



Report to the Board of Health To Approve For Expedited Process

Prepared by the Maricopa County Air Quality Department

Case #/Title: AQ-2015-003-Rule 323

Meeting Date: April 25, 2016

Supervisor Districts: All Districts

Applicant: Staff

Request: Approve for Expedited Process revisions to Rule 323 (Fuel Burning Equipment From Industrial/Commercial/Institutional (ICI) Sources)

Discussion:

Rule 323 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 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 323 include Reasonably Available Control Technology (RACT) for NO_x.

Support/Opposition:

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

For a detailed discussion of comments received during and after the Stakeholder Workshops, please refer to Section 5 in the attached Notice of Proposed Rulemaking.

Department Recommendation: Approve for Expedited Process

Per the Enhanced Regulatory Outreach Program Policy, Section IV(E), the Expedited Process may only be used if the following criteria have been met:

1. The proposed amendment has been subject to at least one Stakeholder Workshop (posted on the County’s web site at least two weeks in advance) and one Citizens’ Board or Commission meeting;
2. A draft of the regulatory change was available on the Enhanced Regulatory Outreach Program web site at least two weeks prior to the Citizens’ Board or Commission meeting and was forwarded to the Board/Commission at least one week in advance of their review meeting;
3. No comments of opposition to the amendment have been received from the public;
4. The Citizens’ Board or Commission reviewing the amendment recommends approval.

AQ-2015-003-Rule 323 has met the criteria for the Expedited Process:

1. Three Stakeholder Workshops were held: June 29, 2015, September 3, 2015, and February 18, 2016. Announcements of the workshops were posted on the County’s web site at least two weeks in advance;

2. A draft of the regulatory change was available on the Enhanced Regulatory Outreach Program web site at least two weeks prior to the Board of Health meeting;
3. No comments of opposition to the amendment have been received from the public;
4. The department is requesting the Board of Health approve for Expedited Process.

Regulatory Process:

This regulatory change will follow the Enhanced Regulatory Outreach Program Policy and workflow process. The County Manager briefed the Board of Supervisors (BOS) regarding this rulemaking in May 2015.

Three Stakeholder Workshops were held: June 29, 2015, September 3, 2015, and February 18, 2016. Comments from the workshops have been incorporated into this rulemaking.

If the Board of Health approves this regulatory change for the Expedited Process, then this regulatory change will proceed with a 30-day public comment period through May 2016 and an anticipated Board of Supervisors' public hearing in late 2016. This regulatory change will take immediate effect upon approval by the Board of Supervisors.

Presented By: Philip A. McNeely, R.G., Director

Prepared By: Hether Krause

Attachments: [Preamble required by A.R.S. § 49-471.05](#) (See Notice of Proposed Rulemaking)

[Summary of the proposed regulatory change](#) (See Item 5 of the Notice of Proposed Rulemaking)

[Language of the proposed regulatory changes](#) (See Item 14 of the Notice of Proposed Rulemaking)

[Copies of all written and electronic Stakeholder input](#)

[County Manager Case Approval](#)

DRAFT – FOR PURPOSES OF BOARD OF HEALTH MEETING ON APRIL 25, 2016

NOTICE OF PROPOSED RULEMAKING

MARICOPA COUNTY AIR POLLUTION CONTROL REGULATIONS

REGULATION III – CONTROL OF AIR CONTAMINANTS

RULE 323: FUEL BURNING EQUIPMENT FROM INDUSTRIAL/COMMERCIAL/INSTITUTIONAL (ICI) SOURCES

PREAMBLE

- | | | |
|------------------|---|--|
| <u>1.</u> | <u>Rule affected</u>
Rule 323: Fuel Burning Equipment From Industrial/Commercial/
Institutional (ICI) Sources | <u>Rulemaking action</u>
Amend |
| <u>2.</u> | <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 | |
| <u>3.</u> | <u>List of all previous notices appearing in the Register addressing the 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 | |
| <u>4.</u> | <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 Avenue, Suite 125
Phoenix, Arizona 85004
Telephone: (602) 506-6010
Fax: (602) 506-6179
E-mail: aqplanning@mail.maricopa.gov | |

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

Summary: [Return to list of Attachements](#)

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 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 323 include Reasonably Available Control Technology (RACT) for NO_x.

In addition, the proposed amendments correct typographical or other clerical errors; make minor grammatical changes to improve readability or clarity; modify the format, numbering, order, capitalization, punctuation, or syntax of certain text to increase standardization within and among rules; or make various other minor changes of a purely editorial nature. As these changes do 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 Proposed Amendments:

Regarding Limitations:

- Section 303 (Limitations-Sulfur In Fuel): The limitations for sulfur in fuel are proposed to be 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 is proposed to be 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 is proposed to be 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 is proposed to clarify 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 ppmdv when burning gaseous fuel or to no more than 65 ppmdv when burning liquid fuel.

Regarding Administrative Requirements:

- Section 401 (Compliance Schedule): Rule 323 is proposed 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 is proposed to be changed to a compliance determination for ultra low sulfur diesel verification; consistent with federal standards.
- Sections 503.2 (Compliance Determination-Gaseous Emissions-Source Test) and 503.3 (Compliance Determination-Gaseous Emissions-Continuous Emission Monitoring System (CEMS)): The text proposed 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.
- Section 504 (Compliance Determination-Test Methods Incorporated By Reference): Rule 323 is proposed to include 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.

6. 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. While currently classified as a “marginal” ozone nonattainment area, the county recently failed to meet 2008 8-hour ozone standard by the marginal area attainment date and anticipates EPA will issue a notice proposing to re-classify the area to “moderate”. 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 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 323 include Reasonably Available Control Technology (RACT) for NO_x.

The department complies with A.R.S. § 49-112(B) in that the proposed 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.

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

Not applicable

8. 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

9. Preliminary summary of the economic, small business, and consumer impact:

A detailed preliminary summary of the economic, small business, and consumer impact will appear in the Notice of Proposed Rulemaking that is anticipated to be published in the Arizona Administrative Register on May 6, 2016.

There are over 100 sources in Maricopa County subject to this rule.

Permit fees are not changing due to this rulemaking.

10. 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 Avenue, Suite 125
 Phoenix, AZ 85004
Telephone: (602) 506-6010
Fax: (602) 506-6179
E-mail: aqplanning@mail.maricopa.gov

11. Time, place, and nature of the proceedings for the rulemaking:

Written oral proceeding requests or written comments or both will be accepted until the record is closed on June 6, 2016, 5:00 p.m. Written oral proceeding requests or written comments or both may be mailed, e-mailed, or hand delivered to the department (see Item #4 of this notice). An oral proceeding will be scheduled only upon receipt of a written request before the record is closed on June 6, 2016, 5:00 p.m. Written comments received during the comment period and before the record is closed on June 6, 2016, 5:00 p.m. will be considered formal comments to the Notice of Proposed Rulemaking and will be responded to in the Notice of Final Rulemaking.

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

Not applicable

13. 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)

14. Full text of the rule follows:

[Return to list of Attachments](#)

**REGULATION III – CONTROL OF AIR CONTAMINANTS
RULE 323
FUEL BURNING EQUIPMENT FROM INDUSTRIAL/COMMERCIAL/ INSTITUTIONAL (ICI)
SOURCES**

INDEX

SECTION 100 – GENERAL

- 101 PURPOSE
- 102 APPLICABILITY

- 103 EXEMPTIONS
- 104 PARTIAL EXEMPTIONS

SECTION 200 – DEFINITIONS

- 201 ALTERNATIVE FUELS
- 202 COGENERATION STEAM GENERATING UNIT
- 203 CORRECTIVE ACTION PLAN (CAP)
- 204 DISTILLATE OIL
- 205 EMERGENCY FUEL
- 206 EMISSION CONTROL SYSTEM (ECS)
- 207 FOSSIL FUEL
- 208 HEAT INPUT
- ~~209 LOW SULFUR OIL~~
- ~~240~~ 209 NATURAL GAS CURTAILMENT
- ~~241~~ 210 OPACITY
- ~~242~~ 211 PARTICULATE MATTER EMISSIONS
- ~~243~~ 212 PEAK LOAD
- ~~244~~ 213 PROCESS HEATER
- ~~245~~ 214 RATED HEAT INPUT CAPACITY
- ~~246~~ 215 REGENERATIVE CYCLE GAS TURBINE
- ~~247~~ 216 RESIDUAL OIL
- ~~248~~ 217 SIMPLE CYCLE GAS TURBINE
- ~~249~~ 218 STATIONARY GAS TURBINE
- ~~220~~ 219 STEAM GENERATING UNIT
- ~~221~~ 220 SULFUR OXIDES (SO_x)
- 221 ULTRA LOW SULFUR DIESEL
- 222 UNCOMBINED WATER
- 223 WASTE DERIVED FUEL GAS
- 224 WATER HEATER

SECTION 300 – STANDARDS

- 301 LIMITATIONS - PARTICULATE MATTER
- 302 LIMITATIONS - OPACITY
- 303 LIMITATIONS -SULFUR IN FUEL
- 304 LIMITATIONS -NITROGEN OXIDES
- 305 LIMITATIONS - CARBON MONOXIDE
- 306 REQUIREMENTS FOR AIR POLLUTION CONTROL EQUIPMENT AND ECS MONITORING EQUIPMENT

SECTION 400 – ADMINISTRATIVE REQUIREMENTS (~~NOT APPLICABLE~~)

401 COMPLIANCE SCHEDULE

SECTION 500 – MONITORING AND RECORDS

501 RECORDKEEPING AND REPORTING

502 RECORDS RETENTION

503 COMPLIANCE DETERMINATION

504 ~~TEST METHODS ADOPTED BY REFERENCE~~ COMPLIANCE DETERMINATION-TEST
METHODS INCORPORATED BY REFERENCE

Adopted 07/02/2003; Revised 10/17/2007; Revised MM/DD/YYYY

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
- c. Used at military training facilities other than a garrison facility; or
- d. Engaged by manufacturers in research and the development of equipment for either gas turbine emission control techniques or gas turbine efficiency improvements; or
- e. Fired with emergency fuel that is normally fired with natural gas, or
- f. ~~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, per unit for testing, reliability, training, and maintenance purposes.

104.2 All steam generating units including cogeneration units and process heaters that are used for any of the following reasons 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.~~ Fired with emergency fuel for 36 cumulative hours per year, per unit.

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 **209** **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 **210** **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 **211** **PARTICULATE MATTER EMISSIONS:** Any and all particulate matter emitted to the ambient air as measured by applicable state and federal test methods.
- 213 **212** **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 **213** **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 **214** **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 **215** **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 **216** **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 **217** **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 **218** **STATIONARY GAS TURBINE:** Any simple cycle gas turbine or regenerative gas turbine that is not self-propelled or that is attached to a foundation.
- 220 **219** **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 **220** **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.
- 221 **221** **ULTRA LOW SULFUR DIESEL:** Fuel oil containing less than or equal to 0.0015 % sulfur by weight.
- 222 **UNCOMBINED WATER:** Condensed water containing no more than analytical trace amounts of other chemical elements or compounds.

- 223 **WASTE DERIVED FUEL GAS:** Any 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.
- 224 **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 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:** 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:
- 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. 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 either reduce the temperature difference to 100°F or less, or
 - 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.
 - 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~~ 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: 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. ~~or~~
- b. Limit nitrogen oxide emissions to no more than the following amounts:
 - (1) ~~155 ppm~~ 42 ppmdv calculated as nitrogen dioxide, when burning gaseous fuel. During steady state operations, this test result using EPA Reference Method(s) 7 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 ppmdv calculated as nitrogen dioxide, when burning liquid fuel. During steady state operations, this test result using EPA Reference Method(s) 7 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. 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 test result, using EPA Reference Method 10, 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. 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).
- 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 [date 8 months after rule adoption] 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 [date 8 months after rule adoption] 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 [date 24 months after rule adoption].
- 401.3 ECS Installation:** An owner or operator required to install an ECS for compliance with this rule shall by [date 8 months after rule adoption] file a schedule for the installation with the Control Officer. The ECS shall then be installed and in compliance by [date 36 months after rule adoption].

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~~ Ultra Low Sulfur Diesel 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~~ If the Control Officer requests proof of the sulfur content, the owner or operator shall submit fuel receipts, contract specifications, pipeline meter tickets, Safety Data Sheets (SDS), 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 0.0015% limits shall be permitted for evidence of compliance.

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~~ 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.

c. ~~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 ~~40 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.

a. Compliance with the NO_x and CO emission requirements and the stack gas oxygen requirements of Sections 301 through 304 of this rule shall be determined using the methods specified below. All emissions determinations shall be made during normal operating conditions, except no compliance determination shall be established during unit startup or shutdown. Tests shall be conducted while units are operating at a firing rate that is as close as physically possible to the unit's rated heat input capacity. Tests shall be conducted

for three 60 minute runs. Results shall be averaged over the three test periods. Test reports shall include the operational characteristics of all flue-gas NO_x reduction equipment.

(1) Oxide of Nitrogen - EPA Method 7E.

(2) Carbon Monoxide - EPA Method 10.

(3) Stack Gas Oxygen - EPA Method 3A.

(4) Carbon Dioxide - EPA Method 3A.

b. A scheduled source test may not be discontinued solely due to the failure of one or more runs to meet applicable standards.

c. A source test not conducted pursuant to the source test methods listed in Section 503.2(a) of this rule may be rejected and the test report determined to be invalid.

503.3 **Gaseous Emissions-Continuous Emission Monitoring System (CEMS): Compliance with NO_x emission requirements specified in Sections 301 through 304 of this rule may also be determined using CEMS. All emissions determinations shall be made in the as-found operating condition, except no compliance determination shall be established during unit startup or shutdown. 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, as applicable, shall be used to determine compliance with this rule. Alternative test methods may be utilized upon written approval from the Control Officer. 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. Copies of test methods referenced in this section are available at the Maricopa County Air Quality Department, 1001 N. Central Avenue, Phoenix, AZ 85004-1942. When more than one test method, as listed in subsections 504.11, 504.12, 504.14, or 504.15 Sections 504.11, 504.12, 504.14, or 504.15 of this rule, is permitted for the same a determination, an exceedance of the limits established in this rule determined by any one of the applicable test methods ~~constitutes~~ shall constitute a violation of this rule.

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 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** American Society of Testing Materials, ASTM Method D2880-00, (“Standard Specification for Gas Turbine Fuel Oils”), 2000.
- 504.14** American Society of Testing Materials, ASTM Method D4294-90 or 98, (“Standard Test Method for Sulfur in Petroleum and Petroleum Products by Energy- Dispersive X-ray Fluorescence Spectrometry”), 1990 or 1998.
- 504.15** American Society of Testing Materials, ASTM Method D5504-01,(“Standard Test Method for Determination of Sulfur compounds in Natural Gas and Gaseous Fuels by Gas Chromatography and Chemiluminescence”), 2006.

[Return to list of Attachments](#)

COPIES OF ALL WRITTEN AND ELECTRONIC STAKEHOLDER INPUT



One of our Department goals is to provide you with outstanding customer service. Your feedback is essential to help us achieve that goal. Please take a moment to tell us what we do well and what needs improvement.

Describe the reason for your interaction with the Department. (e.g. inspection), and any comments or suggestions.

New Rule Review

Did you obtain the information or result you were seeking? Yes No Partially

How would you rate your interaction with us?
(1 is unacceptable and 5 is outstanding)

	1	2	3	4	5	N/A
Timeliness of Service	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Professionalism	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Competence	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Responsiveness	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overall Experience	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please provide you name and contact information:

Name: _____
 Phone: _____
 Email: _____

If you would like a response to your comments please check the box

From: Hether Krause - AQDX
Sent: Wednesday, March 16, 2016 3:25 PM
To: Johanna Kuspert - AQDX
Subject: FW: EPA comments on Maricopa 322, 323 & 324

From: Steckel, Andrew [mailto:Steckel.Andrew@epa.gov]
Sent: Wednesday, March 16, 2016 2:42 PM
To: Hether Krause - AQDX; Marina Mejia (Mejia.Marina@azdeq.gov)
Cc: McKaughan, Colleen; Gong, Kevin
Subject: EPA comments on Maricopa 322, 323 & 324



United States Environmental Protection Agency
Region IX
75 Hawthorne Street
San Francisco, CA 94105-3901

March 16, 2016

Transmittal of EPA Rule Review Comments

To: Hether Krause, Maricopa County Environmental Services Department
hkrause@mail.maricopa.gov

From: Andrew Steckel, Rulemaking Office Chief
steckel.andrew@epa.gov

Re: Maricopa County Air Quality Department, Draft Rule 322 "Power Plant Operations" (dated February 24, 2016), Draft Rule 323 "Fuel Burning Equipment from Industrial/Commercial/Institutional (ICI) Sources" (dated February 18, 2016), and Draft Rule 324 "Stationary Internal Combustion (IC) Engines" (dated February 12, 2016).

We are providing comments on the draft rules identified above, based on our preliminary review and conversations between EPA and County staff via telephone on March 8, 2016. Please direct any questions about our comments to me at (415) 947-4115 or to Kevin Gong at (415) 972-3073.

Stringency

1. Interplay of Federal Regulations with Local Regulations

The County's draft rules split source requirements between new units that must meet standards as outlined in Federal NSPS/NESHAP standards, and those that are older which will be meeting standards outlined in the applicable rule. While this effectively ensures that sources are not subject to duplicative requirements, the County must provide analysis that such standards outlined in the NSPS/NESHAPs:

a) are as stringent as the limits and restrictions in the rule for existing units, and would not constitute backsliding under §110(l) of the Clean Air Act (CAA), and;

b) implement Reasonably Available Control Technology (RACT) as described in CAA §182(b).

The EPA generally does not automatically assume NSPS requirements on their own implement RACT because, for example, NSPS requirements are applicable to sources nationwide, not just for non-attainment area sources.

Please provide analysis as outlined above in a) and b), or include rule language in each of the three draft rules that ensures that all applicable sources meet RACT requirements.

2. Exemptions: Emergency Fuel Emissions Limits

The County rules for emergency units, 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. Please revise the emergency exemptions in section 104 of each of draft Rules 322, 323 and 324 accordingly.

3. Exemptions: Military Training Facilities

Draft Rules 322 and 323 (section 104.1c in both rules) provide partial exemptions for emissions from military training facilities. The term "military training facility" is unclear in this rule, especially as distinguished from other facilities such as "garrisons."

As discussed with County staff, please focus these exemptions on the specific types of activities at these facilities that reasonably require exemptions, rather than the facilities themselves. See, for example, Imperial County APCD Rule 800, Section E6.

Enforceability

4. Temperature Differential Issues in Turbines

Draft Rule 322, section 301.3, and draft Rule 323, section 301.3a both require measurement of temperature differential across the burners for good combustion practices in turbines. However, the frequency of differential temperature measurement is not specified. Please define the frequency of monitoring, and we additionally recommend requiring continuous monitoring of this differential for both draft rules.

5. Definitions

Please clearly define these terms to improve enforceability.

a) Draft Rules 322 and 323 use the term "Analytical Trace Amounts" in the definition of "Uncombined Water," without further description.

b) Draft Rule 322, sections 301, 305 and 306 use the term "steady-state operation" without further description.

Draft Rule 324, section 209.1d, 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. Please remove this discretion.

6. Startup and Shutdown

Draft Rule 323, sections 503.2a (Source Test) and 503.3 (CEMS), 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 (see EPA's Startup, Shutdown and Malfunction Policy at <https://www3.epa.gov/airquality/urbanair/sipstatus/emissions.html>).

Please revise Draft Rule 323 to include alternative numerical limits for operations during these periods, require best operating practices (see, for example, Yolo-Solano Air Quality Management District Rule 2.34 for Stationary Gas Turbines), or require that units comply with the standard limits during SSM events.

7. Source Test Results

Draft Rule 323, section 503.2 c and d describe how three source test runs are generally averaged. Practices outlined here would allow the dismissal of one source test run if certain circumstances occur (i.e., forced shutdown, sampling failure, meteorology or other uncontrollable events). Also, a source test that is improperly conducted according to required test methods **may** be rejected. This would allow Control Officer discretion on testing operations that may lead to poor operating data. We recommend removing these provisions.

8. Sulfur Content in Waste Gas Test Method

Draft Rules 323 and 324 both allow for the combustion of waste gases meeting a certain sulfur content limit. However, there is no test method for determining sulfur content of waste gas in these rules. Section 503.1b of Draft Rule 323 and Section 501.4 in Draft Rule 324 require that the supplier submit documentation of sulfur concentration without further discussion of appropriate test method.

9. We also recommend the following:

Revising the typo in Draft Rule 323, section 503.1a “If the Control Officer requests prood of...” to read “proof of”.

Draft Rule 323, section 503.1a, and draft Rule 324, section 501.4, allow various documents to verify compliance with the ultra low sulfur diesel fuel limit. Maricopa County should 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 Data Safety 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.

Re-evaluate test method ASTM D1266, listed in each of these Draft Rules, as it may not be appropriate. Its range is 0.01 – 0.4% which will not be able to verify compliance with the definition for ultra low sulfur diesel fuel at < 0.0015%.

[Return to list of Attachements](#)

COUNTY MANAGER CASE APPROVAL



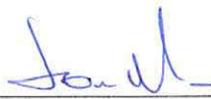
Maricopa County
Air Quality Department

MEMORANDUM

Date: May 4, 2015
To: Tom Manos, County Manager
Via: Joy Rich, AICP, Deputy County Manager
From: Philip A. McNeely, R.G., Director *PAM*
Subject: AQ-2015-003-Rule 323 – County Manager's Approval

In accordance with the "Moratorium on Increased Regulatory Burdens", the Air Quality Department is seeking your approval to proceed with revisions to Rule 323 (Fuel Burning Equipment From Industrial / Commercial / Institutional (ICI) Sources). Rule 323 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 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). Rule 323 revisions will include Reasonably Available Control Technology (RACT) for NO_x.

This rule revision qualifies for County Manager approval under the moratorium, as the rule revision will comply with a federal statutory or regulatory requirement or state statutory requirement. We are requesting your approval to move the rule revision, to be referenced as "AQ-2015-003-Rule 323," forward in accordance with the "Moratorium on Increased Regulatory Burdens".



Approved by Tom Manos, County Manager