for the next time it reopens Rule 314.

**Comment #13:**

Appendix Section A.7: This distance requirement is confusing. The air curtain destructor is composed of a steel frame, refractory line firebox and an air blower and plenum. A reading of this language could restrict any one distance to be not more than 10 feet in length, potentially limiting the operation a newer larger perhaps more efficient unit. Is this MCAQD's intention here?

**Response #13:**

We have removed this requirement.

**Comment #14:**

Section F: Suggest the hours of operation be shifted earlier into the day: with the April to September timeframes be 5am to 4pm and the October–March timeframes 8am to 4pm [*sic*]. This would operations to be conducted comfortable times of day and generally in times of daylight [*sic*]. Suggest the last sentence be stricken, given a list of prohibited material was identified earlier in this draft rule.

**Response #14:**

While 5 a.m. may be cooler, some morning sun is still necessary in order to lift the inversion and to allow for atmospheric dispersion of the pollutants generated by the fire. Atmospheric dispersion is critical in cooler weather when the inversions become more severe.

**Comment #15:**

One commenter stated that the omission of the word "construction" for air curtain destructors in section 302.2 is a drastic change in the rule and will essentially have a huge impact on their business and are sure of its inability to financially sustain the implications of this provision. I bought my first Air Curtain Burner in 2005, and do 90% of my work in Maricopa County. In April of 2007, I purchased a second Air Curtain Burner, and continue to do 90% of my business in Maricopa County. In *my* research I found article content where the San Dimas Technology and Development Center "investigated the use of air curtain destructors as an efficient, environmentally friendly, and technically viable means of disposing of slash, wood, and other burnable waste materials", and stated that, "ACD's should be considered an additional alternative to current fuel reduction methods and disposal of road clearing debris such as pile burning, chipping, landfill disposal, and prescribed fire".

Is the motive for this change to the rule an emissions issue? Is it possible that the emissions from one air curtain burner exceeds the engine emissions of *all* the diesel tractor trailers it would take to haul off this burnable material, as well as the engine emissions from the heavy equipment used to operate the landfill and process this same material?

Furthermore, "Rule 314 – Open Outdoor Fires", includes ACD's. Why? We propose that ACD's *don't* have the emissions that "open outdoor fires" do, and argue the point as to why ACD's even fall under the same rule. Information obtained on the airburners.com web site documents that "open burning averages 60% to 80% opacity". ACD's average 10% opacity...". "...S-Series machines have a 95 to 98 percent reduction rate, so 20,000 lbs. of wood waste will reduce to between 400 and 1,000 lbs. of ash", "The PM 2.5, is 36-39 times less with an ACD then with open burning. In an ACD, 1 ton of wood waste produces 1.1 lbs. of PM vs. 1 ton in open burning produces 39 lbs. of PM. Hence, the ACD is an emissions control device". I am enclosing some literature on ACD's including the emissions technical reports on the ACD from the manufacturer in hopes that the evidence of emissions from the ACD's favors the emissions of open outdoor fires as well as the alternatives to ACD's, and that with these aids, an educated, informed decision can be made whereas ACD's will removed from Rule 314 all together, all in hopes I can continue to operate my business in Maricopa County.

**Response #15:**

Maricopa County is amending Rule 314 in response to the passage of Senate Bill 1552 by the Arizona Legislature in June of 2007. The County is also amending this rule due to the statutory requirements listed in the recently enacted Senate Bill 1552 and also in relation to commitments made in the Five Percent Plan for PM<sub>10</sub>. Since the area did not attain the PM<sub>10</sub> standard by December 31, 2006, the area must submit to the Environmental Protection Agency (EPA) a Five Percent Plan for PM<sub>10</sub> by December 31, 2007. The Five Percent Plan for PM<sub>10</sub> must demonstrate 5% reductions per year in emissions from the date of submission to the EPA. As

part of this rulemaking authority, the County is prohibiting the use of air curtain destructors for purposes of clearance for construction purposes at any time.

We continue to consider burning in an air curtain destructor (ACD) a type of open burning even if properly operated. It is a type of controlled open burning. Arizona Revised Statutes § A.R.S. 49-501 (B) defines "open outdoor fires as used in this section, means any combustion of combustible material of any type outdoors, in the open where the products of combustion are not directed through a flue." A flue is also defined in this Rule 314 as "any duct or passage for air or combustion gases, such as a stack or chimney." The type of ACD that has been operating in Maricopa County does not vent to a flue or stack, but rather vents via an open top directly to the atmosphere. There are other options to using an air curtain destructor for land clearance such as chipping, mulching, composting and landfilling.

Maricopa County has received numerous complaints from the public whenever open burning of this sort in an air curtain destructor is taking place. Also the location of these units has continued to be a problem. One was located in very close proximity to a hospital.

Diesel trucks emitting pollutants while hauling the material to a landfill produce emissions that are spread over time and place, while the emissions from a single open burn are concentrated at **one** point. Also motor vehicles such as diesel trucks are addressed in other federal regulations such as clean fuel programs which help reduce emissions of pollutants via sulfur decreases and reformulated gasoline.

**Comment #16:**

Our company is a leader in the design and manufacture of pyrotechnic devices and ordinance. In order to remain innovative, maintain quality and develop new products, we conduct destructive testing of energetic (e.g. explosive) materials to make sure that the energetic material/ devices will function as intended. The destructive testing as allowed under our Maricopa County Air Pollution Control District, Air Quality Permit Number 98-0691 and referenced in the proposed Rule 314, Section 303.2 (c) and (d) is conducted in part outdoors in an enclosed unit or in an open area. The PM 10 emissions from outdoor testing have averaged 0.66 pounds per month since January 2001. Emissions of PM 10 are calculated with the assumption that all solid products of combustion are particulate matter of less than 10 microns in size. The actual PM10 amount during combustion is a fraction of the total solids emitted and therefore the amount stated above is very conservative.

To date, we have conducted these destructive tests, which would be defined as open burning (e.g. not directed through a flue), only during non-restricted burn periods as required by Rule 314. This requirement at times, has prevented and/or delayed us from conducting destructive testing for customer demonstration purposes, as well as for our engineers from Moorpark, CA facility. These delays have incurred significant additional costs due to equipment rentals, lodging, travel, time and additional resources. This is due to the fact that there is no way to

forecast when burn restrictions will be imposed so that appropriate arrangements can be made to minimize costs and delays. Many of our customers are out of state or global, and are only present at the Mesa AZ facility for limited periods of time. Although the burn restrictions are usually only in effect for a day or two at a time, these delays have also caused considerable impact on research and development timelines.

The proposed changes to Rule 314 further restricts the time that destructive testing can be performed ( i.e. cannot be performed on the weekends or holidays) and could incur additional costs and project delays for the same reasons, referenced above.

Given the insignificant PM 10 emissions from outdoor destructive testing activities referenced above, we ask for your consideration in revising the proposed rule to allow limited quantities of destructive testing defined as open burning without any restrictions to time ( i.e. able to perform on the weekends) and during Restricted Burn periods.

**Response #16:**

The type of burning that you are describing is definitely an open burn. There is no threshold on open burning during stagnant conditions such as during Restricted-Burn days therefore the amount of pollutants that you are describing, while very low, still build up during stagnant conditions. The destructive testing of energetic materials also releases hazardous air pollutants. Furthermore, the number of Restricted-Burn days has not been more than 18 days in 2006 and 18 days in 2005. Therefore the County sees no valid reason to allow open burning of this type on Restricted-Burn days. Restricted -Burn days periods occur at certain times of the year more often than at others (October through February). Therefore planned burning, such as what your company does, can be scheduled ahead of time to try to mitigate the effects of the pollutants generated by the open burns.

The prohibition regarding burning on weekends and holidays for certain types of burning is based upon the fact that the capability of agencies to respond to any problems as a result of open burning is diminished on weekends and holidays. Many permits for years have prohibited certain types of burning on weekends and holidays.

**Comment #17:**

We wish to comment regarding the rulemaking action on Rule 314 – Open Outdoor Fires. As it stands today this rule contains provisions in Sections 303.8 and 303.9 directly applicable to our business operations. We produce explosive-containing products for commercial and military applications and our products require stringent testing in accordance with the Department of Transportation and Department of Defense guidelines.

Testing is a crucial stage to our operations to determine that our products are of high quality and safe and reliable to operate. Until we complete testing we cannot deliver these products to military or commercial

customers such as the U.S. Air Force, US Navy and US Marine Corps. Please understand that these customers have critical delivery schedules to maintain to field products for military forces in the US and overseas.

Before testing we consult with the Control Officer to determine air quality and whether a restricted burn period has been declared. We fully support the activities and the initiatives of the Air Quality Division in maintaining high air standards in the Phoenix Metropolitan area. Whenever we can shift test schedules from potential Pollution Advisory periods we absolutely do. However, when a restricted burn period is declared and critical testing is schedules, unless we specifically seek, and are granted, special permission to proceed with testing, test operations fail. Frequently our US Government customers such as the Air Force or Navy have traveled to Phoenix to witness these tests. Suspending tests causes great disruption to their schedules and programs as well.

In the past we have done our best to minimize the situations where special permissions was necessary. Maricopa County has been very accommodating in considering critical test situations such as those described herein. However, our concern is that the rule will be changed to eliminate the opportunity to request or be granted special permission for critical test situations.

We have shared technical data to demonstrate that tests of our products produce minute emission quantities. We seek to have Rule 314 remain as written to maintain the opportunity for special permission or more ideally, allow certain thresholds for critical testing on restricted burn days provided particulates or emissions fall below thresholds acceptable to the County. Thank you for the opportunity to share our comments and concerns.

**Response #17:**

The type of burning that you are describing is definitely an open burn. There is no threshold on open burning during stagnant conditions such as during Restricted-Burn days therefore the amount of pollutants that you are describing, while very low, do not warrant open burning of any sort during stagnant conditions. The number of Restricted-Burn days has not been more than 18 days in 2006 and 18 days in 2005. Therefore the County sees no valid reason to allow open burning of this type on Restricted-Burn days.

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

Not applicable.

**14. Incorporations by reference and their location in the rules:**

None

**15. Was this rule previously an emergency rule?**

No

**16. The full text of the rule follows:**

**REGULATION III – CONTROL OF AIR CONTAMINANTS**

**RULE 314  
OPEN OUTDOOR FIRES AND INDOOR FIREPLACES AT COMMERCIAL  
AND INSTITUTIONAL ESTABLISHMENTS**

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**APPENDIX TO RULE 314**

**AIR CURTAIN DESTRUCTOR AND ~~BURN PIT~~ FIREBOX PROCEDURES**

MARICOPA COUNTY  
AIR POLLUTION CONTROL REGULATIONS  
REGULATION III – CONTROL OF AIR CONTAMINANTS

RULE 314  
OPEN OUTDOOR FIRES AND INDOOR FIREPLACES AT COMMERCIAL  
AND INSTITUTIONAL ESTABLISHMENTS

SECTION 100 – GENERAL

- 101** **PURPOSE:** To limit the emissions of air contaminants produced from open burning and from indoor fireplaces at commercial and institutional establishments.
- 102** **APPLICABILITY:** Rule 314 is applicable to any open outdoor fire and burning in indoor fireplaces at commercial and institutional establishments that is conducted within Maricopa County.

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

- 201** **AIR CURTAIN DESTRUCTOR** – A device designed to form a curtain of air over a ~~pit~~ firebox in which ~~combustion~~ burning occurs that aids in more complete combustion through increases in turbulence and combustion time. Above ground air curtain destructors are the only type of air curtain destructor that are allowed in Maricopa County.
- 202** **AREA A** – As defined in Arizona Revised Statutes (A.R.S.) § 49-541(1), the area in Maricopa County delineated as follows:  
Township 8 North, Range 2 East and Range 3 East  
Township 7 North, Range 2 West through Range 5 East  
Township 6 North, Range 5 West through Range 6 East  
Township 5 North, Range 5 West through Range 7 East  
Township 4 North, Range 5 West through Range 8 East  
Township 3 North, Range 5 West through Range 8 East  
Township 2 North, Range 5 West through Range 8 East  
Township 1 North, Range 5 West through Range 7 East  
Township 1 South, Range 5 West through Range 7 East  
Township 2 South, Range 5 West through Range 7 East  
Township 3 South, Range 5 West through Range 1 East  
Township 4 South, Range 5 West through Range 1 East
- ~~202~~203** **DANGEROUS MATERIAL** – Any substance or combination of substances that is capable of causing bodily harm or property loss unless neutralized, consumed, or otherwise disposed of in a controlled and safe manner.
- ~~203~~204** **DITCHBANK** – A lateral area not to exceed two and one half feet on either side of a ditch.
- ~~204~~205** **EMISSION REDUCTION TECHNIQUES (ERTs)** – Methods for controlling emissions from outdoor fires to minimize the amount of emissions output per unit of area burned. Types of ERTs include minimizing the material to be burned, preventing fire from spreading by lining the area and applying fire

retardant foam or water, allowing the material to dry before burning, extinguishing the smoldering burns, burning in piles, and burning in the opposite direction of the wind.

- 205206 FENCE ROW** – A lateral area not to exceed two and one half feet on either side of the centerline of a fence.
- 207 FIREBOX** – The chamber or compartment inside of an air curtain destructor wherein materials are burned.
- 206208 FLUE** – Any duct or passage for air or combustion gases, such as a stack or chimney.
- 207209 OPEN OUTDOOR FIRE OR OPEN BURNING** – Any combustion of any type of material outdoors, where the products of combustion are not directed through a flue. Open outdoor fires include agricultural, residential ~~and~~ prescribed ~~and construction~~ burning. Purposes for fires can include prevention of a fire hazard, instruction in the methods of fighting fires, watershed rehabilitation, disease and pest prevention.
- 208210 ORCHARD HEATERS** – A device which helps prevent frost damage to fruit trees by heating. An orchard heater consists of a pipeline heater system operated from a central control from which fuel is distributed by a piping system from a centrally located tank.
- 211 PROHIBITED MATERIALS** – Non-paper garbage from the processing, storage, service or consumption of food; books, magazines, fiberboard, packaging, rags, fabrics, office records, chemically treated or soaked wood; lead-painted wood; linoleum flooring, and composite counter tops; tires; animal wastes and carcasses, coal, liquid or gelatinous hydrocarbons tar, explosives or ammunition; oleanders, leaves, grass clippings, refuse; asphalt shingles or asphalt; tar paper; plastic and rubber products, including bottles for household chemicals; plastic grocery and retail bags; waste petroleum products, such as waste crankcase oil, transmission oil, and oil filters; transformer oils; asbestos; batteries; anti-freeze; aerosol spray cans; electrical wire insulation; thermal insulation; polyester products; hazardous waste products such as paints, pesticides, cleaners and solvents, stains and varnishes, and other flammable liquids; plastic pesticide bags and containers; and hazardous material containers including those that contained lead, cadmium, mercury and arsenic compounds.
- 209212 PUBLIC OFFICER** – Any elected or appointed officer of a public agency established by charter, ordinance, resolution, state constitution or statute, but excluding members of the legislature.
- 240213 RESTRICTED-BURN PERIOD** – A condition declared by the Control Officer whenever meteorological conditions are conducive to an accumulation of carbon monoxide (CO), ozone, and/or particulate matter in exceedance of the standards or when air quality reaches other limits established by the Control Officer or when there is increased fire danger.
- 214 WOOD-BURNING CHIMINEAS** – Chimineas are burning devices made from clay, aluminum, and steel and are used for warmth and aesthetics outside in yards and patios. Chimineas are designed to burn solid fuels.

## SECTION 300 – STANDARDS

- 301 PROHIBITION – OPEN OUTDOOR FIRES:** It shall be unlawful for any person to ignite, cause or permit to be ignited, allow, maintain any open outdoor fire within the limits of Maricopa County, except as provided in Sections 302, ~~this rule and in Section 303, 304, 305~~ and in the Appendix of this rule.
- 302 BURN PERMIT:** ~~A person shall first obtain a Burn Permit from the Control Officer before igniting, causing or permitting to be ignited, allowing, or maintaining the open outdoor fires described in Sections 302.1 through 302.8 of this rule. Before a person to whom a Burn Permit has been issued begins burning, such person shall call, for permission to burn, the fire department having jurisdiction and the Control Officer, who must base his decision to approve or deny permission to burn on National Weather Service forecasts or other meteorological analyses. If a person has obtained a Title V Permit, a Non Title V Permit, or a General Permit under Regulation II (Permits And Fees) of these rules that includes condition(s)~~

regarding open outdoor fires, then such person shall not be required to obtain a Burn Permit from the Control Officer. See Section 402 of this rule for requirements regarding Burn Permit applications and see Section 403 of this rule for requirements regarding Burn Permit conditions.

**302** **OPEN OUTDOOR FIRES REQUIRED TO OBTAIN A BURN PERMIT:** The types of fires described in Subsections 302.1 and 302.2 of this rule require a burn permit that is obtained from the Control Officer prior to initiating the burn. Even after the Control Officer issues the burn permit, the person conducting the fire shall call both the fire department and the Control Officer to obtain permission to burn for each day. The Control Officer shall base his decision to approve or deny permission to burn on National Weather Service forecasts or other meteorological analyses that are indicative of a Restricted-Burn Period. See Section 402 of this rule for additional requirements regarding burn permits.

**302.1** **Fires Prohibited During Restricted-Burn Periods in Maricopa County, But Allowed From May 1 thru September 30 Each Year in Area A:**

~~302.1~~ **a.** Open outdoor fires that are declared necessary by the County Agricultural Agent, when such fires have been determined as essential for the purposes of disease and/or pest prevention and certified by actual investigations by the County Agricultural Agent.

**302.2** **b.** Open outdoor fires for the control of weeds for the prevention of fire hazards, when such fires are declared necessary by a public officer in the performance of his official duties.

~~302.3~~ **c.** Open outdoor fires for fire-fighting training and fire-fighting training areas and structures. See Section ~~303.10~~ 303.2(b) of this rule for an exemption to this requirement.

**302.4** **d.** Open outdoor fires for the burning of agricultural ditchbanks and fence rows where other reasonable mechanical, chemical, or other methods of removal are not available. In addition:

~~a.~~ **(1)** A high-temperature mechanical burner must be used to burn ditchbanks, canal laterals, and/or fence rows.

~~b.~~ **(2)** Burning ditchbanks and/or fence rows is not allowed during a restricted-burn period from October 1 through February 29, unless such fires are required in the performance of an official duty of any public office, or such fires are necessary to thwart or prevent a hazard that cannot be properly managed by any other means, or are necessary for the protection of public health.

~~e.~~ **(3)** An on-site inspection by the Control Officer must be conducted to verify that only vegetative materials will be burned.

~~d.~~ **(4)** After an initial on-site inspection by the Control Officer has been completed, a Burn Permit may be issued for the same location(s) without having to conduct additional initial on-site inspections. However, periodic, unscheduled, on-site inspections may be conducted by the Control Officer on days when such burning has been authorized by the Burn Permit.

~~302.7~~ **e.** Open outdoor fires declared necessary by the Federal government or any of its departments, agencies, or agents, or the state or any of its agencies, departments, or subdivisions for the purpose of watershed rehabilitation or control through vegetative manipulation.

**302.2** **Fires Prohibited During Restricted-Burn Periods in Maricopa County and Also Prohibited From May 1 to September 30 Each Year in Area A:**

**302.5** **a.** Open outdoor fires for the destruction of tumbleweeds for the prevention of fire hazards in cases where other reasonable methods are not available.

**a.** **(1)** Tumbleweeds must be cut, piled, and dried before burning.

- b. ~~(2)~~ A high-temperature mechanical burner may be used to burn un-dried tumbleweeds in situations where it is not feasible to allow natural drying.
- e. ~~(3)~~ A high-temperature mechanical burner must be used to burn tumbleweeds growing along canal laterals and fence rows.
- b. Open outdoor fires for the burning of indigenous scrub vegetation cleared for the purpose of ~~construction or~~ agricultural operations in non-urban areas of low population where other reasonable methods are not available.
- a. (1) The Control Officer shall issue such Burn Permit only once per geographical location.
- e. (2) An on-site inspection must be conducted to determine removal of all other materials (e.g. wood, rubber, tires, dirt and metal) before the issuance of the Burn Permit.

**303** ~~EXEMPTIONS: A person shall not be required to obtain a Burn Permit in order to conduct open outdoor fires described in Sections 303.1 through 303.11 of this rule.~~

**303** **OPEN OUTDOOR FIRES NOT REQUIRED TO OBTAIN A BURN PERMIT:** The person conducting any type of fire listed in Section 303 of this rule does not need to obtain a burn permit. However, the person conducting the fire may be required to contact the Control Officer for permission to burn prior to igniting the fire when specified below in Subsections 303.1 through 303.3.

~~303.1 Domestic cooking for immediate human consumption.~~

~~303.2 Warmth for human beings.~~

~~303.3 Recreational purposes, where the combustible material is clean, dry wood, or charcoal.~~

~~303.4 Branding animals.~~

~~303.10 Fire fighting training areas and training structures.~~

- a. ~~This exemption applies only if the sole source of flame is a burner fueled by either liquefied petroleum gas or natural gas, with a British Thermal Unit (BTU) input per hour rating of less than 2,000,000 BTUs.~~
- b. ~~Before a person conducts an open outdoor fire for fire fighting training areas and training structures, such person shall call the Control Officer to determine if a restricted burn period has been declared and obtain permission to burn.~~

**303.1** **Fires Allowed At Any Time of the Year in Maricopa County or Area A:**

- a. Cooking for immediate human consumption.
- b. Orchard heaters for frost protection in farming or nursery operations.
- c. Proper disposal of flags under 4 United States Code 8.
- d. The display of fireworks for recreational purposes or pyrotechnics for musical or cinematic/theatrical functions.

**303.2** **Fires Prohibited During Restricted-Burn Periods in Maricopa County:** The person conducting any type of fire listed in Subsection 303.2 of this rule shall first call the County Air Quality Updates Hotline to hear the recorded message or check local government web sites to determine whether a Restricted-Burn Period has been declared each day. If that is the case, then open outdoor burning is prohibited.

- a. Fire extinguisher training. This exemption from needing a burn permit applies only when the training is limited to using a small amount of flammable liquid and a small container (i.e. a wastepaper basket or a flat pan).
- b. Fire-fighting training, training areas and training structures are exempt from needing a permit if the sole source of flame is a burner fueled by either liquefied petroleum gas or natural gas, with a British Thermal Unit (BTU) input per hour rating of less than 2,000,000 BTUs.

- c. Testing potentially explosive-containing, flammable, or combustible products (e.g., automotive airbags, rocket motors, gas generators, and vehicular assemblies) in accordance with Department of Transportation (DOT) or Department of Defense guidelines. This exemption from needing a burn permit refers to testing of hazard classification, packaging performance, propagation, and/or mass fire, but only when testing area is controlled, is relatively small, and when testing is not considered to be nor is associated with the disposal of dangerous material.
- d. Testing potentially explosive-containing products for commercial, military, and law enforcement uses. This exemption from needing a burn permit applies only when the testing is controlled, relatively small and not considered to be nor is associated with the disposal of dangerous material.
- e. Disposal of dangerous material must be conducted in compliance with the Arizona Department of Environmental Quality's (ADEQ's) regulations.

**303.3** **Fires Prohibited During Restricted-Burn Periods in Maricopa County and Also Prohibited From May 1 Through September 30 Each Year in Area A:** The person conducting any type of fire listed in Subsection 303.3 of this rule shall first call the County Air Quality Updates Hotline to hear the recorded message or check local government web sites to determine whether a Restricted-Burn Period has been declared. If that is the case, then open outdoor burning is prohibited.

- a. Warmth for human beings.
- b. Recreational purposes.
- c. Wood-burning chimineas and outdoor pits.
- d. Branding of animals.

**304** **OPEN OUTDOOR FIRES IN AN AIR CURTAIN DESTRUCTOR:** Prior to conducting an open outdoor fire in an air curtain destructor shall obtain a Title V permit form ADEQ and a site specific Burn Plan approved by the Control Officer. See the Appendix to Rule 314 for further requirements for the use of air curtain destructors. See Section 406 of this rule for Burn Plan Applications and Conditions.

**305** **ADDITIONAL REQUIREMENTS FOR OPEN OUTDOOR FIRES ALLOWED PER SECTIONS 302, 303, AND 304:**

- 305.1** Prohibited materials cannot be burned in open outdoor fires except as provided in Subsections 303.2(a), 303.2(b), 303.2(c), 303.2(d) and 303.2(e).
- 305.2** Open outdoor fires cannot be conducted before the hours of 10 a.m. and after 5 p.m. from October 1 to March 31 and before the hour of 6 a.m. and after 6 p.m. from April 1 to September 30 except as provided in Subsections 302.1(c), 303.2(b), and 303.3.
- 305.3** Open outdoor fires cannot be conducted during any weekends or holidays except as provided in subsections 302.1(c), 303.1, 303.2(b), and 303.3.
- 305.4** Fire extinguishing equipment shall be available at all times during open outdoor fires.
- 305.5** An attendant shall be present at all times during open outdoor fires for the duration of the burn.
- 305.6** Open outdoor fires shall never be initiated with items that cause the production of black smoke.
- 305.7** An air curtain destructor must be used for the burning of certain vegetative materials greater than 6 inches in diameter and an on-site inspection must be conducted before burning.

**306** **PROHIBITION – BURNING IN INDOOR FIREPLACES:** Burning in indoor fireplaces that use any fuels other than gaseous fuels, including gas logs, at commercial and institutional establishments is prohibited during Restricted-Burn Periods in Maricopa County. The owner or operator of a commercial or institutional fireplace shall first call the County Air Quality Updates Hotline to hear the recorded message or check local government web sites to determine whether a Restricted-Burn Period has been declared. If that is the case, then burning is prohibited except if using gaseous fuels.

**SECTION 400 – ADMINISTRATIVE REQUIREMENTS FOR BURN PERMITS AND BURN PLANS:**

**401** **FEES REQUIRED:** A fee shall be charged for a Burn Permit or the approval of each site specific Air Curtain Destructor Burn Plan as set forth in Rule 280 (Fees) of these rules.

**402** **BURN PERMIT APPLICATION:** A person shall file with the Control Officer, on a form prescribed by the Control Officer, a Burn Permit application and the complete application fee as described in Rule 280 (Fees) of these rules. The Control Officer shall act on a Burn Permit application and shall notify the applicant within 14 calendar days of the filing of the completed application.

**402.1** A separate Burn Permit application is required for each burn site location not contiguous to the location on the original Burn Permit application.

**402.2** The Control Officer shall conduct an on-site inspection before issuing the Burn Permit.

**402.3** The issuance of a Burn Permit does not relieve the permittee from any of the requirements of a fire department having jurisdiction, including but not limited to having the Burn Permit validated by such fire department.

**402.4** ~~Maricopa County shall not issue permits for its own burning activities. Authority for issuance of permits to the County shall be retained by Arizona Department of Environmental Quality. Permission given by a Public Officer for setting any fire given by a public officer in the performance of official duty under Sections 300 through 304 of this rule shall be given in writing and a copy of the written permission shall be transmitted immediately to the Control Officer. The setting of any such fire shall be conducted in a manner and at such times as approved by the Control Officer, unless doing so would defeat the purpose of this exemption.~~

**402.5** If a person has obtained a Title V Permit, a Non-Title V Permit, or a General Permit under Regulation II (Permits And Fees) of these rules that includes condition(s) regarding open outdoor fires, then such person shall not be required to obtain a separate Burn Permit from the Control Officer. An owner or operator of an air curtain destructor that has obtained a Title V permit from the ADEQ shall submit a burn plan for each burn site location to the Control Officer as described in the Appendix to Rule 314.

**403** **BURN PERMIT CONDITIONS:** The Control Officer may impose any permit conditions that are necessary to ensure compliance with Federal laws, State laws, or these rules. Burn Permit condition(s) may include, but are not limited to, burning hours, notification of intent to burn, and Burn Permit posting.

**404** **BURN PERMIT DENIAL:** The Control Officer shall deny a Burn Permit application if the material or operations do not meet the criteria described in this rule.

**405** **BURN PERMIT TERMS:** A Burn Permit shall be issued for the following terms:

Disease/Pest Prevention	30 days from date of issuance
Fire Hazard	30 days from date of issuance
Tumbleweeds	30 days from date of issuance
Ditchbank/Fence Row	1 year from date of issuance
Fire-fighting Training/Structures	1 year from date of issuance

**406** **BURN PLAN APPLICATION AND CONDITIONS:** In order to use an air curtain destructor, a person shall file with the Control Officer, on a form prescribed by the Control Officer, a Burn Plan application and the complete application fee as described in Rule 280 (Fees) of these rules. The Control Officer shall act on a Burn Plan application and shall notify the applicant within 14 calendar days of the filing of the completed application.

**406.1-1.** A separate, site-specific Burn Plan application is required for each burn site location not contiguous to the location.

**406.2 2.** A Burn Plan Application shall be site-specific and shall list the following, at a minimum:

- a. Notification of intent to burn;
- b. The anticipated dates and hours of the burn;
- c. The type and quantity of fuel that will be used;
- d. The type of material burned;
- e. The legal location, to the nearest township, range and section or latitude and longitude, to the nearest degree minute, street address, or parcel number;
- f. The Burn Plan posting; and
- g. The listing of the air curtain destructor's requirements as outlined in Section A of the Appendix to this rule.

**406.3** The Control Officer shall conduct an on-site inspection before approving the Burn Plan Application.

**406.4** The issuance of a Burn Plan does not relieve the permittee from any of the requirements of a fire department having jurisdiction, including but not limited to having the Burn Plan validated by such fire department.

**406.5** The Control Officer may impose any conditions that are necessary to ensure compliance with Federal laws, State laws, or these rules.

**406.6** The Control Officer shall deny a Burn Plan application if the material or operations do not meet the criteria described in this rule.

## **500 MONITORING AND RECORDS**

### **501 RECORDKEEPING AND REPORTING:**

**501.1** The following information shall be provided to the Control Officer for each time that open burning occurs for persons and operations subject to Sections 302, 304 and Subsections 303.2 (c), (d) and (e) ~~Subsections 305.2 (b), 305.2 (c), and 305.2 (d), 303.6, 303.8, 303.9, and 303.1.0.~~ This information shall be provided on a daily basis either by writing, fax, or electronically and shall include:

- a. The date of the burn; and
- b. The type and quantity of fuel burned for each date open outdoor burning occurs; and
- c. The fire type such as a pile or windrow for each date that open outdoor burning occurs; and
- d. The legal location, to the nearest township, range and section, or latitude and longitude, to the nearest degree minute, street address, or parcel number.

### **502 RECORDS RETENTION:**

**502.1** Maricopa County shall retain permits issued for open burning available for inspection by the ADEQ for five years.

**502.2** For each permit issued, Maricopa County shall have a means of contacting the person authorized by the permit to set an open fire, if an order to extinguish open burning is issued by either the County or ADEQ. Therefore the permit application must contain the name of a contact person and shall list a means of contacting that person.

~~502.3 Maricopa County shall hold or attend an annual public meeting for interested parties to review operations of the open outdoor fire program and discuss emission reduction techniques.~~

~~502.4 Maricopa County shall annually submit to ADEQ a record of daily burn activity by May 15 of each calendar year.~~

**503 PROGRAM REVIEW**

503.1 Maricopa County shall hold or attend a public meeting annually for interested parties to review operations of the open outdoor fire program and discuss emission reduction techniques.

503.2 Maricopa County shall annually submit to the ADEQ a record of daily burn activity by May 15 of each calendar year.

**APPENDIX TO RULE 314**

**AIR CURTAIN DESTRUCTOR AND ~~BURN PIT~~ FIREBOX PROCEDURES**

**A. ~~Burn Pit Requirements~~ Air Curtain Destructor Requirements:**

The following must be complied with prior to approval of ~~a pit~~ an air curtain destructor by the Control Officer for burning purposes:

- ~~1. The pit must not exceed the length of the plenum.~~ The length of the firebox must not exceed the length of the plenum.
- ~~2. The width of the pit must not exceed 8 feet.~~ The firebox shall be lined with refractory materials.
- ~~3. The depth of the pit must be a minimum of 15 feet.~~ The depth of the firebox shall be of such a distance to allow all burning material to be below the curtain of air created by the air curtain destructor.
- ~~4. The maximum erosion width must not exceed 12 feet nor must the pit result in excessive emissions at any time due to erosion, regardless of the width.~~ The width of the firebox shall not extend beyond the length of the nozzle action.
- ~~5. The pit firebox must have 4 stable, vertical sides, such as, but not limited to, mineral, soil, metal curtain, and masonry.~~
- ~~6. When air curtain destructor locations are changed, an inspection of the newly located air curtain destructor must be made by the Control Officer prior to burning.~~
- ~~7. When pit locations are changed, an inspection of the newly located pit must be made by the field inspector prior to burning. An air curtain destructor shall never be located at one site for more than 6 consecutive months and shall follow the burn permit terms of Section 402 of this rule. A total of 6 burn permits maximum will be issued by the County for any one area or place.~~

**B. Equipment Set-Up:**

1. An owner or operator of an air curtain destructor shall use a firebox and not a pit or trench to conduct open outdoor burning.
2. The equipment must be positioned so as to allow the blower's airflow to strike at a downward angle no less than 24 inches below the opposite rim of the ~~pit~~ firebox.
3. There shall be at least 1,000 feet between any two air curtain destructors.
4. An air curtain destructor shall be located at least 500 feet from any residence or building structure.
5. An air curtain destructor shall be located at least 500 feet from any pipeline or fuel storage area.
6. An air curtain destructor shall be located at least 250 feet from any power lines.
7. Material that is not being worked or is being stockpiled to be burned at a later date by using an air curtain destructor shall be kept at least 75 feet from the air curtain destructor while the burn is taking place.

**C. Operation of Blower:**

1. The proper blower speed must be maintained ~~so as to meet emissions standards~~ according to manufacturer's specifications.
2. The blower must be operating when and as long as any material in the ~~pit~~ firebox is burning.

**D. Loading of the Pit Firebox:**

1. When loading (feeding) the ~~pit~~ firebox, the material must not extend above the air curtain (blower airflow).
2. The loading of materials into the ~~pit~~ firebox must be discontinued at a minimum of 2 hours prior to the end of the designated burning hours. The blower must continue to operate until the end of the burning hours or until combustion is completed.
3. Adequate measures must be taken to assure that no emissions emanate from materials left in the ~~pit firebox (i.e., overnight)~~ (i.e., when combustion is completed). All materials left in the ~~pit~~ firebox must be extinguished with water or covered over with a minimum of 1 foot of mineral soil.

**E. ~~Pit~~ Firebox Clean-Out:**

All materials removed from the ~~pit~~ firebox must be completely extinguished and all reasonable precautions taken to control emissions.

**F. ~~Permit Approval Requirements:~~ Burning Hours for Air Curtain destructors:**

The following burning hours apply:

April – September: 6 am – 6 pm

October – March: ~~8~~10 am – 5 pm

While complying with the above schedule, the permittee must also obtain permission from the Control Officer on each day of burning. Burning using an air curtain destructor is not authorized on weekends nor on holidays. ~~Rubber and plastic type material must not be used as ignition fuel.~~ Prohibited materials shall never be burned in an air curtain destructor.