

Arizona Administrative REGISTER

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From the Publisher

ABOUT THIS PUBLICATION

The paper copy of the *Administrative Register* (A.A.R.) is the official publication for rules and rulemaking activity in the state of Arizona.

Rulemaking is defined in Arizona Revised Statutes known as the Arizona Administrative Procedure Act (APA), A.R.S. Title 41, Chapter 6, Articles 1 through 10.

The Office of the Secretary of State does not interpret or enforce rules published in the *Arizona Administrative Register* or *Code*. Questions should be directed to the state agency responsible for the promulgation of the rule as provided in its published filing.

The *Register* is cited by volume and page number. Volumes are published by calendar year with issues published weekly. Page numbering continues in each weekly issue.

In addition, the *Register* contains the full text of the Governor's Executive Orders and Proclamations of general applicability, summaries of Attorney General opinions, notices of rules terminated by the agency, and the Governor's appointments of state officials and members of state boards and commissions.

ABOUT RULES

Rules can be: made (all new text); amended (rules on file, changing text); repealed (removing text); or renumbered (moving rules to a different Section number). Rules activity published in the *Register* includes: proposed, final, emergency, expedited, and exempt rules as defined in the APA.

Rulemakings initiated under the APA as effective on and after January 1, 1995, include the full text of the rule in the *Register*. New rules in this publication (whether proposed or made) are denoted with underlining; repealed text is stricken.

WHERE IS A "CLEAN" COPY OF THE FINAL OR EXEMPT RULE PUBLISHED IN THE REGISTER?

The *Arizona Administrative Code* (A.A.C.) contains the codified text of rules. The A.A.C. contains rules promulgated and filed by state agencies that have been approved by the Attorney General or the Governor's Regulatory Review Council. The *Code* also contains rules exempt from the rulemaking process.

The printed *Code* is the official publication of a rule in the A.A.C. is prima facie evidence of the making, amendment, or repeal of that rule as provided by A.R.S. § 41-1012. Paper copies of rules are available by full Chapter or by subscription. The *Code* is posted online for free.

LEGAL CITATIONS AND FILING NUMBERS

On the cover: Each agency is assigned a Chapter in the *Arizona Administrative Code* under a specific Title. Titles represent broad subject areas. The Title number is listed first; with the acronym A.A.C., which stands for the *Arizona Administrative Code*; following the Chapter number and Agency name, then program name. For example, the Secretary of State has rules on rulemaking in Title 1, Chapter 1 of the *Arizona Administrative Code*. The citation for this chapter is 1 A.A.C. 1, Secretary of State, Rules and Rulemaking

Every document filed in the office is assigned a file number. This number, enclosed in brackets, is located at the top right of the published documents in the *Register*. The original filed document is available for 10 cents a copy.

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A price list for the *Arizona Administrative Code* is available online. You may also request a paper price list by mail. To purchase a paper Chapter, contact us at (602) 364-3223.

PUBLICATION DEADLINES
Publication dates are published in the back of the *Register*. These dates include file submittal dates with a three-week turnaround from filing to published document.

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Participate in the Process

Look for the Agency Notice

Review (inspect) notices published in the *Arizona Administrative Register*. Many agencies maintain stakeholder lists and would be glad to inform you when they proposed changes to rules. Check an agency's website and its newsletters for news about notices and meetings.

Feel like a change should be made to a rule and an agency has not proposed changes? You can petition an agency to make, amend, or repeal a rule. The agency must respond to the petition. (See A.R.S. § 41-1033)

Attend a public hearing/meeting

Attend a public meeting that is being conducted by the agency on a Notice of Proposed Rulemaking. Public meetings may be listed in the Preamble of a Notice of Proposed Rulemaking or they may be published separately in the *Register*. Be prepared to speak, attend the meeting, and make an oral comment.

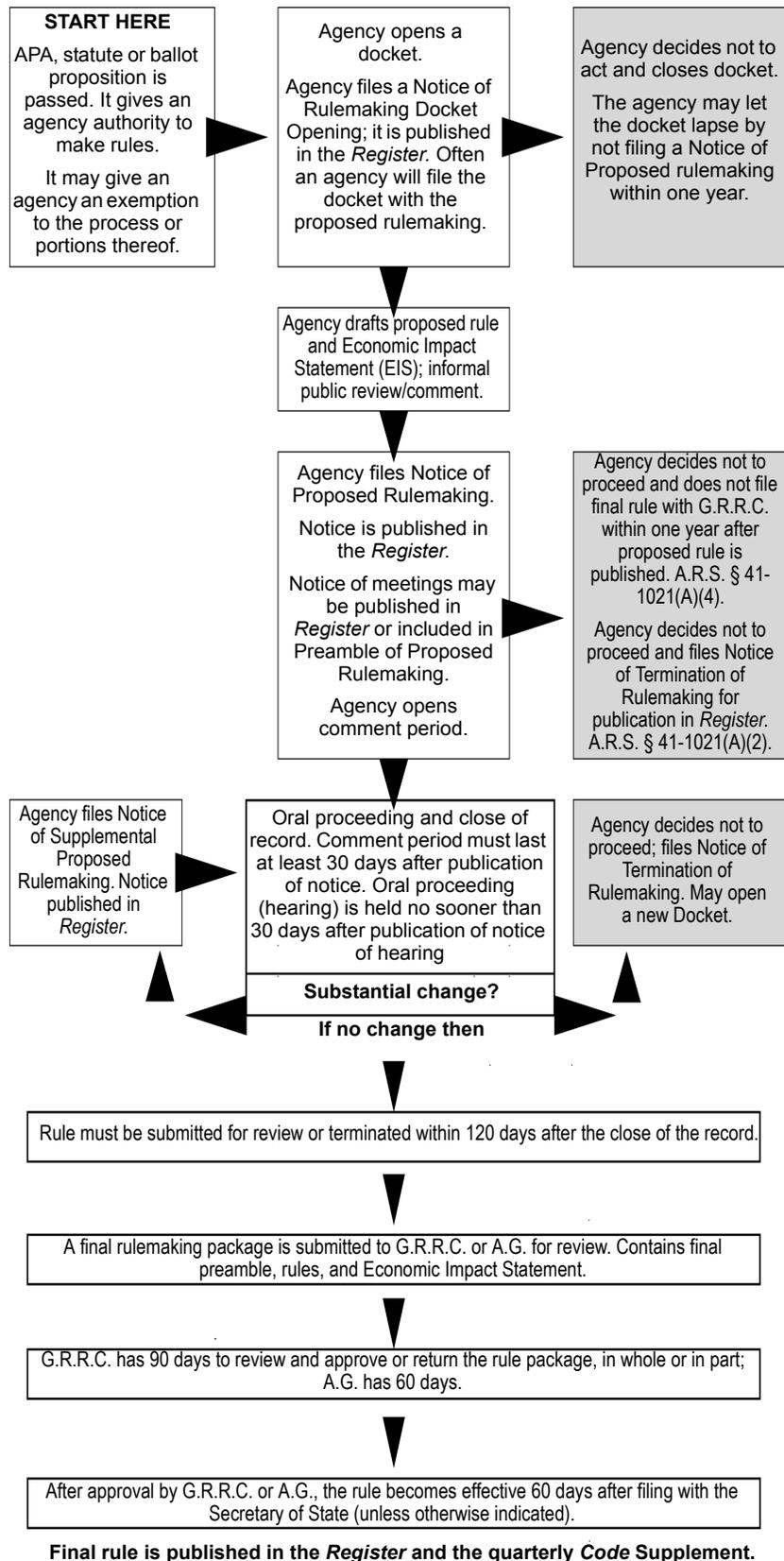
An agency may not have a public meeting scheduled on the Notice of Proposed Rulemaking. If not, you may request that the agency schedule a proceeding. This request must be put in writing within 30 days after the published Notice of Proposed Rulemaking.

Write the agency

Put your comments in writing to the agency. In order for the agency to consider your comments, the agency must receive them by the close of record. The comment must be received within the 30-day comment timeframe following the *Register* publication of the Notice of Proposed Rulemaking.

You can also submit to the Governor's Regulatory Review Council written comments that are relevant to the Council's power to review a given rule (A.R.S. § 41-1052). The Council reviews the rule at the end of the rulemaking process and before the rules are filed with the Secretary of State.

Arizona Regular Rulemaking Process



Definitions

Arizona Administrative Code (A.A.C.): Official rules codified and published by the Secretary of State's Office. Available online at www.azsos.gov.

Arizona Administrative Register (A.A.R.): The official publication that includes filed documents pertaining to Arizona rulemaking. Available online at www.azsos.gov.

Administrative Procedure Act (APA): A.R.S. Title 41, Chapter 6, Articles 1 through 10. Available online at www.azleg.gov.

Arizona Revised Statutes (A.R.S.): The statutes are made by the Arizona State Legislature during a legislative session. They are compiled by Legislative Council, with the official publication codified by Thomson West. Citations to statutes include Titles which represent broad subject areas. The Title number is followed by the Section number. For example, A.R.S. § 41-1001 is the definitions Section of Title 41 of the Arizona Administrative Procedures Act. The "§" symbol simply means "section." Available online at www.azleg.gov.

Chapter: A division in the codification of the *Code* designating a state agency or, for a large agency, a major program.

Close of Record: The close of the public record for a proposed rulemaking is the date an agency chooses as the last date it will accept public comments, either written or oral.

Code of Federal Regulations (CFR): The *Code of Federal Regulations* is a codification of the general and permanent rules published in the *Federal Register* by the executive departments and agencies of the federal government.

Docket: A public file for each rulemaking containing materials related to the proceedings of that rulemaking. The docket file is established and maintained by an agency from the time it begins to consider making a rule until the rulemaking is finished. The agency provides public notice of the docket by filing a Notice of Rulemaking Docket Opening with the Office for publication in the *Register*.

Economic, Small Business, and Consumer Impact Statement (EIS): The EIS identifies the impact of the rule on private and public employment, on small businesses, and on consumers. It includes an analysis of the probable costs and benefits of the rule. An agency includes a brief summary of the EIS in its preamble. The EIS is not published in the *Register* but is available from the agency promulgating the rule. The EIS is also filed with the rulemaking package.

Governor's Regulatory Review (G.R.R.C.): Reviews and approves rules to ensure that they are necessary and to avoid unnecessary duplication and adverse impact on the public. G.R.R.C. also assesses whether the rules are clear, concise, understandable, legal, consistent with legislative intent, and whether the benefits of a rule outweigh the cost.

Incorporated by Reference: An agency may incorporate by reference standards or other publications. These standards are available from the state agency with references on where to order the standard or review it online.

Federal Register (FR): The *Federal Register* is a legal newspaper published every business day by the National Archives and Records Administration (NARA). It contains federal agency regulations; proposed rules and notices; and executive orders, proclamations, and other presidential documents.

Session Laws or "Laws": When an agency references a law that has not yet been codified into the Arizona Revised Statutes, use the word "Laws" is followed by the year the law was passed by the Legislature, followed by the Chapter number using the abbreviation "Ch.," and the specific Section number using the Section symbol (§). For example, Laws 1995, Ch. 6, § 2. Session laws are available at www.azleg.gov.

United States Code (U.S.C.): The Code is a consolidation and codification by subject matter of the general and permanent laws of the United States. The Code does not include regulations issued by executive branch agencies, decisions of the federal courts, treaties, or laws enacted by state or local governments.

Acronyms

A.A.C. – *Arizona Administrative Code*

A.A.R. – *Arizona Administrative Register*

APA – *Administrative Procedure Act*

A.R.S. – *Arizona Revised Statutes*

CFR – *Code of Federal Regulations*

EIS – *Economic, Small Business, and Consumer Impact Statement*

FR – *Federal Register*

G.R.R.C. – *Governor's Regulatory Review Council*

U.S.C. – *United States Code*

About Preambles

The Preamble is the part of a rulemaking package that contains information about the rulemaking and provides agency justification and regulatory intent.

It includes reference to the specific statutes authorizing the agency to make the rule, an explanation of the rule, reasons for proposing the rule, and the preliminary Economic Impact Statement.

The information in the Preamble differs between rulemaking notices used and the stage of the rulemaking.



NOTICES OF PROPOSED RULEMAKING

This section of the *Arizona Administrative Register* contains Notices of Proposed Rulemakings.

A proposed rulemaking is filed by an agency upon completion and submittal of a Notice of Rulemaking Docket Opening. Often these two documents are filed at the same time and published in the same *Register* issue.

When an agency files a Notice of Proposed Rulemaking under the Administrative Procedure Act (APA), the notice is published in the *Register* within three weeks of filing. See the publication schedule in the back of each issue of the *Register* for more information.

Under the APA, an agency must allow at least 30 days to elapse after the publication of the Notice of Proposed Rulemaking in the *Register* before beginning any proceedings for making, amending, or repealing any rule (A.R.S. §§ 41-1013 and 41-1022).

The Office of the Secretary of State is the filing office and publisher of these rules. Questions about the interpretation of the proposed rules should be addressed to the agency that promulgated the rules. Refer to item #4 below to contact the person charged with the rulemaking and item #10 for the close of record and information related to public hearings and oral comments.

**NOTICE OF PROPOSED RULEMAKING
TITLE 2. ADMINISTRATION
CHAPTER 8. STATE RETIREMENT SYSTEM BOARD**

[R16-255]

PREAMBLE

- | | |
|---|---------------------------------|
| <u>1. Article, Part, or Section Affected (as applicable)</u> | <u>Rulemaking Action</u> |
| Article 2 | New Article |
| R2-8-201 | New Section |
| R2-8-202 | New Section |
| R2-8-203 | New Section |
| R2-8-204 | New Section |
| R2-8-205 | New Section |
| R2-8-206 | New Section |
| R2-8-207 | New Section |
- 2. Citations to the agency’s statutory rulemaking authority to include the authorizing statute (general) and the implementing statute (specific):**
 Authorizing statute: A.R.S. § 38-714(E)(4)
 Implementing statutes: A.R.S. §§ 38-782 and 38-783
- 3. Citations to all related notices published in the Register as specified in R1-1-409(A) that pertain to the record of the proposed rules:**
 Notice of Rulemaking Docket Opening: 22 A.A.R. 822, April 15, 2016
- 4. The agency’s contact person who can answer questions about the rulemaking:**
 Name: Jessica A.R. Thomas, Rules Writer
 Address: State Retirement System
 3300 N. Central Ave., Suite 1400
 Phoenix, AZ 85012-0250
 Telephone: (602) 240-2039
 E-mail: JessicaT@azasrs.gov
- 5. An agency’s justification and reason why a rule should be made, amended, repealed, or renumbered, to include an explanation about the rulemaking:**
 The ASRS needs to adopt seven rules to clarify various aspects of the health insurance premium benefit, including the following:
- Definitions relating to the health insurance premium benefit;
 - Eligibility for the health insurance premium benefit;
 - Calculation and supporting documentation for the health insurance premium benefit;
 - Payment of the health insurance premium benefit;
 - The 6-Month Reimbursement Program for the health insurance premium benefit; and



- The optional health insurance premium benefit

In addition to other processes, the ASRS needs to clarify in rule who is eligible for the health insurance premium benefit and how the benefit is calculated in specific situations. This rulemaking will clarify how the ASRS remits the health insurance premium benefit, including the 6-Month reimbursement program. Also, this rulemaking will explain the optional health insurance premium benefit, including how a retiree may elect the optional health insurance premium benefit and name a beneficiary for that election. These new rules will ensure that members and their survivors are aware of how their costs for health insurance may be affected upon retirement based on the health insurance premium benefit and optional health insurance premium benefit; the rules will reflect the types and amounts of health insurance premium benefits that the ASRS will pay on behalf of a retired member who meets certain criteria.

6. A reference to any study relevant to the rule that the agency reviewed and proposes either to rely on or 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.

None

7. A showing of good cause why the rulemaking is necessary to promote a statewide interest if the rulemaking will diminish a previous grant of authority of a political subdivision of this state:

Not applicable

8. The preliminary summary of the economic, small business, and consumer impact:

There is little to no economic, small business, or consumer impact, other than the minimal cost to the ASRS to prepare the rule package. The rules will have minimal economic impact, if any, because the rulemaking simply clarifies statutory requirements that already exist. There may be some economic impact to provide the documentation necessary for the ASRS to administer the Health Insurance Premium Benefit program. However, identifying what documentation must be submitted and when it must be submitted to the ASRS will clarify the requirements of the Health Insurance Premium Benefit program, thereby reducing the regulatory burden imposed on the public. Such clarification will ensure that ASRS retirees and Employers have notice about how to participate in the program. Thus, the economic impact is minimized.

9. The agency’s contact person who can answer questions about the economic, small business, and consumer impact statement:

Name: Jessica A.R. Thomas, Rules Writer
 Address: State Retirement System
 3300 N. Central Ave., Suite 1400
 Phoenix, AZ 85012-0250
 Telephone: (602) 240-2039
 E-mail: JessicaT@azasrs.gov

10. The time, place, and nature of the proceedings for to make, amend, repeal, or renumber the rule, or if no proceeding is scheduled, where, when, and how persons may request and oral proceedings on the proposed rule:

An oral proceeding regarding the proposed rule will be held as follows:

Date: January 24, 2017
 Time: 9:00 a.m.
 Location: Arizona State Retirement System
 10th Floor Board Room
 3300 N. Central Ave.
 Phoenix, AZ 85012-0250

11. All agencies shall list other matters prescribed by statute applicable to the specific agency or to any specific rule or class of rules. Additionally, an agency subject to Council review under A.R.S. §§ 41-1052 and 41-1055 shall respond to the following questions:

None

a. Whether the rule requires a permit, whether a general permit is used and if not, the reasons why a general permit is not used:

None of the rules require a permit.

b. Whether a federal law is applicable to the subject of the rule, whether the rule is more stringent than federal law, and if so, citation to the statutory authority to exceed the requirements of federal law:

Federal law applies to retirement programs, but no federal law specifically applies to this rulemaking.

c. Whether a person submitted an analysis to the agency that compares the rule’s impact on the competitiveness of business in this state to the impact on business in other states:

No analysis was submitted.



12. A list of incorporated by reference material as specified in A.R.S. § 41-1028 and its location in the rules:

None

13. The full text of the rules follows:

TITLE 2. ADMINISTRATION

CHAPTER 8. STATE RETIREMENT SYSTEM BOARD

ARTICLE 2. HEALTH INSURANCE PREMIUM BENEFIT

Section	
<u>R2-8-201.</u>	<u>Definitions</u>
<u>R2-8-202.</u>	<u>Premium Benefit Eligibility and Determination</u>
<u>R2-8-203.</u>	<u>Payment of Premium Benefit</u>
<u>R2-8-204.</u>	<u>Premium Benefit Calculation</u>
<u>R2-8-205.</u>	<u>Premium Benefit Documentation</u>
<u>R2-8-206.</u>	<u>Six Month Reimbursement Program</u>
<u>R2-8-207.</u>	<u>Optional Premium Benefit</u>

ARTICLE 2. HEALTH INSURANCE PREMIUM BENEFIT

R2-8-201. Definitions

The following definitions apply to this Article unless otherwise specified:

1. “Coverage” means a medical and/or dental insurance plan a retired member, disabled member, or beneficiary obtains through the ASRS or an Employer.
2. “Disabled” means the member has a disability and is receiving long-term disability benefits pursuant to A.R.S. § 38-797 et seq.
3. “Net premium” means the amount of the Coverage premium reduced by the amount of the premium benefit provided by the ASRS.
4. “Original retirement date” means the same as in R2-8-126.
5. “Optional premium benefit” means the election, upon retirement, to have the premium benefit paid on behalf of the member’s beneficiary upon death of the member pursuant to A.R.S. § 38-783.
6. “Premium benefit” means the amount the ASRS provides on behalf of a retired member or disabled member in order to offset the Coverage premium of the retired or disabled member pursuant to A.R.S. § 38-783.
7. “Subsidized” means the same as in A.R.S. § 38-783(M)(4).

R2-8-202. Premium Benefit Eligibility and Benefit Determination

A. A retired member or disabled member who has five or more years of service and who elects to maintain Coverage is eligible for a premium benefit as follows:

1. A retired member or disabled member who elects to maintain Coverage for the retired member or disabled member only, is eligible for a Single calculation of the premium benefit as described in R2-8-204(A);
2. A retired member or disabled member who elects to maintain Coverage for the retired member or disabled member and a dependent who is not a retired member or disabled member is eligible for a Family calculation of the premium benefit as described in R2-8-204(B);
3. A retired member or disabled member who elects to maintain Coverage for the retired member or disabled member and a dependent who is a retired member or disabled member is eligible for the greater of:
 - a. Two Single calculations of the premium benefit described in R2-8-204(A); or
 - b. One Family calculation of the premium benefit described in R2-8-204(B).
4. A retired member or disabled member who is enrolled as a dependent on an active member’s insurance plan is eligible for a Single calculation of the premium benefit described in R2-8-204(A) if:
 - a. The retired member has an original retirement date prior to August 2, 2012; or
 - b. The disabled member became disabled prior to August 2, 2012;
5. A retired member or disabled member who elects to maintain Coverage for the retired member or disabled member and multiple dependents, some of whom are retired members or disabled members, is eligible for the greater of:
 - a. Two Single calculations of the premium benefit described in R2-8-204(A); or
 - b. One Family calculation of the premium benefit described in R2-8-204(B).

B. Pursuant to A.R.S. § 38-783(E), a retired member who returns to work as an active member with an Employer and elects to maintain Coverage is eligible to receive a premium benefit if the member has an original retirement date prior to August 2, 2012.

C. Pursuant to A.R.S. § 38-783(E), a disabled member who elects to maintain Coverage is eligible to receive a premium



benefit if the disabled member became disabled prior to August 2, 2012.

- D. A member who receives a lump sum distribution from the ASRS upon retirement is eligible to receive a premium benefit pursuant to this Article.
- E. Notwithstanding any other section, a retired member who has an original retirement date on or after August 2, 2012, or a disabled member who becomes disabled on or after August 2, 2012 is eligible to receive a premium benefit pursuant to this Article, only if Coverage is not subsidized.

R2-8-203. Payment of Premium Benefit

- A. If a retired member who is eligible to receive a premium benefit pursuant to R2-8-202 elects to maintain Coverage with the Arizona Department of Administration or the ASRS, the ASRS shall reduce the eligible retired member's pension amount by the amount of the eligible retired member's Net Premium for Coverage pursuant to this Article, unless the Net Premium exceeds the pension amount.
- B. If the amount of the Net Premium exceeds the eligible retired member's pension amount and Coverage is with the ASRS, the eligible retired member shall be responsible for remitting the Net Premium to the eligible retired member's insurance company and the ASRS shall:
 - 1. Not reduce the eligible retired member's pension amount; and
 - 2. Remit payment of the premium benefit to the eligible retired member's insurance company.
- C. If the amount of the Net Premium exceeds the eligible retired member's pension amount and Coverage is with the Arizona Department of Administration, the eligible retired member shall be responsible for remitting the Net Premium to the Arizona Department of Administration and the ASRS shall:
 - 1. Not reduce the eligible retired member's pension amount; and
 - 2. Remit payment of the premium benefit to the Arizona Department of Administration.
- D. If an eligible retired member or eligible disabled member maintains Coverage with an Employer other than the ASRS or the Arizona Department of Administration, the ASRS shall remit the premium benefit to the eligible retired member's or eligible disabled member's Employer, unless the eligible retired member or eligible disabled member is participating in the 6-Month Reimbursement Program pursuant to R2-8-205.
- E. Every month, the ASRS shall provide a premium benefit to the Employer on behalf of an eligible retired member's, eligible disabled member's, or eligible dependent beneficiary's Coverage.
- F. The ASRS shall provide the lesser of the following for any one eligible retired member or eligible disabled member:
 - 1. The actual cost of the Coverage premium; or
 - 2. The greatest premium benefit calculation for which the retired member or disabled member is eligible pursuant to R2-8-202.
- G. If a member retires from the ASRS in addition to retiring from another State retirement system or plan described in A.R.S. § 38-921, each month, the ASRS shall remit any premium benefit to which the eligible retired or eligible disabled member, or eligible dependent beneficiary is entitled under this Article to the other State retirement system or plan from which the member retired.

R2-8-204. Premium Benefit Calculation

- A. A Single calculation for a premium benefit is based on the eligible retired member's or eligible disabled member's Coverage election, years of service, and Medicare or non-Medicare status.
- B. A Family calculation for a premium benefit is based on the eligible retired member's or eligible disabled member's Coverage election, years of service, and Medicare or Non-Medicare status, and the Medicare or Non-Medicare status of any covered dependents.
- C. A dependent beneficiary who is eligible to receive an optional premium benefit pursuant to R2-8-207 shall receive a premium benefit amount based on:
 - 1. The eligible retired member's years of service and optional retirement benefit election pursuant to A.R.S. § 38-760; and
 - 2. The eligible beneficiary's Coverage and Medicare or non-Medicare status.
- D. Notwithstanding R2-8-203(F), if an eligible dependent beneficiary is a retired member, the eligible dependent beneficiary may be entitled to receive more than one premium benefit.

R2-8-205. Premium Benefit Documentation

- A. Every year, prior to the effective date of Coverage, an Employer shall report to the ASRS all the Coverage plans and premium rates the Employer offers to its retired or disabled employees.
- B. An Employer shall inform the ASRS of any changes to the retired member's, or disabled member's, or eligible beneficiary's Coverage, including enrollment in Coverage, maintained through the Employer within 30 days of the changes taking effect.
- C. Using the Employer's secure ASRS website account, or another ASRS approved method, an Employer shall submit the following health insurance enrollment, change, and/or deletion information pursuant to subsection (B):
 - 1. The retired member's, disabled member's, or eligible beneficiary's social security number;
 - 2. The retired member's, disabled member's, or eligible beneficiary's full name;
 - 3. The retired member's, disabled member's, or eligible beneficiary's residential mailing address and telephone number;
 - 4. The retired member's, disabled member's, or eligible beneficiary's date of birth;
 - 5. The Coverage in which the retired member, disabled member, or eligible beneficiary is enrolling;
 - 6. The type of change that is being made to the Coverage;



7. The type of deletion that is being made to the Coverage;
8. The following information for each dependent enrolled in, or to be enrolled in, Coverage:
 - a. First and last name;
 - b. Social security number;
 - c. Date of birth; and
 - d. Medicare number, if applicable.
9. The old and new premium amounts for Coverage;
10. The effective date of the change, deletion, and/or enrollment;
11. The Employer's name and telephone number;
12. A certification by the Employer representative's signature that the information is current and correct; and
13. The date of the Employer representative's signature.

R2-8-206. Six Month Reimbursement Program

- A.** For a retired member or disabled member who is eligible for a premium benefit pursuant to R2-8-202(A)(4) or (B), the ASRS shall remit the premium benefit to the eligible retired member or eligible disabled member pursuant to subsection (B).
- B.** Pursuant to subsection (A), the ASRS shall remit the premium benefit to the eligible retired member or eligible disabled member every six months, payable in July and January. For purposes of this section, the premium benefit shall be the aggregate amounts of the premium benefit the eligible retired member or eligible disabled member is entitled to receive during the previous six months.
- C.** In order to receive a premium benefit payment pursuant to subsection (B), an eligible retired member or eligible disabled member shall submit to the ASRS a Reimbursement of Medical and/or Dental Cost (Six-Month Reimbursement Program) form after the last day of the last month for which the eligible retired member or eligible disabled member is seeking reimbursement.
- D.** The Reimbursement of Medical and/or Dental Cost (Six-Month Reimbursement Program) form that an eligible retired member or eligible disabled member submits pursuant to subsection (C) shall include the following information:
 1. The retired member's or disabled member's social security number;
 2. The retired member's or disabled member's full name;
 3. The retired member's or disabled member's mailing address and phone number;
 4. The retired member's or disabled member's date of birth;
 5. The retired member's or disabled member's status with the ASRS;
 6. The retired member's or disabled member's status with the retired member's or disabled member's Employer.
 7. The following Coverage information for the Coverage policy holder:
 - a. First and last names;
 - b. Social security number;
 - c. Date of birth;
 - d. Effective date of Coverage;
 8. The following information for each dependent enrolled in, or to be enrolled in, Coverage:
 - a. First and last name;
 - b. Social security number;
 - c. Date of birth;
 - d. Effective date of Coverage;
 9. Six-month reimbursement totals identified by:
 - a. The month and year the premium is due for Coverage;
 - b. The total medical plan premium per month;
 - c. The total dental plan premium per month;
 - d. The employee's out-of-pocket payroll deduction for a medical premium per month;
 - e. The employee's out-of-pocket payroll deduction for a dental premium per month;
 - f. The employee's total out-of-pocket payroll deduction for medical and dental premiums per month;
 10. The Employer's name;
 11. The Employer's phone number;
 12. The Employer's email address;
 13. The name of the Employer's representative; and
 14. The dated signature of the Employer's representative.

R2-8-207. Optional Premium Benefit

- A.** Upon retirement on or after January 1, 2004, a retired member is eligible to elect the optional premium benefit and may designate a beneficiary to receive the optional premium benefit upon the death of the retired member if:
 1. The retired member elects a retirement option under A.R.S. § 38-760 other than a straight life annuity;
 2. The retired member does not receive their complete retirement benefit paid as a lump sum distribution; and
 3. The retired member elects to maintain Coverage.
- B.** A retired member who returns to active membership for 60 consecutive months or more before retiring again, may elect or re-elect the optional premium benefit pursuant to subsection (A).



- C.** A retired member who does not return to active membership for 60 consecutive months or more before retiring again is not eligible to elect the optional premium benefit pursuant to subsection (A) unless the retired member elected the optional premium benefit on the date of the retired member's original retirement date.
- D.** In order to elect, re-elect, or terminate the optional premium benefit pursuant to subsection (A), the retired member shall submit to the ASRS an Optional Premium Benefit Election or Termination form containing the following information:

 - 1. The retired member's Social Security Number;
 - 2. The retired member's full name and gender;
 - 3. The retired member's current mailing address;
 - 4. The retired member's date of birth;
 - 5. The retired member's email address;
 - 6. The retired member's phone number;
 - 7. Whether the retired member is electing, declining, or terminating the optional premium benefit;
 - 8. The following information for the eligible dependent beneficiary if the retired member is electing the optional premium benefit:

 - a. The Social Security Number;
 - b. The full name;
 - c. The mailing address;
 - d. The phone number;
 - e. The date of birth; and
 - f. The gender and relationship to the retired member; and
 - 9. Certification of understanding by the retired member's dated signature of the following statements:

 - a. I have a one-time election at the time of retirement for this benefit, and have a retirement date on or after January 1, 2004;
 - b. I must select a Joint & Survivor or Period-Certain annuity option;
 - c. If I elect to participate, my eligible dependent beneficiary must either be participating or eligible to participate in my retiree health care plan at the time of my death;
 - d. I must provide a Social Security Number and proof of birth date for my eligible dependent beneficiary;
 - e. The premium benefit will be actuarially reduced for the remainder of my benefit and my eligible dependent beneficiary's benefit as long as the optional premium benefit is elected; and
 - f. I may rescind the election at any time and be eligible for the unreduced premium benefit payable as provided by law.
- E.** A beneficiary designated by the retired member to receive the optional premium benefit upon the retired member's death is eligible to receive a premium benefit if:

 - 1. The beneficiary is designated as the primary beneficiary on the member's retirement account;
 - 2. The beneficiary is eligible to enroll in or continues to be enrolled in a Coverage plan; and
 - 3. The beneficiary is eligible to receive at least one annuity payment and does not receive a lump sum distribution.
- F.** Upon the death of a retired member who elected the optional premium benefit pursuant to subsection (A), the ASRS shall provide the optional premium benefit on behalf of the retired member's designated beneficiary who is eligible to receive the optional premium benefit pursuant to subsection (D).
- G.** Notwithstanding subsection (E), the amount of the premium benefit the ASRS provides on behalf of an eligible dependent beneficiary, shall not exceed the actual amount of the Coverage premium.
- H.** Unless otherwise indicated by law, the optional premium benefit shall not terminate upon the death of the retired member if the retired member designated a beneficiary who is eligible for the optional premium benefit pursuant to subsection (D).
- I.** Notwithstanding subsection (F), the optional premium benefit will cease upon the retired member's death if the retired member was receiving a straight life annuity at the time of the retired member's death.



NOTICES OF EXPIRATION OF RULES UNDER A.R.S. § 41-1056(E)

This section of the Arizona Administrative Register contains Notices of Expiration of Rules. Under A.R.S. § 41-1056(E), if an agency does not file a five-year rule review report with the Governor's Regulatory Review Council (including a revised report); or if an agency does not file an extension before the due date of the report; or if an agency files an extension but does not submit a report

within the extension period; the rules scheduled for review expire.

The Council is required to notify the Secretary of State that the rules have expired and are no longer enforceable. The notice is published in the Register, and the rules are removed from the Code.

GOVERNOR'S REGULATORY REVIEW COUNCIL NOTICE OF RULE EXPIRATION

DEPARTMENT OF WATER RESOURCES

[R16-250]

- 1. Agency name: Department of Water Resources
2. Title and its heading: 12, Natural Resources
3. Chapter and its heading: 15, Department of Water Resources
4. Articles and their headings: 1, Fees
5. As required by A.R.S. § 41-1056(J), the Council provides notice that the following rule has expired as of November 5, 2016:

R12-15-107. Municipality Fee

- 6. Signature is of Nicole A. Ong Date of Signing
/s/ Nov. 15, 2016
Nicole A. Ong
G.R.R.C. Chair

GOVERNOR'S REGULATORY REVIEW COUNCIL NOTICE OF RULE EXPIRATION

INDUSTRIAL COMMISSION OF ARIZONA

[R16-251]

- 1. Agency name: Industrial Commission of Arizona
2. Title and its heading: 20, Commerce, Financial Institutions, and Insurance
3. Chapter and its heading: 5, Industrial Commission of Arizona
4. Articles and their headings: 1, Workers' Compensation Practice and Procedure
8, Occupational Safety and Health Rules of Procedure before the Industrial Commission of Arizona
5. As required by A.R.S. § 41-1056(J), the Council provides notice that the following rules have expired as of November 8, 2016:

R20-5-136. Time Within Which Requests for Hearing Shall be Filed
R20-5-816. Notice of Hearing

- 6. Signature is of Nicole A. Ong Date of Signing
/s/ Nov. 15, 2016
Nicole A. Ong
G.R.R.C. Chair



NOTICES OF RULEMAKING DOCKET OPENING

This section of the Arizona Administrative Register contains Notices of Rulemaking Docket Opening.

A docket opening is the first part of the administrative rulemaking process. It is an "announcement" that the agency intends to work on its rules.

When an agency opens a rulemaking docket to consider rulemaking, the Administrative Procedure Act (APA) requires the publication of the Notice of Rulemaking Docket Opening.

Under the APA effective January 1, 1995, agencies must submit a Notice of Rulemaking Docket Opening before beginning the formal rulemaking process. Many times an agency may file the Notice of Rulemaking Docket Opening with the Notice of Proposed Rulemaking.

The Office of the Secretary of State is the filing office and publisher of these notices. Questions about the interpretation of this information should be directed to the agency contact person listed in item #4 of this notice.

NOTICE OF RULEMAKING DOCKET OPENING

DEPARTMENT OF FINANCIAL INSTITUTIONS

[R16-256]

- 1. Title and its heading: Chapter and its heading: Article and its heading: Section numbers: 20, Commerce, Financial Institutions, and Insurance 4, Department of Financial Institutions 3, Savings and Loan Associations R20-4-301, R20-4-303, R20-4-304, R20-4-309, R20-4-318, R20-4-324, R20-4-325, R20-4-326, R20-4-327, R20-4-328, R20-4-330
2. The subject matter of the proposed rule: The Department has identified 11 rules in Title 20, Chapter 6, Article 3, which are no longer relevant in the regulation of Savings and Loan Associations in Arizona.
3. A citation to all published notices relating to the proceeding: None
4. The name and address of agency personnel with whom persons may communicate regarding the rule: Name: Stephen Briggs Address: Department of Financial Institutions 2910 N. 44th Street Suite 310 Phoenix, AZ 85016 Telephone: (602) 771-2778 Fax: (602) 381-1225 E-mail: sbriggs@azdfi.gov
5. The time during which the agency will accept written comments and the time and place where oral comments may be made: Written comments will be accepted at the address listed in item #4 until the close of record, which has not yet been determined. The Department has not scheduled any oral proceeding at this time.
6. A timetable for agency decisions or other action on the proceeding, if known: To be announced in the Notice of Proposed Rulemaking.



GOVERNOR EXECUTIVE ORDERS

The Administrative Procedure Act (APA) requires the full-text publication of Governor Executive Orders.

With the exception of egregious errors, content (including spelling, grammar, and punctuation) of these orders has been reproduced as submitted.

In addition, the Register shall include each statement filed by the Governor in granting a commutation, pardon or reprieve, or stay or suspension of execution where a sentence of death is imposed.

EXECUTIVE ORDER 2016-03

Internal Review of Administrative Rules; Moratorium to Promote Job Creation and Customer-Service-Oriented Agencies

Editor's Note: This Executive Order is being reproduced in each issue of the Administrative Register until its expiration on December 31, 2016, as a notice to the public regarding state agencies' rulemaking activities.

[M16-29]

WHEREAS, Arizona is poised to lead the nation in job growth;

WHEREAS, burdensome regulations inhibit job growth and economic development;

WHEREAS, small businesses and startups are especially hurt by regulations;

WHEREAS, each agency of the State of Arizona should promote customer-service-oriented principles for the people that it serves;

WHEREAS, each State agency should undertake a critical and comprehensive review of its administrative rules and take action to reduce the regulatory burden, administrative delay, and legal uncertainty associated with government regulation;

WHEREAS, overly burdensome, antiquated, contradictory, redundant, and nonessential regulations should be repealed;

WHEREAS, Article 5, Section 4 of the Arizona Constitution and Title 41, Chapter 1, Article 1 of the Arizona Revised Statutes vests the executive power of the State of Arizona in the Governor;

NOW, THEREFORE, I, Douglas A. Ducey, by virtue of the authority vested in me by the Constitution and laws of the State of Arizona hereby declare the following:

- 1. A State agency subject to this Order, shall not conduct any rulemaking except as permitted by this Order.
2. A State agency subject to this Order, shall not conduct any rulemaking, whether informal or formal, without the prior written approval of the Office of the Governor. In seeking approval, a State agency shall address one or more of the following as justification for the rulemaking:
a. To fulfill an objective related to job creation, economic development, or economic expansion in this State.
b. To reduce or ameliorate a regulatory burden while achieving the same regulatory objective.
c. To prevent a significant threat to the public health, peace, or safety.
d. To avoid violating a court order or federal law that would result in sanctions by a court or the federal government against an agency for failure to conduct the rulemaking action.
e. To comply with a federal statutory or regulatory requirement if such compliance is related to a condition for the receipt of federal funds or participation in any federal program.
f. To comply with a state statutory requirement.
g. To fulfill an obligation related to fees or any other action necessary to implement the State budget that is certified by the Governor's Office of Strategic Planning and Budgeting.
h. To promulgate a rule or other item that is exempt from Title 41, Chapter 6, Arizona Revised Statutes, pursuant to section 41-1005, Arizona Revised Statutes.
i. To address matters pertaining to the control, mitigation, or eradication of waste, fraud, or abuse within an agency or wasteful, fraudulent, or abusive activities perpetrated against an agency.
j. To eliminates rules that are antiquated, redundant or otherwise no longer necessary for the operation of state government.
3. For the purposes of this Order, the term "State agencies," includes without limitation, all executive departments, agencies, offices, and all state boards and commissions, except for: (a) any State agency that is headed by a single elected State official, (b) the Corporation Commission and (c) any board or commission established by ballot measure during or after the November 1998 general election. Those State agencies, boards and commissions excluded



from this Order are strongly encouraged to voluntarily comply with this Order in the context of their own rulemaking processes.

4. This Order does not confer any legal rights upon any persons and shall not be used as a basis for legal challenges to rules, approvals, permits, licenses or other actions or to any inaction of a State agency. For the purposes of this Order, “person,” “rule,” and “rulemaking” have the same meanings prescribed in Arizona Revised Statutes Section 41-1001.
5. This Executive Order expires on December 31, 2016.

IN WITNESS WHEREOF, I have hereunto set my hand and caused to be affixed the Great Seal of the State of Arizona.

Douglas A. Ducey
GOVERNOR

DONE at the Capitol in Phoenix on this Eighth day of February in the Year Two Thousand and Fifteen and of the Independence of the United States of America the Two Hundred and Thirty-Fourth.

ATTEST:

Michele Reagan
Secretary of State

COUNTY NOTICES ACCORDING TO A.R.S. § 49-112

This section of the *Arizona Administrative Register* contains County Notices (according to A.R.S. § 49-112).

Each county writes rules and regulations in its own unique style. Although these notices are published in the Register, they do not conform to the standards specified in the Arizona Rulemaking Manual.

With the exception of minor formatting changes, County Notices (including subsection labeling, spelling, grammar, and punctuation) are reproduced as submitted.

**NOTICE OF FINAL RULEMAKING
MARICOPA COUNTY AIR POLLUTION CONTROL REGULATIONS
REGULATION III – CONTROL OF AIR CONTAMINANTS
RULE 322: POWER PLANT OPERATIONS**

[M16-283]

PREAMBLE

- | | |
|---|--|
| 1. <u>Rule affected</u>
Rule 322: Power Plant Operations | <u>Rulemaking action</u>
Amended |
| 2. <u>Statutory authority for the rulemaking:</u>
Authorizing statutes: A.R.S. §§ 49-474, 49-479, and 49-480
Implementing Statute: A.R.S. § 49-112 | |
| 3. <u>The effective date of the rule:</u>
Date of adoption: November 2, 2016 | |
| 4. <u>List of public notices addressing this rulemaking:</u>
Notice of Briefing to Maricopa County Manager: May 2015
Notice of Stakeholder Workshops: June 29, 2015, September 3, 2015, and February 24, 2016
Notice of Maricopa County Board of Health Meeting: April 25, 2016
Notice of Proposed Rulemaking: 22 A.A.R. 1122, May 13, 2016 | |
| 5. <u>Name and address of department personnel with whom persons may communicate regarding the rulemaking:</u>
Name: Johanna M. Kuspert or Hether Krause
Maricopa County Air Quality Department
Planning and Analysis Division
Address: 1001 N. Central Ave., Suite 125
Phoenix, AZ 85004
Telephone: (602) 506-6010
Fax: (602) 506-6179
E-mail: aqplanning@mail.maricopa.gov | |
| 6. <u>Explanation of the rule, including the department's reasons for initiating the rulemaking:</u>
Summary:
Rule 322 (Power Plant Operations) limits the discharge of nitrogen oxides (NO _x), sulfur oxides, particulate matter and carbon monoxide emissions into the atmosphere from stationary fossil-fuel-fired equipment at power plants and cogeneration plants. Revisions to Rule 322 addressed the requirements of the State Implementation Plan (SIP) for “moderate” nonattainment for the 2008 eight-hour ozone national ambient air quality standard (NAAQS). The amendments in Rule 322 included Reasonably Available Control Technology (RACT) for NO _x .
In addition, the amendments corrected typographical or other clerical errors; made minor grammatical changes to improve readability or clarity; modified the format, numbering, order, capitalization, punctuation, or syntax of certain text to increase standardization within and among rules; or made various other minor changes of a purely editorial nature. As these changes did not alter the sense, meaning, or effect of the rules, they are not described in detail here, but can be readily discerned in the “underline/ strikeout” version of the rules contained in Item 14 of this | |



notice.

Issues Raised and Discussed During this Rulemaking Process:

Stakeholders expressed a general understanding for the need for rule revisions based on the department's nonattainment status; however, Stakeholders were concerned about the emission limitations and what is considered "RACT" and what is considered "beyond RACT". Stakeholders requested comparisons to comparable agencies to see how they have managed to achieve RACT. In addition, questions were raised regarding the following:

- The stringency of Rule 322 compared to the stringency in the Arizona Department of Environmental Quality's (ADEQ's) rules
- Cost effectiveness and its relationship to RACT and the impact on sources
- Most Achievable Control Technology (MACT) standards and the application to the boiler standards
- The compliance schedule and the timing of when sources must show compliance with the proposed emission limitations
- The phrase "owner and/or operator" and the implications of responsibility and liability
- Exemptions for equipment operating hours and during startup and shutdown
- The requirements for continuous emission monitoring systems and allowances for alternative methods

Description of Proposed Amendments:

Regarding Applicability:

- Section 102 (Applicability): Rule 322 no longer applies only to equipment for which construction commenced prior to May 10, 1996. Rule 322 applies to all equipment, except for equipment that was built or modified after May 10, 1996 that is already subject to more stringent federally enforceable standards. This revision made the rule comply with RACT, while also recognizing that sources that are complying with more stringent federally and/or locally enforceable standards are complying with RACT and are therefore in compliance with this rule. Rule 322 included new Section 102.4 (per the U.S. Environmental Protection Agency's (EPA's) comment) a provision that states that facilities subject to Rule 322 may be subject to New Source Performance Standards (NSPS) and/or National Emission Standards for Hazardous Air Pollutants (NESHAP).
- Section 104 (Partial Exemptions): Rule 322 included a partial exemption for equipment that operates less than or equal to 10 percent annual capacity factor per calendar year. This revision made the rule compliant with RACT, while also recognizing that if equipment operates below the specified rate then such equipment would not be expected to discharge into the atmosphere nitrogen oxides in excess of the limits specified in the rule and would therefore be in compliance with this rule. Also, Rule 322 included the definition of "annual capacity factor" in Section 200; definition is similar to definition used in 40 CFR Part 63, Subpart DDDDD (National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters)
- Section 104.1(c) (Partial Exemptions): Rule 322 was revised to clarify the partial exemption for military training facilities. The EPA commented that the term "military training facility" is unclear in this rule, especially as distinguished from other facilities such as "garrisons". The EPA suggested that this exemption should focus on the specific types of activities at these facilities that reasonably require exemptions, rather than the facilities themselves. The EPA suggested using Imperial County Air Pollution Control District, Rule 800, Section E(6) (General Requirements for Control of Fine Particulate Matter (PM10)) as an example. The text included in Section 104.1(c) is from Imperial County Air Pollution Control District, Rule 800, Section E(6) (General Requirements for Control of Fine Particulate Matter (PM10)).
- Sections 104.2 and 104.3 (Partial Exemptions): Rule 322 was revised to include source specific limitations on emergency fuel use that is or will be incorporated in a source permit. The EPA commented that engines and fuel use allow alternative emission limits from normal operating conditions; this is generally allowable but must also include appropriate limits on the length of the emergency condition and alternative emergency emission limits. EPA asked that the department revise this section.

Regarding Definitions:

- Section 235 (Definition of "Steady State"): Rule 322 included a definition of "steady state"; the text of the definition was proposed by one of the Stakeholders/sources subject to Rule 322 – Arizona Public Service (APS). The EPA commented that Rule 322 uses the term "steady state operation" without further description.

Regarding Limitations for Particulate Matter:

- Sections 301.1 and 301.2: The limitations for particulate matter-fuel type and testing were deleted. Stakeholders commented in January 2016 that Sections 301.1 and 301.2 might not be needed because equipment cannot use anything other than natural gas for non-emergency purposes.

Regarding Limitations for Nitrogen Oxides (NO_x):

- Section 305.1: The NO_x limitation when burning gaseous fossil fuel was changed from “155 ppmv” to “42 ppmv”. The EPA advised that this limitation is considered RACT for NO_x; this limitation is similar to limits in Imperial County’s (CA) RACT SIP for the 1997 ozone standard for turbines (Rule 400.1 adopted 2010).
- Section 305.2: The NO_x limitation when burning liquid fossil fuel was changed from “230 ppmv” to “65 ppmv”. The EPA advised that this limitation is considered RACT for NO_x; this limitation is similar to limits in Imperial County’s (CA) RACT SIP for the 1997 ozone standard for turbines (Rule 400.1 adopted 2010).

Regarding Alternative Monitoring Methods:

- Section 200 (Definitions): The definitions of “low mass emissions (LME)” and “predictive emissions monitoring system (PEMS)” were added to Rule 322. The text for the definition of “LME” is from 40 CFR Part 75 (Acid Rain) and the text for the definition of “PEMS” is from the EPA.
- Section 301 (Good Combustion Practices for Turbines): Rule 322 included a provision that if CEMS or another approved monitoring method is used, good combustion practices for turbines are considered to have been met.
- Section 301.1 (Good Combustion Practices for Turbines): Rule 322 included text regarding the frequency of monitoring temperature differential across the combustion burners. The EPA commented that the frequency of differential temperature measurement should be defined and that continuous monitoring of this differential should be required.
- Section 307.1 (Requirements for Emission Control System (ECS) Monitoring Equipment): Rule 322 included a provision that allows for installing an approved combustion control system (as an alternative to installing an emission control system (ECS)), in order to comply with the standards of the rule. Not all “approved combustion control systems” are “emission control systems”; however, approved combustion control systems should be designed and operated in accordance with good engineering practices to reduce emissions (which matches the definition of “emission control system”).
- Section 307.3(d) (Operation and Maintenance (O&M) Plan Required for ECS): Rule 322 included text that the department inserts into Title V permit renewals, which requires facilities to comply with O&M Plan revisions upon submittal not department approval.
- Section 307.4 (Continuous Emission Monitoring Systems): Rule 322 included other methods (other than CEMS) for measuring nitrogen oxides.

Regarding Administrative Requirements:

- Sections 401 (in Existence and in Compliance) and 402 (in Existence and Non-Compliant): Rule 322 included compliance schedules for equipment that is in existence and in compliance and in existence and non-compliant.
- Section 403 (Emergency Standby Units): Rule 322 included a compliance schedule for emergency standby units.

Regarding Compliance Determinations:

- Section 504 (Compliance Determination-Test Methods Incorporated By Reference): Rule 322 included a provision that allows for the use of alternative test methods to determine compliance with the rule and to clarify the provision regarding when more than one test method is permitted for a compliance determination.
- Section 504.12 (Compliance Determination-Test Methods Incorporated By Reference): Rule 322 deleted the text method “American Society of Testing Materials, ASTM Method D1266-98, (“Standard Test Method for Sulfur in Petroleum Products - Lamp Method”), 1998”. The EPA commented that the test method may not be appropriate; its range is 0.01-0.4% which will not be able to verify compliance with the definition of ultra low sulfur diesel fuel at <0.0015%.

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

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

§ 49-112 County regulation; standards

§ 49-112(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 of 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 regulation.

3. Any fee or tax adopted under the rule, ordinance or other regulation will not exceed the reasonable costs of the county to issue and administer that permit or plan approval program.

§ 49-112(B)

When authorized by law, a county may adopt rules, ordinances or other regulations in lieu of a state program that are as stringent as 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 the county demonstrates that the cost of obtaining permits or other approvals from the county will approximately equal or be less than the fee or cost of obtaining similar permits or approvals under this title or any rule adopted pursuant to this title. If the state has not adopted a fee or tax for similar permits or approvals, the county may adopt a fee when authorized by law in the rule, ordinance or other regulation that does not exceed the reasonable costs of the county to issue and administer that permit or plan approval program.

The department complies with A.R.S. § 49-112(A) in that Maricopa County fails to meet the National Ambient Air Quality Standards for both ozone and particulates. The County failed to meet 2008 8-hour ozone standard by the marginal area attainment date of July 20, 2015. The EPA issued a final rule, effective June 3, 2016, reclassifying the Maricopa County area to “moderate” (published at 86 FR 26697, May 4, 2016). Further, a portion of the County was classified as a serious ozone nonattainment area under the previous 1-hour ozone standard requiring the County to continue to maintain the measures and requirements that allowed the County to attain that standard. Currently, a portion of Maricopa County and Apache Junction in Pinal County is designated serious nonattainment for the PM₁₀ 24-hour standard. This is the only serious PM₁₀ nonattainment area in Arizona. Revisions to Rule 322 addressed the requirements of the State Implementation Plan (SIP) for “moderate” nonattainment for the 2008 eight-hour ozone national ambient air quality standard (NAAQS). The amendments in Rule 322 included Reasonably Available Control Technology (RACT) for NO_x.

The department complies with A.R.S. § 49-112(B) in that the amendments to Rule 322 are not more stringent than or in addition to a provision of Title 49 or rule adopted by the director or any board or commission authorized to adopt rules pursuant to Title 49; address the peculiar local conditions in Maricopa County; are authorized under A.R.S. Title 49, Chapter 3, Article 3; and are not in lieu of a state program.

8. Documents or studies referenced and/or reviewed for this rulemaking:

Not applicable

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:

Not applicable

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

The following discussion addresses each of the elements required for an economic, small business and consumer impact statement under A.R.S. § 41-1055.

An identification of the rulemaking.

This rulemaking revised Rule 322 (Power Plant Operations).

An identification of the persons who will be directly affected by, bear the costs of or directly benefit from the rulemaking.

The persons directly affected by and bear the costs of this rulemaking are facilities in Maricopa County that operate the following types of equipment built or modified before May 10, 1996, that burn fossil fuel:

- Electric utility steam generating unit or cogeneration steam unit used to generate electric power that has a heat input of equal to or greater than 100 MMBtu/hour (20 MW);
- Electric utility stationary gas turbine with a heat input at peak load equal to or greater than 10 MMBtu/hour (2.9 MW) based upon the lower heating value of the fuel;
- Cooling towers associated with these types of equipment.

The department has issued permits for 5 facilities that are subject to this rule as revised.

A cost benefit analysis of the following:

(a) The probable costs and benefits to the implementing agency and other agencies directly affected by the implementation and enforcement of the rulemaking.

It is expected that the department will benefit from the increased clarity of the rule with decreased time to inspect a facility or prepare a permit. In addition, the rulemaking will not impose increased monetary or regulatory costs on other state agencies, political subdivisions of this state, persons, or individuals so regulated.

The benefits of the rule revision are anticipated to be a result of the following:

- The revision of the NO_x limitation when burning gaseous fossil fuel from “155 ppmv” to “42 ppmv” to conform to federal performance standards;
- The revision of the NO_x limitation when burning liquid fossil fuel from “230 ppmv” to “65 ppmv” to conform to federal performance standards;
- Exemption a source from the NO_x limitations and continuous emissions monitoring system requirements if the source submits a Reasonable Available Control Technology (RACT) evaluation to the Control Officer if such RACT evaluation is incorporated into the source’s permit;
- Minor changes of a purely editorial nature, e.g., corrected typographical or other clerical errors; made minor grammatical changes to improve readability;
- Modification of the format, numbering, order, capitalization, punctuation, or syntax of certain text to increase standardization within and among rules.

The entities with sources subject to revised Rule 322 have submitted a RACT evaluation for their subject units, and have stated that they will not incur costs for compliance with the rule revisions. In their RACT evaluation, these entities determined that the most cost-efficient method to meet the RACT NO_x limitations is to limit the hours of operation for particular power plant units. The entities already have similar limitations in their Title V permits, and as such, there will be no additional burden on them to comply with the new RACT-based hourly limits.

(b) The probable costs and benefits to a political subdivision of this state directly affected by the implementation and enforcement of the rulemaking

The rule revisions did not impose increased monetary or regulatory costs on other state agencies, political subdivisions of this state, persons, or individuals so regulated.

(c) The probable costs and benefits to businesses directly affected by the rulemaking, including any anticipated effect on the revenues or payroll expenditures of employers who are subject to the rulemaking.

The department anticipates that increased clarity provided by the Rule 322 revisions will provide a benefit to the regulated community; it will take less time for sources subject to the rule to understand and comply with the rule, which leads to increased compliance, which leads to decreased costs of compliance to the regulated community. The department does not anticipate these rule revisions to have a significant impact on a person's income, revenue, or employment in this state related to this activity. The rule revisions did not impose increased monetary or regulatory costs on individuals so regulated.

A general description of the probable impact on private and public employment in businesses, agencies and political subdivisions of this state directly affected by the rulemaking.

The rule revisions did not impose increased monetary or regulatory costs on other state agencies, political subdivisions of this state, persons, or individuals so regulated.

A statement of the probable impact of the rulemaking on small businesses.

The rule revisions did not impose increased monetary or regulatory costs on any permitted business, persons, or individuals so regulated.

(a) An identification of the small businesses subject to the rulemaking.

There are no small businesses subject to this rulemaking.

(b) The administrative and other costs required for compliance with the rulemaking.

This rulemaking updated and clarified existing rule provisions and definitions to be consistent with federal performance standards, to reduce confusion and improve understanding and readability. The department considered the implications of the amendments to the regulated entities and the implementing agency and deemed that none of the rule revisions have potentially significant economic impacts.

(c) A description of the methods that the agency may use to reduce the impact on small businesses.

(i) Establishing less costly compliance requirements in the rulemaking for small businesses.

There are no small businesses subject to this rulemaking.

(ii) Establishing less costly schedules or less stringent deadlines for compliance in the rulemaking.

This rulemaking corrected or clarified existing rule provisions and definitions to reduce confusion and



improve understanding and readability.

(iii) Exempting small businesses from any or all requirements of the rulemaking.

This rulemaking corrected or clarified existing rule provisions and definitions to reduce confusion and improve understanding and readability.

(d) The probable cost and benefit to private persons and consumers who are directly affected by the rulemaking.

This rulemaking did not impose increased monetary or regulatory costs on any permitted business, persons, or individuals so regulated. As such, there are no costs to pass through to consumers which means there are no impacts on consumers.

A statement of the probable effect on state revenues.

The rule revisions did not impose increased monetary or regulatory costs on other state agencies, political subdivisions of this state, persons, or individuals so regulated. Without costs to pass through to customers, there is no projected change in consumer purchase patterns and, thus, no impact on state revenues from sales taxes.

A description of any less intrusive or less costly alternative methods of achieving the purpose of the rulemaking.

This rulemaking corrected or clarified existing rule provisions and definitions to reduce confusion and improve understanding and readability.

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

Name: Johanna M. Kuspert or Hether Krause
 Maricopa County Air Quality Department
 Planning and Analysis Division
 Address: 1001 N. Central Ave., Suite 125
 Phoenix, AZ 85004
 Telephone: (602) 506-6010
 Fax: (602) 506-6179
 E-mail: aqplanning@mail.maricopa.gov

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

Since the Notice of Proposed Rulemaking was published on May 13, 2016 (22 A.A.R 1122), the department made the following additional amendments:

- Section 102 (Applicability): Did not include proposed new text “except for equipment that was built or modified after May 10, 1996 that is already subject to more stringent federally and/or locally enforceable standards”. The EPA commented in June 2016 that the exception conflicts with the Clean Air Act requirement that “major sources” in ozone nonattainment areas classified at moderate or higher must be regulated under a SIP-approved RACT rule. With this amendment, Rule 322 no longer applies only to equipment for which construction commenced prior to May 10, 1996, but rather applies to all equipment that is listed in Sections 102.1 through 102.3.
- Section 104.1(c) (Partial Exemptions): Deleted the partial exemption for stationary gas turbines used for military training activities. The EPA commented in June 2016 to remove this exemption or provide definitions for the terms “military training facilities” and “military gas turbines” and demonstrate why these gas turbines should not be subject to the specified emission standards.
- Sections 104.2 and 104.3 (Partial Exemptions): Did not include proposed new text “and that is or will be incorporated in a permit issued by the Control Officer for that source” and did not include the text “which fires an emergency fuel but”. Also, re-phrased the sections to read in part “...as allowed by a permit”, per the Salt River Project Agricultural Improvement and Power District (SRP) comments.
- Section 104.4 (Partial Exemptions): Did not include the proposed new text “and that is or will be incorporated in a permit issued by the Control Officer for that source” and included Section 400 to the list of sections from which the equipment is exempt. The Arizona Public Service Company (APS) and SRP commented in June 2016 that if the low capacity exemption is linked to an actual permit, then it would be the equivalent of a case-by-case determination defeating the very purpose of this de minimis exemption. Also, APS and SRP commented that Section 400 should be included to the list of sections from which the equipment is exempt. Also, changed “less than or equal to” to “at or below” and changed “10 percent annual capacity factor per calendar

year” to “10 percent calendar year annual capacity factor”.

- Section 201 (Definition of “Annual Capacity Factor”): Added text to the definition to allow the definition to apply to steam units as well as gas turbines, per APS and SRP comments.
- Section 218 (Definition of “Low Sulfur Oil”): Deleted the definition of “Low Sulfur Oil”. Added the definition of “Ultra Low Sulfur Diesel” to be consistent with federal standards.
- Section 220 (Definition of “Low Mass Emission (LME)”): Did not include the definition of “LME” and removed the term from Sections 308.4 and 501.5. The EPA commented in June 2016 that LME is not a suitable substitute for Continuous Emissions Monitoring Systems (CEMS) for the purposes of SIP compliance determination with an emissions limit.
- Section 229 (Definition of “Predictive Emission Monitoring System (PEMS)”): Did not include the proposed definition of “PEMS” and removed the term from Sections 308.4 and 501.5. The EPA commented in June 2016 that the usage of PEMS for compliance purposes be restricted to units with a heat input rate of 250 MMBtu/hr or less, which aligns with other Federal guidance.
- Section 232 (Definition of “Steady State”): Included “with equipment in normal operating conditions” after the phrase “at which a unit”.
- Section 234 (Definition of “Thirty (30) Day Rolling Average”): Deleted the terms “equipment” and “every hour” and added text at the end of the definition to make the definition consistent with common practice, per APS and SRP comments.
- Section 236 (Definition of “Total Dissolved Solids (TDS)”): Deleted the second sentence and revised the first sentence to include test methods for determining TDS. The EPA commented in June 2016 that the second sentence should be removed and the first sentence should be modified to read “...glass fiber filter, as determined by Test Method XXX”.
- Section 237 (Definition of “Ultra Low Sulfur Diesel”): Added the definition of “Ultra Low Sulfur Diesel”. Deleted the definition of “Low Sulfur Oil” to be consistent with federal standards.
- Section 239 (Definition of “Waste Derived Fuel Gas”): Added the definition of “Waste Derived Fuel Gas” to be consistent with the other department “engine” rules – Rule 323 (Fuel Burning Equipment From Industrial/Commercial/Institutional (ICI) Sources) and Rule 324 (Stationary Internal Combustion (IC) Engines).
- Sections 301.1 and 301.2 (Limitations-Particulate Matter): Did not delete Sections 301.1 and 301.2 (the limitations for particulate matter-fuel type and testing). The EPA commented in June 2016 that Sections 301.1 and 301.2 should either be retained or the County should provide an adequate Clean Air Act Section 110(l) demonstration, which supports removing these requirements.
- Section 301.1 (Limitations-Particulate Matter): Included the wording “during steady state operations” after the phrase “more than 0.007 lbs. of particulate matter per MMBtu”.
- Section 302 (Good Combustion Practices for Turbines): Did not include proposed new text “good combustion practices for turbines are considered to have been met” at the end of the last sentence. Instead, included at the end of the last sentence “then the equipment would be exempt from the requirements of Section 302 of this rule”. The EPA commented in June 2016 that it appears that the department intends to say that if equipment is utilizing a CEMS, which already monitors various operating parameters, then the equipment would be exempt from the requirements of Section 302; revise accordingly.
- Section 304.2 (Limitations-Opacity): Did not change “of” to “or” in the phrase “for up to one hour during the startup of switching fuels...” Instead, changed “switching fuels” to “fuel switching startup process” (the term is defined in Rule 322). APS and SRP commented in June 2016 that it would appear that “of” was the correct choice and should not have been changed. To make it clearer, change “switching fuel” to “fuel switching startup process”.
- Section 305 (Limitations-Sulfur in Fuel): Changed “low sulfur oil” to “ultra low sulfur diesel” and added a limitation for sulfur in waste derived fuel gas to be consistent with the other department “engine” rules – Rule 323 (Fuel Burning Equipment From Industrial/Commercial/Institutional (ICI) Sources) and Rule 324 (Stationary Internal Combustion (IC) Engines).
- Sections 306.1 and 306.2 (Limitations-Nitrogen Oxides (NO_x)): Added Section 400 to the list of sections from which a source would be exempt. APS commented in June 2016 that the department should also exempt the case-by-case RACT analysis from the requirements of Section 400 (Administrative Requirements), since it will conflict with the specific permit limit set forth by the case-by-case analysis.
- Sections 306.3 (Limitations-Nitrogen Oxides (NO_x)): Added the wording “during steady state operations”



to the end of the last sentence to be consistent with similar standard in Section 307 (Limitations-Carbon Monoxide).

- Section 307 (Limitations-Carbon Monoxide): Did not include proposed new text “and combined cycle gas turbines” at the end of the second-to-the-last sentence. Instead, added the phrase to the last sentence. APS commented in June 2016 that the department incorrectly placed combined cycle gas turbines in the 3% oxygen correction factor section. The correct location of combined cycle gas turbines is within the 15% oxygen correction factor section; this change lines up Sections 306.3 and 307 to have consistent factors.
- Section 308.1 (Requirements for ECS Monitoring Equipment): Did not include the proposed new text “or another approved combustion control system” at the end-of the sentence in Section 307.1. The EPA commented in June 2016 that the definition of “approved combustion control equipment” is unclear. The EPA commented that the EPA must review and approve any such alternative control systems if the criteria are not specific enough. The EPA asked that the County define the criteria for approval. Instead, the department included new text “a combustion control system which reduces emissions to below the applicable standards in Section 300 of this rule”.
- Section 308.4(b) (Requirements for ECS Monitoring Equipment-Emission Compliance Demonstration): Did not include the proposed new text “or other monitoring system approved by the Control Officer” in Section 308.4(b). The EPA commented in June 2016 that the inclusion of “other monitoring system approved by the Control Officer” is an inappropriate allowance of Director’s discretion; remove this statement or require EPA approval.
- Section 401 (Administrative Requirements-in Existence and in Compliance): Clarified that this section is not intended for units exempt in Section 104.4 by an annual capacity factor equal to or less than 10% or for units which are accepting a case-by-case RACT determination approved by the Control Officer. Include a compliance path for those sources which operate a unit below a 10% capacity factor or under a case-by-case RACT limitation and in the future elect to increase operations and may need to then come into compliance with the limits in Section 306, per APS and SRP comments.
- Section 402.1 (Administrative Requirements-in Existence and Non-Compliant): Clarified that this section is not intended for units exempt in Section 104.4 by an annual capacity factor equal to or less than 10% or for units which are accepting a case-by-case RACT determination approved by the Control Officer. Also, did not include the proposed last sentence regarding “interim compliance”. APS commented in June 2016 that “interim compliance” does not appear to relate to the rulemaking; there are no “interim compliance” options in the rule.
- Section 402.3 (Administrative Requirements-in Existence and Non-Compliance-Removal From Service): Revised this section to be more functional for retiring units by making the effectiveness of the section not linked to the adoption of the rule but rather linked to the decision by the owner to retire the unit, per APS and SRP comments.
- Section 402.3(c) (Administrative Requirements-in Existence and Non-Compliance-Removal from Service): Removed the one month discrepancy in the sentences in the section. Revised the timeframes so they match.
- Section 403 (Administrative Requirements-Emergency Standby Units): Changed “electric utility stationary gas turbine, electric utility steam generating unit or cogeneration steam generating unit used to generate electric power” to “emergency standby unit”. APS and SRP commented in June 2016 that this section should address emergency standby units.
- Section 501.6 (Recordkeeping and Reporting-Good Combustion Practices): Did not include proposed new text “good combustion practices for turbines are considered to have been met” at the end of the last sentence. Instead, included at the end of the last sentence “then the equipment would be exempt from the requirements of Section 302 of this rule”. The EPA commented in June 2016 that it appears that the department intends to say that if equipment is utilizing a CEMS, which already monitors various operating parameters, then the equipment would be exempt from the requirements of Section 302; revise accordingly.
- Section 501.7 (Recordkeeping and Reporting-Equipment Referenced in Sections 104.4, 306.1, and 306.2): Changed “covering a 12-month rolling period” to “of the annual capacity factor and NO_x emissions”. APS and SRP commented in June 2016 that a 12-month rolling period conflicts with the limits in Sections 306.1 and 306.2, which are concentrations measured during a test conducted annually and also with the measurement of the annual capacity factor.
- Section 503.1 (Compliance Determination-Low Sulfur Oil Verification): Changed “low sulfur oil” to “ultra low sulfur diesel” and clarified that sulfur content verification documents must provide accurate values and be based on enforceable test methods to determine sulfur content.

- Section 503.1(Compliance Determination-Low Sulfur Oil Verification): Revised the new text “sulfur content of the fuel oil to demonstrate the 0.0015% limits” to “sulfur content of the fuel to demonstrate the 0.0015% limit” and revised the new text in Section 503.1(f) from “testing of the fuel oil for sulfur content” to “test results of the fuel for sulfur content”
- Section 503.3 (Compliance Determination-Waste Derived Fuel Gas-Sulfur Verification): Added a provision for verifying sulfur content in waste derived fuel gas to be consistent with the other department “engine” rules – Rule 323 (Fuel Burning Equipment From Industrial/Commercial/Institutional (ICI) Sources) and Rule 324 (Stationary Internal Combustion (IC) Engines).
- Section 504 (Compliance Determination-Test Methods Incorporated By Reference): Deleted the provision allowing test methods to be used upon sole approval by the Control Officer and added text that allows test methods as approved by the Administrator to be used, per the EPA’s comments.
- Section 504.15 (Compliance Determination-Test Methods Incorporated By Reference): Added ASTM D5907-13, Standard Methods for the Examination of Water and Wastewater for Filterable Matter (Total Dissolved Solids) and Nonfilterable Matter (Total Suspended Solids) in Water; test method is referenced in the definition of “Total Dissolved Solids (TDS)”.
- Section 504.16 (Compliance Determination-Test Methods Incorporated By Reference): Added test method for determining the sulfur content in waste derived fuel gas to be consistent with the other department “engine” rules – Rule 323 (Fuel Burning Equipment From Industrial/Commercial/Institutional (ICI) Sources) and Rule 324 (Stationary Internal Combustion (IC) Engines); test method is referenced in Section 503.3.

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

Since the Notice of Proposed Rulemaking was published on May 13, 2016 (22 A.A.R. 1122), the department received comments from the Arizona Public Service Company (APS), Salt River Project Agricultural Improvement and Power District (SRP), and the U.S. Environmental Protection Agency (EPA). The comments and the department’s responses are provided below.

Comment #1: Section 102 (Applicability)

The draft rule states that subject equipment built or modified after May 10, 1996 must comply with the limits in this rule, unless the equipment is already subject to more stringent federally enforceable standards, such as NSPS and NESHAPs standards. This exception conflicts with the Clean Air Act requirement that “major sources” in ozone nonattainment areas classified at moderate or higher must be regulated under a SIP-approved RACT rule. If the County determines that different levels of RACT are appropriate for different types, sizes, or ages of equipment, the EPA recommends outlining separate emission limits for these different classes of equipment.

Response #1: Section 102 (Applicability)

The department did not include proposed new text “except for equipment that was built or modified after May 10, 1996 that is already subject to more stringent federally and/or locally enforceable standards”. With this amendment, Rule 322 no longer applies only to equipment for which construction commenced prior to May 10, 1996, but rather applies to all equipment that is listed in Sections 102.1 through 102.3.

Comment #2: Section 104.1(c) (Partial Exemptions)

This provision provides that gas turbines used for military training facilities and military gas turbines used anywhere other than a garrison are exempt from the listed sections. The EPA asks that the County remove this exemption or provide definitions for the terms “military training facilities” and “military gas turbines” and demonstrate in the rule’s Staff report why these gas turbines should not be subject to the specified emission standards.

Response #2: Section 104.1(c) (Partial Exemptions)

The department deleted the partial exemption for stationary gas turbines used for military training activities.

Comment #3: Sections 104.2 and 104.3 (Partial Exemptions)

The County proposed adding the statement “and that is or will be incorporated in a permit issued by the Control Officer”. To add clarity to the intent of the language, SRP proposes changes this phrase to “as long as this is allowed by a permit issued by the Control Officer for that source”.

Response #3: Sections 104.2 and 104.3 (Partial Exemptions)

The department did not include proposed new text “and that is or will be incorporated in a permit issued by the Control Officer for that source” and to not include the text “which fires an emergency fuel but”. Rather than including new text “as long as this is allowed by a permit issued by the Control Officer for that source”, the department re-phrased the sections to read in part “...as allowed by a permit...”

Comment #4: Section 104.4 (Partial Exemptions)

For units that operate at a low capacity factor (10% or less), the County has proposed a de minimis partial exemption. This partial exemption makes sense and works for several APS units that operate at low levels. However, between the final stakeholder workshop and the Proposed Rulemaking, the County added a counterintuitive requirement that an exempt unit would somehow need to operate under a specific permit limit. Upon reflection, we hope that the County can see the troubles caused by this position. The purpose of Section 104.4 is to provide a partial exemption from the requirements of Section 305, 306, 307.4 and 400 for units that operate at a low capacity factor. If the 10% is linked to an actual permit, then it would be the equivalent of a case-by-case determination under 305.1 defeating the very purpose of this de minimis exemption. Any unit operating under a Section 104.4 partial exemption is still required to keep records. If the unit exceeds the 10% threshold, this exemption no longer applies. At that time the unit would then no longer be excluded from Section 305 and would need to meet RACT through installation of control equipment or seek a case-by-case determination under Section 305.1 which would result in a permit limit. Accordingly, limiting this de minimis exemption by requiring a permit limits defeats the purpose of the partial exemption. To resolve this issue, APS recommends that the County remove the phrase “and that is or will be incorporated in a permit issued by the Control Officer for that source” from the sentence and add “and 400” to the sentence.

Response #4: Section 104.4 (Partial Exemptions)

The department did not include proposed new text “and that is or will be incorporated in a permit issued by the Control Officer for that source” and included Section 400 to the list of sections from which the equipment is exempt. Also, the department changed “less than or equal to” to “at or below” and changed “10 percent annual capacity factor per calendar year” to “10 percent calendar year annual capacity factor”.

Comment #5: Section 104.4 (Partial Exemptions)

The proposed rule language would require a specific permit limitation. The revisions to Rule 322 already incorporate a pathway for compliance if a unit which has taken the partial exemption exceeds a 10% annual capacity factor. This would trigger an emissions limitation in Section 305 and a compliance demonstration in Section 401, and therefore there is no need for a specific limit to be incorporated into the permit. Additionally, units using this annual capacity factor partial exemption in Section 104.4, as well as units that submit a case-by-case reasonably available control technology (RACT) analysis in Sections 305.1 and 305.2 should be exempted from Section 400, as this section lists the requirements for notification of compliance and avenues to come into compliance, neither of which must be followed by units exempted by a low annual capacity factor or complying through a case-by-case RACT. Therefore, SRP proposes that the County revert to the previous draft language and add an exemption from Section 400.

Response #5: Section 104.4 (Partial Exemptions)

The department did not include proposed new text “and that is or will be incorporated in a permit issued by the Control Officer for that source” and included Section 400 to the list of sections from which the equipment is exempt. Also, the department changed “less than or equal to” to “at or below” and changed “10 percent annual capacity factor per calendar year” to “10 percent calendar year annual capacity factor”.

Comment #6: Section 104.4 (Partial Exemptions)

The draft rule language presumes that equipment operating at less than or equal to 10% annual capacity factor is exempt from NO_x and CO limits and is exempt from emission control monitoring system requirements in Sections 305, 306, and 307.4. To ensure enforceability, the EPA asks that the County please provide a definition for the term “annual capacity factor” in Section 200.

Response #6: Section 104.4 (Partial Exemptions)

The department included a definition of “Annual Capacity Factor” in Section 200.

Comment #7: Section 201 (Definition of “Annual Capacity Factor”)

The original definition was lacking a relationship to gas turbines. APS suggests the following change to allow it to apply to steam units as well as gas turbines. Add to the end of the last sentence “or the ratio between the actual electrical output of a machine or equipment during a calendar year and the potential electrical output of a machine or equipment had it been operated for 8,760 hours at full nameplate capacity”.

Response #7: Section 201 (Definition of “Annual Capacity Factor”)

The department added text to the definition of “Annual Capacity Factor” to allow the definition to apply to steam



units as well as gas turbines.

Comment #8: Section 201 (Definition of “Annual Capacity Factor”)

The definition of “Annual Capacity Factor” is specific to boilers and/or process heaters. In order to make the definition more generic so it can apply to combustion turbines too, SRP proposes adding to the end of the last sentence the phrase “or the ratio between the actual electrical output of a machine or equipment during a calendar year and the potential electrical output of a machine or equipment had it been operated for 8,760 hours during a year at full nameplate capacity.”

Response #8: Section 201 (Definition of “Annual Capacity Factor”)

The department added to the end of the last sentence of the definition of “Annual Capacity Factor” the phrase “or the ratio between the actual electrical output of a machine or equipment during a calendar year and the potential electrical output of a machine or equipment had it been operated for 8,760 hours during a year at full nameplate capacity.”

Comment #9: Section 234 (Definition of “Thirty (30) Day Rolling Average”)

The 30-day rolling average equation can be deceptively complex. To help make the definition as clear as possible, APS suggests the following changes: Delete “equipment” between “combustion” and “operating” and delete “every hour” at the end of the sentence. Add “at the conclusion of each day for the previous 30 operating” between “CEMS” and “days”.

Response #9: Section 234 (Definition of “Thirty (30) Day Rolling Average”)

The department deleted the terms “equipment” and “every hour” and added text at the end of the definition of “Thirty (30) Day Rolling Average” to make the definition consistent with common practice.

Comment #10: Section 234 (Definition of “Thirty (30) Day Rolling Average”)

SRP proposes a different definition for “Thirty (30) Day Rolling Average” which is more consistent with common practice: “An arithmetic mean or average of all hourly emission rates for 30 successive combustion operating days and calculated by a CEMS at the conclusion of each day for the previous 30 operating days”.

Response #10: Section 234 (Definition of “Thirty (30) Day Rolling Average”)

The department deleted the terms “equipment” and “every hour” and added text at the end of the definition of “Thirty (30) Day Rolling Average” to make the definition consistent with common practice.

Comment #11: Section 236 (Definition of “Total Dissolved Solids (TDS)”)

The second sentence in the definition of “Total Dissolved Solids (TDS)” appears to describe the methodology that should be used to determine TDS. The EPA asks that the County remove the second sentence and re-write the first sentence to read “...glass fiber filter, as determined by Test Method XXX.”

Response #11: Section 236 (Definition of “Total Dissolved Solids (TDS)”)

The department removed the second sentence and re-wrote the first sentence to include test methods for determining TDS.

Comment #12: Section 301 (Limitations-Particulate Matter)

The EPA comments that the current language in Section 301 (Limitations-Particulate Matter) proposed for deletion only applies to two units constructed prior to 1996. Either retain these limits for those units at a minimum or provide an adequate Clean Air Act Section 110(l) demonstration which supports removing these requirements for those units.

Response #12: Section 301 (Limitations-Particulate Matter)

The department did not delete Sections 301.1 and 301.2 (the limitations for particulate matter-fuel type and testing).

Comment #13: Section 302 (Good Combustion Practices for Turbines)

The draft rule language appears to state that “good combustion practices” are met for turbines if CEMS are used (last sentence). It appears that the County intends to say that if equipment is utilizing a CEMS, which already monitors various operating parameters, then the equipment would be exempt from the requirements of Section 302. The EPA asks that the County revise accordingly if this is correct or otherwise clarify the intent of this last sentence. This provision is also found in Section 501.6.

Response #13: Section 302 (Good Combustion Practices for Turbines)

The department did not include proposed new text “good combustion practices for turbines are considered to have been met” at the end of the last sentence. Instead, the department included at the end of the last sentence “then the equipment would be exempt from the requirements of Section 302 of this rule”.

Comment #14: Section 304.2 (Limitations-Opacity)



Section 304.2 appears to be related to the issue of fuel switching. The change proposed by the County seems to confuse the matter by inserting “or” into the sentence in place of “of”. It would appear that “of” was the correct choice and should not have been changed. To make it clearer, APS would suggest changing “switching fuel” to “fuel switching”, which lines up better with the final sentence in that section which also uses “fuel switching”.

Response #14: Section 304.2 (Limitations-Opacity)

The department did not change “of” to “or” in the phrase “for up to one hour during the startup of switching fuels...”. Instead, the department changed “switching fuels” to “fuel switching startup process” (the term is defined in Rule 322).

Comment #15: Section 304.2 (Limitations-Opacity)

The County seems to inadvertently have replaced the word “of” in the second sentence with the word “or”. This should be changed back to “of” since the exemption allowed by this section pertains to the first hour during startup of fuel switching for those units that are allowed to fire emergency fuels. To avoid future confusions with this section of the rule, SRP proposes that the County consistently use the term “fuel switching startup process” throughout the rule, as defined in Section 217 (Definition of “Fuel Switching Startup Process”).

Response #15: Section 304.2 (Limitations-Opacity)

The department did not change “of” to “or” in the phrase “for up to one hour during the startup of switching fuels...”. Instead, the department changed “switching fuels” to “fuel switching startup process” (the term is defined in Rule 322).

Comment #16: Section 306 (Limitations-Nitrogen Oxides (NO_x))

As part of the RACT assessment, a unit may choose to use a case-by-case RACT analysis. The County has made provision for the case-by-case RACT analysis within Sections 306.1 and 306.2. Because the case-by-case RACT analysis is separate from the emission limit in Sections 306.1 and 306.2, the County correctly sought to exempt the case-by-case RACT analysis from these sections. However, it is important that the County also exempt the case-by-case RACT analysis from the requirements of Section 400 (parts 401 and 402), since it will conflict with the specific permit limit set forth by the case-by-case analysis. Accordingly, APS recommends that the County insert “Section 400” into the exemptions listed in Sections 306.1 and 306.2.

Response #16: Section 306 (Limitations-Nitrogen Oxides (NO_x))

The department added Section 400 to the list of sections from which a source would be exempt.

Comment #17: Section 307 (Limitations-Carbon Monoxide)

The County appears to have misplaced some clarifying language that was offered during the final workshop. In Section 307, the County incorrectly placed combined cycle gas turbines in the 3% oxygen correction factor section. The correct location of combined cycle gas turbines is within the 15% oxygen correction factor section, not the 3% section. This change also lines up Section 306.3 to have consistent factors.

Response #17: Section 307 (Limitations-Carbon Monoxide)

The department did not include proposed new text “and combined cycle gas turbines” to the end of the second-to-the-last sentence. Instead, the department added the phrase to the last sentence.

Comment #18: Section 307 (Limitations-Carbon Monoxide)

SRP believes the County incorrectly inserted “...and combined cycle gas turbines” in the wrong sentence of Section 307. That language should be inserted in the last sentence of that section: “The CO concentration shall be measured dry and corrected to 15% oxygen for stationary turbines and combined cycle gas turbines, during steady state operations”.

Response #18: Section 307 (Limitations-Carbon Monoxide)

The department did not include proposed new text “and combined cycle gas turbines” to the end of the second-to-the-last sentence. Instead, the department added the phrase to the last sentence.

Comment #19: Section 308.1 (Requirements for ECS Monitoring Equipment)

The definition of “approved combustion control equipment” is unclear. The EPA asks that the County define the criteria for approval. The EPA must review and approve any such alternative control systems if the criteria are not specific enough.

Response #19: Section 308.1 (Requirements for ECS Monitoring Equipment)

The department did not include proposed new text “or another approved combustion control system” at the end-of the sentence in Section 308.1. Instead, the department included new text “a combustion control system which

reduces emissions to below the applicable standards in Section 300 of this rule”.

Comment #20: Section 308.4 (Requirements for ECS Monitoring Equipment-Emission Compliance Demonstration)

The EPA recognizes that a Predictive Emissions Monitoring System (PEMS), if certified in accordance with the applicable provisions of Performance Specification 16, may be appropriate for certain emissions units. The EPA recommends, in their comments in June 2016, that their usage for compliance purposes be restricted to units with a heat input rate of 250 MMBtu/hr or less, which aligns with other Federal guidance.

Response #20: Section 308.4 (Requirements for ECS Monitoring Equipment-Emission Compliance Demonstration)

The department did not include the proposed definition of “PEMS” and to remove the term from Sections 308.4 and 501.5.

Comment #21: Section 308.4(b) (Requirements for ECS Monitoring Equipment-Emission Compliance Demonstration)

The inclusion of “other monitoring system approved by the Control Officer” is an inappropriate allowance of Director’s discretion. The EPA asks the County to remove this statement or require EPA approval.

Response #21: Section 308.4(b) (Requirements for ECS Monitoring Equipment-Emission Compliance Demonstration)

The department did not include the proposed new text “or other monitoring system approved by the Control Officer” in Section 308.4(b).

Comment #22: Section 308.4(b) (Requirements for ECS Monitoring Equipment-Emission Compliance Demonstration)

The provision that allows the Control Officer to approve any other monitoring system to be equivalent to a CEMS is too broad. The EPA asks the County to strike this language or also require that the EPA must approve any such alternative monitoring system.

Response #22: Section 308.4(b) (Requirements for ECS Monitoring Equipment-Emission Compliance Demonstration)

The department did not include the proposed new text “or other monitoring system approved by the Control Officer” in Section 308.4(b).

Comment #23: Section 308.4(b) (Requirements for ECS Monitoring Equipment-Emission Compliance Demonstration)

The EPA comments that Low Mass Emissions (LME) as cited in Sections 219 and 308.4 is not a suitable substitute for Continuous Emissions Monitoring Systems (CEMS) for the purposes of SIP compliance determination with an emissions unit

Response #23: Section 308.4(b) (Requirements for ECS Monitoring Equipment-Emission Compliance Demonstration)

The department did not include the proposed definition of “LME” and to remove the term from Sections 308.4 and 501.5.

Comment #24: Section 401 (Administrative Requirements-in Existence and in Compliance)

Section 400 is the operative section that helps define how the RACT standard will be implemented by the affected units. There are several disconnects and inconsistencies that should be addressed to make this section work as intended. First, it is important to make sure that partially exempt units are not pulled into Section 400. For example, Section 104.4 is a partial exemption as long as the unit maintains a capacity factor of 10% or less, and should not be required to comply with Section 400. In fact, it would be inconsistent, if not impossible, to do both. Second, it is important that any unit which chooses to undertake a case-by-case RACT analysis under Section 305.1 not be required to also comply with Section 400. That analysis is outside the scope of Section 400. Accordingly, a case-by-case RACT analysis under Section 305.1 should be exempt from Section 400. Third, the proposed rule language in Section 401 states that the owner of a unit “in compliance with” Section 305 shall submit a Notification of Compliance. It would appear that a better way to say this is to say “and subject to”, since it will trigger the obligation, rather than assuming one is already met. Fourth-relates to the timeframe for submitting a notice. The proposed rule set the timeframe at 6 months from rule adoption. However, this creates a disconnect for a unit that may be exempt under Section 104.4 for a year because it ran at a capacity factor of less than 10%. If that unit in year two exceeded



the partial exemption capacity factor and needed to comply with Section 305, there is no way it could submit a notice 6 months from rule adoption. Accordingly, APS thinks it would read better if the section said “6 months from becoming subject to Section 305 limits”. Fifth-is to create a correlation between Step 1 (Section 401) and Step 2 (Section 402). If a unit cannot submit a Notification of Compliance, there needs to be an “if-then” response. APS proposes the language that says if you cannot comply with Section 401, then go to Section 402. Currently, the two sections are not linked and this creates a disconnect.

Response #24: Section 401 (Administrative Requirements-in Existence and in Compliance)

The department clarified that this section is not intended for units exempt in Section 104.4 by an annual capacity factor equal to or less than 10% or for units which are accepting a case-by-case RACT determination approved by the Control Officer and the department included a compliance path for those sources which operate a unit below a 10% capacity factor or under a case-by-case RACT limitation and in the future elect to increase operations and may need to then come into compliance with the limits in Section 306.

Comment #25: Section 401 (Administrative Requirements-in Existence and in Compliance)

Section 401 is intended for those units which are (or will be) in compliance with the NO_x limits in Section 305 by the date this rule is adopted. This section is not intended for units exempted in Section 104.4 by an annual capacity factor equal to or less than 10% or for units which are accepting a case-by-case RACT determination approved by the Control Officer and this should be clarified. Additionally, this section is missing a compliance path for those sources which operate a unit below a 10% capacity factor or under a case-by-case RACT limitation and in the future elect to increase operations and may need to then come into compliance with the limits in Section 305. Therefore, SRP is proposing to add to the beginning of the first sentence in Section 401 the phrase “except as set forth in Sections 104.4 and 305.1 of this rule”.

Response #25: Section 401 (Administrative Requirements-in Existence and in Compliance)

The department clarified that this section is not intended for units exempt in Section 104.4 by an annual capacity factor equal to or less than 10% or for units which are accepting a case-by-case RACT determination approved by the Control Officer and the department included a compliance path for those sources which operate a unit below a 10% capacity factor or under a case-by-case RACT limitation and in the future elect to increase operations and may need to then come into compliance with the limits in Section 306.

Comment #26: Section 402.1 (Administrative Requirements-in Existence and Non-Compliant)

APS would recommend adding the exceptions of Sections 104.4 and 305.1 to Section 402. Additionally, APS would recommend deleting the last sentence of Section 402, as it does not appear to relate to the rulemaking. APS is unaware of any “interim compliance” options within the rule.

Response #26: Section 402.1 (Administrative Requirements-in Existence and Non-Compliant)

The department clarified that this section is not intended for units exempt in Section 104.4 by an annual capacity factor equal to or less than 10% or for units which are accepting a case-by-case RACT determination approved by the Control Officer. Also, the department did not include the proposed last sentence regarding “interim compliance”.

Comment #27: Section 402.3 (Administrative Requirements-in Existence and Non-Compliance-Removal from Service)

This section provides an avenue for units that would be retired from service in lieu of emissions controls or a case-by-case RACT analysis and permit limit. To make this section more functional for the retiring units, it is important to make the effectiveness of the section not linked to the adoption of the rule, but rather linked to the decision by the owner to retire the unit. For example, Section 402.3 limits the window of opportunity to only 24 months. If a Section 104.4 partial exemption unit is exempt for 2 years and then exceeds its capacity factor, rather than installing emissions controls to meet Section 305, it may seek removal from service. As proposed, this would not be possible since this section would only be available for 24 months after the rule is adopted. Instead, APS suggests that Section 402.3 be based on when a unit otherwise becomes subject to Section 305 emission limits. The offered language makes this possible without changing obligations on existing units which do not have a partial exemption. The second issue is to add a similar scope to the Section 402.3(a) which, as written, limits the ability of a unit to submit a notice for removal from service to only 6 months after rule adoption. As noted above, by linking it to when a unit becomes subject to Section 305 emissions limits provides an option for units which may be otherwise exempt during the first 6 months after the rule is adopted. The third issue is to remove the requirement for “requesting an exemption” and instead require that the owner or operator merely submit a notice of proposed removal. This



reduces the burden on the County to create and issue an exemption when there is no reason for the extra paperwork. Additionally, it reduces any delay caused by waiting on the County to issue the exemption. As amended, the unit would submit the notice and then proceed to the formal submittal of the decommissioning plan and permit revision, which is the document upon which the County can focus its efforts. Finally, Section 402.3(c) appears to have a mismatch between the use of 4 months of plan approval and in the final sentence a limitation on operations past 3 months. This inconsistency can be fixed by merely changing the 3 months to 4 months.

Response #27: Section 402.3 (Administrative Requirements-in Existence and Non-Compliant-Removal from Service)

The department made this section more functional for retiring units by making the effectiveness of the section not linked to the adoption of the rule but rather linked to the decision by the owner to retire the unit.

Comment #28: Section 402.3 (Administrative Requirements-in Existence and Non-Compliance-Removal from Service)

Section 402.3 defines the requirements for units that will be removed from service within 24 months of the rule being adopted. Such units will exempt from the limits of Section 305 as long as the owner or operator notifies the County of the intent to remove from service within 6 months of rule adoption. To avoid any delays in the timing of the notification, the decommissioning plan and permit revision (required in Section 402.3(b)), SRP proposes this section require a notification of removal of service, rather than requesting an exemption, which is already granted in the previous paragraph in that rule section. This section is also missing a compliance path for those sources which operate a unit below a 10% capacity factor or under a case-by-case RACT limitation and in the future elect to increase operations and may need to then come into compliance with the limits in Section 305. SRP suggests removing the phrase “requesting an exemption from the emission limits in Section 305 of this rule” and removing the phrase “receiving the exemption”.

Response #28: Section 402.3 (Administrative Requirements-in Existence and Non-Compliant-Removal from Service)

The department made this section more functional for retiring units by making the effectiveness of the section not linked to the adoption of the rule but rather linked to the decision by the owner to retire the unit.

Comment #29: Section 402.3(c) (Administrative Requirements-in Existence and Non-Compliant-Removal from Service)

There is a one month discrepancy in the sentences in this section; it makes it seem as if the County is requiring affected sources that choose to take the full 4 months after plan/revision approval to discontinue operations to come into compliance with the limits of the rule (and possibly install controls) for one month before the final removal from service. SRP believes that to make this section clearer, the timeframes should be revised to match.

Response #29: Section 402.3(c) (Administrative Requirements-in Existence and Non-Compliant-Removal from Service)

The department removed the one month discrepancy in the sentences in the section. The department revised the timeframes so they match.

Comment #30: Section 403 (Administrative Requirements-Emergency Standby Units)

In this Section, the County appears to be limiting the affected units to “emergency standby units”; however, the sentence includes all affected units. APS comments that the solution for this paragraph would be to limit the affected units.

Response #30: Section 403 (Administrative Requirements-Emergency Standby Units)

The department changed “electric utility stationary gas turbine, electric utility steam generating unit or cogeneration steam generating unit used to generate electric power” to “emergency standby unit”.

Comment #31: Section 403 (Administrative Requirements-Emergency Standby Units)

SRP comments that Section 403 incorrectly addresses electric utility stationary gas turbines, electric utility steam generating units and cogeneration steam generating units, when the section should be addressed to emergency standby units only.

Response #31: Section 403 (Administrative Requirements-Emergency Standby Units)

The department changed “electric utility stationary gas turbine, electric utility steam generating unit or cogeneration steam generating unit used to generate electric power” to “emergency standby unit”.

Comment #32: Section 501.6 (Recordkeeping)



The draft rule language appears to state that “good combustion practices” are met for turbines if CEMS are used (last sentence). It appears that the County intends to say that if equipment is utilizing a CEMS, which already monitors various operating parameters, then the equipment would be exempt from the requirements of Section 301. The EPA asks that the County revise accordingly if this is correct or otherwise clarify the intent of this last sentence. This provision is also found in Section 501.6.

Response #32: Section 501.6 (Recordkeeping)

The department did not include proposed new text “good combustion practices for turbines are considered to have been met” at the end of the last sentence. Instead, the department included at the end of the last sentence “then the equipment would be exempt from the requirements of Section 302 of this rule”.

Comment #33: Section 501.7 (Recordkeeping)

Under the recordkeeping requirements, the County proposes that the records demonstrating compliance with Sections 104.4, 305.1, and 305.2 include 12 month rolling averages. The inclusion of “12 month rolling period” conflicts with the measurements set forth in Section 305.1 and 305.2. The general purpose of this section appears to be a requirement to keep records. By eliminating the contradictory language, APS can still maintain the necessary records and not introduce confusion to the compliance obligation.

Response #33: Section 501.7 (Recordkeeping)

The department changed “covering a 12-month rolling period” to “of the annual capacity factor and NO_x emissions”.

Comment #34: Section 501.7 (Recordkeeping)

While SRP agrees that records must be kept to demonstrate compliance with the annual capacity factor and the limitations, a “12-month rolling period” conflicts with the limits in Sections 305.1 and 305.2, which are concentrations measured during a test conducted annually, and also with the measurement of the annual capacity factor. SRP proposes the following: “Records of the annual capacity factor and NO_x emissions demonstrating compliance with Sections 104.4, 305.1 and 305.2”.

Response #34: Section 501.7 (Recordkeeping)

The department changed “covering a 12-month rolling period” to “of the annual capacity factor and NO_x emissions”.

Comment #35: Section 504 (Compliance Determination-Test Methods Incorporated By Reference)

Alternative test methods may not be used upon sole approval by the Control Officer. The EPA asks the County to delete this provision or include language that also requires EPA approval for alternative methods.

Response #35: Section 504 (Compliance Determination-Test Methods Incorporated By Reference)

The department deleted the provision allowing test methods to be used upon sole approval by the Control Officer and added text that allows test methods as approved by the Administrator to be used.

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

Not applicable

15. Incorporations by reference and their location in the rule:

The department incorporated by reference sections of the Code of Federal Regulations in the following sections of the rule:

Section 308.4 (Continuous Emission Monitoring Systems)

Section 504 (Compliance Determination-Test Methods Incorporated By Reference)

16. Was this rule previously an emergency rule?

No

17. Full text of the rule follows:

MARICOPA COUNTY
AIR POLLUTION CONTROL REGULATIONS
REGULATION III - CONTROL OF AIR CONTAMINANTS
RULE 322
POWER PLANT OPERATIONS
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Adopted 7/02/03

Revised 10/17/07

Adopted 07/02/2003; Revised 10/17/2007; **Revised 11/02/2016**

**MARICOPA COUNTY
AIR POLLUTION CONTROL REGULATIONS
REGULATION III - CONTROL OF AIR CONTAMINANTS
RULE 322
POWER PLANT OPERATIONS**

SECTION 100 - GENERAL

- 101** **PURPOSE:** To limit the discharge of nitrogen oxides, sulfur oxides, particulate matter and carbon monoxide emissions into the atmosphere from stationary fossil-fuel-fired equipment at ~~existing power plants and existing cogeneration plants~~ electric utility stationary gas turbines, electric utility steam generating units or cogeneration steam generating units and to limit particulate matter emissions from cooling towers associated with this equipment.
- 102** **APPLICABILITY:** This rule applies to ~~any of the following types of equipment that burn fossil fuel: for which construction commenced prior to May 10, 1996~~
- 102.1** Each electric utility steam generating unit or cogeneration steam generating unit used to generate electric power that has a heat input of equal to or greater than 100 million (MM) Btu/hour (29 megawatts (MW)).
- 102.2** Each electric utility stationary gas turbine with a heat input at peak load equal to or greater than 10 MMBtu/hour (2.9 MW) based upon the lower heating value of the fuel.
- 102.3** Each cooling tower associated with the type of equipment listed in ~~subsections 102.1 and 102.2~~ Sections 102.1 and 102.2 of this rule.
- 102.4** **NSPS & NESHAP:** In addition to this rule, facilities may be subject to New Source Performance Standards (NSPS) in Rule 360 and/or National Emission Standards for Hazardous Air Pollutants (NESHAP) in Rule 370 of these rules.
- 103** **EXEMPTIONS:** This rule shall not apply to the following types of equipment:
 - 103.1** Combustion equipment associated with nuclear power plant operations; or
 - 103.2** Reciprocating internal combustion equipment.
- 104** **PARTIAL EXEMPTIONS:**
 - 104.1** ~~Stationary gas turbines that meet any of the following criteria listed below are exempt from Sections 304 and 305 and subsections 301.1, 301.2, 306.4, and 501.4 of this rule:~~
 - ~~a. Used for fire fighting; or~~

- b. ~~Used for flood control; or~~
 - e. ~~Used in the military at military training facilities or military gas turbines for use in other than a garrison; or~~
 - d. ~~Engaged by manufacturers in research and development of equipment for either gas turbine emission control techniques or gas turbine efficiency improvements.~~
- ~~104.2 All equipment listed in Section 102 fired with an emergency normally fired with natural gas is exempt from Sections 304 and 305 and subsections 301.1, 301.2, and 306.4, 501.4 of this rule.~~
- ~~104.3 All equipment listed in Section 102 shall be exempt from Sections 304 and 305 and subsections 301.1, 301.2, and 306.4 306.6, of this rule for 36 cumulative hrs. of firing emergency fuel per year, per unit for testing, reliability, training, and maintenance purposes.~~
- 104.1** Stationary gas turbines that meet any of the criteria listed below are exempt from Sections 301.1, 301.2, 306, 307, 308.4 and 501.4 of this rule:
- a.** Used for fire-fighting
 - b.** Used for flood control
 - c.** Engaged by manufacturers in research and development of equipment for either gas turbine emission control techniques or gas turbine efficiency improvements
- 104.2** Any equipment listed in Section 102 of this rule that is normally fired with natural gas, as allowed by a permit issued by the Control Officer for that source, is exempt from Sections 301.1, 301.2, 306, 307, 308.4, 400 and 501.4 of this rule while firing emergency fuel.
- 104.3** Any equipment listed in Section 102 of this rule that only fires emergency fuel for 36 cumulative hours per year or less, per unit for testing, reliability, training, and maintenance purposes as allowed by a permit issued by the Control Officer for that source, is exempt from Sections 301.1, 301.2, 306, 307, 308.4, and 400 of this rule.
- 104.4** Any equipment listed in Section 102 of this rule that operates at or below 10 percent calendar year annual capacity factor is exempt from Sections 306, 307, 308.4 and 400 of this rule.

SECTION 200 - DEFINITIONS: For the purpose of this rule, the following definitions shall apply: See Rule 100 (General Provisions and Definitions) of these rules for definitions of terms that are used but not specifically defined in this rule. For the purpose of this rule, the following definitions shall apply, in addition to those definitions found in Rule 100 (General Provisions and Definitions) of these rules. In the event of any inconsistency between any of the Maricopa County air pollution control rules, the definitions in this rule take precedence.

- 201** **ANNUAL CAPACITY FACTOR:** The ratio between the actual heat input to a boiler or process heater from the fuels burned during a calendar year and the potential heat input to the boiler or process heater had it been operated for 8,760 hours during a year at the maximum steady state design heat input capacity or the ratio between the actual electrical output of a machine or equipment during a calendar year and the potential electrical output of a machine or equipment had it been operated for 8,760 hours during a year at full nameplate capacity.
- ~~201~~**202** **COGENERATION STEAM GENERATING UNIT:** A steam or hot water generating unit that simultaneously produces both electrical (or mechanical) and thermal energy (such as heat or steam) from the same primary energy source and supplies more than one-third of its potential electric output to any utility power distribution system for sale.
- ~~202~~**203** **COMBINED CYCLE GAS TURBINE:** A type of stationary gas turbine wherein heat from the turbine exhaust is recovered by a steam generating unit to make steam for use in a steam-electric turbine.
- ~~203~~**204** **CONTINUOUS EMISSION MONITORING SYSTEM (CEMS):** The total equipment required to sample and analyze emissions or process parameters such as opacity, nitrogen oxide, and oxygen or carbon dioxide, and to provide a permanent data record.
- ~~204~~**205** **COOLING TOWERS:** Open water recirculating devices that use fans or natural draft to draw or force air through the device to cool water by evaporation and direct contact.
- ~~205~~**206** **CORRECTIVE ACTION PLAN (CAP):** A methodical procedure that is used to evaluate and correct a turbine operational problem and that includes, at a minimum, improved preventative maintenance procedures, improved ECS operating practices, possible operational changes, and progress reports.
- ~~206~~**207** **DISTILLATE OIL:** A petroleum fraction of fuel oil produced by distillation that complies with the specifications for fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials in ASTM D396-01, "Standard Specification for Fuel Oils."
- ~~207~~**208** **DRIFT:** Water droplets, bubbles, and particulate matter that escape from cooling tower stacks.
- ~~208~~**209** **DRIFT ELIMINATOR:** Device used to remove drift from cooling tower exhaust air, thus reducing water loss by



relying on rapid changes in velocity and direction of air-droplet mixtures by impaction on eliminator passage surfaces. A drift eliminator is not categorized as an emission control system but is an inherent part of the cooling tower's design requirements.

- 209210 DRIFT RATE:** Percentage (%) of circulating water flow rate that passes through a drift eliminator on a cooling tower.
- 210211 ELECTRIC UTILITY STATIONARY GAS TURBINE:** Any stationary gas turbine that is constructed for the purpose of supplying more than 1/3 of its potential electric output capacity to any utility power distribution system for sale. Both simple and combined cycle gas turbines are types of electric utility stationary gas turbines.
- 211212 ELECTRIC UTILITY STEAM GENERATING UNIT:** Any steam electric generating unit that uses fossil fuel and is constructed for the purpose of supplying more than one-third of its potential electric output capacity and more than 25 MW electric output to any utility power distribution system for sale.
- 212213 EMERGENCY FUEL:** Fuel fired only during circumstances such as natural gas emergency, natural gas curtailment, or breakdown of delivery system such as an unavoidable interruption of supply that makes it impossible to fire natural gas in the unit. Fuel is not considered emergency fuel if it is used to avoid either peak demand charges or high gas prices during on-peak price periods or due to a voluntary reduction in natural gas usage by the power company.
- 214** **EMERGENCY STANDBY UNIT:** A stationary gas turbine that is limited by permit condition to be operated only as a mechanical or electrical power source for a facility when the primary power source for a facility has been rendered inoperable due to failure beyond the reasonable control of the operator, except due to power interruption pursuant to an interruptible power supply agreement. Electricity generated by such a unit cannot be sold.
- 213215 EMISSION CONTROL SYSTEM (ECS):** A system approved in writing by the Control Officer, designed and operated in accordance with good engineering practice to reduce emissions.
- 214216 FOSSIL FUEL:** Naturally occurring carbonaceous substances from the ground such as natural gas, petroleum, coal and any form of solid, liquid, or gaseous fuel derived from such material for the purpose of creating energy.
- 215217 FUEL SWITCHING STARTUP PROCESS:** The act of changing from one type of fuel to a different type of fuel.
- 216218 HEAT INPUT:** Heat derived from the combustion of fuel, not including the heat input from preheated combustion air, recirculated flue gases, or exhaust gases from other sources, such as gas turbines, internal combustion engines, and kilns.
- 217219 HIGHER HEATING VALUE (HHV) OR GROSS HEATING VALUE:** The amount of heat produced by the complete combustion of a unit quantity of fuel determined by a calorimeter wherein the combustion products are cooled to the temperature existing before combustion and all of the water vapor is condensed to liquid.
- 218** **LOW SULFUR OIL:** Fuel oil containing less than or equal to 0.05% by weight of sulfur.
- 219220 LOWER HEATING VALUE (LHV) OR NET HEATING VALUE:** The amount of heat produced by the complete combustion of a unit quantity of fuel determined by a calorimeter wherein the combustion products are cooled to the temperature existing before combustion and all of the water vapor remains as vapor and is not condensed to a liquid. The value is computed from the higher heating value by subtracting the water originally present as moisture and the water formed by combustion of the fuel.
- 220221 NATURAL GAS CURTAILMENT:** An interruption in natural gas service, such that the daily fuel needs of a combustion unit cannot be met with natural gas available due to one of the following reasons, beyond the control of the owner or operator:
- 220.1** **221.1** An unforeseeable failure or malfunction, not resulting from an intentional act or omission that the governing state, federal or local agency finds to be due to an act of gross negligence on the part of the owner or operator; or
- 220.2** **221.2** A natural disaster; or
- 220.3** **221.3** The natural gas is curtailed pursuant to governing state, federal or local agency rules or orders; or
- 220.4** **221.4** The serving natural gas supplier provides notice to the owner or operator that, with forecasted natural gas supplies and demands, natural gas service is expected to be curtailed pursuant to governing state, federal or local agency rules or orders.
- 221222 OPACITY:** A condition of the ambient air, or any part thereof, in which an air contaminant partially or wholly obscures the view of an observer.
- 223** **OPERATING DAY:** A 24-hour period between 0000 and 2359 during which any fuel is combusted at any time in the unit. It is not necessary for fuel to be combusted continuously for the entire 24-hour period.
- 222224 PARTICULATE MATTER EMISSIONS:** Any and all particulate matter emitted to the ambient air as measured by applicable state and federal test methods.

- 223225 PEAK LOAD:** 100% of the manufacturer's design capacity of a gas turbine at 288° Kelvin, 60% relative humidity, and 101.3 kilopascals pressure (ISO standard day conditions).
- 224226 POWER PLANT OPERATION:** An operation whose purpose is to supply more than one-third of its potential electric output capacity to any utility power distribution system for sale.
- 225227 RATED HEAT INPUT CAPACITY:** The heat input capacity in million Btu/hr. as specified on the nameplate of the combustion unit. If the combustion unit has been altered or modified such that its maximum heat input is different than the heat input capacity on the name plate, the maximum heat input shall be considered the rated heat input capacity.
- 226228 REGENERATIVE CYCLE GAS TURBINE:** Any stationary gas turbine that recovers thermal energy from the exhaust gases and utilizes the thermal energy to preheat air prior to entering the combustion unit.
- 227229 RESIDUAL OIL:** The heavier oils that remain after the distillate oils and lighter hydrocarbons are distilled off in refinery operations. This includes crude oil or fuel oil numbers 1 and 2 that have a nitrogen content greater than 0.05% by weight, and all fuel oil numbers 4, 5, and 6, as defined by the American Society of Testing and Materials in ASTM D396-01, "Standard Specifications for Fuel Oils."
- 228230 SIMPLE CYCLE GAS TURBINE:** Any stationary gas turbine that does not recover heat from the gas turbine exhaust gases to preheat the inlet combustion air to the gas turbine, or that does not recover heat from the gas turbine exhaust gases to heat water or generate steam.
- 229231 STATIONARY GAS TURBINE:** Any simple cycle gas turbine, regenerative gas turbine or any gas turbine portion of a combined cycle gas turbine that is not self-propelled or that is attached to a foundation.
- 232 STEADY STATE:** A safe, stable megawatt load at which a unit with equipment in normal operating conditions is capable of being held for an extended period of time, without creating an unsafe or unstable operating condition.
- 230233 SULFUR OXIDES (SO_x):** The sum of the oxides of sulfur emitted from the flue gas from a combustion unit that are directly dependent upon the amount of sulfur in the fuel used.
- 234234 THIRTY (30) DAY ROLLING AVERAGE:** An arithmetic mean or average of all hourly emission rates for 30 successive combustion ~~equipment~~ operating days and calculated by a CEMS ~~every hour~~ at the conclusion of each day for the previous 30 operating days.
- 232235 THREE (3) HOUR ROLLING AVERAGE:** An arithmetic mean or average of the most recent three one (1) hour tests, or an arithmetic mean or average over a period of three hours which is newly calculated with each hourly measurement.
- 233236 TOTAL DISSOLVED SOLIDS (TDS):** The amount of concentrated matter reported in milligrams/liter (mg/l) or parts per million (ppm) left after filtration of a well-mixed sample through a standard glass fiber filter, as determined by an applicable method in the Standard Methods for the Examination of Water and Wastewater, a conductivity/TDS meter, or ASTM D5907. The filtrate is evaporated to dryness in a weighed dish and dried to constant weight at 180° C and the increase in dish weight represents the total dissolved solids.
- 237 ULTRA LOW SULFUR DIESEL:** Fuel oil containing less than or equal to 0.0015% sulfur by weight.
- 234238 UNCOMBINED WATER:** Condensed water containing no more than analytical trace amounts of other chemical elements or compounds.
- 239 WASTE DERIVED FUEL GAS:** A gaseous fuel that is generated from the biodegradation of solid or liquid waste including, but not limited to, digester gas and landfill gas.

SECTION 300 – STANDARDS

301 LIMITATIONS – PARTICULATE MATTER:

- 301.1** Fuel Type: An owner or operator of any combustion equipment listed in Section 102 shall burn only natural gas except when firing emergency fuel per ~~subsections~~ Sections 104.2 and 104.3 of this rule. An owner or operator may burn a fuel other than natural gas for non-emergency purposes providing that the fuel shall not cause to be discharged more than 0.007 lbs. of particulate matter per MMBtu during steady state operations, demonstrated and documented through performance testing of this alternate fuel using Test Method 5. This usage of different fuels other than natural gas shall be approved by the Control Officer prior to usage.
- 301.2** Particulate Matter Testing: A backhalf analysis shall be performed, using Reference Method 202 referenced in ~~subsection~~ Section 504.6 of this rule, each time a compliance test for particulate matter emissions to meet the standard in ~~subsection~~ Section 301.1 of this rule is performed using Test Method 5.
- 301.3** ~~302~~ **GOOD COMBUSTION PRACTICES FOR TURBINES:** ~~An~~ During steady state operations, an owner or operator of any stationary gas turbine listed in ~~subsection 102.2~~ Section 102.2 of this rule, regardless of fuel type, shall use operational practices recommended by the manufacturer and parametric monitoring to ensure good combustion control as listed below. One of the following procedures may be used. For the purposes of this rule, if a



CEMS or another approved monitoring method is used, then the equipment would be exempt from the requirements of Section 302 of this rule.

- a. **302.1** Monitor the maximum temperature differential across the combustion burners or at locations around the back end of the turbine, dependent upon the particular unit, to ensure no more than a 100°F difference using a thermocouple. Differential temperatures across the burners to demonstrate good combustion practices shall be measured from at least one minute data point during a complete steady state operating hour. If a valid maximum temperature differential of greater than 100°F is observed across the burners, investigation and corrective action shall be taken within three hours to reduce the temperature difference to 100°F or less; or
- b. **302.2** If the manufacturer recommends that the maximum numerical temperature differential to ensure good combustion is a temperature that is greater than 100°F, then proof of this maximum alternate temperature shall be submitted to the Control Officer. The procedure to measure the maximum temperature differential listed ~~above in subsection 301.3a~~ Section 302.1 of this rule shall then be followed using this alternate recommended maximum temperature differential after approval by the Control Officer.
- e. **302.3** If the frequency of failure to meet the proper temperature differential of 100°F or to meet the alternate temperature differential recommended by the manufacturer reflects a pattern that the turbine is not being operated in a manner consistent with good combustion practices, then the Control Officer may require the owner or operator to submit a Corrective Action Plan (CAP).

~~301.4~~**303** **COOLING TOWERS:** An owner or operator of a cooling tower associated with applicable units listed in Section 102 of this rule shall:

- a. **303.1** Equip the cooling tower with a drift eliminator. The drift eliminator shall not be manufactured out of wood.
- b. **303.2** The concentration of Total Dissolved Solids (TDS) multiplied by the percentage of drift rate shall not exceed the maximum numerical limit of 20.
- e. **303.3** Visually inspect the drift eliminator on a monthly basis only if the drift eliminator can be viewed safely and does not require an owner or operator to walk into the tower. If the drift eliminator cannot be safely inspected monthly then ~~subsection 301.4d~~ Section 303.4 of this rule shall apply:
- f. **303.4** Visually inspect the drift eliminator for integrity during a regularly scheduled outage when the cooling tower is not operating, if it cannot be inspected on a monthly basis. This visual inspection shall be no less than once per year.

~~302~~**304** **LIMITATIONS – OPACITY:**

- ~~302.1~~ **304.1** ~~No person shall~~ An owner or operator shall not discharge into the ambient air from any single source of emissions any air contaminant, other than uncombined water, in excess of 20% opacity, except as provided in ~~subsection 302.2~~ Section 304.2 of this rule.
- ~~302.2~~ **304.2** Opacity may exceed the applicable limits established in ~~subsection 302.1~~ Section 304.1 of this rule for up to one hour during the ~~startup of switching fuels~~ fuel switching startup process; however, opacity shall not exceed 40% for any six (6) minute averaging period in this one hour period, provided that the Control Officer finds that the owner or operator has, to the extent practicable, maintained and operated the source of emissions in a manner consistent with good air pollution control practices for minimizing emissions. The one hour period shall begin ~~at the moment of startup of fuel switching~~ when the fuel switching startup process begins.
- ~~302.3~~ **304.3** Determination of whether good air pollution control practices are being used shall be based on information provided to the Control Officer upon request, which may include, but is not limited to, the following:
 - a. Monitoring results.
 - b. Opacity observations.
 - c. Review of operating and maintenance procedures.
 - d. Inspection of the source.

~~303~~**305** **LIMITATIONS - SULFUR IN FUEL:** An owner or operator of any applicable equipment listed in Section 102 of this rule that burns fuel oil alone or in combination with any other fuel as either emergency fuel or non-emergency fuel ~~that meets the standards in subsection 301.1~~ shall use only ~~low sulfur oil~~ ultra low sulfur diesel. An owner or operator using waste derived fuel gas shall use only waste derived fuel gas that contains no more than 0.08% sulfur by weight, alone or in combination with other fuels.

~~304~~**306** **LIMITATIONS – NITROGEN OXIDES (NO_x):** ~~No~~ An owner or operator of any applicable equipment listed in ~~subsection 102.1~~ Section 102.1 and 102.2 of this rule ~~that commenced construction or a major modification after May 30, 1972~~ shall not cause to be discharged into the atmosphere nitrogen oxides in excess of the following

limits:

- ~~304.1~~ **306.1** ~~155 ppmv~~ 42 ppmdv, calculated as nitrogen dioxide when burning gaseous fossil fuel. During steady state operations, this test result using EPA Reference Method(s) 7 or other EPA-approved test method designated by the Control Officer shall be based upon the arithmetic mean of the results of three test runs. Each test run shall have a minimum sample time of one hour. ~~If a Continuous Emission Monitoring System (CEMS) is used for the compliance demonstration, the test result compliance demonstration shall be based upon a 30-day rolling average. Any source for which the owner or operator submits to the department a case-by-case reasonably available control technology analysis that is or will be incorporated in a permit issued by the Control Officer for that source, is exempt from Sections 306, 308.4, and 400 of this rule.~~
- ~~304.2~~ **306.2** ~~230 ppmv~~ 65 ppmdv calculated as nitrogen dioxide when burning liquid fossil fuel. During steady state operations, this test result using EPA Reference Method(s) 7 or other EPA-approved test method designated by the Control Officer, shall be based upon the arithmetic mean of the results of three test runs. Each test run shall have a minimum sample time of one hour. ~~If a CEMS is used for the compliance demonstration, the test result compliance demonstration shall be based upon a 30-day rolling average. Any source for which the owner or operator submits to the department a case-by-case reasonably available control technology analysis that is or will be incorporated in a permit issued by the Control Officer for that source, is exempt from Sections 306, 308.4, and 400 of this rule.~~
- ~~304.3~~ **306.3** The nitrogen oxides concentration shall be measured dry and corrected to 3% oxygen for electric utility steam generating units and cogeneration steam generating units. The nitrogen oxides concentration shall be measured dry and corrected to 15% oxygen for stationary gas turbines and for combined cycle gas turbines, during steady state operations.
- ~~305~~**307** **LIMITATIONS - CARBON MONOXIDE:** An owner or operator of any equipment listed in Section 102 of this rule shall not cause to be discharged into the atmosphere carbon monoxide (CO) measured in excess of 400 ppmv at any time. ~~This~~ During steady state operations, this test result, using EPA Reference Method 10 or other EPA-approved test method designated by the Control Officer and performed during steady state compliance source testing, shall be based upon the arithmetic mean of the results of three test runs. Each test run shall have a minimum sample time of one hour. The CO concentration shall be measured dry and corrected to 3% oxygen for electric utility steam generating units and cogeneration steam generating units. The CO concentration shall be measured dry and corrected to 15% oxygen for stationary gas turbines and for combined cycle gas turbines, during steady state operations.
- ~~306~~**308** **REQUIREMENTS FOR AIR POLLUTION CONTROL EQUIPMENT AND ECS MONITORING EQUIPMENT:**
- ~~306.1~~ **308.1** ~~Emission Control System Required:~~ For affected operations which may exceed any of the applicable standards set forth in Section 300 of this rule, an owner or operator may comply by installing and operating an emission control system (ECS) or a combustion control system which reduces emissions to below the applicable standards in Section 300 of this rule.
- ~~306.2~~ **308.2** ~~Providing and Maintaining ECS Monitoring Devices:~~ No An owner or operator required to use an approved ECS pursuant to this rule shall not do so without first properly installing, operating, and maintaining in calibration and in good working order, devices for indicating temperatures, pressures, transfer rates, rates of flow, or other operating conditions necessary to determine if air pollution control equipment is functioning properly and is properly maintained as described in an approved Operation and Maintenance (O&M) Plan.
- ~~306.3~~ **308.3** **Operation and Maintenance (O&M) Plan Required for ECS:**
- General Requirements:** An owner or operator shall provide and maintain an O&M Plan for any ECS, any other emission processing equipment, and any ECS monitoring devices that are used pursuant to this rule or to an air pollution permit.
 - Approval by Control Officer:** An owner or operator shall submit to the Control Officer for approval the O&M Plans of each ECS and each ECS monitoring device that is used pursuant to this rule.
 - Initial Plans:** An owner or operator ~~that~~ who is required to have an O&M Plan pursuant to this rule shall comply with all O&M Plans that the owner or operator has submitted for approval, but which have not yet been approved, unless notified by the Control Officer in writing. Once the initial plan has been approved in writing by the Control Officer, an owner or operator shall then comply with the approved plan.
 - Revisions to Plan:** ~~If revisions to the initial plan have been approved by the Control Officer in writing, an owner or operator shall comply with the revisions to the initial plan. If revisions to the plan have not yet been approved by the Control Officer, then an~~ An owner or operator shall comply with the newest-recent may revise an initial O&M plan by submitting written revisions to the Control Officer on file at Maricopa County Air Quality Department. The owner or operator shall at all times comply with the latest version of the O&M Plan submitted to the Control Officer.



- e. **Control Officer Modifications to Plan:** After discussion with the owner or operator, the Control Officer may modify the plan in writing prior to approval of the initial O&M plan. An owner or operator shall then comply with the plan that has been modified by the Control Officer.

~~306.4~~ **308.4** ~~Continuous Emission Monitoring Systems (CEMS)~~ **Emission Compliance Demonstration:**

- a. An owner or operator of ~~a combustion unit~~ an electric utility stationary gas turbine, electric utility steam generating unit or cogeneration steam generating unit used to generate electric power subject to Section ~~304~~ 306 of this rule with a heat input of greater than 250 MMBtu/hr, regardless of fuel type, shall install, calibrate, maintain, and operate a CEMS ~~or conduct stack tests as approved by the Control Officer for measuring nitrogen oxides, and recording the output of the system.~~ Where nitrogen oxide emissions are monitored by a CEMS, then a CEMS shall also be required for the measurement of the oxygen content of the flue gases. All CEMS shall comply with the provisions in ~~40 CFR Subpart Da, Part 60, 60.47 (a) and 40 CFR Part 60.~~
- b. An owner or operator of any affected ~~unit~~ electric utility stationary gas turbine, electric utility steam generating unit or cogeneration steam generating unit used to generate electric power listed above that requires a CEMS for nitrogen oxides that meets and is continuing to meet the requirements of 40 CFR Part 75 ~~or Part 60~~ may use that CEMS to meet the requirements of ~~subsection 306.4 a~~ Section 308.4(a) of this rule.

~~307~~**309** **EMERGENCY FUEL USE NOTIFICATION:** An owner or operator of ~~a unit~~ an electric utility stationary gas turbine, electric utility steam generating unit or cogeneration steam generating unit used to generate electric power that is fired with emergency fuel but is normally fired with natural gas shall notify the Control Officer verbally no later than 24 hours after declaration of the emergency that necessitates its use in compliance with ~~subsections 104.2 and 212~~ Section 104.2 of this rule. This verbal report shall be followed by a written report within 48 hours of initial emergency fuel usage. The written report shall also include identification of the nature of the emergency, initial dates of usage, and the expected dates of usage.

SECTION 400 - ADMINISTRATIVE REQUIREMENTS (NOT APPLICABLE)

401 **IN EXISTENCE AND IN COMPLIANCE:** Except as set forth in Section 104.4 of this rule and the case-by-case RACT analysis of Section 306.1 of this rule, the owner or operator of any electric utility stationary gas turbine, electric utility steam generating unit or cogeneration steam generating unit used to generate electric power in existence on November 2, 2016 and subject to the emission limits in Section 306 of this rule shall submit a Notification of Compliance within 6 months of becoming subject to Section 306 of this rule. This Notification shall indicate how compliance with the NO_x limit has been determined and if performance testing is required to demonstrate compliance. If performance testing is required to demonstrate compliance, the Notification shall include a timeline for the test. Performance test results from a past test may be used for this determination, as long as the test was conducted within 5 years before November 2, 2016. If compliance under Section 401 of this rule cannot be demonstrated, an owner or operator of any electric utility stationary gas turbine, electric utility steam generating unit or cogeneration steam generation unit used to generate electric power shall comply with Section 402 of this rule.

402 **IN EXISTENCE AND NON-COMPLIANT:**

402.1 Except as set forth in Section 104.4 of this rule and the case-by-case RACT analysis of Section 306.1 of this rule, when air pollution control equipment is required to achieve the emission limits in Section 306 of this rule, the owner or operator shall comply with the increments of progress in Section 402.2 of this rule and be in compliance with the emission limits by the date specified in Section 402.2 of this rule.

402.2 **Increments of Progress:** The owner or operator of any electric utility stationary gas turbine, electric utility steam generating unit or cogeneration steam generating unit used to generate electric power subject to the emission limits in Section 306 of this rule shall comply with the following increments of progress. The Control Officer, upon the request of the owner or operator, may extend the increments of progress. The following compliance schedule does not apply to units already compliant with this rule as of November 2, 2016:

- a. Within 18 months of becoming subject to the emission limits in Section 306 of this rule, submit a compliance schedule and permit application to the Control Officer.
- b. Within 36 months of final permit issuance, be fully compliant with the emission limits in Section 306 of this rule and submit to the Control Officer a complete source test report indicating compliance.

402.3 **Removal From Service:** The owner or operator of any electric utility stationary gas turbine, electric utility steam generating unit or cogeneration steam generating unit used to generate electric power in existence on November 2, 2016 that is expected to be removed from service within 24 months of becoming subject to Section 306 of this rule shall be exempt from the emission limits in Section 306 of this rule if it complies with the following:

- a. Within 6 months of becoming subject to the limits in Section 306 of this rule, submit to the Control Officer a notification of proposed removal from service.
- b. Within 14 months of submitting notification under Section 402.3(a) of this rule, submit to the Control Officer a decommissioning plan and a permit revision providing that the units will be decommissioned by a certain date.
- c. Within 4 months of decommissioning plan and permit revision approval, discontinue operation of the electric utility stationary gas turbine, electric utility steam generating unit or cogeneration steam generating unit used to generate electric power, disconnect the fuel supply line(s), and notify the Control Officer in writing of the removal from service. Operation of any electric utility stationary gas turbine, electric utility steam generating unit or cogeneration steam generating unit used to generate electric power beyond 4 months of decommissioning plan and permit revision approval, shall be conducted in compliance with the emission limits in Section 306 of this rule.

403 **EMERGENCY STANDBY UNITS:** The owner or operator of any emergency standby unit in existence prior to November 2, 2016 shall by January 2, 2017, submit to the Control Officer a notification requesting an exemption from the requirements of Section 300 of this rule.

SECTION 500 - MONITORING AND RECORDS

501 **RECORDKEEPING AND REPORTING:** Any owner or operator subject to this rule shall comply with the requirements set forth in this section. Any records and data required by this section shall be kept on site at all times in a consistent and complete manner and be made available without delay to the Control Officer or his designee upon request. Records shall consist of the following information:

- 501.1** **Equipment Listed in Section 102 of this Rule:** Type of fuel used, amount of fuel used, amount of sulfur in the fuel if using liquid fuel, and the days and hours of operation.
- 501.2** **Cooling Towers:** Monthly gravimetric testing reports for TDS shall be recorded for six months in succession and thereafter quarterly reports shall be recorded. Results of the monthly or yearly visual inspection of the drift eliminator shall also be recorded. If the drift eliminator cannot be visually inspected monthly, then documentation of the physical configuration of the drift eliminator shall be submitted to the Control Officer to demonstrate that the drift eliminator cannot be inspected monthly.
- 501.3** **Emergency Fuel Usage:** Type and amount of emergency fuel used, dates and hours of operation using emergency fuel, nature of the emergency or reason for the use of emergency fuel as stated in ~~subsections 104.2 and 104.3~~ Sections 104.2 and 104.3 of this rule.
- 501.4** **Fuel Switching:** Monthly records of fuel switching including stop and start times, monthly records of hours of operation for testing, reliability and maintenance purposes per ~~subsection 104.3~~ Section 104.3 of this rule, and a yearly log total of these hours.
- 501.5** **CEMS Continuous Emission Monitoring Systems:** All CEMS measurements, results of CEMS performance evaluations, CEMS calibration checks, and adjustments and maintenance performed on these systems.
- 501.6** **Good Combustion Practices:** Measurements of the temperature differential across the burners of turbines per ~~subsection 301.3 a, b, or c~~ Section 302 of this rule, results of evaluation and of corrective action taken to reduce the temperature differential or a finding that the temperature differential returned to the range listed in ~~subsection 301.3 a or b~~ Sections 302.1 or 302.2 of this rule without any action by the owner or operator. For the purposes of this rule, if a CEMS or other approved monitoring method is used, then the equipment would be exempt from the requirements of Section 302 of this rule.
- 501.7** **Equipment Referenced in Sections 104.4, 306.1, and 306.2:** Maintain records of the annual capacity factor and NO_x emissions to demonstrate compliance with Sections 104.4, 306.1, or 306.2 of this rule, as applicable.

502 **RECORDS RETENTION:** Copies of reports, logs, and supporting documentation required by the Control Officer shall be retained for at least 5 years. Records and information required by this rule shall also be retained for at least 5 years.

503 **COMPLIANCE DETERMINATION:**

- 503.1** **Low Sulfur Oil Ultra Low Sulfur Diesel Verification:** If the Control Officer requests documentation of the sulfur content of the fuel to demonstrate the 0.0015% limit, the owner or operator shall submit one of the following:
 - a. Fuel receipts, or
 - b. Contract specifications, or
 - c. Pipeline meter tickets, or



- d. Fuel supplier information, or
- e. Purchase records, or
- f. Test results of the fuel for sulfur content

The items listed above must provide accurate sulfur content values or be based on enforceable test methods as approved by the Administrator to determine the sulfur content.

- a. An owner or operator shall submit fuel oil or liquid fuel receipts from the fuel supplier indicating the sulfur content of the fuel or verification that the oil used to generate electric power meets the 0.05% sulfur limit if requested by the Control Officer; or
- b. If fuel receipts are not available then an owner or operator shall submit a statement of certification or proof of the sulfur content of the oil or liquid fuel from the supplier to the Control Officer; or
- e. An owner or operator may elect to test the fuel for sulfur content in lieu of certification from the fuel supplier or fuel receipts using one of the test methods listed in subsections 504.11, 504.12, 504.13 or 504.14.

503.2 Drift Rate Verification: An owner or operator shall submit design drift rate verification from the manufacturer of the drift eliminator used in the cooling towers to the Control Officer if proof of the design drift rate is requested by the Control Officer.

503.3 Waste Derived Fuel Gas – Sulfur Verification: The owner or operator shall submit documentation of the concentration of the sulfur level of the waste derived fuel gas to the Control Officer upon request. The sulfur content of gaseous fuels shall be determined by South Coast Air Quality Management District Method 307-94 Determination of Sulfur in a Gaseous Matrix.

504 COMPLIANCE DETERMINATION-TEST METHODS INCORPORATED BY REFERENCE: The following test methods are approved for use for the purpose of determining compliance with this rule. The test methods The EPA test methods as they exist in the Code of Federal Regulations (CFR) (July 1, 2004), as listed below, are incorporated by reference in Appendix G of the Maricopa County Air Pollution Control Regulations. Alternative test methods as approved by the Administrator or other EPA-approved test methods may be used upon prior written approval from the Control Officer. When more than one test method is permitted for the same determination, an exceedance under any method will constitute a violation. Copies of test methods referenced in this section are available at the Maricopa County Air Quality Department, 1001 N. Central Avenue, Suite 595-125, Phoenix, AZ 85004-1942. The Standard Methods listed below (1995) are also incorporated by reference. When more than one test method as listed in subsections 504.11 through 504.14 is permitted for the same determination, an exceedance of the limits established in this rule determined by any of the applicable test methods constitutes a violation.

- 504.1** EPA Reference Methods 1 (“Sample and Velocity Traverses for Stationary Sources”), and 1A (“Sample and Velocity Traverses for Stationary Sources with Small Stacks and Ducts”) (40 CFR 60, Appendix A).
- 504.2** EPA Reference Methods 2 (“Determination of Stack Gas Velocity and Volumetric Flow Rate”), 2A (“Direct Measurement of Gas Volume through Pipes and Small Ducts”), 2C (“Determination of Stack Gas Velocity and Volumetric Flow Rate in Small Stacks or Ducts”), and 2D (“Measurement of Gas Volumetric Flow Rates in Small Pipes and Ducts”) (40 CFR 60, Appendix A).
- 504.3** EPA Reference Methods 3 (“Gas Analysis for the Determination of Dry Molecular Weight”), 3A (“Determination of Oxygen and Carbon Dioxide Concentrations in Emissions From Stationary Sources (Instrumental Analyzer Procedure)”), 3B (“Gas Analysis for the Determination of Emission Rate Correction Factor of Excess Air”), and 3C (“Determination of Carbon Dioxide, Methane, Nitrogen and Oxygen from Stationary Sources”) (40 CFR 60, Appendix A).
- 504.4** EPA Reference Method 4 (“Determination of Moisture Content in Stack Gases”) (40 CFR 60, Appendix A).
- 504.5** EPA Reference Method 5 (“Determination of Particulate Emissions from Stationary Sources”) (40 CFR 60, Appendix A).
- 504.6** EPA Reference Method 202 (“Determination of Condensable Particulate Emissions from Stationary Sources”) (40 CFR 51, Appendix M).
- 504.7** EPA Reference Methods 7 (“Determination of Nitrogen Oxide Emissions from Stationary Sources”), 7A (“Determination of Nitrogen Oxide Emissions from Stationary Sources”), 7B (“Determination of Nitrogen Oxide Emissions from Stationary Sources - Ultraviolet Spectrometry”), 7C (“Determination of Nitrogen Oxide Emissions from Stationary Sources - Alkaline-Permanganate Colorimetric Method”), 7D (“Determination of Nitrogen Oxide Emissions from Stationary Sources – Alkaline-Permanganate Chromatographic Method”), and 7E (“Determination of Nitrogen Oxide Emissions from Stationary Sources – Instrumental Analyzer Method”) (40 CFR 60, Appendix A).

- 504.8 EPA Reference Method 9 (“Visual Determination of the Opacity of Emissions from Stationary Sources”) (40 CFR 60, Appendix A).
- 504.9 EPA Reference Method 10 (“Determination of Carbon Monoxide Emissions from Stationary Sources”) (40 CFR 60, Appendix A).
- 504.10 EPA Reference Method 20 (“Determination of Nitrogen Oxides, Sulfur Dioxide and Diluent Emissions from Stationary Gas Turbines”) (40 CFR 60, Appendix A).
- 504.11 ~~American Society of Testing Materials, ASTM Method D2622-98~~16, (“Standard Test Method for Sulfur in Petroleum Products by Wavelength Disperse X-Ray Fluorescence Spectrometry”), ~~1998~~.
- 504.12 ~~American Society of Testing Materials, ASTM Method D1266-98, (“Standard Test Method for Sulfur in Petroleum Products – Lamp Method”), 1998.~~
- 504.13 ~~504.12~~ American Society of Testing Materials, ASTM Method D2880-0015, (“Standard Specification for Gas Turbine Fuel Oils”), ~~2000~~.
- 504.14 ~~504.13~~ American Society of Testing Materials, ASTM Method D4294-90 or 9816e1, (“Standard Test Method for Sulfur in Petroleum Products by Energy-Dispersive X-Ray Fluorescence Spectrometry”), ~~1990 or 1998~~.
- 504.15 ~~504.14~~ Standard Methods for the Examination of Water and Wastewater, (“Dissolved Solids Dried at 180°C, Method #2540C”), American Public Health Association, 19th edition, 1995.
- 504.15 ASTM D5907-13, Standard Methods for the Examination of Water and Wastewater for Filterable Matter (Total Dissolved Solids) and Nonfilterable Matter (Total Suspended Solids) in Water.
- 504.16 South Coast Air Quality Management District Method 307-94 Determination of Sulfur in a Gaseous Matrix.

NOTICE OF FINAL RULEMAKING
MARICOPA COUNTY AIR POLLUTION CONTROL REGULATIONS
REGULATION III – CONTROL OF AIR CONTAMINANTS
RULE 323: FUEL BURNING EQUIPMENT FROM INDUSTRIAL/COMMERCIAL/INSTITUTIONAL (ICI) SOURCES

[M16-284]

PREAMBLE

- | <u>1. Rule affected</u> | <u>Rulemaking action</u> |
|--|---------------------------------|
| Rule 323: Fuel Burning Equipment from Industrial/Commercial/Institutional (ICI) Sources | Amended |
| <u>2. Statutory authority for the rulemaking:</u>
Authorizing statutes: A.R.S. §§ 49-474, 49-479, and 49-480
Implementing Statute: A.R.S. § 49-112 | |
| <u>3. The effective date of the rule:</u>
Date of adoption: November 2, 2016 | |
| <u>4. List of public notices addressing this rulemaking:</u>
Notice of Briefing to Maricopa County Manager: May 2015
Notice of Stakeholder Workshops: June 29, 2015, September 3, 2015, and February 18, 2016
Notice of Maricopa County Board of Health Meeting: April 25, 2016
Notice of Proposed Rulemaking: 22 A.A.R. 1134, May 13, 2016 | |
| <u>5. Name and address of department personnel with whom persons may communicate regarding the rulemaking:</u>
Name: Johanna M. Kuspert or Hether Krause
Maricopa County Air Quality Department
Planning and Analysis Division
Address: 1001 N. Central Ave., Suite 125
Phoenix, AZ 85004
Telephone: (602) 506-6010
Fax: (602) 506-6179 | |



E-mail: aqplanning@mail.maricopa.gov

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

Summary:

Rule 323 (Fuel Burning Equipment from Industrial/Commercial/Institutional (ICI) Sources) limits the discharge of nitrogen oxides (NO_x), sulfur oxides, particulate matter and carbon monoxide emissions into the atmosphere from fuel burning combustion equipment at industrial, commercial, and institutional (ICI) sources. Revisions to Rule 323 addressed the requirements of the State Implementation Plan (SIP) for “moderate” nonattainment for the 2008 eight-hour ozone national ambient air quality standard (NAAQS). The amendments in Rule 323 included Reasonably Available Control Technology (RACT) for NO_x.

In addition, the amendments corrected typographical or other clerical errors; made minor grammatical changes to improve readability or clarity; modified the format, numbering, order, capitalization, punctuation, or syntax of certain text to increase standardization within and among rules; or made various other minor changes of a purely editorial nature. As these changes did not alter the sense, meaning, or effect of the rules, they are not described in detail here, but can be readily discerned in the “underline/ strikeout” version of the rules contained in Item 14 of this notice.

Issues Raised and Discussed During this Rulemaking Process:

Stakeholders expressed a general understanding for the need for rule revisions based on the department’s nonattainment status; however, Stakeholders were concerned about the emission limitations and what is considered “RACT” and what is considered “beyond RACT”. In addition, questions were raised regarding the following:

- Partial exemptions, particularly regarding stationary gas turbines
- Provisions for good combustion practices
- Source testing methods and frequency

Description of Amendments:

Regarding Exemptions:

- Section 104.1(c) (Partial Exemptions): Rule 323 was revised to clarify the partial exemption for military training facilities. The EPA commented that the term “military training facility” is unclear in this rule, especially as distinguished from other facilities such as “garrisons”. The EPA suggested that this exemption should focus on the specific types of activities at these facilities that reasonably require exemptions, rather than the facilities themselves. The EPA suggested using Imperial County Air Pollution Control District, Rule 800, Section E(6) (General Requirements for Control of Fine Particulate Matter (PM₁₀)) as an example. The text in Section 104.1(c) is from Imperial County Air Pollution Control District, Rule 800, Section E(6) (General Requirements for Control of Fine Particulate Matter (PM₁₀)).
- Sections 104.1(f) and 104.2 (Partial Exemptions): Rule 323 was revised to include source specific limitations on emergency fuel use that is or will be incorporated in a source permit. The EPA commented that engines and fuel use allow alternative emission limits from normal operating conditions; this is generally allowable but must also include appropriate limits on the length of the emergency condition and alternative emergency emission limits. EPA asked that the department revise this section.

Regarding Limitations:

- Section 301.1 (Good Combustion Practices for Turbines): Rule 323 was revised to include text regarding the frequency of monitoring temperature differential across the combustion burners. The EPA commented that the frequency of differential temperature measurement should be defined and that continuous monitoring of this differential should be required.
- Section 303 (Limitations-Sulfur in Fuel): The limitations for sulfur in fuel were changed from “low sulfur fuel” to “ultra low sulfur diesel”; consistent with federal standards.
- Section 304.1(b)(1) (Limitations-Nitrogen Oxides): The NO_x limitation when burning gaseous fossil fuel was changed from “155 ppm” to “42 ppmdv”. The U.S. Environmental Protection Agency (EPA) advised the department that this limitation is considered RACT for NO_x; this limitation is similar to limits in Imperial County’s (CA) RACT SIP for the 1997 ozone standard for turbines (Rule 400.1 adopted 2010).
- Section 304.1(b)(2) (Limitations-Nitrogen Oxides): The NO_x limitation when burning liquid fossil fuel was changed from “230 ppm” to “65 ppmdv”. The EPA advised the department that this limitation is considered RACT for NO_x; this limitation is similar to limits in Imperial County’s (CA) RACT SIP for the 1997 ozone standard for turbines (Rule 400.1 adopted 2010).

Regarding Compliance with Nitrogen Oxides Limitations:

- Section 304.1 (Limitations-Nitrogen Oxides): Rule 323 clarified which provisions a source must comply with in order to be in compliance with the NO_x limitations. A source can either tune equipment annually in accordance with good combustion practices or follow the manufacturer's recommended procedure or a source can limit NO_x emission to no more than 42 ppm_{dv} when burning gaseous fuel or to no more than 65 ppm_{dv} when burning liquid fuel.

Regarding Administrative Requirements:

- Section 401 (Compliance Schedule): Rule 323 was revised to include compliance schedules for filing an Operation & Maintenance (O&M) Plan; for filing a schedule for making modifications to existing Emission Control Systems (ECS); and for filing a schedule for installing an ECS.

Regarding Compliance Determinations:

- Section 503.1 (Compliance Determination-Ultra Low Sulfur Diesel Verification): The compliance determination for low sulfur oil verification was changed to a compliance determination for ultra low sulfur diesel verification consistent with federal standards. Due to the EPA's comments, additional language was added to clarify that sulfur content verification documents must provide accurate values and utilize enforceable test methods to determine the sulfur content. Also, the test method for determining sulfur content of waste gas was added in Sections 503.1(b) and 504.15 (Compliance Determination-Test Methods Incorporated by Reference).
- Section 503.2 (Compliance Determination-Gaseous Emissions-Source Test): The size of boilers that must conduct performance (stack) tests was changed from "10 MMBtu" to "100 MMBtu". The Arizona Public Service Company (APS) submitted a comment on February 22, 2016. They stated that Section 503.2 should be rewritten to be applicable to unit 100 MMBtu or larger, because it does not make sense to have stack testing for such small units.
- Sections 503.2 (Compliance Determination-Gaseous Emissions-Source Test) and 503.3 (Compliance Determination-Gaseous Emissions-Continuous Emission Monitoring System (CEMS)): The text in Sections 503.2 and 503.3 is from Sacramento Metropolitan Air Quality Management District Rule 411 (NO_x from Boilers, Process Heaters and Steam Generators). The EPA advised the department that, when updating Rule 323 to include RACT, the department should consider other agencies' rules. Text for Sections 503.2(c) and (d) regarding test runs and test protocols were removed, per the EPA's comments that this language would allow Control Officer discretion on testing operations that may lead to poor operating data. Text for Sections 503.2(a) and 503.3 regarding compliance determinations during startup and shutdown were removed ("All emissions determinations shall be made during normal operating conditions, except no compliance determination shall be established during unit startup and shutdown"), due to the EPA's comments that this language does not align with the EPA's startup, shutdown, and malfunction policy.
- Sections 503.2(c) and (d) (Compliance Determination-Gaseous Emissions-Source Test): The text in Sections 503.2(c) and (d) was deleted. The text was from Sacramento Metropolitan Air Quality Management District Rule 411 (NO_x from Boilers, Process Heaters and Steam Generators) and regards procedures in the event that a sample is accidentally lost or conditions occur in which one of the three runs must be discontinued and states that a source test reports may be determined to be invalid. The EPA commented that this would allow Control Officer discretion on testing operations that may lead to poor operating data and recommended removing these provisions.
- Section 504 (Compliance Determination-Test Methods Incorporated by Reference): Rule 323 included a provision that allows for the use of alternative test methods to determine compliance with the rule and clarified the provision regarding when more than one test method is permitted for a compliance determination.
- Section 504.12 (Compliance Determination-Test Methods Incorporated by Reference): The test method "American Society of Testing Materials, ASTM Method D1266-98, ("Standard Test Method for Sulfur in Petroleum Products - Lamp Method"), 1998" was deleted. The EPA commented that the test method may not be appropriate; its range is 0.01-0.4% which will not be able to verify compliance with the definition of ultra low sulfur diesel fuel at <0.0015%.

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

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

§ 49-112 County regulation; standards

§ 49-112(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 of 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 regulation.
3. Any fee or tax adopted under the rule, ordinance or other regulation will not exceed the reasonable costs of the county to issue and administer that permit or plan approval program.

§ 49-112(B)

When authorized by law, a county may adopt rules, ordinances or other regulations in lieu of a state program that are as stringent as 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 the county demonstrates that the cost of obtaining permits or other approvals from the county will approximately equal or be less than the fee or cost of obtaining similar permits or approvals under this title or any rule adopted pursuant to this title. If the state has not adopted a fee or tax for similar permits or approvals, the county may adopt a fee when authorized by law in the rule, ordinance or other regulation that does not exceed the reasonable costs of the county to issue and administer that permit or plan approval program.

The department complies with A.R.S. § 49-112(A) in that Maricopa County fails to meet the National Ambient Air Quality Standards for both ozone and particulates. The County failed to meet 2008 8-hour ozone standard by the marginal area attainment date of July 20, 2015. The EPA issued a final rule, effective June 3, 2016, reclassifying the Maricopa County area to “moderate” (published at 86 FR 26697, May 4, 2016). Further, a portion of the County was classified as a serious ozone nonattainment area under the previous 1-hour ozone standard requiring the County to continue to maintain the measures and requirements that allowed the County to attain that standard. Currently, a portion of Maricopa County and Apache Junction in Pinal County is designated serious nonattainment for the PM₁₀ 24-hour standard. This is the only serious PM₁₀ nonattainment area in Arizona. Revisions to Rule 323 addressed the requirements of the State Implementation Plan (SIP) for “moderate” nonattainment for the 2008 eight-hour ozone national ambient air quality standard (NAAQS). The amendments in Rule 323 include Reasonably Available Control Technology (RACT) for NO_x.

The department complies with A.R.S. § 49-112(B) in that the amendments to Rule 323 are not more stringent than or in addition to a provision of Title 49 or rule adopted by the director or any board or commission authorized to adopt rules pursuant to Title 49; address the peculiar local conditions in Maricopa County; are authorized under A.R.S. Title 49, Chapter 3, Article 3; and are not in lieu of a state program.

8. Documents or studies referenced and/or reviewed for this rulemaking:

Not applicable

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:

Not applicable

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

The following discussion addresses each of the elements required for an economic, small business and consumer impact statement under A.R.S. § 41-1055.

An identification of the rulemaking.

This rulemaking revised Rule 323 (Fuel Burning from Industrial, Commercial, and Institutional (ICI) Sources).

An identification of the persons who will be directly affected by, bear the costs of or directly benefit from the rulemaking.

The persons who will be directly affected by and bear the costs of this rulemaking will be facilities in Maricopa County that use ICI sources that burn either fossil fuels or alternative fuels where the sources include any of the following:

- Steam generating unit with a maximum design rated heat input capacity from fuels combusted in the unit of greater than 10 million BTU/hr;
- Stationary gas turbines with a heat input at peak load equal to or greater than 2.9 megawatts (MW);
- Cogeneration steam generating unit with a heat input of greater than 10 million Btu/hr;
- Indirect-fired process heater with a heat input greater than 10 million Btu/hr.

The department has issued permits to more than 130 facilities with sources applicable to Rule 323.

**A cost benefit analysis of the following:****(a) The probable costs and benefits to the implementing agency and other agencies directly affected by the implementation and enforcement of the rulemaking.**

It is expected that the department will benefit from the increased clarity of the rule with decreased time to inspect a facility or prepare a permit. In addition, the rulemaking will not impose increased monetary or regulatory costs on other state agencies, political subdivisions of this state, persons, or individuals so regulated.

The assumptions of savings with the rule revisions will be reviewed after rule implementation to confirm their effectiveness. However, the benefits of the rule revision are anticipated to be a result of the following changes:

- Applying limitations for fuel sulfur content to ultra low sulfur diesel (from “low sulfur fuel”) to be consistent with federal requirements;
- Changing NO_x limitations when burning gaseous fossil fuel from 155 ppm to 42 ppmdv, and when burning liquid gaseous fossil fuel from 230 ppm to 65 ppmdv to be consistent with federal requirements and what EPA considers to be RACT for NO_x.
- Clarifying compliance requirements that apply to a source in order to meet the NO_x limitations;
- Adding requirements for schedules pertaining to filing an Operation & Maintenance Plan (O&M) Plan, and when modifying or installing a new Emission Control System (ECS); and
- Clarifying compliance determination test methods that apply for determining fuel sulfur content, NO_x (and CO) emissions for boilers with a heat input capacity of 100 MMBtu per hour or greater, and methods for boilers equipped with continuous emission monitoring system (CEMS).

These revisions align Maricopa County requirements with existing federal performance standards. In addition, the sources subject to the revised Rule 323 already have permits in which these requirements are addressed.

Therefore, this revised rule does not impose new requirements on the subject facilities, and no costs would be incurred for compliance with the rule revisions.

(b) The probable costs and benefits to a political subdivision of this state directly affected by the implementation and enforcement of the rulemaking

The rule revisions will not impose increased monetary or regulatory costs on other state agencies, political subdivisions of this state, persons, or individuals so regulated.

(c) The probable costs and benefits to businesses directly affected by the rulemaking, including any anticipated effect on the revenues or payroll expenditures of employers who are subject to the rulemaking.

The department anticipates that increased clarity provided by the Rule 323 revisions will provide a benefit to the regulated community; it will take less time for sources subject to the rule to understand and comply with the rule, which leads to increased compliance, which leads to decreased costs of compliance to the regulated community. The department does not anticipate these rule revisions to have a significant impact on a person's income, revenue, or employment in this state related to this activity. The rule revision will not impose increased monetary or regulatory costs on individuals so regulated.

A general description of the probable impact on private and public employment in businesses, agencies and political subdivisions of this state directly affected by the rulemaking.

The rule revisions will not impose increased monetary or regulatory costs on other state agencies, political subdivisions of this state, persons, or individuals so regulated.

A statement of the probable impact of the rulemaking on small businesses.

The rule revisions will not impose increased monetary or regulatory costs on any business, persons, or individuals so regulated.

(a) An identification of the small businesses subject to the rulemaking.

Small businesses subject to this rulemaking are those facilities in Maricopa County that use ICI sources that burn either fossil fuels or alternative fuels where the sources include any of the following: a steam generating unit with a maximum design rated heat input capacity from fuels combusted in the unit of greater than 10 million BTU/hr; a stationary gas turbine with a heat input at peak load equal to or greater than 2.9 megawatts (MW); a cogeneration steam generating unit with a heat input of greater than 10 million Btu/hr; and, an indirect-fired process heater with a heat input greater than 10 million Btu/hr.

(b) The administrative and other costs required for compliance with the rulemaking.

This rulemaking updated and clarified existing rule provisions and definitions to be consistent with federal performance standards, and reduce confusion and improve understanding and readability. The department considered the implications of the amendments to the regulated entities and the implementing agency and



deemed that none of the rule revisions have potentially significant economic impacts.

(c) A description of the methods that the agency may use to reduce the impact on small businesses.

(i) Establishing less costly compliance requirements in the rulemaking for small businesses.

By correcting and clarifying existing rule provisions and definitions, this rulemaking lessens or eases the regulatory burden for small businesses.

(ii) Establishing less costly schedules or less stringent deadlines for compliance in the rulemaking.

This rulemaking corrects or clarifies existing rule provisions and definitions to reduce confusion and improve understanding and readability.

(iii) Exempting small businesses from any or all requirements of the rulemaking.

This rulemaking corrects or clarifies existing rule provisions and definitions to reduce confusion and improve understanding and readability.

(d) The probable cost and benefit to private persons and consumers who are directly affected by the rulemaking.

This rulemaking did not impose any new compliance burdens on regulated entities or introduce additional regulatory requirements and will not impose increased monetary or regulatory costs on any business, persons, or individuals so regulated. As such, there are no costs to pass through to consumers which means there are no impacts on consumers.

A statement of the probable effect on state revenues.

The rule revisions did not impose increased monetary or regulatory costs on other state agencies, political subdivisions of this state, persons, or individuals so regulated. Without costs to pass through to customers, there is no projected change in consumer purchase patterns and, thus, no impact on state revenues from sales taxes.

A description of any less intrusive or less costly alternative methods of achieving the purpose of the rulemaking.

This rulemaking corrected or clarified existing rule provisions and definitions to reduce confusion and improve understanding and readability.

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

Name: Johanna M. Kuspert or Hether Krause
 Maricopa County Air Quality Department
 Planning and Analysis Division
 Address: 1001 N. Central Ave., Suite 125
 Phoenix, AZ 85004
 Telephone: (602) 506-6010
 Fax: (602) 506-6179
 E-mail: aqplanning@mail.maricopa.gov

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

Since the Notice of Proposed Rulemaking was published on May 13, 2016 (22 A.A.R 1134), the department made the following additional amendments:

- Section 104.1(c) (Partial Exemptions): Did not include new text “used in the following military training activities conducted by the Department of Defense: (1) military tactical training or (2) maintenance, repair, and removal of targets and munitions associated with military tactical training; or”. The U.S. Environmental Protection Agency (EPA) commented in June 2016 to remove this exemption or provide definitions for the terms “military training facilities” and “military gas turbines” and demonstrate why these gas turbines should not be subject to the specified emission standards. Deleted the partial exemption for stationary gas turbines used at military training facilities.
- Section 104.1(e) (Partial Exemptions): Did not include new text “and that are or will be incorporated in a permit” but included the text “...as allowed by a permit”.
- Section 104.2 (Partial Exemptions): Did not include new text “and that are or will be incorporated in a permit” but included the text “...as allowed by a permit”.
- Section 219 (Definition of “Steady State”): Added the definition of “Steady State”.
- Section 224 (Definition of “Waste Derived Fuel Gas”): Revised the definition of “Waste Derived Fuel Gas” to match the definition in Rule 324 (Stationary Internal Combustion (IC) Engines). Deleted “sewage sludge”

- from the list of examples of waste derived fuel gas because sewage sludge is not a gas.
- Section 301.1 (Limitations-Particulate Matter-Limitations-Liquid Fuels): Included new text “during steady state operations” after “in excess of 0.10 lbs. per MMBtu”.
 - Section 301.3 (Limitations-Particulate Matter-Good Combustion Practices for Turbines): Included new text “during steady state operations” at the beginning of the first sentence.
 - Section 304.1(a) (Limitations-Nitrogen Oxides): Included new text before the last sentence “for low emission burner systems that do not provide accessibility for combustion chamber inspection, burner inspection, or inspection of the flame pattern, an owner or operator shall provide documentation from the manufacturer and follow manufacturer's recommended procedure”, per comments from APS.
 - Sections 304.1(b)(1) and (2) (Limitations-Nitrogen Oxides): Included new text “or other EPA-approved test method designated by the Control Officer” after the phrase “EPA Reference Method(s) 7”.
 - Section 304.1(c) (Limitations-Nitrogen Oxides): Included new text “during steady state operations” at the end of the first sentence.
 - Section 305 (Limitations-Carbon Monoxide): Included new text “during steady state operations and “or other EPA-approved test method designated by the Control Officer” in the second sentence. Added new text “during steady state operations” after “...corrected to 15% oxygen” in the second-to-the-last sentence.
 - Section 306.1 (Requirements for Air Pollution Control Equipment and ECS Monitoring Equipment-Emission Control System): Included new text at the end-of the sentence “or a combustion control system which reduces emissions to below the applicable standards in Section 300 of this rule”.
 - Section 503.1 (Compliance Determination-Sulfur in Fuel Verification): Changed the headings of Sections 503.1, 503.1(a), and 503.1(b) to more clearly distinguish what the sections address.
 - Section 503.1(a) (Compliance Determination-Sulfur in Fuel Verification-Ultra Low Sulfur Diesel): Revised the new text “sulfur content of the fuel oil to demonstrate the 0.0015% limits” to “sulfur content of the fuel to demonstrate the 0.0015% limit”. Revised the new text in Section 503.1(a)(6) from “testing of the fuel oil for sulfur content” to “test results of the fuel for sulfur content”
 - Section 503.1(a) (Compliance Determination-Sulfur In Fuel Verification-Ultra Low Sulfur Diesel): Revised the new text after the list of items in Sections 503.1(a)(1)-(6). Changed “and utilize” to “or be based on”. Added “as approved by the Administrator” after “test methods”.
 - Section 503.1(a)(4) (Compliance Determination-Sulfur In Fuel Verification-Ultra Low Sulfur Diesel): Removed Safety Data Sheets (SDS)/Material Safety Data Sheets (MSDS) from the list of documentation of the sulfur content of the fuel oil, per the EPA comments.
 - Sections 503.2(a) and (b) (Compliance Determination-Gaseous Emissions-Source Test): Did not include new text regarding specific test methods to be used to determine compliance with NO_x and CO and regarding discontinuing a scheduled source test. These requirements are addressed in performance testing protocol.
 - Section 503.3 (Compliance Determination-Gaseous Emissions-Continuous Emission Monitoring System (CEMS)): Did not include new text “NO_x” in the introductory statement. CEMS can be used for other pollutants. Introductory statement was revised to read in part: Compliance with the emission requirements specified...
 - Section 504 (Compliance Determination-Test Methods Incorporated By Reference): Deleted the provision allowing test methods to be used upon sole approval by the Control Officer. Added text that allows test methods as approved by the Administrator to be used, per the EPA’s comments.

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

Since the Notice of Proposed Rulemaking was published on May 13, 2016 (22 A.A.R. 1134), the department received comments from the Arizona Public Service Company (APS) and the U.S. Environmental Protection Agency (EPA). The comments and the department’s responses are provided below.

Comment #1: Sections 104.1(c) (Partial Exemptions)

The EPA asks that the County clarify the exceptions for units at military training facilities, as this is not defined.

Response #1: Section 104.1(c) (Partial Exemptions)

The department did not include new text “used in the following military training activities conducted by the Department of Defense: (1) military tactical training or (2) maintenance, repair, and removal of targets and munitions associated with military tactical training; or...” The department deleted the partial exemption for stationary gas turbines used at military training facilities.



Comment #2: Sections 104.1(e) and (f) (Partial Exemptions)

The EPA asks that the County include appropriate limits on the length of emergency condition and alternative emergency limits for units fired with emergency fuel that are otherwise normally fired with natural gas.

Response #2: Sections 104.1(e) and (f) (Partial Exemptions)

The department included source specific limitations on emergency fuel use as allowed by a permit issued by the Control Officer.

Comment #3: Section 301.3 (Limitations-Particulate Matter-Good Combustion Practices for Turbines)

The EPA asks the County to define the frequency of monitoring required to comply with the provisions of “good combustion practices” for turbines.

Response #3: Section 301.3 (Limitations-Particulate Matter-Good Combustion Practices for Turbines)

The department included text regarding the frequency of monitoring temperature differential across the combustion burners.

Comment #4: Section 304.1(a) (Limitations-Nitrogen Oxides)

During the County workshops discussing Rule 323, APS brought to the County’s attention the dilemma caused by the inspection requirements related to boilers. APS has installed a Clayton Boiler on its process equipment. This boiler is a state-of-the-art boiler and as such has a sealed burner chamber which does not allow for inspection of the combustion chamber, burner or flame pattern as required under Section 304.1(a). Rather than be penalized for having such an advanced and efficient burner that does not allow for inspection, APS suggested that the County provide an exception to allow APS to operate the burner in compliance with the manufacturer’s recommended procedures. At the time of the workshops, the County was open to the suggestion and offered no indication that it would not approve such a solution. APS hopes this was an oversight on the County’s part, but if the County should need additional information, please let APS know and APS will be happy to provide it.

Response #4: Section 304 (Limitations-Nitrogen Oxides)

The department included new text before the last sentence “for low emission burner systems that do not provide accessibility for combustion chamber inspection, burner inspection, or inspection of the flame pattern, an owner or operator shall provide documentation from the manufacturer and follow manufacturer's recommended procedure”.

Comment #5: Section 306.1 (Requirements for Air Pollution Control Equipment and ECS Monitoring Equipment-Emission Control System)

A facility may comply with the emission limits in the rule by installing and operating an emission control system (ECS). While an ECS may be one possible way to meeting emission limits, it generally cannot substitute for meeting limits, unless specific control measures or a percent effectiveness are defined as a part of the required ECS that may be approved by the Control Officer. The definition of ECS at Section 206 also allows discretion to the Control Officer on the types of required control devices, practices, and monitoring needs for an effective ECS. The EPA asks the County to either define a set of specific required control technologies or practices that must be a part of any effective ECS or define a required emissions reduction (for example, 80% reduction of existing NO_x emissions).

Response #5: Section 306.1 (Requirements for Air Pollution Control Equipment and ECS Monitoring Equipment-Emission Control System)

The department included new text at the end-of the sentence in Section 306.1 “or a combustion control system which reduces emissions to below the applicable standards in Section 300 of this rule”.

Comment #6: Section 503.1(a) (Compliance Determination-Ultra Low Sulfur Diesel Verification)

This section allows for various documents to verify compliance with the ultra-low sulfur diesel fuel limit. The EPA asks the County to ensure the documents listed give accurate values and use enforceable test methods. For example, EPA generally has not approved the use of Safety Data Sheets (SDS)/Material Safety Data Sheets (MSDS) to determine compliance in SIP rules unless the SDS/MSDS specifies that the compound of interest was determined by an approved EPA method.

Response #6: Section 503.1(a) (Compliance Determination-Ultra Low Sulfur Diesel Verification)

The department removed Safety Data Sheets (SDS)/Material Safety Data Sheets (MSDS) from the list of documentation of the sulfur content of the fuel oil in Section 503.1(a)(4).

Comment #7: Section 503.2(a) (Compliance Determination-Gaseous Emissions-Source Test)

This section states that no compliance determinations will be made during startup and shutdown. This does not align with EPA’s startup, shutdown, and malfunction (SSM) policy, particularly in the case of CEMS-equipped

units. The EPA asks the County to include alternative numerical limits for operations during these periods, require best operating practices, or require that units comply with the standard limits during SSM events.

Response #7: Section 503.2(a) (Compliance Determination-Gaseous Emissions-Source Test)

The department removed text regarding compliance determinations during startup and shutdown.

Comment #8: Section 503.3 (Compliance Determination-Gaseous Emissions-Continuous Emission Monitoring System (CEMS))

This section states that no compliance determinations will be made during startup and shutdown. This does not align with EPA’s startup, shutdown, and malfunction (SSM) policy, particularly in the case of CEMS-equipped units. The EPA asks the County to include alternative numerical limits for operations during these periods, require best operating practices, or require that units comply with the standard limits during SSM events.

Response #8: Section 503.3 (Compliance Determination-Gaseous Emissions-Continuous Emission Monitoring System (CEMS))

The department removed text regarding compliance determinations during startup and shutdown.

Comment #9: Section 504 (Compliance Determination-Test Methods Incorporated By Reference)

Alternative test methods may not be used upon sole approval by the Control Officer. The EPA asks the County to remove this provision or include language that also requires EPA approval for alternative methods.

Response #9: Section 504 (Compliance Determination-Test Methods Incorporated By Reference)

The department deleted the provision allowing test methods to be used upon sole approval by the Control Officer and added text that allows test methods as approved by the Administrator to be used.

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

Not applicable

15. Incorporations by reference and their location in the rule:

The department incorporated by reference sections of the Code of Federal Regulations in Section 504 (Compliance Determination-Test Methods Incorporated by Reference)

16. Was this rule previously an emergency rule?

No

17. Full text of the rule follows:

MARICOPA COUNTY
AIR POLLUTION CONTROL REGULATIONS
REGULATION III – CONTROL OF AIR CONTAMINANTS
RULE 323
FUEL BURNING EQUIPMENT FROM INDUSTRIAL/COMMERCIAL/ INSTITUTIONAL (ICI) SOURCES
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Adopted 07/03/05

Revised 10/17/07

Adopted 07/02/2003; Revised 10/17/2007; Revised 11/02/2016

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

RULE 323

FUEL BURNING EQUIPMENT FROM INDUSTRIAL/COMMERCIAL/INSTITUTIONAL (ICI) SOURCES

INDEX

SECTION 100 – GENERAL

- 101 PURPOSE:** To limit the discharge of nitrogen oxides, sulfur oxides, carbon monoxide, and particulate matter emissions into the atmosphere from fuel burning combustion equipment at industrial and/or commercial and/or institutional (ICI) sources.
- 102 APPLICABILITY:** This rule applies to any of the following types of ICI combustion equipment that burns either fossil fuels or alternative fuels:
 - 102.1** Each steam generating unit that has a maximum design rated heat input capacity from fuels combusted in the generating unit of greater than 10 million (MM) Btu/hr (2.9 Megawatts (MW)).

- 102.2** Each stationary gas turbine with a heat input at peak load equal to or greater than 2.9 megawatts (MW).
- 102.3** Each cogeneration steam generating unit with a heat input of greater than 10 MMBtu/hr.
- 102.4** Each indirect-fired process heater with a heat input greater than 10 MMBtu/hr.
- 102.5** NSPS & NESHAP: In addition to this rule, facilities may be subject to New Source Performance Standards (NSPS) in Rule 360 and/or National Emission Standards for Hazardous Air Pollutants (NESHAP) in Rule 370 of these rules.
- 103 EXEMPTIONS:** This rule shall not apply to the following types of equipment:
- 103.1** Incinerators, crematories, or burn-off ovens; or
- 103.2** Dryers, cement and lime kilns; or
- 103.3** Direct-fired process heaters; or
- 103.4** Medical waste incinerators; or
- 103.5** Reciprocating internal combustion equipment; or
- 103.6** Combustion equipment used in power plant operations for the purpose of supplying greater than one third of the electricity to any utility power distribution system for sale; or
- 103.7** Combustion equipment associated with nuclear power plant operations; or
- 103.8** Water heaters used for the sole purpose of heating hot water for comfort or for radiant heat.
- 104 PARTIAL EXEMPTIONS:**
- 104.1** Stationary gas turbines listed in ~~subsection 102.2~~ Section 102.2 of this rule that are used for any of the following reasons shall be exempt from ~~Sections 304, 305 and subsections 301.1, 301.2, 501.1 and 501.3~~ Sections 301.1, 301.2, 304, 305, 501.1, and 501.3 of this rule:
- a.** Used for firefighting; or
 - b.** Used for flood control; or
 - e.** ~~Used at military training facilities other than a garrison facility; or~~
 - d.c.** Engaged by manufacturers in research and the development of equipment for either gas turbine emission control techniques or gas turbine efficiency improvements; or
 - e-d.** Fired with emergency fuel that is normally fired with natural gas, or
 - f.c.** ~~Testing, reliability, maintenance, training, and readiness purposes for a total of 36 hours per year per unit when firing any emergency fuel. Fired with emergency fuel for 36 cumulative hours per year or less, per unit for testing, reliability, training, and maintenance purposes as allowed by a permit issued by the Control Officer for that source.~~
- 104.2** All steam generating units including cogeneration units and process heaters that are used for any of the following reasons as allowed by a permit issued by the Control Officer shall be exempt from Sections 301, 304, 305, ~~and subsections 501.1 and 501.3~~ of this rule:
- a.** Fired with an emergency fuel that is normally fired with natural gas; or
 - b.** ~~Firing any emergency fuel for testing, reliability, and maintenance purposes up to a maximum total of 36 hrs. per unit per year.~~ for 36 cumulative hours per year, per unit or less.
- SECTION 200 – DEFINITIONS:** ~~For the purpose of this rule, the following definitions shall apply. See Rule 100 (General Provisions and Definitions) of these rules for definitions of terms that are used but not specifically defined in this rule. For the purpose of this rule, the following definitions shall apply, in addition to those definitions found in Rule 100 (General Provisions and Definitions) of these rules. In the event of any inconsistency between any of the Maricopa County air pollution control rules, the definitions in this rule take precedence.~~
- 201 ALTERNATIVE FUELS:** Substitutes for traditional oil-derived and fossil-fuel derived motor vehicle fuels including but not limited to biodiesel, propane, ethanol or methanol.
- 202 COGENERATION STEAM GENERATING UNIT:** A steam or hot water generating unit that simultaneously produces both electrical (or mechanical) and thermal energy (such as heat or steam) from the same primary energy source.
- 203 CORRECTIVE ACTION PLAN (CAP):** A methodical procedure that is used to evaluate and correct a turbine operational problem and that includes, at a minimum, improved preventative maintenance procedures, improved ECS operating practices, possible operational amendments, and progress reports.
- 204 DISTILLATE OIL:** A petroleum fraction of fuel oil produced by distillation that complies with the specifications for fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials in ASTM D396-01, “Standard Specification for Fuel Oils.”



- 205 EMERGENCY FUEL:** Fuel fired by a gas combustion unit, normally fueled by natural gas, only during circumstances of unforeseen disruption or interruption in the supply of natural gas to a unit that normally runs on natural gas. The inability to burn natural gas may be one of the following, but is not limited to, natural gas emergency, natural gas curtailment, or a breakdown of the delivery system.
- 206 EMISSION CONTROL SYSTEM (ECS):** A system approved in writing by the Control Officer, designed and operated in accordance with good engineering practice to reduce emissions.
- 207 FOSSIL FUEL:** Naturally occurring carbonaceous substances from the ground such as natural gas, petroleum, coal, and any form of solid, liquid or gaseous fuel derived from such material for the purpose of creating energy.
- 208 HEAT INPUT:** Heat derived from the combustion of fuel not including the heat input from preheated combustion air, recirculated flue gases, or exhaust gases from other sources, such as gas turbines, internal combustion engines, and kilns.
- ~~209~~ **LOW SULFUR OIL:** Fuel oil containing less than or equal to 0.05 % by weight of sulfur.
- ~~210~~ **NATURAL GAS CURTAILMENT:** A shortage in the supply of natural gas, due solely to limitations or restrictions in distribution pipelines by the utility supplying the gas and not due to the cost of natural gas.
- ~~211~~ **OPACITY:** A condition of the ambient air, or any part thereof, in which an air contaminant partially or wholly obscures the view of an observer.
- ~~212~~ **PARTICULATE MATTER EMISSIONS:** Any and all particulate matter emitted to the ambient air as measured by applicable state and federal test methods.
- ~~213~~ **PEAK LOAD:** 100% of the manufacturer's design capacity of a gas turbine at 288° Kelvin, 60% relative humidity, and 101.3 kilopascals pressure (ISO standard day conditions).
- ~~214~~ **PROCESS HEATER:** An enclosed combustion device that uses controlled flame to transfer heat to a process fluid or a process material that is not a fluid or to heat transfer material for use in a process unit (not including the generation of steam). A process heater may be either indirect or direct-fired, dependent upon whether the gases of combustion mix with and exhaust to the same stack or vent (direct-fired) with gases emanating from the process material or not (indirect-fired). Emissions from indirect-fired units consist entirely of products of combustion while emissions from direct-fired units are unique to the given process and may vary widely in any industrial process. A process heater is not an oven or kiln used for drying, curing, baking, cooking, calcining, or vitrifying.
- ~~215~~ **RATED HEAT INPUT CAPACITY:** The heat input capacity in million Btu/hr. as specified on the nameplate of the combustion unit. If the combustion unit has been altered or modified so that its maximum heat input is different than the heat input capacity on the nameplate (design heat capacity), the maximum heat input shall be considered as the rated heat input capacity.
- ~~216~~ **REGENERATIVE CYCLE GAS TURBINE:** Any stationary gas turbine that recovers thermal energy from the exhaust gases and utilizes the thermal energy to preheat air prior to entering the combustor unit.
- ~~217~~ **RESIDUAL OIL:** The heavier oils that remain after the distillate oils and lighter hydrocarbons are distilled off in refinery operations. This includes crude oil or fuel oil numbers 1 and 2 that have a nitrogen content greater than 0.05% by weight, and all fuel oil numbers 4, 5 and 6, as defined by the American Society of Testing and Materials in ASTM D396-01, "Standard Specifications for Fuel Oils".
- ~~218~~ **SIMPLE CYCLE GAS TURBINE:** Any stationary gas turbine that does not recover heat from the gas turbine exhaust gases to preheat the inlet combustion air to the gas turbine, or that does not recover heat from the gas turbine exhaust gases to heat water or generate steam.
- ~~219~~ **STATIONARY GAS TURBINE:** Any simple cycle gas turbine or regenerative gas turbine that is not self-propelled or that is attached to a foundation.
- 219** **STEADY STATE:** A safe, stable megawatt load at which a unit with equipment in normal operating conditions is capable of being held for an extended period of time, without creating an unsafe or unstable operating condition.
- ~~220~~ **STEAM GENERATING UNIT:** An external combustion unit or boiler fired by fossil fuel that is used to generate hot water or steam. The hot water or steam is then used as energy for driving another process or piece of equipment.
- ~~221~~ **SULFUR OXIDES (SO_x):** The sum of the oxides of sulfur emitted from the flue gas from a combustion unit that are directly dependent upon the amount of sulfur in the fuel used.
- 222** **ULTRA LOW SULFUR DIESEL:** Fuel oil containing less than or equal to 0.0015% sulfur by weight.
- ~~223~~ **UNCOMBINED WATER:** Condensed water containing no more than analytical trace amounts of other chemical elements or compounds.
- ~~224~~ **WASTE DERIVED FUEL GAS:** Any A gaseous fuel that is generated from the biodegradation of solid or liquid waste including, but not limited to, sewage sludge, digester gas and landfill gas.
- ~~225~~ **WATER HEATER:** A closed vessel in which water is heated by combustion of fuel and water is either withdrawn

for use external to the vessel (at pressures not exceeding 160 psi with all controls and devices preventing water temperatures from exceeding 210°F) or used for radiant heat. Water heaters are usually no larger than 1 MM Btu/hr as opposed to boilers, do not reach temperatures of 220°F and higher that boilers can reach, and are not manufactured to meet boiler codes.

SECTION 300 – STANDARDS**301 LIMITATIONS – PARTICULATE MATTER:**

301.1 Limitation-Liquid Fuels: An owner or operator shall not discharge, cause or allow the discharge of particulate matter emissions, caused by combustion of non-gaseous liquid fuels or a blend of liquid fuels with other fuels in excess of 0.10 lbs. per MMBtu, during steady state operations, from any combustion units listed in ~~subsections 102.1, 102.3 and 102.4~~ Sections 102.1, 102.3, and 102.4 of this rule with either a rated heat input capacity or heat input of greater than 100 MM Btu/hr.

301.2 Particulate Matter Testing: A backhalf analysis shall be performed, using Reference Method 202 referenced in ~~subsection 504.6~~ Section 504.6 of this rule, each time a compliance test for particulate matter emissions to meet the standards in ~~subsection 301.1~~ Section 301.1 of this rule is performed using Method 5. (The results of the Method 202 testing shall be used for emissions inventory purposes).

301.3 Good Combustion Practices for Turbines: During steady state operations, ~~An~~ owner or operator of a stationary gas turbine listed in ~~subsection 102.2~~ Section 102.2 of this rule, regardless of fuel type or size, shall use operational practices recommended by the manufacturer and parametric monitoring that ensure good combustion control. One of the following procedures may be used:

- a. Monitor the maximum temperature differential across the combustion burners or at locations around the back end of the turbine, dependent upon the particular unit, to ensure no more than a 100° F difference using a thermocouple. Differential temperatures across the burners to demonstrate good combustion practices shall be measured from at least one minute data point during a complete steady state operating hour. If a valid maximum temperature differential of greater than 100°F is observed across the burners, investigation and corrective action shall be taken within three hours to reduce the temperature difference to 100°F or less; or
- b. If the manufacturer recommends that the maximum numerical temperature differential to ensure good combustion is a temperature that is greater than 100°F, then proof of this maximum alternate temperature shall be submitted to the Control Officer. The procedure to measure the maximum temperature differential listed above in ~~subsection 301.3a~~ Section 301.3(a) of this rule shall then be followed using the alternate recommended maximum temperature differential after approval by the Control Officer.
- c. If a repetitive pattern of failure to meet the proper temperature differential of 100°F or to meet the alternate temperature differential recommended by the manufacturer indicates that the turbine is not being operated in a manner consistent with good combustion practices, then the Control Officer may require the owner or operator to submit a Corrective Action Plan (CAP).

302 LIMITATIONS – OPACITY: ~~No~~ An owner or operator shall not discharge into the ambient air from any single source of emissions any air contaminant, other than uncombined water, in excess of 20% opacity.

303 LIMITATIONS – SULFUR IN FUEL: An owner or operator of any applicable equipment listed in Section 102 of this rule that burns liquid fuel oil or a mixture or blend of fuel oil with any other fuels shall use only low sulfur oil or ultra low sulfur diesel. An owner or operator using waste derived fuel gas shall use only waste derived fuel gas with a sulfur content less than or equal to 800 ppm (0.08%) that contains no more than 0.08% sulfur by weight, alone or in combination with other fuels.

304 LIMITATIONS – NITROGEN OXIDES:

304.1 An owner or operator of any combustion equipment listed in Section 102 of this rule, except gas turbines, with a heat input of greater than 10 MMBtu/hr to 100 MMBtu/hr, ~~except gas turbines,~~ shall comply either with ~~(a) or (b) below~~ Sections 304.1(a) or 304.1(b) of this rule. Gas turbines are subject to both Sections 304.1(a) and 304.1(b) of this rule below:

- a. Establish initial optimal baseline concentrations for NO_x and CO within 90 days of the first usage of the combustion equipment utilizing the initial design burner specifications or manufacturer's recommendations to ensure good combustion practices. Tune the unit annually in accordance with good combustion practices or a follow the manufacturer's recommended procedure, if applicable, – that will include the following at a minimum: For low emission burner systems that do not provide accessibility for combustion chamber inspection, burner inspection, or inspection of the flame pattern, an owner or operator shall provide documentation from the manufacturer and follow manufacturer's recommended procedure. If using good combustion practices, the owner or operator shall include the following at a minimum:



- (1) Inspect the burner system and clean and replace any components of the burner as necessary to minimize emissions of NO_x and CO; and
 - (2) Inspect the burner chamber for areas of impingement and remove if necessary; and
 - (3) Inspect the flame pattern and make adjustments as necessary to optimize the flame pattern; and
 - (4) Inspect the system controlling the air-to-fuel ratio and ensure that it is correctly calibrated and functioning properly; and
 - (5) Measure the NO_x and the CO concentration of the effluent stream after each adjustment was made with a handheld portable monitor to ensure optimal baseline concentrations are maintained.
- b.** Limit nitrogen oxide emissions to no more than the following amounts:
- (1) ~~155 ppm~~ 42 ppm calculated as nitrogen dioxide, when burning gaseous fuel. During steady state operations, this test result using EPA Reference Method(s) 7 or other EPA-approved test method designated by the Control Officer shall be based upon the arithmetic mean of the results of three test runs. Each test run shall have a minimum sample run time of one hour.
 - (2) ~~230 ppm~~ 65 ppm calculated as nitrogen dioxide, when burning liquid fuel. During steady state operations, this test result using EPA Reference Method(s) 7 or other EPA-approved test method designated by the Control Officer shall be based upon the arithmetic mean of the results of three test runs. Each test run shall have a minimum sample run time of one hour.
- c.** For simple gas turbines, the nitrogen oxides shall be measured dry and corrected to 15% oxygen, during steady state operations. For all other combustion equipment, the nitrogen oxides shall be measured dry and corrected to 3% oxygen.
- 304.2** An owner or operator of any combustion equipment, listed in Section 102 of this rule, with a heat input greater than 100 MMBtu/hr, shall:
- a.** Tune the equipment every 6 months with good combustion practices or a manufacturer's procedure that at a minimum includes the procedures listed in ~~subsection 304.1a~~ Section 304.1(a) of this rule and;
 - b.** Meet the NO_x emission limits as stated in ~~subsection 304.1b~~ Section 304.1(b) of this rule.
- 305** **LIMITATIONS-CARBON MONOXIDE:** ~~No~~ An owner or operator of any equipment listed in Section 102 of this rule with a heat input greater than 100 MMBtu/hr shall not cause to be discharged into the atmosphere, carbon monoxide (CO), measured in excess of 400 ppmv at any time. ~~This~~ During steady state operations, this test result, using EPA Reference Method 10 or other EPA-approved test method designated by the Control Officer, shall be based upon the arithmetic mean of the results of three test runs and shall be measured during steady state compliance source testing. Each test run shall have a minimum sample time of one hour. For simple gas turbines, the CO shall be measured dry and corrected to 15% oxygen, during steady state operations. For all other combustion equipment, the CO shall be measured dry and corrected to 3% oxygen.
- 306** **REQUIREMENTS FOR AIR POLLUTION CONTROL EQUIPMENT AND ECS MONITORING EQUIPMENT:**
- 306.1** **Emission Control System Required:** For affected operations which may exceed any of the applicable standards set forth in Sections 300 of this rule, an owner or operator may comply by installing and operating an emission control system (ECS) or a combustion control system which reduces emissions to below the applicable standards in Section 300 of this rule.
- 306.2** **Providing and Maintaining ECS Monitoring Devices:** ~~No~~ An owner or operator required to use an approved ECS pursuant to this rule shall not do so without first providing, properly installing, operating, and maintaining in calibration and in good working order, devices for indicating temperatures, pressures, transfer rates, rates of flow, or other operating conditions necessary to determine if air pollution control equipment is functioning properly and is properly maintained as described in an approved Operation and Maintenance (O&M) Plan.
- 306.3** ~~Operation and Maintenance (O&M) Plan Required for ECS:~~
- a. General Requirements:** An owner or operator shall provide and maintain an O&M Plan for any ECS, any other emission processing equipment, and any ECS monitoring devices that are used pursuant to this rule or an air pollution permit.
 - b. Approval by Control Officer:** An owner or operator shall submit to the Control Officer for approval the O&M Plans of each ECS and each ECS monitoring device that is used pursuant to this rule.
 - c. Initial Plans:** An owner or operator that is required to have an O&M Plan pursuant to this rule shall

comply with all O&M Plans that the owner or operator has submitted for approval, but which have not yet been approved, unless notified by the Control Officer in writing. Once the initial plan has been approved in writing by the Control Officer, an owner or operator shall comply with this approved plan.

- d. **Revisions to Plan:** If revisions to the initial plan have been approved by the Control Officer in writing, an owner or operator shall comply with the revisions to the initial plan. If revisions to the plan have not yet been approved by the Control Officer in writing, then an owner or operator shall comply with the most recent O&M plan on file at Maricopa County Air Quality Department.
- e. **Control Officer Modifications to Plan:** After discussion with the owner or operator, the Control Officer may modify the plan in writing prior to approval of the initial O&M plan. An owner or operator shall then comply with the plan that has been modified by the Control Officer.

SECTION 400 – ADMINISTRATIVE REQUIREMENTS (NOT APPLICABLE)

401 COMPLIANCE SCHEDULE

- 401.1 O&M Plan:** Any owner or operator employing an approved ECS on the effective date of this rule shall by July 2, 2017 file an O&M Plan with the Control Officer in accordance with Section 306.3 of this rule.
- 401.2 Modifications to Existing ECS:** Any owner or operator required to modify their ECS equipment or system by either reconstructing or adding on equipment for compliance with this rule shall by July 2, 2016 file a schedule for the modification with the Control Officer. The plan shall show how the ECS is to be used to achieve full compliance and shall specify dates for completing increments of progress. Any and all ECS used to achieve such compliance shall be in operation by November 2, 2018.
- 401.3 ECS Installation:** An owner or operator required to install an ECS for compliance with this rule shall by July 2, 2017 file a schedule for the installation with the Control Officer. The ECS shall then be installed and in compliance by November 2, 2019.

SECTION 500 – MONITORING AND RECORDS

501 RECORDKEEPING AND REPORTING: An owner or operator subject to this rule shall comply with the requirements set forth in this section. Any records and data required by this section shall be kept on site at all times in a consistent and complete manner and be made available without delay to the Control Officer or his designee upon request. Records shall consist of the following information:

- 501.1 Equipment Listed in Section 102 of this Rule:** Type of fuel used, amount of fuel used, and amount of sulfur in the fuel if using liquid fuel, and the days and hours of operation.
- 501.2 Emergency Fuel Usage:** Monthly records of: type of emergency fuel used, dates and hours of operation using emergency fuel, and nature of the emergency or purpose for the use of the emergency fuel as stated in ~~subsections 104.1 and 104.2~~ Sections 104.1 and 104.2. Yearly records of the twelve month log of hours of operation in the emergency mode.
- 501.3 Good Combustion Practice:** Measurements of the temperature differential across the burners of turbines per ~~subsection 301.3~~ Section 301.3 of this rule, results of evaluation and corrective action taken to reduce the temperature differential or a finding that the temperature differential returned to the range listed in ~~subsection 301.3(a) or (b)~~ Sections 301.3(a) or 301.3(b) of this rule without any action by the owner or operator.
- 501.4 Tuning Procedure:** Date that the procedure was performed on the particular unit and at a minimum: stack gas temperature, flame conditions, nature of the adjustment and results of the nitrogen oxide and carbon monoxide concentrations obtained by using a handheld monitor after each adjustment.

502 RECORDS RETENTION: Copies of reports, logs and supporting documentation required by the Control Officer shall be retained for at least 5 years. Records and information required by this rule shall also be retained for at least 5 years.

503 COMPLIANCE DETERMINATION:

- 503.1 ~~Low Sulfur Oil Verification~~ Sulfur In Fuel Verification:**
 - a. An owner or operator shall submit fuel oil receipts from the fuel supplier indicating the sulfur content of the fuel oil or verification that the fuel oil used meets the 0.05% sulfur limit or the 0.08% limit for landfill or digester gas if requested by the Control Officer, or **Ultra Low Sulfur Diesel:** If the Control Officer requests documentation of the sulfur content of the fuel to demonstrate the 0.0015% limit, the owner or operator shall submit one of the following:
 - (1) Fuel receipts, or
 - (2) Contract specifications, or
 - (3) Pipeline meter tickets, or



- (4) Fuel supplier information, or
- (5) Purchase records, or
- (6) Test results of the fuel for sulfur content

The items listed above must provide accurate sulfur content values or be based on enforceable test methods as approved by the Administrator to determine the sulfur content.

- b. If fuel receipts are not available, an owner or operator shall submit a statement of certification or proof of the sulfur content of the fuel oil from the supplier to the Control Officer, or **Waste Derived Fuel Gas**: The owner or operator shall submit documentation of the concentration of the sulfur level of the waste derived fuel gas to the Control Officer upon request. The sulfur content of gaseous fuels shall be determined by South Coast Air Quality Management District Method 307-94 Determination of Sulfur in a Gaseous Matrix.
- e. An owner or operator may elect to test the fuel oil for sulfur content in lieu of certification from the fuel supplier or fuel receipts using one of the test methods incorporated by reference in subsections 504.11, 504.12, 504.14 or 504.15.

503.2 Gaseous Emissions-Source Test: Boilers with a heat input capacity of ~~10 MMBtu~~ 100 MMBtu per hour or greater, must conduct all applicable performance (stack) tests on a triennial basis. Triennial performance tests must be completed no more than 37 months after the previous performance test.

503.3 Gaseous Emissions-Continuous Emission Monitoring System (CEMS): Compliance with the emission requirements specified in Sections 301 through 304 of this rule may also be determined using CEMS. Where the unit(s) are equipped with CEMS:

- a. **General:** All CEMS must be installed according to the procedures specified in 40 CFR 60.13(g). All CEMS shall be installed such that a representative measurement of emissions is obtained. Additional procedures for the location of CEMS found in 40 CFR 60, Appendix B shall be used. The data recorder for CEMS shall be in operation at all times the unit is operated.
- b. **Cycle Time:** An owner or operator of any unit using a CEMS shall ensure that the CEMS completes a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15 minute period.
- c. **Calibration:** Zero and span shall be checked once every 24 hours. The CEMS shall be calibrated in accordance with the manufacturer's specifications.
- d. **Averaging:** The data recorded during periods of calibration checks, zero and span adjustments shall not be included in averaging for compliance determinations. Compliance shall be determined on an hourly basis using the average of the 3 previous 1 hour average emissions concentrations. The 1-hour average emissions concentration shall be determined from at least two data points recorded by the CEMS.
- e. **Accuracy Testing:** Accuracy testing of CEMS shall be conducted using a relative accuracy test audit pursuant to 40 CFR 60, Appendix F.

504 TEST METHODS ADOPTED BY REFERENCE COMPLIANCE DETERMINATION-TEST METHODS INCORPORATED BY REFERENCE: The following test methods are approved for use for the purpose of determining compliance with this rule. The test methods The EPA test methods as they exist in the Code of Federal Regulations (CFR) (July 1, 2004), as listed below, are incorporated by reference in Appendix G of the Maricopa County Air Pollution Control Regulations. Alternative test methods as approved by the Administrator or other EPA-approved test methods may be used upon written approval from the Control Officer. When more than one test method is permitted for the same determination, an exceedance under any method will constitute a violation. Copies of test methods referenced in this section are available at the Maricopa County Air Quality Department, 1001 N. Central Avenue, Suite 125, Phoenix, AZ 85004-1942. ~~When more than one test method, as listed in subsections 504.11, 504.12, 504.14, or 504.15 of this rule, is permitted for the same determination, an exceedance of the limits established in this rule determined by any one of the applicable test methods constitutes a violation.~~

- 504.1** EPA Reference Methods 1 (“Sample and Velocity Traverses for Stationary Sources”), and 1 A (“Sample and Velocity Traverses for Stationary Sources with Small Stacks and Ducts”) (40 CFR 60, Appendix A).
- 504.2** EPA Reference Methods 2 (“Determination of Stack Gas Velocity and Volumetric Flow Rate”), 2A (“Direct Measurement of Gas Volume Through Pipes and Small Ducts”), 2C (“Determination of Stack Gas Velocity and Volumetric Flow Rate in Small Stacks or Ducts”), and 2D (“Measurement of Gas Volumetric Flow Rates in Small Pipes and Ducts”) (40 CFR 60, Appendix A).
- 504.3** EPA Reference Methods 3 (“Gas Analysis for the Determination of Dry Molecular Weight”), 3A (“Determination of Oxygen and Carbon Dioxide Concentrations in Emissions from Stationary Sources (Instrumental Analyzer Procedure”), 3B (“Gas Analysis for the Determination of Emission Rate



- Correction Factor of Excess Air”), and 3C (“Determination of Carbon Dioxide, Methane, Nitrogen and Oxygen from Stationary Sources”) (40 CFR 60, Appendix A).
- 504.4 EPA Reference Method 4 (“Determination of Moisture Content in Stack Gases”) (40 CFR 60, Appendix A).
 - 504.5 EPA Reference Method 5 (“Determination of Particulate Emissions from Stationary Sources”) (40 CFR 60, Appendix A)
 - 504.6 EPA Reference Method 202 (“Determination of Condensable Particulate Emissions from Stationary Sources”) (40 CFR 51, Appendix M).
 - 504.7 EPA Reference Methods 7 (“Determination of Nitrogen Oxide Emissions from Stationary Sources”), 7A (“Determination of Nitrogen Oxide Emissions form Stationary Sources”), 7B (“Determination of Nitrogen Oxide Emissions from Stationary Sources – Ultraviolet Spectrometry”), 7C (“Determination of Nitrogen Oxide Emissions from Stationary Sources – Alkaline-Permanganate Colorimetric Method”), 7D (“Determination of Nitrogen Oxide Emissions from Stationary Sources – Alkaline – Permanganate Chromatographic Method”), and 7E (“Determination of Nitrogen Oxide Emissions from Stationary Sources – Instrumental Analyzer Method“), (40 CFR 60, Appendix A).
 - 504.8 EPA Reference Method 9, (“Visual Determination of the Opacity of Emissions from Stationary Sources”) (40 CFR 60, Appendix A).
 - 504.9 EPA Reference Method 10, (“Determination of Carbon Monoxide from Stationary Sources”) (40 CFR 60, Appendix A).
 - 504.10 EPA Reference Method 20, (“Determination of Nitrogen Oxides, Sulfur Dioxide, and Diluent Emissions from Stationary Gas Turbines”) (40 CFR 60, Appendix A).
 - 504.11 ~~American Society of Testing Materials, ASTM Method D2622-92 or D2622-98, (“Standard Test Method for Sulfur in Petroleum Products by Wavelength Dispersive X-Ray Fluorescence Spectrometry”), 1992 or 1998.~~
 - 504.12 ~~American Society of Testing Materials, ASTM Method D1266-98, (“Standard Test Method for Sulfur in Petroleum Products (Lamp Method”), 1998.~~
 - 504.13 ~~504.12 American Society of Testing Materials, ASTM Method D2880-00 D2880-96, (“Standard Specification for Gas Turbine Fuel Oils”), 2000~~
 - 504.14 ~~504.13 American Society of Testing Materials, ASTM Method D4294-90 or 98 D4294-02 or D4294-03, (“Standard Test Method for Sulfur in Petroleum and Petroleum Products by Energy- Dispersive X-ray Fluorescence Spectrometry”), 1990 or 1998.~~
 - 504.15 ~~504.14 American Society of Testing Materials, ASTM Method D5504-01 or D5504-08, (“Standard Test Method for Determination of Sulfur compounds in Natural Gas and Gaseous Fuels by Gas Chromatography and Chemiluminescence”), 2006.~~
 - 504.15 South Coast Air Quality Management District Method 307-94 Determination of Sulfur in a Gaseous Matrix

**NOTICE OF FINAL RULEMAKING
 MARICOPA COUNTY AIR POLLUTION CONTROL REGULATIONS
 REGULATION III – CONTROL OF AIR CONTAMINANTS
 RULE 324: STATIONARY INTERNAL COMBUSTION (IC) ENGINES**

[M16-285]

PREAMBLE

- | | | |
|-----------|--|--|
| 1. | <u>Rule affected</u>
Rule 324: Stationary Internal Combustion (IC) Engines | <u>Rulemaking action</u>
Amended |
| 2. | <u>Statutory authority for the rulemaking:</u>
Authorizing statutes: A.R.S. §§ 49-474, 49-479, and 49-480
Implementing Statute: A.R.S. § 49-112 | |
| 3. | <u>The effective date of the rule:</u>
Date of adoption: November 2, 2016 | |
| 4. | <u>List of public notices addressing this rulemaking:</u> | |



Notice of Briefing to Maricopa County Manager: May 2015
Notice of Stakeholder Workshops: August 3, 2015, November 19, 2015, and January 27, 2016
Notice of Maricopa County Board of Health Meeting: April 25, 2016
Notice of Proposed Rulemaking: 22 A.A.R. 1145, May 13, 2016

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

Name: Johanna M. Kuspert or Hether Krause
Maricopa County Air Quality Department
Planning and Analysis Division
Address: 1001 N. Central Ave., Suite 125
Phoenix, AZ 85004
Telephone: (602) 506-6010
Fax: (602) 506-6179
E-mail: aqplanning@mail.maricopa.gov

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

Summary:

Rule 324 (Stationary Internal Combustion (IC) Engines) limits the discharge of carbon monoxide, nitrogen oxides (NO_x), sulfur oxides, volatile organic compounds (VOCs), and particulate matter emissions from stationary internal combustion (IC) engines. Revisions to Rule 324 addressed the requirements of the State Implementation Plan (SIP) for “moderate” nonattainment for the 2008 eight-hour ozone national ambient air quality standard (NAAQS). Rule 324 revisions included Reasonably Available Control Technology (RACT) for NO_x.

In addition, the amendments corrected typographical or other clerical errors; made minor grammatical changes to improve readability or clarity; modified the format, numbering, order, capitalization, punctuation, or syntax of certain text to increase standardization within and among rules; or made various other minor changes of a purely editorial nature. As these changes did not alter the sense, meaning, or effect of the rules, they are not described in detail here, but can be readily discerned in the “underline/ strikeout” version of the rules contained in Item 14 of this notice.

Issues Raised and Discussed During this Rulemaking Process:

Stakeholders expressed a general understanding for the need for rule revisions based on the department’s nonattainment status; however, Stakeholders were concerned about the emission limitations and what is considered “RACT” and what is considered “beyond RACT”. In addition, questions were raised regarding the following:

- The correlation of Rule 324 with New Source Performance Standards (NSPS)
- The emission limitations for existing engines and new engines
- The compliance schedule for equipment being removed from service

Description of Amendments:

Regarding the Title of the Rule:

The title of the rule was changed to “Stationary Reciprocating Internal Combustion Engines (RICE)”. The term “stationary internal combustion (IC) engine” was changed to “stationary reciprocating internal combustion engine (RICE)” in the definitions and throughout the rule.

Regarding Applicability:

- Section 102 (Applicability): Rule 324 continues to apply to spark-ignition engines or compression-ignition engines including stationary RICE used in cogeneration, with a rated brake horsepower (rated bhp) of greater than 250 and to also apply to a combination of stationary RICE each with a rated bhp greater than 50 used at a source, whose maximum aggregate rated bhp is greater than 250. Rule 324 was revised to also apply to stationary RICE that are subject to federal standards of performance.
- Section 102.3 (Applicability): Rule 324 included new Section 102.3 (per a Stakeholder’s comment) a provision that states that engines subject to Rule 324 may be subject to New Source Performance Standards (NSPS) and/or National Emission Standards for Hazardous Air Pollutants (NESHAP). This text is similar to text in Rule 322 (Power Plant Operations) and Rule 323 (Fuel Burning Equipment from Industrial/Commercial/Institutional (ICI) Sources).

Regarding Exemptions:

- Section 103.2 (Exemptions): Rule 324 clarified that nonroad internal combustion (IC) engines are not considered stationary RICE; included nonroad internal combustion (IC) engines in new Section 103.2; and added that a

- nonroad internal combustion (IC) engine must be operated and approved by the Control Officer as a nonroad internal combustion (IC) engine in order for such engine to be exempt from all of the requirements of Rule 324.
- Sections 104, 105, and 106 (Partial Exemptions): Rule 324 added “as defined in this rule” after “emergency engine” to clarify that the provision that an emergency engine shall not exceed 500 hours of operation applies to the definition of “emergency engine” and applies to an emergency engine subject to Section 104; clarified which provisions in Rule 324 apply to low usage non-emergency engines; and added a partial exemption for engines subject to 40 CFR Part 63, Subpart ZZZZ.

Regarding Definitions:

- The requirements in Rule 324 now harmonize with New Source Performance Standards (NSPS) IIII, JJJJ, and Maximum Achievable Control Technology (MACT) ZZZZ. The definitions of “existing engine” and “new engine” were deleted from Rule 324; the terms are not used in the rule. Rule 324 references the dates before and after which NSPS were promulgated. Rule 324 applies to spark-ignition engines and compression-ignition engines with a rated brake horsepower of greater than 250 and to any stationary reciprocating internal combustion engine subject to the federal standards of performance set forth in 40 CFR 60, Subpart IIII for compression-ignition engines or 40 CFR 60, Subpart JJJJ for spark-ignition engine.
- The definition of “Identical Replacement Engine” was made consistent with the definition of “Equivalent Replacement Engine”. The definition of “Internal Combustion (IC) Engine, Nonroad” was clarified so the text corresponds with the introductory text and corresponds with the definition of “Nonroad” in 40 CFR 1068.30. The U.S. Environmental Protection Agency (EPA) commented that the proposed text that a nonroad IC engine must be approved by the Control Officer (Section 212.1(d)) allows discretion to the Control Officer without guidance or restriction on how the Control Officer shall make the determination. The EPA commented that this text/discretion should be removed. Accordingly, the definition of “nonroad IC engine” now includes an introductory statement that the requirements of a nonroad IC engine must be met and approved by the Control Officer in order for the engine to be determined to be a nonroad IC engine; the intent is that even if the engine meets the definition of a “nonroad IC engine”, it is not a nonroad IC engine until the Control Officer approves it.
- The term “Prime Engine” was changed to “Non-Emergency Engine” and the definition of “Non-Emergency Engine” was added, which is the same definition as the definition of “Prime Engine”. The term “prime engine” was changed to “non-emergency engine” throughout the rule.
- The definition of “Internal Combustion (IC) Engine, Nonroad” was changed to “Nonroad Internal Combustion (IC) Engine”, since “nonroad” is the most important term.
- The definition of “Internal Combustion (IC) Engine, Stationary” was changed to “Stationary Internal Combustion Engine (RICE)”, since “stationary” is the most important term.

Regarding Good Combustion Practices:

- Section 302 (Good Combustion Practices/Tuning Procedure for Stationary RICE): Rule 323 now includes a provision that a handheld monitor may be used by the Control Officer to determine compliance.

Regarding Limitations for Non-Emergency Engines:

- Section 304 (Limitations for Non-Emergency Engines): Rule 324 clarified the three options that non-emergency engines have for complying with Rule 324. A source can comply with (1) the provisions for add-on control equipment for non-emergency engines, (2) the current emission limitations, or (3) the federal standards of performance for non-emergency engines. The current emission limits in Rule 324 are retained; such limits apply to:
 - Engines manufactured prior to October 22, 2003 (the date when Rule 324 was adopted)
 - Engines manufactured on or after October 22, 2003 but prior to July 11, 2005 (the date the New Source Performance Standards were adopted for compression-ignition engines)
 - Engines manufactured on or after October 22, 2003 but prior to June 12, 2006 (the date the New Source Performance Standards were adopted for spark-ignition engines)
- Rule 324 was revised to include a requirement that spark-ignition engines manufactured after June 12, 2006 and compression-ignition engines manufactured after July 11, 2005 comply with federal standards of performance. Per Stakeholders’ comments, Section 304.2, Table 2 does not include a footnote regarding test methods for PM; Section 500 includes test methods for PM.
- Section 306 (Equivalent Replacement Engine or Identical Replacement Engine): Rule 324 clarified when an equivalent replacement engine or an identical replacement engine is to be treated as the original stationary RICE. Section 306.2 was removed; the text is captured in Section 307 (Modification to a Stationary RICE).
- Section 307 (Modification to a Stationary RICE): Rule 324 added Section 307 to address if a modification is made



to a stationary RICE.

- Section 308 (Non-Resetting Totalizing Hour Meter): Rule 324 added Section 308 to require the installation, operation, and maintenance of non-resetting totalizing hour meter.

Regarding Administrative Requirements:

- Section 401 (Compliance Schedule-Stationary RICE Being Removed from Service) was revised to require that if a stationary RICE must be removed from service because such engine does not comply with the emission limits in Rule 324, then the stationary RICE that replaces such engine must comply with all applicable provisions of Rule 324, e.g., limitations for fuel, limitations for opacity, and with the federal standards of performance for non-emergency engines.
- Section 402 (Compliance Schedule-Non-Resetting Totalizing Hour Meter) was added; a non-resetting totalizing hour meter must be installed, operated, and maintained on a stationary RICE.

Regarding Compliance Determinations:

- Section 501 (Compliance Determination) was clarified regarding the compliance determination requirements for stationary RICE, an engine family, and engines with a displacement of greater than or equal to 30 liters per cylinder. Also, the compliance determination for low sulfur oil verification (Section 501.3) was changed to a compliance determination for ultra low sulfur diesel verification consistent with federal standards. Due to the EPA's comments, additional language was added to clarify that sulfur content verification documents must provide accurate values and utilize enforceable test methods to determine the sulfur content. Also, the test method for determining sulfur content of waste gas was added in Sections 501.4 and 504.16 (Compliance Determination-Test Methods Incorporated by Reference).
- Section 501.1(d) (Compliance Determination-Stationary RICE) was added. Rule 324 was revised to include a requirement that sources that choose add-on control equipment for non-emergency engines (Section 304.1) shall demonstrate compliance by installing, operating, and maintaining in calibration, devices that continuously monitor the operational characteristics of the engine and any NO_x emission reduction system.
- Section 503 (Compliance Determination-Test Methods Incorporated by Reference) was clarified to allow alternative test methods.
- Section 504.12 (Compliance Determination-Test Methods Incorporated by Reference): The test method "American Society of Testing Materials, ASTM Method D1266-98, ("Standard Test Method for Sulfur in Petroleum Products - Lamp Method"), 1998" was deleted. The EPA commented that the test method may not be appropriate; its range is 0.01-0.4% which will not be able to verify compliance with the definition of ultra low sulfur diesel fuel at <0.0015%.

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

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

§ 49-112 County regulation; standards

§ 49-112(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 of 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 regulation.
3. Any fee or tax adopted under the rule, ordinance or other regulation will not exceed the reasonable costs of the county to issue and administer that permit or plan approval program.

§ 49-112(B)

When authorized by law, a county may adopt rules, ordinances or other regulations in lieu of a state program that are as stringent as 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 the county demonstrates that the cost of obtaining permits or other approvals from the county will approximately equal or be less than the fee or cost of obtaining similar permits or approvals under this title or any rule adopted pursuant to this title. If the state has not adopted a fee or tax for similar permits

or approvals, the county may adopt a fee when authorized by law in the rule, ordinance or other regulation that does not exceed the reasonable costs of the county to issue and administer that permit or plan approval program.

The department complies with A.R.S. § 49-112(A) in that Maricopa County fails to meet the National Ambient Air Quality Standards for both ozone and particulates. The County failed to meet 2008 8-hour ozone standard by the marginal area attainment date of July 20, 2015. The EPA issued a final rule, effective June 3, 2016, reclassifying the Maricopa County area to “moderate” (published at 86 FR 26697, May 4, 2016). Further, a portion of the County was classified as a serious ozone nonattainment area under the previous 1-hour ozone standard requiring the County to continue to maintain the measures and requirements that allowed the County to attain that standard. Currently, a portion of Maricopa County and Apache Junction in Pinal County is designated serious nonattainment for the PM₁₀ 24-hour standard. This is the only serious PM₁₀ nonattainment area in Arizona. Revisions to Rule 324 are being proposed to address the requirements of the State Implementation Plan (SIP) for “moderate” nonattainment for the 2008 eight-hour ozone national ambient air quality standard (NAAQS). The proposed amendments in Rule 324 include Reasonably Available Control Technology (RACT) for NO_x.

The department complies with A.R.S. § 49-112(B) in that the amendments to Rule 324 are not more stringent than or in addition to a provision of Title 49 or rule adopted by the director or any board or commission authorized to adopt rules pursuant to Title 49; address the peculiar local conditions in Maricopa County; are authorized under A.R.S. Title 49, Chapter 3, Article 3; and are not in lieu of a state program.

8. Documents or studies referenced and/or reviewed for this rulemaking:

Not applicable

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:

Not applicable

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

The following discussion addresses each of the elements required for an economic, small business and consumer impact statement under A.R.S. § 41-1055.

An identification of the rulemaking.

This rulemaking revised Rule 324 (Stationary Internal Combustion (IC) Engines).

An identification of the persons who will be directly affected by, bear the costs of or directly benefit from the rulemaking.

The persons who are directly affected by and bear the costs of this rulemaking will be facilities in Maricopa County that use stationary spark- or compression-ignited RICE including stationary RICE used in cogeneration with a rating of greater than 250 brake horsepower (rated bhp), and facilities that use a combination of stationary RICE each with a rated bhp greater than 50 used at a source, whose maximum aggregate rated bhp is greater than 250. The department has issued permits to more than 590 facilities.

A cost benefit analysis of the following:

(a) The probable costs and benefits to the implementing agency and other agencies directly affected by the implementation and enforcement of the rulemaking.

Because this rulemaking did not impose any new compliance burdens on regulated entities or introduce additional regulatory requirements, the department deemed that none of the revisions have potentially significant economic impacts. It is expected that the department will benefit from the increased clarity of the rule with decreased time to inspect a facility or prepare a permit. In addition, the rulemaking will not impose increased monetary or regulatory costs on other state agencies, political subdivisions of this state, persons, or individuals so regulated.

The benefits of the rule revision are anticipated to be a result of the following changes:

- Changing the title of the rule to: Stationary Reciprocating Internal Combustion Engines (RICE);
- Adding a requirement that spark-ignition engines manufactured after June 12, 2006 and compression-ignition engines manufactured after July 11, 2005 comply with the federal standards of performance;
- Adding a compliance schedule for installing, maintaining, and operating a non-resetting totalizing hour meter;
- Reformatting Tables 1, 2, and 3 to clarify emission limits and retain current emission limits;
- Clarifying the compliance schedule for stationary RICE being removed from service;
- Clarifying that alternative test methods may be used if approved by the Control Officer.

The requirement that spark-ignition engines and compression-ignition engines must comply with existing



federal standards of performance and the compliance schedule for a non-resetting totalizing hour-meter are revisions that now align Maricopa County requirements with existing federal standards. Based on observations by department inspectors, all facilities subject to this rule as revised should already be in compliance with this requirement; therefore, no incremental costs are associated with the Rule 324 revisions.

(b) The probable costs and benefits to a political subdivision of this state directly affected by the implementation and enforcement of the rulemaking

The rule revisions do not impose increased monetary or regulatory costs on other state agencies, political subdivisions of this state, persons, or individuals so regulated.

(c) The probable costs and benefits to businesses directly affected by the rulemaking, including any anticipated effect on the revenues or payroll expenditures of employers who are subject to the rulemaking.

The department anticipates that increased clarity provided by the Rule 324 revisions will provide a benefit to the regulated community; it will take less time for sources subject to the rule to understand and comply with the rule, which leads to increased compliance, which leads to decreased costs of compliance to the regulated community. The department does not anticipate these rule revisions to have a significant impact on a person's income, revenue, or employment in this state related to this activity. The rule revision did not impose increased monetary or regulatory costs on individuals so regulated.

A general description of the probable impact on private and public employment in businesses, agencies and political subdivisions of this state directly affected by the rulemaking.

The rule revisions did not impose increased monetary or regulatory costs on other state agencies, political subdivisions of this state, persons, or individuals so regulated.

A statement of the probable impact of the rulemaking on small businesses.

The rule revisions did not impose increased monetary or regulatory costs on any business, persons, or individuals so regulated.

(a) An identification of the small businesses subject to the rulemaking.

Small businesses subject to this rulemaking are those facilities in Maricopa County that use stationary spark- or compression-ignited RICE including stationary RICE used in cogeneration with a rating of greater than 250 brake horsepower (rated bhp), and facilities that use a combination of stationary RICE each with a rated bhp greater than 50 used at a source, whose maximum aggregate rated bhp is greater than 250.

(b) The administrative and other costs required for compliance with the rulemaking.

This rulemaking updated and clarified existing rule provisions and definitions to be consistent with federal performance standards to reduce confusion and improve understanding and readability. The department considered the implications of the amendments to the regulated entities and the implementing agency and deemed that none of the rule revisions have potentially significant economic impacts.

(c) A description of the methods that the agency may use to reduce the impact on small businesses.

(i) Establishing less costly compliance requirements in the rulemaking for small businesses.

By correcting and clarifying existing rule provisions and definitions, this rulemaking lessens or eases the regulatory burden for small businesses.

(ii) Establishing less costly schedules or less stringent deadlines for compliance in the rulemaking.

This rulemaking corrected or clarified existing rule provisions and definitions to reduce confusion and improve understanding and readability. Although the revised rule does include a schedule for compliance with installation of non-resetting totalizing hour meters, based on department inspector observations, the subject sources should already be in compliance with this requirement; therefore, no cost impacts on businesses, including small businesses, are anticipated.

(iii) Exempting small businesses from any or all requirements of the rulemaking.

This rulemaking corrected or clarified existing rule provisions and definitions to reduce confusion and improve understanding and readability.

(d) The probable cost and benefit to private persons and consumers who are directly affected by the rulemaking.

This rulemaking did not impose any new compliance burdens on regulated entities or introduce additional regulatory requirements and will not impose increased monetary or regulatory costs on any business, persons, or individuals so regulated. As such, there are no costs to pass through to consumers which means there are no impacts on consumers.

A statement of the probable effect on state revenues.

The rule revisions did not impose increased monetary or regulatory costs on other state agencies, political subdivisions of this state, persons, or individuals so regulated. Without costs to pass through to customers, there is no projected change in consumer purchase patterns and, thus, no impact on state revenues from sales taxes.

A description of any less intrusive or less costly alternative methods of achieving the purpose of the rulemaking.

This rulemaking corrected or clarified existing rule provisions and definitions to reduce confusion and improve understanding and readability.

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

Name: Johanna M. Kuspert or Hether Krause
Maricopa County Air Quality Department
Planning and Analysis Division
Address: 1001 N. Central Ave., Suite 125
Phoenix, AZ 85004
Telephone: (602) 506-6010
Fax: (602) 506-6179
E-mail: aqplanning@mail.maricopa.gov

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

Since the Notice of Proposed Rulemaking was published on May 13, 2016 (22 A.A.R 1145), the department made the following additional amendments:

- Section 103.2 (Exemptions): Did not include proposed new text “a piece of equipment that is approved by the Control Officer as a nonroad IC engine” in Section 103.2(b), per comments from the Salt River Project Agricultural Improvement and Power District (SRP) and the U.S. Environmental Protection Agency (EPA).
- Sections 104, 105, 106 (Partial Exemptions): Revised the introductory statements to state in part “...shall comply only with the provisions of...”, per comments from SRP.
- Sections 105.1 and 105.2 (Partial Exemptions for Low Usage Non-Emergency Engines): Changed proposed new text “hours in any 12 consecutive-calendar-month period” to “hours per calendar year” to be consistent with text in Section 104.5 (Partial Exemptions for Emergency Engines) and to be consistent with text in 40 CFR Part 60, Subpart IIII and 40 CFR Part 60, Subpart JJJJ.
- Section 207.3 (Definition of “Equivalent Replacement Engine”): Included new text “for the purpose of this rule” to the end-of the first sentence, per comments from the EPA.
- Section 212.1 (Definition of “Nonroad Internal Combustion (IC) Engine”): Did not include proposed new text “upon approval by the Control Officer” in Section 212.1, per comments from the Arizona Public Service Company (APS), SRP, and the EPA.
- Section 304.1 (Limitations for Non-Emergency Engines 250 Rated Bhp or Greater-Add-on Control Equipment for Non-Emergency Engines): Did not include proposed new text regarding add-on control equipment for non-emergency engines - “The uncontrolled NO_x emissions from the non-emergency engines shall be reduced with add-on control equipment in compliance with Table 1 (engine category and weight percent reduction)”.
- Section 501.1(d) (Compliance Determination-Stationary RICE): Did not include proposed new text “An owner or operator of a stationary RICE shall demonstrate compliance with Section 304.1 of this rule, by installing, operating, and maintaining in calibration, devices that continuously monitor the operational characteristics of the engine and any NO_x emission reduction system”, because the department did not include proposed new text in Section 304.1 regarding add-on control equipment for non-emergency engines.
- Section 501.3 (Compliance Determination-Ultra Low Sulfur Diesel Verification): Revised the new text after the list of items in Sections 501.3 (a)-(f) to change “and utilize” to “or be based on” and added “as approved by the Administrator” after “test methods”.
- Section 501.3 (Compliance Determination-Ultra Low Sulfur Diesel Verification): Revised the new text from “sulfur content of the fuel oil to demonstrate the 0.0015% limits” to “sulfur content of the fuel to demonstrate the 0.0015% limit”. Revised the new text in Section 501.3(f) from “testing of the fuel oil for sulfur content” to “test results of the fuel for sulfur content”



- Section 501.3(d) (Compliance Determination-Ultra Low Sulfur Diesel Verification): Removed Safety Data Sheets (SDS)/Material Safety Data Sheets (MSDS) from the list of documentation of the sulfur content of the fuel oil, per the EPA's comments.
- Section 503 (Compliance Determination-Test Methods Incorporated By Reference): Deleted the provision allowing test methods to be used upon sole approval by the Control Officer and added text that allows test methods as approved by the Administrator to be used, per the EPA's comments.

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

Since the Notice of Proposed Rulemaking was published on May 13, 2016 (22 A.A.R. 1145), the department received comments from the Arizona Public Service Company (APS), Salt River Project Agricultural Improvement and Power District (SRP), and the U.S. Environmental Protection Agency (EPA). The comments and the department's responses are provided below.

Comment #1: Section 103.2 (Exemptions)

In the proposed revisions to Rule 324, MCAQD is proposing to remove portions of Section 103.2, which provided exceptions for nonroad IC engines and Section 104, which provides partial exemptions for emergency IC engines. Based on language contained in the preamble, the details in the formatting of the modified text, which includes overlapping underline and strikethrough, and the structure of the remaining portions of those sections, SRP believes that MCAQD has inadvertently deleted those partial sections. Accordingly, SRP suggests MCAQD reinstate the rule language for Section 103.2 and 104 as contained in the April 25, 2016 Board of Health Staff Report.

Response #1: Section 103.2 (Exemptions)

The department corrected the overlapping underline and strikethrough in Section 103 (Exemptions) and did not include proposed new text "a piece of equipment that is approved by the Control Officer as a nonroad IC engine" in Section 103.2(b).

Comment #2: Section 103.2(b) (Exemptions)

This section allows discretion to the Control Officer on the definition of "nonroad engine" without guidance or restriction on how the Control Officer shall make that determination. The EPA recommends that MCAQD remove this discretion.

Response #2: Section 103.2(b) (Exemptions)

The department did not include proposed new text "a piece of equipment that is approved by the Control Officer as a nonroad IC engine" in Section 103.2(b).

Comment #3: Sections 104, 105, and 106 (Partial Exemptions)

In the proposed revisions to Sections 104, 105, and 106, which provide partial exemptions for emergency engines, low use non-emergency engines, and non-emergency engines subject to 40 CFR Part 63, Subpart ZZZ, respectively, MCAQD does not indicate which sections of Rule 324 the affected engines are exempt from. SRP suggests that MCAQD revise Sections 104, 105, and 106 to indicate which sections the affected engines are exempt from.

Response #3: Sections 104, 105, and 106 (Partial Exemptions)

The department revised the introductory statements in Sections 104, 105, and 106 to state in part "...shall comply only with the provisions of...".

Comment #4: Section 212.1 (Definition of "Nonroad Internal Combustion (IC) Engine")

The proposed revisions to the definition of "Nonroad Internal Combustion (IC) Engine" now indicates that an engine must first receive approval from MCAQD prior to fully qualifying as a nonroad IC engine. Qualifying as a nonroad IC engine is critical since all nonroad IC engines are fully exempt from the requirements of Rule 324. The requirement to receive prior approval from MCAQD for all nonroad IC engines will place a substantial amount of burden on both industry and MCAQD. Given that nonroad IC engines encompass a wide array of equipment including tractors, cranes, bulldozers, fork lifts, portable generators and many other portable engines, the number of IC engines requiring approval from MCAQD will be significant, likely in the thousands. Given that nonroad IC engines have historically been exempt from Rule 324 based on meeting the definition alone, there is likely a great number of IC engine owners and operators that are unaware of the proposed requirements to obtain approval from MCAQD as they are not tracking the rulemaking process. Lastly, MCAQD has not explained why requiring approval for nonroad IC engines is necessary. If MCAQD has reason to believe that sources are inappropriately claiming stationary IC engines as nonroad IC engines in order to claim a rule exemption, this is best addressed through MCAQD's compliance and enforcement divisions, rather than through a change to the provisions of Rule



324. The change would have significant implications to owners and operators of nonroad IC engines and SRP strongly urges MCAQD to not finalize such approval requirements in the final rule.

Response #4: Section 212.1 (Definition of “Nonroad Internal Combustion (IC) Engine”)

The department did not include proposed new text “upon approval by the Control Officer” in Section 212.1.

Comment #5: Section 212.1 (Definition of “Nonroad Internal Combustion (IC) Engine”)

Section 212 of Rule 324 states “upon approval by the Control Officer...”. Does this mean we now have to have all nonroad engines approved by the Control Officer? APS has dozens, if not hundreds, of nonroad engines located within Maricopa County. This includes portable light fixtures, air compressors, nonroad engines used throughout the County to provide power at construction sites. It is unrealistic and unnecessary to have approval on these units since they clearly meet the definition of “nonroad engine”.

Response #5: Section 212.1 (Definition of “Nonroad Internal Combustion (IC) Engine”)

The department did not include proposed new text “upon approval by the Control Officer” in Section 212.1.

Comment #6: Section 212.1 (Definition of “Nonroad Internal Combustion (IC) Engine”)

This section allows discretion to the Control Officer on the definition of “nonroad engine” without guidance or restriction on how the Control Officer shall make that determination. The EPA recommends that MCAQD remove this discretion.

Response #6: Section 212.1 (Definition of “Nonroad Internal Combustion (IC) Engine”)

The department did not include proposed new text “upon approval by the Control Officer” in Section 212.1.

Comment #7: Section 304.3 (Limitations for Non-Emergency Engines 250 Rated BHP or Greater-Federal Standards of Performance for Non-Emergency Engines)

Limits for engines subject to NSPS are not automatically considered RACT by EPA for the purposes of SIP approval. MCAQD must provide analysis that NSPS requirements cited here meet RACT or provide the intended numerical limits and operational requirements explicitly within this rule for EPA to review for SIP approval purposes.

Response #7: Section 304.3 (Limitations for Non-Emergency Engines 250 Rated BHP or Greater-Federal Standards of Performance for Non-Emergency Engines)

A review was conducted by Eastern Research Group, Inc. (ERG) to compare the emissions limits in Rule 324 to other similar rules in other similar jurisdictions, as well as national standards and data sources. ERG reviewed and compared State Implementation Plan (SIP) rules for IC engines in several areas of California to the NSPS Subparts IIII and JJJJ limits incorporated under the revisions to Rule 324. Specifically, IC engine rules for these areas were reviewed: Placer County Air Pollution Control District, Sacramento Metropolitan Air Quality Management District, Ventura County Air Pollution Control District, and South Coast Air Quality Management District. In addition, ERG searched the RACT/BACT/LAER Clearinghouse (RBLC) to locate applicable control technologies. ERG’s search of the RBLC specified processes in the Internal Combustion Engines categories, including Large Internal Combustion Engines greater than 500 horsepower (hp) (all fuel types) and Small Internal Combustion Engines less than 500 hp (all fuel types), with permits dating back to 2000. The search results included the following data fields: RBLC ID, facility name and state, permit date, process name, throughput, pollutant, control technology, and percent efficiency of control. Based on searches conducted for facilities in the IC engine category, ERG found 283 recent RACT, BACT, and LAER decisions for CO, NO_x, and VOC emissions that had sufficient information to be included in this analysis. While the initial RBLC query returned thousands of records, RBLC records were only used if the engine size could be determined and if the emission limits were in units of (g/HP-hr). The majority of the RBLC determinations represent PSD-BACT determinations and some represent LAER determinations.

The engine rules in NSPS Subparts IIII and JJJJ are complex and provide numerous subcategories of engines subject to different emission limits. However, the NSPS rules are generally consistent with both the California SIP rules and recent RBLC determinations, with the exception of the SIP rules for the Los Angeles nonattainment area. The Los Angeles area of California has been classified as being in serious, severe, and extreme nonattainment with the 2008 8-hour ozone standard. Therefore, because these areas have worse nonattainment statuses as compared to Maricopa County, it is expected that their IC engine limits would be more restrictive than for a moderate nonattainment area such as Maricopa County.

The RBLC results represent 283 records that had sufficient information to be useful for comparison. Of the 283 records evaluated, 10 were for smaller compression-ignition engines (less than 250 hp). The NO_x and CO limits for



these smaller engines are lower than the corresponding NSPS Subpart IIII limits for larger engines (greater than 250 hp), while the VOC limits are higher. For the larger engines, the NSPS limits fell within the range of the RBLC limits for most pollutants and engine types, the only exception being VOC limits for spark-ignition engines manufactured between July 1, 2008 and January 1, 2011. A comparison of the emission limits in Rule 324 revisions and NSPS Subparts IIII and JJJJ with the range of limits found in RBLC and the California SIP rules shows that the emission limits in revised Rule 324 are within the range of values found in the RBLC and as required under the California SIP rules. Therefore, the department has determined that the NSPS requirements cited in Rule 324 meet RACT.

Comment #8: Section 306 (Equivalent Replacement Engine or Identical Replacement Engine)

New language at Section 306 treats equivalent and identical replacement engines the same as the engines they are replacing for the purposes of rule compliance. However, the definition of “Equivalent Replacement Engine” would allow for an engine that could be up to 20% larger than the original engine, with the requirement that such larger replacement must also decrease NO_x emissions by at least 20%. While this does not pose an approvability issue for draft Rule 324, the EPA requests that MCAQD clarify that this definition only applies in this context and does not have broader implications.

Response #8: Section 306 (Equivalent Replacement Engine or Identical Replacement Engine)

The department included new text “for the purpose this rule” to the end-of the first sentence in Section 207.3 (Definition of “Equivalent Replacement Engine”).

Comment #9: Section 501.3 (Compliance Determination-Ultra Low Sulfur Diesel Verification)

This section allows for various documents to verify compliance with the ultra low sulfur diesel fuel limit. MCAQD should ensure the documents listed give accurate values and use enforceable test methods. For example, EPA generally has not approved the use of SDS/MSDS to determine compliance in SIP rules, unless the SDS/MSDS specifies that the compound of interest was determined by an approved EPA method.

Response #9: Section 501.3 (Compliance Determination-Ultra Low Sulfur Diesel Verification)

The department deleted Safety Data Sheets (SDS)/Material Safety Data Sheets (MSDS) from the list of documentation of the sulfur content of the fuel oil in Section 501.3(d). The department revised the new text after the list of items in Sections 501.3 (a)-(f) to change “and utilize” to “or be based on” and added “as approved by the Administrator” after “test methods”.

Comment #10: Section 503 (Compliance Determination-Test Methods Incorporated By Reference)

Alternative test methods may not be used upon sole approval by the Control Officer. The EPA asks the County to remove this provision or include language that also requires EPA approval for alternative methods.

Response #10: Section 503 (Compliance Determination-Test Methods Incorporated By Reference)

The department deleted the provision allowing test methods to be used upon sole approval by the Control Officer and added text that allows test methods as approved by the Administrator to be used.

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

Not applicable

15. Incorporations by reference and their location in the rule:

The department incorporated by reference sections of the Code of Federal Regulations in Section 503 (Compliance Determination-Test Methods Incorporated by Reference)

16. Was this rule previously an emergency rule?

No

17. Full text of the rule follows:

MARICOPA COUNTY
AIR POLLUTION CONTROL REGULATIONS
REGULATION III - CONTROL OF AIR CONTAMINANTS
RULE 324
STATIONARY RECIPROCATING INTERNAL COMBUSTION (ICE) ENGINES (RICE)
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Adopted 10/23/03

Revised 10/17/07

Adopted 10/22/2003; Revised 10/17/2007; **Revised 11/02/2016**

MARICOPA COUNTY

AIR POLLUTION CONTROL REGULATIONS

REGULATION III - CONTROL OF AIR CONTAMINANTS

RULE 324

STATIONARY RECIPROCATING INTERNAL COMBUSTION (~~IC~~) ENGINES (RICE)

SECTION 100 – GENERAL

- 101 PURPOSE:** To limit carbon monoxide (CO), nitrogen oxides (NO_x), sulfur oxides (SO_x), volatile organic compounds (VOCs), and particulate matter (PM) emissions from stationary reciprocating internal combustion (~~IC~~) engines (RICE).
- 102 APPLICABILITY:** ~~The provisions of this rule apply to any single existing or new stationary spark or compression-ignited reciprocating IC engine including stationary IC engines used in cogeneration, with a rating of greater than 250 brake horsepower (bhp). The provisions of this rule also apply to a combination of IC engines each with a rated brake horsepower greater than 50 bhp used at a single source, whose maximum aggregate rated brake horsepower is greater than 250 bhp.~~
- 102.1** This rule applies to a spark-ignition engine or compression-ignition engine including stationary RICE used in cogeneration, with a rated brake horsepower (rated bhp) of greater than 250. This rule also applies to a combination of stationary RICE each with a rated bhp greater than 50 used at a source, whose maximum aggregate rated bhp is greater than 250.
- 102.2** A stationary RICE subject to this rule that is also subject to the federal standards of performance set forth in 40 CFR Part 60, Subpart IIII for compression-ignition engines or 40 CFR Part 60, Subpart JJJ for spark-ignition engines shall comply with the most stringent requirements. Whenever more than one provision in this rule applies to such engine or whenever a provision in this rule and a provision in the federal standards apply to such engine, the provision or combination of provisions resulting in the lowest rate of emissions shall apply, unless otherwise specifically exempted or designated.
- 102.3** NSPS & NESHAP: In addition to this rule, a stationary RICE may be subject to New Source Performance Standards (NSPS) in Rule 360 and/or National Emission Standards for Hazardous Air Pollutants (NESHAP) in Rule 370 of these rules. Whenever more than one provision in this rule applies to such engine or whenever a provision in this rule and a provision in the federal standards apply to such engine, the provision or combination of provisions resulting in the lowest rate of emissions shall apply, unless otherwise specifically exempted or designated.
- 103 EXEMPTIONS:** The following types of stationary IC engines are exempt from all of the requirements of this rule but shall comply with Rule 300:
- ~~103.1 Any rotary engine, including gas turbines, jet engines.~~
 - ~~103.2 An IC engine operated as a nonroad engine.~~
 - ~~103.3 A laboratory IC engine used directly and exclusively for engine research including engine development, and subsequent engine performance verification for the purpose of either engine emission control techniques or engine efficiency improvements.~~
 - ~~103.4 A prime engine when it is operated for purposes of performance verification and testing by the owner or operator or by a manufacturer or distributor of such equipment for the purpose of performance verification and testing at the production facility.~~
 - ~~103.5 A compressed gas IC engine used for solar testing and research programs.~~
 - ~~103.6 An IC engine operated as an emergency generator or other equipment at a nuclear power plant that must run for safety reasons and/or operational tests to meet requirements imposed by the Nuclear Regulatory Commission.~~
 - ~~103.7 An IC engine test stand used for evaluating engine performance.; and~~

- 103.8 An IC engine used for training purposes as long as the total number of hours of the operation does not exceed 100 hours per calendar year per engine.
- 103.1 The following types of stationary RICE are exempt from all of the requirements of this rule but shall comply with Rule 300 (Visible Emissions) of these rules:
- a. A rotary engine, including gas turbines, jet engines.
 - b. A stationary RICE used directly and exclusively for engine research including engine development, and subsequent engine performance verification for the purpose of either engine emission control techniques or engine efficiency improvements.
 - c. A non-emergency engine when it is operated for purposes of performance verification and testing by the owner or operator or by a manufacturer or distributor of such equipment for the purpose of performance verification and testing at the production facility.
 - d. A compressed gas stationary RICE used for solar testing and research programs.
 - e. A stationary RICE operated as an emergency engine or other equipment at a nuclear power plant that must run for safety reasons and/or operational tests to meet requirements imposed by the Nuclear Regulatory Commission.
 - f. A stationary RICE test stand used for evaluating engine performance.
 - g. A stationary RICE used for training purposes as long as the total number of hours of the operation does not exceed 100 hours per calendar year per engine.
- 103.2 An IC engine operated as a nonroad IC engine is exempt from all of the requirements of this rule but shall comply with Rule 300 (Visible Emissions) of these rules.
- 104 **PARTIAL EXEMPTIONS FOR EMERGENCY ENGINES:** ~~Any A stationary IC engine RICE operated as an emergency engine, as defined in this rule, for any of the following reasons is exempt from all of the provisions of this rule, except for the provisions in Sections 301, 303, and subsections 502.1 and 502.4:~~ shall comply only with the provisions in Sections 301, 303, 306, 307, 400, 502.1 and 502.4 of this rule when:
- 104.1 Used only for power when normal power service fails from the serving utility or if onsite electrical transmission or onsite power generation equipment fails.
 - 104.2 Used only for the emergency pumping of water resulting from a flood, fire, lightning strikes, police action or for any other essential public services which affect the public health and safety.
 - 104.3 Used for lighting airport runways.
 - 104.4 Used for sewage overflow mitigation and/or prevention.
 - 104.5 Used for reliability-related activities such as engine readiness, calibration, or maintenance or to prevent the occurrence of an unsafe condition during electrical system maintenance, as long as the total number of hours of the operation does not exceed 100 hours per calendar year per engine as evidenced by an installed non-resettable hour meter.
 - 104.6 Used as the ~~prime non-emergency~~ engine when the ~~prime non-emergency~~ engine has failed, but only for such time as is needed to repair the ~~prime non-emergency~~ engine, ~~or~~
 - 104.7 Used to operate standby emergency water pumps for fire control that activate when sensors detect low water pressure.
- 105 **PARTIAL EXEMPTIONS FOR LOW USAGE NON-EMERGENCY, LOW USAGE PRIME ENGINES:** ~~The following low usage non-emergency engines, low usage prime engines are exempt from all of the provisions of this rule except for the provisions in Sections 301, 303, and subsections 502.1 and 502.4:~~ shall comply only with the provisions in Sections 301, 303, 306, 307, 400, 502.1 and 502.4 of this rule for:
- 105.1 Each engine with a rated bhp at or below 1000 bhp that operates less than 200 hours in any 12 consecutive month period per calendar year as evidenced by an installed non-resettable hour meter.
 - 105.2 Each engine with a rated bhp above 1000 bhp that operates less than 100 hours in any 12 consecutive month period per calendar year as evidenced by an installed non-resettable hour meter.
- 106 **PARTIAL EXEMPTION FOR NON-EMERGENCY ENGINES SUBJECT TO 40 CFR PART 63, SUBPART ~~ZZZZ~~:** A stationary RICE subject to the federal standards of performance set forth in 40 CFR Part 63, Subpart ~~ZZZZ~~ shall comply only with the provisions in Sections 502.1, 502.2, and 502.3 of this rule.
- SECTION 200 – DEFINITIONS:** For the purpose of this rule, the following definitions shall apply, in addition to those definitions found in Rule 100 (General Provisions and Definitions) of these rules. In the event of any inconsistency between any of the Maricopa County Air Pollution Control Rules, the definitions in this rule take precedence. See Rule 100 (General Provisions and Definitions) of these rules for definitions of terms that are used but not specifically defined in this rule.
- 201 **AFTERCOOLER / INTERCOOLER:** A system that cools the engine intake air or air/fuel mixture after the air exits



- the turbocharger and prior to the introduction into the cylinder, thereby lowering NO_x emissions.
- 202 **COGENERATION UNIT:** ~~Internal combustion engine unit~~ A stationary RICE unit that burns fuel to simultaneously produce electricity and heat in a single thermodynamic process and is usually located in close proximity to the equipment requiring the heat energy.
- 203 **COMPRESSION-IGNITION ENGINE:** ~~A reciprocating internal combustion engine~~ A stationary RICE with operating characteristics wherein the principal mechanism of igniting the fuel and air mixture in the cylinders is the compression of air in the cylinder until it is so hot that any fuel injected into the air or mixed with the air ignites. In this type of engine, a separate ignition source, such as a spark plug, is not used.
- 204 **DIESEL ENGINE:** A type of ~~compression-ignited IC engine~~ compression-ignition engine.
- 205 **EMERGENCY ENGINE:** ~~Any stationary standby IC engine~~ A stationary RICE whose sole function is to provide back-up power when electric power from the local utility is interrupted or when operated solely for any of the reasons listed in Section 104 of this rule. An emergency engine, for the purposes of this rule, shall not be used to supply standby power due to a voluntary reduction in power by a utility or power company, supply power for distribution or sale to the grid, or supply power at a source in order to avoid peak demand charges or high electric energy prices during on-peak price periods and shall not exceed 500 hours of operation per calendar year including the 100 hours listed in ~~subsection~~ Section 104.5 of this rule.
- 206 **ENGINE FAMILY:** A group of ~~engines~~ stationary RICE with similar design features such as fuel type, cooling medium, method of air aspiration, combustion chamber design including cylinder bore and stroke, exhaust after treatment (if any), method of fuel admission, and method of control. These engines are also expected to have similar emission and operating characteristics throughout their useful lives.
- 207 **EQUIVALENT REPLACEMENT ENGINE:** ~~An engine~~ A stationary RICE that is substituted for ~~a another stationary IC engine RICE~~ that is intended to perform the same or similar function as the original engine stationary RICE and where all of the following conditions exist:
- 207.1 The equivalent replacement engine results in equal or lower air contaminant emissions than the ~~existing engine original stationary RICE~~; and
- 207.2 The equivalent replacement engine meets the emission control technology standards contained in ~~either Table 1 or Table 2~~ Section 304 of this rule; and
- 207.3 The rated bhp of the equivalent replacement engine does not exceed the rated bhp of the ~~existing engine original stationary RICE~~ (or sum of ~~existing engines original stationary RICE~~) by more than 20 percent, for the purpose of this rule. For every percentage point increase of the rated ~~brake horsepower bhp~~, there shall be an associated decrease in emissions of nitrogen oxides, expressed as a mass per unit time, equal to or exceeding two percentage points.
- 208 **EXISTING ENGINE:** ~~An engine that commenced operation prior to October 22, 2003 or an engine on which the construction or modification has commenced prior to October 22, 2003, including the contractual obligation to undertake and complete an order for an engine.~~
- 209208 **IDENTICAL REPLACEMENT ENGINE:** ~~An engine that is substituted for an existing stationary IC engine that has the same manufacturer type, model number, manufacturer's maximum rated capacity (bhp), and that is intended to perform the same or similar function as the original stationary IC engine that it replaces and has equal or lower emissions or meets the emission control technology requirements in Section 304, Table 1, 2, or 3. A stationary RICE that is substituted for another stationary RICE that is intended to perform the same or similar function as the original stationary RICE and where all of the following conditions exist:~~
- 208.1 The identical replacement engine results in equal or lower air contaminant emissions than the original stationary RICE; and
- 208.2 The identical replacement engine meets the emission control technology standards contained in Section 304 of this rule; and
- 208.3 The identical replacement engine has the same manufacturer type, model number, and manufacturer's rated bhp as the original stationary RICE.
- 210 **INTERNAL COMBUSTION (IC) ENGINE, NONROAD:**
- 210.1 ~~An IC engine:~~
- a. ~~In or on a piece of equipment that is self-propelled or serves a dual purpose by both propelling itself and performing another function (such as garden tractors, off-highway mobile cranes and bulldozers); or~~
- b. ~~In or on a piece of equipment that is intended to be propelled while performing its function (such as lawnmowers and string trimmers); or~~
- e. ~~That, by itself or in or on a piece of equipment, is portable or transportable, meaning designed to be~~

and capable of being carried or moved from one location to another. Indicia of transportability include but are not limited to, wheels, skids, carrying handles, dollies, trailers, or platforms.

- 210.2 An internal combustion engine is not a nonroad engine if:
- The engine used to propel a motor vehicle or a vehicle used solely for competition, or is subject to standards promulgated under Section 202 of the Clean Air Act; or
 - The engine regulated by a federal New Source Performance Standard promulgated under Section 111 of the Clean Air Act; or
 - The engine otherwise included in paragraph (c) above of this definition remains or will remain at a location for more than 12 consecutive months or a shorter period of time for an engine located at a seasonal source. A location is any single site at a building, structure, facility, or installation. Any engine (or engines) that replace(s) an engine at a location and that is intended to perform the same or similar function as the engine replaced will be included in calculating the consecutive time period. An engine located at a seasonal source is an engine that remains at a seasonal source during the full annual operating period of the seasonal source. A seasonal source is a stationary source that remains in a single location on a permanent basis (i.e. at least two years) and that operates at that single location approximately three months (or more) each year. This paragraph does not apply to an engine after the engine is removed from the location.

211 **INTERNAL COMBUSTION (IC) ENGINE, STATIONARY:** Any reciprocating, piston-driven IC engine that is operated or intended to be operated at one specific location for more than 12 consecutive months or that is attached to a foundation at the location. Any engine that replaces an engine at a location and is intended to perform the same or similar function as the engine being replaced will be included in calculating the consecutive time period. A stationary IC engine is not a nonroad engine.

~~212209~~ **LEAN-BURN ENGINE:** ~~A spark-ignited engine~~ A spark-ignition engine with an air-to-fuel operating range that has more air present than is needed to burn the fuel present and cannot be adjusted to operate with an exhaust oxygen concentration of less than or equal to 2%.

~~213210~~ **LOCATION:** Any single site at a building, structure, facility or installation.

214 **LOW SULFUR OIL:** Fuel oil containing less than or equal to 0.05 % sulfur by weight.

215 **NEW ENGINE:** An engine that is not an existing engine.

211 **NON-EMERGENCY ENGINE:** A stationary RICE that is dedicated to a process or processes for the purpose of supplying primary mechanical or electrical power.

212 **NONROAD INTERNAL COMBUSTION (IC) ENGINE:**

212.1 Equipment that meets the following requirements are nonroad IC engines:

- An internal combustion engine that is (or will be) used in or on a piece of equipment that is self-propelled or serves a dual purpose by both propelling itself and performing another function (such as garden tractors, off-highway mobile cranes and bulldozers); or
- An internal combustion engine that is (or will be) used in or on a piece of equipment that is intended to be propelled while performing its function (such as lawnmowers and string trimmers); or
- An internal combustion engine that by itself or in or on a piece of equipment is portable or transportable, meaning designed to be and capable of being carried or moved from one location to another. Indicia of transportability include but are not limited to, wheels, skids, carrying handles, dollies, trailers, or platforms.

212.2 The following are not nonroad IC engines:

- An engine used to propel a motor vehicle, an aircraft, or equipment used solely for competition; or
- An engine regulated by a federal New Source Performance Standard promulgated under Section 111 of the Clean Air Act; or
- An engine otherwise included in Section 212.1(c) of this rule that remains or will remain at a location for more than 12 consecutive months or a shorter period of time for an engine located at a seasonal source. A location is any single site at a building, structure, facility, or installation. Any engine (or engines) that replace(s) an engine at a location and that is intended to perform the same or similar function as the engine replaced will be included in calculating the consecutive time period. An engine located at a seasonal source is an engine that remains at a seasonal source during the full annual operating period of the seasonal source. A seasonal source is a stationary source that remains in a single location on a permanent basis (i.e. at least two years) and that operates at that single location approximately three months (or more) each year. This paragraph does not apply to an engine after the engine is removed from the location.



- ~~216~~**213 PART(S) PER MILLION, DRY VOLUME (PPMDV):** A unit of proportion equal to 10^{-6} that is measured on a dry basis (minus water) at 15% oxygen.
- ~~217~~ **PRIME ENGINE:** ~~A principal or main use engine that is dedicated to a process or processes for the purpose of supplying primary mechanical or electrical power, as opposed to an emergency engine.~~
- ~~218~~**214 RATED BRAKE HORSEPOWER (RATED BHP):** The maximum brake horsepower (bhp) specified by the engine manufacturer for the engine application, usually listed on the nameplate of the engine. If the engine has been altered so that the maximum brake horsepower is different than the rated brake horsepower on the nameplate, then the maximum brake horsepower shall be considered the rated brake horsepower.
- ~~219~~**215 RICH-BURN ENGINE:** ~~Any spark-ignited IC engine~~ A spark-ignition engine that is not a lean-burn engine.
- ~~220~~**216 SPARK-IGNITION ENGINE:** ~~An IC engine~~ A stationary RICE wherein the fuel is usually mixed with intake air before introduction into the combustion chamber resulting in a relatively homogeneous air/fuel mixture in the combustion chamber, at which time a spark plug, ~~or other device,~~ then ignites the air/fuel mixture.
- ~~217~~ **STATIONARY RECIPROCATING INTERNAL COMBUSTION ENGINE (RICE):** A reciprocating, piston-driven internal combustion engine that is operated or intended to be operated at one specific location for more than 12 consecutive months or that is attached to a foundation at the location. An engine that replaces an engine at a location and is intended to perform the same or similar function as the engine being replaced will be included in calculating the consecutive time period. A stationary RICE is not a nonroad engine.
- ~~221~~**218 SULFUR OXIDES (SO_x):** Oxides of sulfur calculated as equivalent sulfur dioxide.
- ~~219~~ **ULTRA LOW SULFUR DIESEL:** Fuel oil containing less than or equal to 0.0015% sulfur by weight.
- ~~222~~**220 WASTE DERIVED FUEL GAS:** ~~Any~~ A gaseous fuel that is generated from the biodegradation of solid or liquid waste including, but not limited to, ~~sewage sludge,~~ digester gas and landfill gas.

SECTION 300 – STANDARDS:

- ~~301~~ **LIMITATIONS FOR NEW AND EXISTING STATIONARY IC ENGINES** **STATIONARY RICE - FUEL:** An owner or operator of ~~any~~ an engine that meets the criteria listed in Section 102 of this rule shall comply with either of the following:
- ~~301.1~~ **301.1** Use any fuel that contains no more than ~~0.05%~~ 0.0015% sulfur by weight, alone or in combination with other fuels.
- ~~301.2~~ **301.2** Use any waste derived fuel gas that contains no more than 0.08% sulfur by weight, alone or in combination with other fuels.
- ~~302~~ **GOOD COMBUSTION PRACTICES / TUNING PROCEDURE FOR STATIONARY RICE:** An owner or operator of an engine that meets the criteria listed in Section 102 of this rule shall conduct preventative maintenance or tuning procedures as recommended by the engine manufacturer to ensure good combustion practices to minimize NO_x emissions. A handheld monitor may be used if so desired by the owner or operator for measurement of NO_x and CO and concentrations in the effluent stream after each adjustment is made. This; this may assist in determining that the proper adjustment has been made to ensure NO_x and CO minimization minimize NO_x and CO emissions. A handheld monitor may be used by the Control Officer to determine compliance with this section. In lieu of a manufacturer's procedure, a different procedure specified by any other maintenance guideline may be used as a default procedure. The owner or operator shall include all of the following in the tuning procedures ~~procedure~~ ~~shall include all of the following,~~ if the engine is so equipped, and if such procedures are appropriate to the type of engine:
- ~~302.1~~ **302.1** Lubricating Oil and Filter: Change once every three months or after no more than 300 hours of operation, whichever occurs last.
- ~~302.2~~ **302.2** Inlet Air Filter: Clean once every three months or after no more than 300 hours of operation and replace every 1,000 hours of operation or every year, whichever occurs last.
- ~~302.3~~ **302.3** Fuel Filter: Clean once every year or replace (if cartridge type) once every 1,000 hours of operation, whichever occurs last.
- ~~302.4~~ **302.4** Check and adjust the following once every year or after no more than 1,000 hours of operation, whichever occurs last:
- a. Intake and exhaust valves
 - b. Spark plugs (if so equipped)
 - c. Spark timing and dwell or fuel injection timing (if adjustable), and
 - d. Carburetor mixture (if adjustable).
- ~~302.5~~ **302.5** Spark Plugs and Ignition Points: Replace after 3,000 hours of operation or every year whichever occurs

last

302.6 Coolant: Change after 3,000 hours of operation or every year whichever occurs last.

302.7 Exhaust System: Check for leaks and/or restrictions after 3,000 hours of operation or every year whichever occurs last.

303 **LIMITATIONS FOR STATIONARY RICE – OPACITY:** ~~No~~ An owner or operator of an engine that meets the criteria in Section 102 of this rule shall not discharge into the ambient air from any single source of emissions such engine any air contaminant, other than uncombined water, in excess of 20% opacity.

304 **ADDITIONAL LIMITATIONS FOR PRIME NON-EMERGENCY ENGINES > 250 RATED BHP OR GREATER:** ~~In addition to meeting the standards in Sections 301, 302, and 303, each existing or new prime engine greater than 250 rated bhp that is not listed in Sections 103, 104, or 105, shall comply with the emission limits or control technology requirements listed in Section 304, Table 1, 2, or 3, dependent upon the type of engine. In addition to meeting the standards in Sections 301, 302 and 303 of this rule, an owner or operator of a non-emergency engine that meets the criteria in Section 102 of this rule shall comply with Sections 304.1 or 304.2 of this rule.~~

304.1 **Engine Requirements for Non-Emergency Engines:** The emissions in parts per million by dry volume (ppmdv) or grams per bhp (g/bhp) from the non-emergency engines shall comply with either Table 1 or Table 2 of this rule.

TABLE 1
COMPRESSION-IGNITION ENGINES

<u>MANUFACTURED OR MODIFIED</u>	<u>RATED BHP</u>	<u>ENGINE REQUIREMENTS</u>
<u>Prior to October 22, 2003</u>	<u>250-399</u>	<u>770 ppmdv or 10 g/bhp-hr. NO_x or turbocharger with aftercooler/intercooler or 4-degree injection timing retard</u>
<u>Prior to October 22, 2003</u>	<u>400 plus</u>	<u>550 ppmdv or 7.2 g/bhp-hr. NO_x or turbocharger with aftercooler/intercooler or 4-degree injection timing retard</u>
<u>On or after October 22, 2003 but prior to July 11, 2005</u>	<u>>250</u>	<u>530 ppmdv or 6.9 g/bhp-hr. NO_x or turbocharger with aftercooler/intercooler or 4-degree injection timing retard; 1,000 ppmdv CO; 0.40 g/bhp-hr PM</u>

TABLE 2
SPARK-IGNITION ENGINES
LEAN-BURN ENGINES

<u>MANUFACTURED OR MODIFIED</u>	<u>RATED BHP</u>	<u>OXIDES OF NITROGEN (NO_x)</u>	<u>VOLATILE ORGANIC COMPOUND (VOC)</u>	<u>CARBON MONOXIDE (CO)</u>
<u>Prior to October 22, 2003</u>	<u>>250</u>	<u>280 ppmdv or 4.0 g/bhp-hr</u>	<u>800 ppmdv or 5.0 g/bhp-hr</u>	<u>4,500 ppmdv</u>
<u>On or after October 22, 2003 but prior to June 12, 2006</u>	<u>>250</u>	<u>110 ppmdv or 1.5 g/bhp-hr</u>	<u>800 ppmdv or 5.0 g/bhp-hr</u>	<u>4,500 ppmdv</u>



RICH-BURN ENGINES

<u>MANUFACTURED OR MODIFIED</u>	<u>RATED BHP</u>	<u>OXIDES OF NITROGEN (NO_x)</u>	<u>VOLATILE ORGANIC COMPOUND (VOC)</u>	<u>CARBON MONOXIDE (CO)</u>
<u>Prior to October 22, 2003</u>	<u>>250</u>	<u>280 ppmdv or 4.0 g/bhp-hr or three-way catalyst*</u>	<u>800 ppmdv or 5.0 g/bhp-hr or three-way catalyst*</u>	<u>4,500 ppmdv or three-way catalyst*</u>
<u>On or after October 22, 2003 but prior to June 12, 2006</u>	<u>>250</u>	<u>20 ppmdv or 0.30 g/bhp-hr or three-way catalyst*</u>	<u>800 ppmdv or 5.0 g/bhp-hr or three-way catalyst*</u>	<u>4,500 ppmdv or three-way catalyst*</u>

* The three-way catalyst shall provide a minimum of 80% control efficiency for NO_x and CO for those engines fueled with natural gas, propane or gasoline. In addition, the three-way catalyst shall also provide a minimum of at least 50% control efficiency for VOC for those engines fueled by gasoline.

NO_x EMISSION LIMITS OR CONTROL TECHNOLOGY REQUIREMENTS FOR EXISTING COMPRESSION-IGNITION ENGINES > 250 bhp

TABLE 1

<u>RATED BRAKE HORSEPOWER (bhp)</u>	<u>ENGINE REQUIREMENTS</u>
<u>250-399</u>	<u>770 ppmdv or 10 g/bhp-hr. NO_x or turbocharger with aftercooler/intercooler or 4 degree injection timing retard</u>
<u>400 plus</u>	<u>550 ppmdv or 7.2 g/bhp-hr. NO_x or turbocharger with aftercooler/intercooler or 4 degree injection timing retard</u>

EMISSION LIMITS OR CONTROL TECHNOLOGY REQUIREMENTS FOR EXISTING APPLICABLE SPARK-IGNITION ENGINES > 250 RATED BHP

TABLE 2

<u>OXIDES OF NITROGEN (NO_x)</u>	<u>VOLATILE ORGANIC COMPOUND (VOC)</u>	<u>CARBON MONOXIDE (CO)</u>
<u>280 ppmdv or 4.0 g/bhp-hr or three-way catalyst*</u>	<u>800 ppmdv or 5.0 g/bhp-hr or three-way catalyst*</u>	<u>4,500 ppmdv or three-way catalyst*</u>

EMISSION LIMITS FOR NEW SPARK OR COMPRESSION IGNITION ENGINES > 250 BHP

TABLE 3

<u>ENGINE TYPE</u>	<u>NO_x</u>	<u>PM*</u>	<u>CO</u>
<u>LEAN-BURN (SPARK)</u>	<u>110 ppmdv or 1.5 g/bhp-hr.</u>	<u>Not Applicable</u>	<u>4,500 ppmdv</u>
<u>RICH-BURN (SPARK)</u>	<u>20 ppmdv or 0.30 g/bhp-hr.</u>	<u>Not Applicable</u>	<u>4,500 ppmdv</u>
<u>COMPRESSION</u>	<u>530 ppmdv or 6.9 g/bhp-hr.</u>	<u>0.40 g/bhp-hr</u>	<u>1,000 ppmdv</u>

* A backhalf analysis shall be performed using reference Method 202 (referenced in subsection 504.6) each time a compliance test for particulate matter emissions to meet the limitations listed in Table 3 is performed using Method 5. The results of the Method 202 testing shall be used for emissions inventory purposes.



304.2 Federal Standards of Performance for Non-Emergency Engines: An owner or operator of an engine listed in Sections 304.2(a) or (b) of this rule shall comply with the federal standards of performance for compression-ignition engines set forth in 40 CFR Part 60, Subpart IIII or spark-ignition engines set forth in 40 CFR Part 60, Subpart JJJJ and in all accompanying appendices as incorporated by reference in Rule 360 (New Source Performance Standards) of these rules. Whenever more than one provision in this rule applies to such engine or whenever a provision in this rule and a provision in the federal standards apply to such engine, the provision or combination of provisions resulting in the lowest rate of emissions shall apply, unless otherwise specifically exempted or designated.

- a. 40 CFR Part 60, Subpart IIII applies to all of the following non-emergency compression-ignition engines:
 - (1) Any stationary compression-ignition IC engine that was ordered after July 11, 2005 and manufactured after April 1, 2006.
 - (2) Any stationary compression-ignition IC engine that was modified or reconstructed after July 11, 2005.
- b. 40 CFR Part 60, Subpart JJJJ applies to the following non-emergency spark-ignition engine:
 - (1) Any stationary spark-ignition engine that was ordered after June 12, 2006 and manufactured on or after:
 - (a) July 1, 2007 for engines with a rated bhp greater than or equal to 500 (except lean burn engines with a rated bhp greater than or equal to 500 and less than 1,350)
 - (b) January 1, 2008 for lean burn engines with a rated bhp greater than or equal to 500 and less than 1,350
 - (c) July 1, 2008 for engines with a rated bhp less than 500.
 - (2) Any stationary spark-ignition engine that was modified or reconstructed after June 12, 2006.

305 EFFICIENCY ALLOWANCE: Each emission limit expressed in Tables ~~1, 2 or 3~~ 1 or 2 of this rule may be multiplied by X, where X equals the engine efficiency (E) divided by a reference efficiency of 30 percent. Engine efficiency shall be determined by one of the following methods whichever is higher:

- a. E = (Engine Output) X (100) ÷ (Energy Input) where Energy Input is determined by a fuel measuring device accurate to +/- 5% and is based upon the higher heating value (HHV) of the fuel. Percent efficiency (E) shall be averaged over 15 consecutive minutes and measured at peak load for the applicable engine.
- b. E = (Manufacturers Rated Efficiency [Continuous] at (LHV) X (LHV) ÷ (HHV) where LHV = the lower heating value of the fuel Engine efficiency (E) shall not be less than 30 percent; an engine with an efficiency lower than 30 percent shall be assigned an efficiency of 30 percent for the purposes of this rule.

306 EQUIVALENT REPLACEMENT ENGINE OR IDENTICAL REPLACEMENT ENGINE REPLACEMENT: An equivalent or identical replacement engine that replaces an existing engine shall be treated as an existing engine for the purposes of compliance with this rule, unless the engine commenced operation or was constructed or modified after October 22, 2003, including the contractual obligation to undertake and complete an order for an engine, and then it will be considered a new engine for purposes of meeting the standards for a new engine in this rule. An equivalent replacement engine or an identical replacement engine shall be treated as the original stationary RICE that it replaces for the purposes of compliance with this rule.

307 MODIFICATION TO A STATIONARY RICE: If a modification, including the contractual obligation to undertake and complete an order for an engine, is made to a stationary RICE, then such engine shall comply with all applicable provisions of this rule. The date of the modification shall be the trigger for when the modification is subject to the provisions of Section 304 of this rule. Whenever a provision in this rule and a provision in Section 304 of this rule apply to such engine, the provision or combination of provisions resulting in the lowest rate of emissions shall apply, unless otherwise specifically exempted or designated.

308 NON-RESETTING TOTALIZING HOUR METER: The owner or operator of a stationary RICE, subject to any provision of this rule, except for those engines being removed from service under Section 401 of this rule, shall install, operate, and maintain a non-resetting totalizing hour meter. If the non-resetting totalizing hour meter is found to be malfunctioning, operation of the engine shall cease until corrective action(s) can be implemented or the function of the meter is restored.

SECTION 400 - ADMINISTRATIVE REQUIREMENTS

401 COMPLIANCE SCHEDULE-STATIONARY RICE BEING REMOVED FROM SERVICE: An owner or operator of an existing stationary IC engine that must be replaced with a new engine to meet emission limits listed in Section 300 shall be in compliance with the emission limits listed in Section 304, Table 3 by October 22, 2007. If a stationary RICE must be removed from service because such engine does not comply with the emission limits listed in Section 300 of this rule, then the stationary RICE shall be removed from service no later than November 2,



2017. The stationary RICE that replaces such engine shall comply with all applicable provisions of this rule and shall comply with Section 304 of this rule upon installation.

- 402** **COMPLIANCE SCHEDULE-NON-RESETTING TOTALIZING HOUR METER:** The owner or operator of a stationary RICE, subject to any provision of this rule, except for those engines being removed from service under Section 401 of this rule, shall install, operate, and maintain a non-resetting totalizing hour meter on each such engine no later than November 2, 2017.

SECTION 500 - MONITORING AND RECORDS

501 COMPLIANCE DETERMINATION:

- 501.1 ~~Existing Engines: Existing IC engines or engine families shall demonstrate compliance with Section 300 by recordkeeping according to Section 502. Emission testing using the applicable test methods listed in Section 500 shall be performed if the Control Officer requests.~~
- 501.2 ~~Existing Engine Families at a Source: When testing an engine family at one source, the number of engines tested should be the greater of either one engine or one third of all identical engines in the group. If any of the representative engines exceed the emission limits, each engine in the group shall demonstrate compliance by emissions testing.~~
- 501.3 ~~New Engines / New Engine Families: Compliance with the limitations listed in Section 304, Table 3 shall be demonstrated by either:~~
- ~~A statement from the manufacturer that the engine meets the most stringent emissions standards found in 40 CFR Part 89 or 90 applicable to the engine and its model year at the time of manufacture, or~~
 - ~~Performance of emission testing using the test methods listed in Section 503.~~

501.1 **Stationary RICE:** An owner or operator of a stationary RICE shall demonstrate compliance with all of the following, as applicable:

- With Section 300 of this rule, by recordkeeping according to Section 502 of this rule. Emission testing using the applicable test methods listed in Section 503 of this rule shall be performed upon the request of the Control Officer.
- With Section 304.2 of this rule, by one of the following:
 - A statement from the manufacturer that the engine meets the most stringent emissions standards found in this rule or 40 CFR Parts 89, 90, and 1039 applicable to the engine and its model year at the time of manufacture.
 - Emission testing using the applicable test methods listed in Section 503 of this rule shall be performed upon the request of the Control Officer.
- With 40 CFR Part 60.4213, for a stationary RICE with a displacement of greater than or equal to 30 liters per cylinder.

501.2 **Engine Family:** An owner or operator of an engine family shall demonstrate compliance with all of the following, as applicable:

- With Section 300 of this rule, by recordkeeping according to Section 502 of this rule. Emission testing using the applicable test methods listed in Section 503 of this rule shall be performed upon the request of the Control Officer.
- When testing an engine family at one source, the number of engines tested should be the greater of either one engine or one third of all identical engines in the group. If any of the representative engines exceed the emission limits, each engine in the group shall demonstrate compliance by emissions testing.
- With Section 304.2 of this rule, by one of the following:
 - A statement from the manufacturer that the engine meets the most stringent emissions standards found in this rule or 40 CFR Parts 89, 90, and 1039 applicable to the engine and its model year at the time of manufacture.
 - Emission testing using the applicable test methods listed in Section 503 of this rule shall be performed upon the request of the Control Officer.
- With 40 CFR Part 60.4213, for an engine family with a displacement of greater than or equal to 30 liters per cylinder.

- 501.4 **501.3** **Low Sulfur Oil Ultra Low Sulfur Diesel Verification:** If the Control Officer requests proof of the sulfur content, the owner or operator shall submit fuel receipts, contract specifications, pipeline meter tickets, Material Safety Data Sheets (MSDS), fuel supplier information or purchase records, if applicable, from the fuel supplier, indicating the sulfur content of the fuel oil. In lieu of these, testing of the fuel oil for sulfur

content to meet the 0.05% limit shall be permitted if so desired by the owner or operator for evidence of compliance. If the Control Officer requests documentation of the sulfur content of the fuel to demonstrate the 0.0015% limit, the owner or operator shall submit one of the following:

- a. Fuel receipts, or
- b. Contract specifications, or
- c. Pipeline meter tickets, or
- d. Fuel supplier information, or
- e. Purchase records, or
- f. Test results of the fuel for sulfur content.

The items listed above must provide accurate sulfur content values or be based on enforceable test methods as approved by the Administrator to determine the sulfur content.

501-5 **501.4** **Waste Derived Fuel Gas - Sulfur Verification:** The owner or operator shall submit documentation of the concentration of the sulfur level of the waste derived fuel gas to the Control Officer upon request. The sulfur content of gaseous fuels shall be determined by South Coast Air Quality Management District Method 307-94 Determination of Sulfur in a Gaseous Matrix.

501-6 **501.5** **Test Method Conditions:** The owner or operator shall use the test methods listed in Section 503 of this rule to determine compliance with the limitations listed in ~~Section 304~~, Tables 1-3 1 or 2 of this rule. Testing for ~~stationary IC engines~~ stationary RICE shall be completed under steady state conditions at either the maximum operating load or no less than 80% of the rated ~~brake horsepower rating~~ bhp. If the owner or operator of an engine demonstrates to the Control Officer that the engine cannot operate at these conditions, then emissions source testing shall be performed at the highest achievable continuous ~~brake horsepower rating~~ rated bhp or under the typical duty cycle or typical operational mode of the engine.

502 **RECORDKEEPING / RECORDS RETENTION:** The owner or operator of ~~any stationary IC engine~~ a stationary RICE subject to this rule shall comply with the following requirements and ~~keep~~ retain records for a ~~period of at least~~ 5 years:

502.1 **Records Required for a Stationary RICE:** An owner or operator of ~~any IC engine~~ a stationary RICE, including emergency engines, ~~prime engines~~ non-emergency engines and ~~low usage engines~~ low usage non-emergency engines, shall keep a record that includes an initial one time entry that lists the particular engine combustion type (compression-ignition or spark-ignition or rich ~~burn~~, or lean burn); manufacturer; model designation, rated ~~brake horsepower~~ bhp, serial number and where the engine is located on the site.

502.2 **Monthly Records Required for Non-Emergency Engines:** An owner or operator of a ~~prime engine~~ non-emergency engine shall maintain a monthly record for ~~prime engines~~ non-emergency engines which shall include:

- a. Hours of operation; and
- b. Type of fuel used, and
- c. Documentation verifying compliance with sulfur fuel content according to ~~subsection~~ Section 301.1 of this rule.

502.3 **Annual Records Required for Non-Emergency Engines:** An owner or operator of a ~~prime engine~~ non-emergency engine shall maintain an annual record of ~~good combustion procedures according to Section 302~~ the practices/procedure that are followed in order to comply with Section 302 (Good Combustion Practices/Tuning Procedure for Stationary RICE) of this rule.

502.4 **Records Required for an Emergency Engine or a Low Usage Non-Emergency Engine:** An owner or operator of an emergency engine and or a low usage non-emergency, ~~low usage~~ engine that meets the exemptions listed in Sections 104 and 105 of this rule shall keep an engine record that includes:

- a. Monthly rolling twelve month total of hours of operation, including hours of operation for testing, reliability and maintenance; and
- b. Fuel type and sulfur content of fuel; and
- c. Explanation for the use of the engine if it is used as an emergency engine.

503 **COMPLIANCE DETERMINATION-TEST METHODS INCORPORATED BY REFERENCE:** The following test methods are approved for use for the purpose of determining compliance with this rule. The test methods The Environmental Protection Agency (EPA) test methods as they exist in the Code of Federal Regulations (CFR) (July 1, 2004) and the American Society of Testing Materials International Methods as listed below, are incorporated by reference in Appendix G of the ~~Maricopa County Rules and Regulations~~ Maricopa County Air Pollution Control Regulations. ~~The~~ When more than one test method is permitted for the same determination, as listed in subsections 503.12, 503.13, 503.14, or 503.15, an exceedance of the limits established in this rule determined by any of the applicable test methods constitutes a violation. ~~Alternative test methods as approved by the Administrator~~



or other EPA-approved test methods may be used upon written approval from the Control Officer. When more than one test method is permitted for the same determination, an exceedance under any method will constitute a violation. Copies of test methods referenced in this section of this rule are available at the Maricopa County Environmental Services Department Air Quality Department, 1001 North Central Avenue, Suite ~~204~~ 125, Phoenix, Arizona, 85004-1942.

- 503.1** EPA Reference Methods 1 (“Sample and Velocity Traverses for Stationary Sources”) and 1A (“Sample and Velocity Traverses for Stationary Sources with Small Stacks and Ducts”) (40 CFR 60, Appendix A).
- 503.2** EPA Reference Methods 2 (“Determination of Stack Gas Velocity and Volumetric Flow Rate”), 2A (“Direct Measurement of Gas Volume Through Pipes and Small Ducts”), 2C (“Determination of Stack Gas Velocity and Volumetric Flow Rate in Small Stacks or Ducts”), and 2D (“Measurement of Gas Volumetric Flow Rates in Small Pipes and Ducts”) (40 CFR 60, Appendix A).
- 503.3** EPA Reference Methods 3 (“Gas Analysis for the Determination of Dry Molecular Weight”), 3A (“Determination of Oxygen and Carbon Dioxide Concentrations in Emissions from Stationary Sources (Instrumental Analyzer Procedure”), 3B (“Gas Analysis for the Determination of Emission Rate Correction Factor of Excess Air”), and 3C (“Determination of Carbon Dioxide, Methane, Nitrogen and Oxygen from Stationary Sources”) (40 CFR 60, Appendix A).
- 503.4** EPA Reference Method 4 (“Determination of Moisture Content in Stack Gases”) (40 CFR 60, Appendix A).
- 503.5** EPA Reference Method 5 (“Determination of Particulate Emissions from Stationary Sources”) (40 CFR 60, Appendix A)
- 503.6** EPA Reference Method 202 (“Determination of Condensable Particulate Emissions from Stationary Sources”) (40 CFR 51, Appendix M).
- 503.7** EPA Reference Methods 7 (“Determination of Nitrogen Oxide Emissions from Stationary Sources”), 7A (“Determination of Nitrogen Oxide Emissions form Stationary Sources - Ion chromatographic method”), 7B (“Determination of Nitrogen Oxide Emissions from Stationary Sources – Ultraviolet Spectrometry”), 7C (“Determination of Nitrogen Oxide Emissions from Stationary Sources – Alkaline-Permanganate Colorimetric Method”), 7D (“Determination of Nitrogen Oxide Emissions from Stationary Sources – Alkaline – Permanganate Chromatographic Method”), and 7E (“Determination of Nitrogen Oxide Emissions from Stationary Sources – Instrumental Analyzer Method“), (40 CFR 60, Appendix A).
- 503.8** EPA Reference Method 9 (“Visual Determination of the Opacity of Emissions from Stationary Sources”) (40 CFR 60, Appendix A).
- 503.9** EPA Reference Method 10 (“Determination of Carbon Monoxide from Stationary Sources”) (40 CFR 60, Appendix A).
- 503.10** EPA Reference Method 18 (“Measurement of Gaseous Organic Compound Emissions by Gas Chromatography”) (40 CFR 60, Appendix A).
- 503.11** EPA Reference Method 25A (“Determination of Total Gaseous Organic Concentration Using a Flame Ionization Analyzer”) (40 CFR 60, Appendix A).
- ~~503.12 American Society of Testing Materials International, ASTM Method D1266-98 (“Standard Test Method for Sulfur in Petroleum Products (Lamp Method)”), 1998.~~
- ~~503.13 **503.12** American Society of Testing Materials International, ASTM Method D2622-98 (“Standard Test Method for Sulfur in Petroleum Products by Wavelength Dispersive X-Ray Fluorescence Spectrometry”), 1998.~~
- ~~503.14 **503.13** American Society of Testing Materials International, ASTM Method D2880-71 D2880-96, 78 or 96 (“Standard Specification for Gas Turbine Fuel Oils”), 1971 ~~or 1978 or 1996~~.~~
- ~~503.15 **503.14** American Society of Testing Materials International, ASTM Method D4294-98 D4294-02 or D4294-03 (“Standard Test Method for Sulfur in Petroleum Products by Energy-Dispersive X-Ray Fluorescence Spectroscopy”) 1990 ~~or 1998~~.~~
- ~~503.16 **503.15** American Society of Testing Materials International, ASTM Method D5504-01 or D5504-08 (“Standard Test Method for Determination of Sulfur Compounds in Natural Gas and Gaseous Fuels by Gas Chromatography and Chemiluminescence”), 2006.~~
- 504.16** South Coast Air Quality Management District Method 307-94 Determination of Sulfur in a Gaseous Matrix

REGISTER INDEXES

The *Register* is published by volume in a calendar year (See “Information” in the front of each issue for a more detailed explanation).

Abbreviations for rulemaking activity in this Index include:

PROPOSED RULEMAKING

PN = Proposed new Section
PM = Proposed amended Section
PR = Proposed repealed Section
P# = Proposed renumbered Section

SUPPLEMENTAL PROPOSED RULEMAKING

SPN = Supplemental proposed new Section
SPM = Supplemental proposed amended Section
SPR = Supplemental proposed repealed Section
SP# = Supplemental proposed renumbered Section

FINAL RULEMAKING

FN = Final new Section
FM = Final amended Section
FR = Final repealed Section
F# = Final renumbered Section

SUMMARY RULEMAKING**PROPOSED SUMMARY**

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PSMM = Proposed Summary amended Section
PSMR = Proposed Summary repealed Section
PSM# = Proposed Summary renumbered Section

FINAL SUMMARY

FSMN = Final Summary new Section
FSMM = Final Summary amended Section
FSMR = Final Summary repealed Section
FSM# = Final Summary renumbered Section

EXPEDITED RULEMAKING**PROPOSED EXPEDITED**

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PEM = Proposed Expedited amended Section
PER = Proposed Expedited repealed Section
PE# = Proposed Expedited renumbered Section

SUPPLEMENTAL EXPEDITED

SPEN = Supplemental Proposed Expedited new Section
SPEM = Supplemental Proposed Expedited amended Section
SPER = Supplemental Proposed Expedited repealed Section
SPE# = Supplemental Proposed Expedited renumbered Section

FINAL EXPEDITED

FEN = Final Expedited new Section
FEM = Final Expedited amended Section
FER = Final Expedited repealed Section
FE# = Final Expedited renumbered Section

EXEMPT RULEMAKING**EXEMPT PROPOSED**

PXN = Proposed Exempt new Section
PXM = Proposed Exempt amended Section
PXR = Proposed Exempt repealed Section
PX# = Proposed Exempt renumbered Section

EXEMPT SUPPLEMENTAL PROPOSED

SPXN = Supplemental Proposed Exempt new Section
SPXR = Supplemental Proposed Exempt repealed Section
SPXM = Supplemental Proposed Exempt amended Section
SPX# = Supplemental Proposed Exempt renumbered Section

FINAL EXEMPT RULMAKING

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FXM = Final Exempt amended Section
FXR = Final Exempt repealed Section
FX# = Final Exempt renumbered Section

EMERGENCY RULEMAKING

EN = Emergency new Section
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E# = Emergency renumbered Section
EEXP = Emergency expired

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RC = Recodified

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RJ = Rejected by the Attorney General

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TN = Terminated proposed new Sections
TM = Terminated proposed amended Section
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R9-26-304.	PR-177; PM-177; F#-1675; FM-1675	R6-5-6503. R6-5-6503.01. R6-5-6504. R6-5-6505.	EXP-2567 EXP-2567 EXP-2567 EXP-2567	R6-5-7027. R6-5-7028. R6-5-7029. R6-5-7030.	EXP-2567 EXP-2567 EXP-2567 EXP-2567
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R9-15-307.	FXR-851	R9-19-302.	R19-3-204.	FM-1379
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2016 RULES EFFECTIVE DATES CALENDAR

A.R.S. § 41-1032(A), as amended by Laws 2002, Ch. 334, § 8 (effective August 22, 2002), states that a rule generally becomes effective 60 days after the day it is filed with the Secretary of State's Office. The following table lists filing dates and effective dates for rules that follow this provision. Please also check the rulemaking Preamble for effective dates.

January		February		March		April		May		June	
Date Filed	Effective Date										
1/1	3/1	2/1	4/1	3/1	4/30	4/1	5/31	5/1	6/30	6/1	7/31
1/2	3/2	2/2	4/2	3/2	5/1	4/2	6/1	5/2	7/1	6/2	8/1
1/3	3/3	2/3	4/3	3/3	5/2	4/3	6/2	5/3	7/2	6/3	8/2
1/4	3/4	2/4	4/4	3/4	5/3	4/4	6/3	5/4	7/3	6/4	8/3
1/5	3/5	2/5	4/5	3/5	5/4	4/5	6/4	5/5	7/4	6/5	8/4
1/6	3/6	2/6	4/6	3/6	5/5	4/6	6/5	5/6	7/5	6/6	8/5
1/7	3/7	2/7	4/7	3/7	5/6	4/7	6/6	5/7	7/6	6/7	8/6
1/8	3/8	2/8	4/8	3/8	5/7	4/8	6/7	5/8	7/7	6/8	8/7
1/9	3/9	2/9	4/9	3/9	5/8	4/9	6/8	5/9	7/8	6/9	8/8
1/10	3/10	2/10	4/10	3/10	5/9	4/10	6/9	5/10	7/9	6/10	8/9
1/11	3/11	2/11	4/11	3/11	5/10	4/11	6/10	5/11	7/10	6/11	8/10
1/12	3/12	2/12	4/12	3/12	5/11	4/12	6/11	5/12	7/11	6/12	8/11
1/13	3/13	2/13	4/13	3/13	5/12	4/13	6/12	5/13	7/12	6/13	8/12
1/14	3/14	2/14	4/14	3/14	5/13	4/14	6/13	5/14	7/13	6/14	8/13
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1/22	3/22	2/22	4/22	3/22	5/21	4/22	6/21	5/22	7/21	6/22	8/21
1/23	3/23	2/23	4/23	3/23	5/22	4/23	6/22	5/23	7/22	6/23	8/22
1/24	3/24	2/24	4/24	3/24	5/23	4/24	6/23	5/24	7/23	6/24	8/23
1/25	3/25	2/25	4/25	3/25	5/24	4/25	6/24	5/25	7/24	6/25	8/24
1/26	3/26	2/26	4/26	3/26	5/25	4/26	6/25	5/26	7/25	6/26	8/25
1/27	3/27	2/27	4/27	3/27	5/26	4/27	6/26	5/27	7/26	6/27	8/26
1/28	3/28	2/28	4/28	3/28	5/27	4/28	6/27	5/28	7/27	6/28	8/27
1/29	3/29	2/29	4/29	3/29	5/28	4/29	6/28	5/29	7/28	6/29	8/28
1/30	3/30			3/30	5/29	4/30	6/29	5/30	7/29	6/30	8/29
1/31	3/31			3/31	5/30			5/31	7/30		



July		August		September		October		November		December	
Date Filed	Effective Date										
7/1	8/30	8/1	9/30	9/1	10/31	10/1	11/30	11/1	12/31	12/1	1/30/17
7/2	8/31	8/2	10/1	9/2	11/1	10/2	12/1	11/2	1/1/17	12/2	1/31/17
7/3	9/1	8/3	10/2	9/3	11/2	10/3	12/2	11/3	1/2/17	12/3	2/1/17
7/4	9/2	8/4	10/3	9/4	11/3	10/4	12/3	11/4	1/3/17	12/4	2/2/17
7/5	9/3	8/5	10/4	9/5	11/4	10/5	12/4	11/5	1/4/17	12/5	2/3/17
7/6	9/4	8/6	10/5	9/6	11/5	10/6	12/5	11/6	1/5/17	12/6	2/4/17
7/7	9/5	8/7	10/6	9/7	11/6	10/7	12/6	11/7	1/6/17	12/7	2/5/17
7/8	9/6	8/8	10/7	9/8	11/7	10/8	12/7	11/8	1/7/17	12/8	2/6/17
7/9	9/7	8/9	10/8	9/9	11/8	10/9	12/8	11/9	1/8/17	12/9	2/7/17
7/10	9/8	8/10	10/9	9/10	11/9	10/10	12/9	11/10	1/9/17	12/10	2/8/17
7/11	9/9	8/11	10/10	9/11	11/10	10/11	12/10	11/11	1/10/17	12/11	2/9/17
7/12	9/10	8/12	10/11	9/12	11/11	10/12	12/11	11/12	1/11/17	12/12	2/10/17
7/13	9/11	8/13	10/12	9/13	11/12	10/13	12/12	11/13	1/12/17	12/13	2/11/17
7/14	9/12	8/14	10/13	9/14	11/13	10/14	12/13	11/14	1/13/17	12/14	2/12/17
7/15	9/13	8/15	10/14	9/15	11/14	10/15	12/14	11/15	1/14/17	12/15	2/13/17
7/16	9/14	8/16	10/15	9/16	11/15	10/16	12/15	11/16	1/15/17	12/16	2/14/17
7/17	9/15	8/17	10/16	9/17	11/16	10/17	12/16	11/17	1/16/17	12/17	2/15/17
7/18	9/16	8/18	10/17	9/18	11/17	10/18	12/17	11/18	1/17/17	12/18	2/16/17
7/19	9/17	8/19	10/18	9/19	11/18	10/19	12/18	11/19	1/18/17	12/19	2/17/17
7/20	9/18	8/20	10/19	9/20	11/19	10/20	12/19	11/20	1/19/17	12/20	2/18/17
7/21	9/19	8/21	10/20	9/21	11/20	10/21	12/20	11/21	1/20/17	12/21	2/19/17
7/22	9/20	8/22	10/21	9/22	11/21	10/22	12/21	11/22	1/21/17	12/22	2/20/17
7/23	9/21	8/23	10/22	9/23	11/22	10/23	12/22	11/23	1/22/17	12/23	2/21/17
7/24	9/22	8/24	10/23	9/24	11/23	10/24	12/23	11/24	1/23/17	12/24	2/22/17
7/25	9/23	8/25	10/24	9/25	11/24	10/25	12/24	11/25	1/24/17	12/25	2/23/17
7/26	9/24	8/26	10/25	9/26	11/25	10/26	12/25	11/26	1/25/17	12/26	2/24/17
7/27	9/25	8/27	10/26	9/27	11/26	10/27	12/26	11/27	1/26/17	12/27	2/25/17
7/28	9/26	8/28	10/27	9/28	11/27	10/28	12/27	11/28	1/27/17	12/28	2/26/17
7/29	9/27	8/29	10/28	9/29	11/28	10/29	12/28	11/29	1/28/17	12/29	2/27/17
7/30	9/28	8/30	10/29	9/30	11/29	10/30	12/29	11/30	1/29/17	12/30	2/28/17
7/31	9/29	8/31	10/30			10/31	12/30			12/31	3/1/17



REGISTER PUBLISHING DEADLINES

The Secretary of State's Office publishes the Register weekly. There is a three-week turnaround period between a deadline date and the publication date of the Register. The weekly deadline dates and issue dates are shown below. Council meetings and Register deadlines do not correlate. Also listed are the earliest dates on which an oral proceeding can be held on proposed rulemakings or proposed delegation agreements following publication of the notice in the Register.

Table with 3 columns: Deadline Date (paper only) Friday, 5:00 p.m., Register Publication Date, and Oral Proceeding may be scheduled on or after. Rows list dates from October 2016 to May 2017.



GOVERNOR’S REGULATORY REVIEW COUNCIL DEADLINES

The following deadlines apply to all Five-Year-Review Reports and any adopted rule submitted to the Governor’s Regulatory Review Council. Council meetings and Register deadlines do not correlate. We publish these deadlines as a courtesy.

All rules and Five-Year Review Reports are due in the Council office by noon of the deadline date. The Council’s office is located at 100 N. 15th Ave., Suite 402, Phoenix, AZ 85007. For more information, call (602) 542-2058 or visit www.grrc.state.az.us.

GOVERNOR’S REGULATORY REVIEW COUNCIL DEADLINES FOR 2016

DEADLINE TO BE PLACED ON COUNCIL AGENDA	FINAL MATERIALS DUE FROM AGENCIES	DATE OF COUNCIL STUDY SESSION	DATE OF COUNCIL MEETING
November 17, 2015	December 18, 2015	December 29, 2015	January 5, 2016
December 21, 2015	January 15, 2016	January 26, 2016	February 2, 2016
January 19, 2016 (Tuesday)	February 12, 2016	February 23, 2016	March 1, 2016
February 16, 2016 (Tuesday)	March 18, 2016	March 29, 2016	April 5, 2016
March 21, 2016	April 15, 2016	April 26, 2016	May 5, 2016
April 18, 2016	May 20, 2016	June 1, 2016 (Wednesday)	June 7, 2016
May 23, 2016	June 17, 2016	June 28, 2016	July 6, 2016 (Wednesday)
June 20, 2016	July 15, 2016	July 26, 2016	August 2, 2016
July 18, 2016	August 19, 2016	August 30, 2016	September 7, 2016 (Wednesday)
August 22, 2016	September 16, 2016	September 27, 2016	October 4, 2016
September 19, 2016	October 14, 2016	October 25, 2016	November 1, 2016
October 17, 2016	November 18, 2016	November 29, 2016	December 6, 2016
November 21, 2016	December 16, 2016	December 28, 2016 (Wednesday)	January 4, 2017 (Wednesday)

*Materials must be submitted by **noon** on dates listed as a deadline for placement on a particular agenda. Placement on a particular agenda is not guaranteed.