

CHAPTER 5. STATIONARY SOURCE PERFORMANCE STANDARDS

ARTICLE 1. GENERAL PROVISIONS

5-1-010. Effective date of compliance

Notwithstanding the other provisions of Chapter 5, any holder of a Permit to Operate upon November 3, 1993, shall be authorized to continue to operate under the terms of such permit until expiration thereof.

[Adopted effective November 3, 1993. Amended February 22, 1995.]

5-1-020. Scope

Except as specified in §§5-1-010 and §5-1-030, the provisions of this chapter shall apply to all new and existing sources. The provisions of this Chapter supplement any applicable requirements arising under either Chapter 6 or Chapter 7 of this Code.

[Adopted effective November 3, 1993. Amended February 22, 1995.]

5-1-030. Applicability in non-attainment areas

A. PM₁₀ non-attainment areas.

The applicable performance standards for a PM₁₀ source located in an area designated non-attainment for PM₁₀ as of November 3, 1993, shall be the more stringent of the provisions set forth in this chapter, or the applicable provisions set forth in the SIP for such non-attainment area existing on and after November 3, 1993.

B. SO₂ non-attainment areas.

The applicable performance standards for a SO₂ source located in an area designated non-attainment for SO₂ as of November 3, 1993, shall be the more stringent of the provisions set forth in this chapter, or the applicable provisions set forth in the SIP for such non-attainment area existing on and after November 3, 1993.

[Adopted effective November 3, 1993. Amended February 22, 1995.]

ARTICLE 2. Hot Mix Asphalt Plants

5-2-050. Standards of performance for hot mix asphalt plants

A. Fixed asphalt concrete plants and portable asphalt concrete plants shall meet the standards set forth in this Section.

B. No person shall cause, allow or permit the discharge of particulate matter into the atmosphere in any one hour from any hot mix asphalt plant in total quantities in excess of the amounts calculated in accord with §5-24-1030.A. 1.

- C. For purposes of this Section, the total process weight from all similar units employing a similar type process shall be used in determining the maximum allowable emission of particulate matter.
- D. Liquid fuel containing greater than 0.9 percent sulfur by weight shall not be utilized for asphalt concrete plants subject to this Section.
- E. Solid fuel containing greater than 0.5 percent sulfur by weight shall not be utilized for asphalt concrete plants subject to this Section.
- F. The test methods and procedures required under this Section are:
 - 1. The reference methods given in 40 CFR 60, Appendix A shall be used to determine compliance with the standards prescribed in subsection (B).
 - a. Method 5 for the concentration of particulate matter and the associated moisture content.
 - b. Method 1 for sample and velocity traverses.
 - c. Method 2 for velocity and volumetric flow rate.
 - d. Method 3 for gas analysis.
 - 2. For Method 5, the sampling time for each run shall be at least 60 minutes and the sampling rate shall be at least 0.9 dscm/hr (0.53 dscf/min), except that shorter sampling times, when necessitated by process variables or other factors, may be approved by the Director.
 - 3. Percent sulfur in liquid fuel shall be determined by ASTM method D-129-91 (Test Method for Sulfur in Petroleum Products) (General Bomb Method), and the percent sulfur in solid fuel shall be determined by ASTM method D-3177-89 (Test Method for Total Sulfur in the Analysis Sample of Coal and Coke).

[Adopted February 22, 1995. Revised May 14, 1997.]

ARTICLE 3. INCINERATORS

5-3-100. Standard of Performance for Incinerators

- A. No person shall cause, allow or permit to be emitted into the atmosphere, from any type of incinerator, smoke, fumes, gases, particulate matter or other gas-borne material which exceeds 20 percent opacity except during the times specified in subsection (D) of this Section.
- B. No person shall cause, allow or permit the discharge of particulate matter into the atmosphere in any one hour from any incinerator, in excess of the following limits:
 - 1. For multiple chamber incinerators, controlled atmosphere incinerators, fume incinerators, afterburners or other unspecified types of incinerators, emissions shall not exceed 0.1 grain per cubic foot, based on dry flue gas at standard conditions, corrected to 12 percent carbon dioxide.
 - 2. For wood waste burners other than air curtain destructors, emissions discharged from the stack or burner top opening shall not exceed 0.2 grain per cubic foot, based on dry flue gas at standard conditions, corrected to 12 percent carbon dioxide.
- C. Air curtain destructors shall not be used within 500 feet of the nearest dwelling.
- D. Incinerators shall be exempt from the opacity and emission requirements described in subsections (A) and (B) of this Section as follows:

1. For multiple chamber incinerators, controlled atmosphere incinerators, fume incinerators, afterburners or other unspecified types of incinerators, such exemption shall be for not more than 30 seconds in any 60-minute period.
 2. Wood waste burners shall be exempt both:
 - a. For a period once each day for the purpose of building a new fire but not to exceed 60 minutes, and
 - b. For an upset of operations not to exceed three minutes in any 60-minute period.
- E. The owner or operator of any incinerator subject to the provisions of this Section shall record the daily charging rates and hours of operation.
- F. The test methods and procedures required by this Section are as follows:
1. The reference methods in 40 CFR 60, Appendix A shall be used to determine compliance with the standards prescribed in subsection (B) of this Section as follows:
 - a. Method 5 for the concentration of particulate matter and the associated moisture content.
 - b. Method 1 for sample and velocity traverses.
 - c. Method 2 for velocity and volumetric flow rate.
 - d. Method 3 for gas analysis and calculation of excess air, using the integrated sampling technique.
 2. For Method 5, the sampling time for each run shall be at least 60 minutes and the minimum sample volume shall be 0.85 dscm (30.0 dscf), except that smaller sampling times or sample volumes, when necessitated by process variables or other factors, may be approved by the Director.

[Adopted February 22, 1995.]

ARTICLE 4. SANDBLASTING OR ABRASIVE BLASTING

5-4-140. General

The purpose of this article is to control particulate emissions from abrasive blasting operations.

[Adopted effective November 3, 1993.]

5-4-150. Definitions

For the purpose of this article, the following definitions shall apply:

1. **ABRASIVE BLASTING** - The operation of cleaning or preparing a surface by forcibly propelling a stream of abrasive material against the surface.
2. Omitted in original.
3. **CONFINED BLASTING** - Any abrasive blasting conducted in an enclosure which significantly reduces air contaminants from being emitted to the ambient atmosphere, including but not limited to shrouds, tanks, buildings and structures.
4. **HYDROBLASTING** - Any abrasive blasting using high pressure liquid as the propelling force.
5. **MULTIPLE NOZZLES** - A group of two or more nozzles being used for abrasive cleaning of the same surface in such close proximity that their separate plumes are indistinguishable.

6. WET ABRASIVE BLASTING - Any abrasive blasting using compressed air as the propelling force and sufficient water to minimize the plume.

[Adopted effective November 3, 1993.]

5-4-160. Performance standards

- A. The opacity of emissions from abrasive blasting shall not be greater than 40% measured in accordance with the Arizona Testing Manual Reference method 9.
- B. Any abrasive blasting operation shall use at least one of the following control measures:
 1. Confined blasting.
 2. Wet abrasive blasting.
 3. Hydroblasting.
 4. A control measure that is determined by the Control Officer to be equally effective to control particulate emissions.

[Adopted effective November 3, 1993. Amended June 20, 1996.]

5-4-170. Monitoring and records

Visible emission evaluation of abrasive blasting operations shall be conducted in accordance with the following provisions:

1. Emissions from unconfined blasting employing multiple nozzles shall be judged as single source unless it can be demonstrated by the owner or operator that each nozzle, evaluated separately, meets the emission standards of this article.
2. Emissions from confined blasting shall be read at the densest point after the air contaminant leaves the enclosure.

[Adopted effective November 3, 1993.]

5-4-175. Applicability and Performance Standard

The provisions of this section are applicable to sandblasting and other abrasive blasting operations, and no person shall cause or permit sandblasting or other abrasive blasting without minimizing dust emissions to the atmosphere through the use of good modern practices. Examples of good modern practices include wet blasting and the use of effective enclosures with necessary dust collecting equipment.

[Adopted February 22, 1995. Amended October 12, 1995.]

ARTICLE 5. GRAVEL OR CRUSHED STONE PROCESSING PLANTS

5-5-180. General

The provisions of this article are applicable to the following affected facilities: primary rock crushers, secondary rock crushers, tertiary rock crushers, screens, conveyors and conveyor transfer points, stackers, reclaimers, and all gravel or crushed stone processing plants and rock storage piles.

[Adopted effective November 3, 1993.]

5-5-190. Performance standards

- A. No person shall cause, allow or permit the discharge of particulate matter into the atmosphere except as fugitive emissions in any one hour from any gravel or crushed stone processing plant in total quantities in excess of the amounts calculated by one of the following equations:

1. For process sources having a process weight rate of 60,000 lbs/hr (30 tons/hr) or less, the maximum allowable emissions shall be determined by the following equation:

$$E = 4.10P^{0.67}$$

where:

E = the maximum allowable particulate emissions rate in pounds-mass per hour.

P = the process weight rate in tons-mass per hour.

2. For process sources having a process weight rate greater than 60,000 lbs/hr (30 tons/hr), the maximum allowable emissions shall be determined by the following equation:

$$E = (55.0P^{0.11}) - 40$$

where "E" and "P" are defined as indicated in Subdivision 1. of this subsection.

- B. For reference purposes only the equations in Subsection A. of this section are plotted in A.A.C. Title 18, Chapter 2, Appendix 11, Figure 2 (December 31, 1991). The emission values obtained from the graph are approximately correct for the process weight rates shown. However, the actual values shall be calculated from the applicable equation and rounded off to two decimal places.
- C. Spray bar pollution controls shall be utilized in accordance with "EPA Control of Air Emissions from Process Operations in the Rock Crushing Industry" (EPA 340/1-79-002), "Wet Suppression System" (pages 15-34), amended as of January, 1979, as incorporated herein by reference, with placement of spray bars and nozzles as required by the Control Officer to minimize air pollution.
- D. Fugitive emissions from gravel or crushed stone processing plants shall be controlled in accordance with Chapter 4 of this Code.

[Adopted effective November 3, 1993.]

5-5-200. Monitoring and records

- A. The owner or operator of any affected facility subject to the provisions of this article shall install, calibrate, maintain, and operate monitoring devices which can be used to determine daily the process weight of gravel or crushed stone produced. The weighing devices shall have an accuracy of $\pm 5\%$ over their operating range.
- B. The owner or operator of any affected facility shall maintain a record of daily production rates of gravel or crushed stone produced.
- C. The test methods and procedures required by this article are as follows:
1. The reference methods in 40 C.F.R. Part 60, Appendix A shall be used to determine compliance with the standards prescribed in this article as follows:
 - a. Method 5 for concentration of particulate matter and moisture content.
 - b. Method 1 for sample and velocity traverses.
 - c. Method 2 for velocity and volumetric flow rate.
 - d. Method 3 for gas analysis.

2. For Method 5, the sampling time for each run shall be at least 60 minutes and the minimum sample volume is 0.85 dscm (30 dscf), except that shorter sampling times or smaller volumes, when necessitated by process variables or other factors, may be approved by the Control Officer. Sampling shall not be started until 30 minutes after start-up and shall be terminated before shutdown procedures commence. The owner or operator of the affected facility shall eliminate cyclonic flow during performance tests in a manner acceptable to the Control Officer.

[Adopted effective November 3, 1993. Revised May 14, 1997.]

ARTICLE 6. PERLITE PROCESSING PLANTS

5-6-210. General

The provisions of this article are applicable to the following sources: perlite crushers, dryers, expansion furnaces, screens, conveyors and conveyor transfer points, stackers, reclaimers and loading equipment.

[Adopted effective November 3, 1993.]

5-6-220. Definitions

For the purpose of this article, the following definition shall apply:

PERLITE - Volcanic glass that has a concentric shelly structure and when expanded by heat forms a lightweight aggregate.

[Adopted effective November 3, 1993.]

5-6-230. Performance standards

- A. No person shall cause, allow or permit the discharge of particulate matter into the atmosphere except as fugitive emissions in any one hour from any perlite processing plant in total quantities in excess of the amounts calculated by one of the following equations:
 1. For process sources having a process weight rate of 60,000 lbs/hr (30 tons/hr) or less, the maximum allowable emissions shall be determined by the following equation:

$$E = 4.10P^{0.67}$$

where:

E = the maximum allowable particulate emissions rate in pounds-mass per hour.

P = the process weight rate in tons-mass per hour.

2. For process sources having a process weight rate greater than 60,000 lbs/hr (30 tons/hr), the maximum allowable emissions shall be determined by the following equation:

$$E = (55.0P^{0.11}) - 40$$

where "E" and "P" are defined as indicated in Subdivision 1. of this subsection.

- B. For reference purposes only the equation in Subsection A. of this section are plotted in A.A.C. Title 18, Chapter 2, Appendix 11, Figure 2 (December 31, 1991).

The emission values obtained from the graph are approximately correct for the process weight rates shown. However, the actual values shall be calculated from the applicable equation and rounded off to two decimal places.

- C. Baghouses shall be used to control the fine dust from the perlite dryers and expansion furnaces. The baghouse collection efficiency shall be 96% or greater of the particles larger than 20 :m in diameter.
- D. Spray bar pollution controls shall be utilized in accordance with "EPA Control of Air Emissions from Process Operations in the Rock Crushing Industry" (EPA 340/1-79-002), "Wet Suppression System" (pages 15-34), amended as of January, 1979, as incorporated herein by reference, with placement of spray bars and nozzles as required by the Control Officer to minimize air pollution.
- E. Fugitive emissions from perlite processing plants shall be controlled in accordance with Chapter 4 of this Code. Opacity for all point sources shall be kept below 20% as determined using Method 9 in Appendix A of 40 C.F.R. Part 60.

[Adopted effective November 3, 1993. Revised May 14, 1997.]

5-6-240. Monitoring and records

- A. The owner or operator of any source subject to the provisions of this article shall install, calibrate, maintain, and operate monitoring devices which can be used to determine daily the process weight of perlite produced. The weighing devices shall have an accuracy of $\pm 5\%$ over their operating range.
- B. The owner or operator of any source subject to the provisions of this article shall maintain a record of daily production rates of perlite produced.
- C. The test methods and procedures required by this article are as follows:
 - 1. The reference methods in 40 C.F.R. Part 60, Appendix A shall be used to determine compliance with the standards prescribed in this article as follows:
 - a. Method 5 for concentration of particulate matter and moisture content.
 - b. Method 1 for sample and velocity traverses.
 - c. Method 2 for velocity and volumetric flow rate.
 - d. Method 3 for gas analysis.
 - 2. For Method 5, the sampling time for each run shall be at least 60 minutes and the minimum sample volume shall be 0.85 dscm (30 dscf), except that shorter sampling times or smaller volumes, when necessitated by process variables or other factors, may be approved by the Control Officer. Sampling shall not be started until 30 minutes after start-up and shall be terminated before shutdown procedures commence. The owner or operator of the source subject to the requirements of this article shall eliminate cyclonic flow during performance tests in a manner acceptable to the Control Officer.

[Adopted effective November 3, 1993. Revised May 14, 1997.]

ARTICLE 7. Reserved

ARTICLE 8. COTTON GINS

5-8-260. Performance standards

- A. Fugitive dust, lint, bolls, cotton seed or other material emitted from a cotton gin or lying loose in a yard shall be collected and disposed of in an efficient manner or shall be treated in accordance with Chapter 4 of this Code.
- B. No person shall cause, allow or permit to be emitted into the atmosphere, from any type of incinerator, smoke, fumes, gases, particulate matter or other gas-borne material which exceeds 40% opacity.
- C. No person shall cause, allow, or permit the discharge of particulate matter into the atmosphere in any one hour from any cotton gin in total quantities in excess of the amounts calculated by one of the following equations:
 1. For process sources having a process weight rate of 60,000 lbs/hr (30 tons/hr) or less, the maximum allowable emissions shall be determined by the following equation:

$$E = 4.10P^{0.67}$$

where:

E = the maximum allowable particulate emissions rate in pounds-mass per hour.

P = the process weight rate in tons-mass per hour.

2. For process sources having a process weight rate greater than 60,000 lbs/hr (30 tons/hr), the maximum allowable emissions shall be determined by the following equation:

$$E = (55.0P^{0.11}) - 40$$

where "E" and "P" are defined as indicated in Subdivision 1. of this subsection.

[Adopted effective November 3, 1993. Revised May 14, 1997, Amended October 13, 2010]

5-8-270. Monitoring and records

The test methods and procedures required by this article are as follows:

1. The reference methods in the Arizona Testing Manual and 40 C.F.R. Part 60, Appendix A shall be used to determine compliance with this article as follows:
 - a. Method A-2 for the measurement of particulate matter.
 - b. Method 1 for sample and velocity traverses.
 - c. Method 2 for velocity and volumetric flow rate.
 - d. Method 3 for gas analysis.
 - e. Method 9 for visible emissions.
2. For Method A-2, the sampling time for each run shall be at least 60 minutes and the sampling rate shall be at least 0.85 dry standard cubic meters per hour (0.53 dry standard cubic feet per minute), except that shorter sampling times, when

necessitated by process variables or other factors, may be approved by the Control Officer.

[Adopted effective November 3, 1993. Revised May 14, 1997.]

ARTICLE 9. VOLATILE ORGANIC COMPOUNDS EMISSIONS

5-9-278. Applicability

The requirements of this Article shall only apply to sources in that portion of Pinal County lying within the rectangle defined by and including:

1. Section 7, Township 4 South, Range 2 East, Gila & Salt River Base & Meridian, and
2. Section 5, Township 1 North, Range 9 East, Gila & Salt River Base & Meridian.

[Adopted effective June 16, 1980 as R7-3-3.4. Revised and renumbered February 22, 1995. Amended October 12, 1995. Revised July 12, 2000.]

5-9-280. Organic Solvents; Control of Volatile Organic Compounds Emissions

A. Applicability

The requirements of this section shall apply to any source that is not otherwise exempted under this section, that discharges into the atmosphere more than 40 pounds per day of volatile organic compounds, calculated on the basis of a 7-day-rolling-average, and that either uses:

1. Photochemically reactive solvents; or
2. Any emissions unit in which organic solvent or any material containing organic solvent comes into contact with flame, or is baked, heat-cured, or heatpolymerized in the presence of oxygen.

B. Exemptions

The requirements of this section shall not apply to or be triggered by:

1. Emissions units that qualify for regulation under §5-10-330 [*Petroleum Solvent Dry Cleaners*].
2. Emissions units that are subject to emissions limitations under §7-1-030 [*Performance standards for federally listed hazardous air pollutants*].
3. The manufacture of organic solvents, or the transport or storage of organic solvents or materials containing organic solvents.
4. The use of equipment for which other requirements are specified by Article 18 [*Storage of Organic Liquids*] of this Code.
5. The spraying or other employment of insecticides, pesticides or herbicides.

C. Definitions

For purposes of this section "photochemically reactive solvent" means:

1. One or more solvents, whether singly, in a solvent blend, in a solvent-and-solute combination, or solvent-solute-and-suspension combination, wherein more than 20 percent of the total volume of the combination consists of the chemical compounds classified below:
 - a. Hydrocarbons, alcohols, aldehydes, esters, ethers, or ketones having an olefinic or cycloolefinic type of unsaturation;
 - b. Aromatic compounds with eight or more carbon atoms to the molecule;

- c. Ketones having branched hydrocarbon structures, trichloroethylene or toluene.
- 2. One or more solvents, whether singly, in a solvent blend, in a solvent-and-solute combination or solvent-solute-and-suspension combination, wherein the volume concentration of any class of solvents, relative to the volume of the whole of the combination, exceeds the percentage limits for the chemical compounds classified below:
 - a. A combination including hydrocarbons, alcohols, aldehydes, esters, ethers, or ketones having an olefinic or cycloolefinic type of unsaturation: 5 percent;
 - b. A combination including aromatic compounds with eight or more carbon atoms to the molecule except ethylbenzene: 8 percent;
 - c. A combination including ethylbenzene, ketones having branched hydrocarbon structures, trichloroethylene or toluene: 20 percent.
 - d. Whenever any organic solvent or any constituent of an organic solvent may be classified from its chemical structure into more than one of the above groups of organic compounds, it shall be considered as a member of the most reactive chemical group, that is, that group having the least allowable percent of the total volume of solvents.

D. Control Standards

Volatile organic compound emissions from an affected source that exceed 40 pounds per day, calculated on the basis of a 7-day-rolling-average emission rate, shall be controlled in accord with one of the following:

- 1. Primary control standard
Emissions of volatile organic compounds into the atmosphere shall be reduced by at least 90% by:
 - a. Incinerating such that the carbon in the volatile organic compounds is oxidized to carbon dioxide, or
 - b. Adsorption, or
 - c. Processing in a manner not less effective than a and b of this subsection.
- 2. Alternative control standard
Emissions of volatile organic compounds shall be reduced by effecting rational control technology. For the purposes of this subparagraph, "rational control technology" means an emission standard, technology requirement or work practice which the control officer determines, on a case-by-case basis, is reasonable for a source, considering any reasonably anticipated danger to public health or welfare, potential impact on the maintenance of the applicable ambient standard, costs, nonairquality benefits and energy requirements. A showing that a particular control strategy would constitute RACT for a similar source located in a nonattainment area shall constitute a *prima facie* demonstration of compliance with the control obligation under this subsection.

[Adopted effective June 16, 1980 as R7-3-3.4. Revised and renumbered October 12, 1995.]

ARTICLE 10. PETROLEUM SOLVENT DRY CLEANING

5-10-330. Petroleum Solvent Dry Cleaners

No person shall operate any dry cleaning establishment using non-chlorinated petroleum solvents unless such person:

1. uses Stoddard solvent;
2. uses 140 safety solution solvent;
3. uses other solvent that does not contain photochemically reactive compounds, as defined in §5-9-280; or
4. reduces solvent emissions by at least ninety percent (90%) by application of approved control technology.

[Adopted effective June 16, 1980 as R7-3-3.4. Revised and renumbered *October 12, 1995.*]

ARTICLE 11. CHLORINATED SYNTHETIC SOLVENT DRY CLEANING

5-11-350. Chlorinated Solvent Dry Cleaners

No person shall operate any dry cleaning equipment using chlorinated synthetic solvents without minimizing organic solvent emissions by accepted modern practices including, but not limited to, the use of an adequately sized and properly maintained activated carbon adsorber, or an adequately sized and properly operated vapor condensing system utilizing a coolant inlet temperature of 72oF (22oC) or less, or other equally effective control device.

[Adopted effective June 16, 1980 as R7-3-3.4. Revised and renumbered October 12, 1995.]

ARTICLE 12. ARCHITECTURAL COATINGS

5-12-370. Architectural Coating Operations

- A. To limit emissions of volatile organic compounds, no person shall employ, apply, evaporate or dry any architectural coating for industrial or commercial purposes, material containing photochemically reactive solvent as defined in §5-9-280 or shall thin or dilute any architectural coating with a photochemically reactive solvent.
- B. For the purposes of this rule, architectural coating is defined as a coating used commercially or industrially for residential, commercial or industrial buildings and their appurtenances, structural steel and other fabrications such as but not limited to, storage tanks, bridges, beams and girders.
- C. For the purposes of this rule, "photochemically reactive solvent" means a solvent with an aggregate of more than 20 percent of its total volume composed of the chemical compounds classified below or which exceeds any of the following individual percentage composition limitations, referred to the total volume of solvent:
 1. A combination of hydrocarbons, alcohols, aldehydes, esters, ethers, or ketones having an olefinic or cycloolefinic type of unsaturation: 5 percent;
 2. A combination of aromatic compounds with eight or more carbon atoms to the molecule except ethylbenzene: 8 percent;
 3. A combination of ethylbenzene, ketones having branched hydrocarbon structures, trichloroethylene or toluene: 20 percent.
 4. Whenever any organic solvent or any constituent of an organic solvent may be classified from its chemical structure into more than one of the above groups or organic compounds, it shall be considered as a member of the most reactive chemical group, that is, that group having the least allowable percent of the total volume of solvents.

D. Disposal Limitation

No person shall, during any one day, dispose of a total of more than one and one-half gallons of any photochemically reactive solvent or of any material containing more than one and one-half gallons of any such photochemically reactive solvent by any means which will permit the evaporation of such solvent into the atmosphere.

[Adopted effective June 16, 1980 as R7-3-3.4. Revised and renumbered **October 12, 1995.**]

ARTICLE 13. SURFACE COATING OPERATIONS

5-13-100 – GENERAL

1. **PURPOSE:** To limit the emission of volatile organic compounds (VOCs) from surface coating operations in the Pinal County portion of the Phoenix metro 8-hour ozone nonattainment area (2008 ozone National Ambient Air Quality Standard (NAAQS)), defined in 40 CFR 81.303.

2. **APPLICABILITY:** This rule applies to surface coating operations in the Pinal County portion of the Phoenix metro 8-hour ozone nonattainment area for the 2008 ozone NAAQS, namely T1N, R8E; T1S, R8E (Sections 1 through 12) where the total actual VOC emissions from all operations, including related cleaning activities, at the facility are equal to or exceed 15 lbs/day or an equivalent 2.7 tons per year, before consideration of controls.

Additionally:

- i. Surface-coating activities regulated under this rule include, but are not limited to, the application of coating, coating preparation/mixing at the facility applying the coating, and the cleanup of coating application equipment.
- ii. §5-13-100.3 sets forth partial exemptions for certain materials or uses employed by a surface coating operation subject to this rule.
- iii. In addition to this rule, facilities may be subject to New Source Performance Standards (NSPS) in Chapter 6 and/or to National Emission Standards for Hazardous Air Pollutants (NESHAP) in Chapter 7 of these regulations.

3. **PARTIAL EXEMPTIONS:**

- i. **Qualified Materials Exemption:**
 - a. **Leak-Preventing Materials:** Sealants, caulking, and similar materials used on the following substrates for the primary purpose of leak prevention are exempt from this rule:
 - (1) Non-metallic substrates; and
 - (2) Post manufacture, such as, but not limited to, old joints and seals on pipe and valve assemblies.
 - b. **Certain Joint Fillers:** Caulking and beaded sealants used to fill gaps or to fill joints between surfaces are exempt from this rule, except those used in manufacturing other metal parts and products or in the manufacturing of cans.

- ii. Extreme Performance Coatings: Extreme performance coatings are exempt from the VOC limits in Table 1 of this rule but not from any other sections of this rule when used under the following conditions:
 - a. Used on internal combustion engine components that are normally above 250°F (121°C) during use; or
 - b. Used at temperatures above 250°F (121°C) on items that are both included under the North American Industry Classifications System (NAICS) codes 334210, 334220, 334290, 334416, 334417, 334418, 334419, 334310 or 336419 and are electronic products in space vehicles and/or are communications equipment.

- iii. Application Methods Exemptions: The following coatings are exempt from application methods in §5-13-300.2 of this rule but are subject to the remaining provisions of this rule:
 - a. Metal part texture coatings;
 - b. Metal part touch-up and repair coatings;

- iv. Application Methods and VOC-Limit Exemptions: The following surface coating operations are exempt from §§5-13-300.1(surface coating standards), 5-13-300.2 (Application methods), and 5-13-300.5 (Emission control system requirements) of this rule but shall comply with §§5-13-300.3 (Cleanup of application equipment), 5-13-300.4 (Work practices-handling, disposal and storage of VOC-Containing material), and 5-13-500 (Monitoring & Records) of this rule.
 - a. Aerosol can spray coating from a non-refillable container that is less than 22 fluid ounces (0.66 liter) capacity without exceeding 2 ton/yr VOC usage or purchase, facility wide threshold.
 - b. Low usage of VOC coatings which exceed thresholds for coating categories listed in Table 1 of this Rule, which in aggregate of all formulations do not exceed 55 gal/yr (208 liters) facility-wide. The operator shall update usage records of these coatings at the end of each month of their use, pursuant to §5-13-500(1)(ii) of this rule.
 - c. A Small Surface-Coating Source
 - d. This rule is not applicable to coatings or solvents having a VOC content, minus exempt compounds, of less than 0.15 lb VOC/gal (18g/L).
 - e. A tactical military-equipment coating that is approved in a Pinal County Air Pollution Permit subsequent to a sufficient demonstration by the user that no compliant substitute exists.
 - f. Metal Parts Coating:
 - (1) Stencil coatings.
 - (2) Safety-indicating coatings.
 - (3) Solid-film lubricants.
 - (4) Electric-insulating and thermal-conducting coatings.

- (5) Magnetic data storage disk coatings.
 - (6) Plastic extruded onto metal parts to form a coating.
- v. Low Usage Allowance for Restricted Spray Guns: Spray guns otherwise prohibited by §5-13-300.2 of this rule for use with coatings over 2 lbs VOC/gal minus exempt compounds, are exempt from this rule under the following limited conditions:
- a. If VOC emissions from the finishing application are captured and directed to an ECS complying with the provisions of §5-13-300.5 of this rule; or
 - b. To coat the inside of pipes and tubes with a wand-style applicator; or
 - c. Using an airbrush or other small gun that has a reservoir capacity not exceeding 250 cc (8.8 fl. oz) and is used solely for detailing, lettering, touchup, and/or repair.
4. TOTAL CATEGORICAL EXEMPTIONS: This rule does not apply to the following operations:
- i. Solvent cleaning (Chapter 5, Article 15).

[Adopted November 30, 2016]

5-13-200 – DEFINITIONS:

For the purpose of this rule, the following definitions shall apply, in addition to those definitions found in §1-3-140 (Definitions) of these rules. In the event of any inconsistency between any of the Pinal County Air Quality Control District Code of Regulations, the definitions in this rule take precedence.

1. **ADHESIVE:** A material used for the primary purpose of bonding two or more surfaces together.
2. **ADHESIVE PRIMER:** A coating applied to a substrate, prior to the application of an adhesive, to provide a bonding surface.
3. **AEROSOL CAN-SPRAY COATING:** A coating sold in a hand-held, pressurized, non-refillable container, of less than 22 fluid ounces (0.66 liter) capacity, and that is expelled from the container in a finely divided form when a valve on the container is depressed.
4. **AIR-DRIED COATING:** A coating dried by the use of air or forced warm air at temperatures up to and including 200°F (93.3°C).
5. **BAKED COATING:** A coating that is dried or cured in an oven in which the oven temperature exceeds 200°F (93.3°C).
6. **CAMOUFLAGE:** A coating used, principally by the military, to conceal equipment from detection.
7. **CAULKING:** A semisolid material that is used to aerodynamically smooth surfaces or fill cavities.
8. **CLEAR COAT:** A coating that lacks color or opacity or is transparent.

9. **COATING APPLICATION EQUIPMENT:** Any spray gun, wand, rollers, brushes or any other means used to apply or cover a surface with a coating for either beauty, protection or other purpose.
10. **DAY:** A period of 24 consecutive hours beginning at midnight.
11. **DRUM COATING:** Coating of a cylindrical metal shipping container larger than 12 gallons capacity but no larger than 110 gallons capacity.
12. **ELECTRIC INSULATING VARNISH:** A non-convertible-type coating applied to electric motors, components of electric motors, or power transformers, to provide electrical, mechanical, and environmental protection or resistance.
13. **ELECTROSTATIC SYSTEM:** A method of applying atomized paint by electrically charging the coating and the object being coated with opposing charges. A higher proportion of the coating reaches and coats the object than would occur in the absence of a charge.
14. **EMISSION CONTROL SYSTEM (ECS):** A system, approved in writing by the Control Officer, designed and operated in accordance with the equipment manufacturer's specifications, to reduce emissions of volatile organic compounds. Such system consists of an emissions collection subsystem and an emissions processing subsystem.
15. **ETCHING FILLER:** A coating that contains less than 23 percent solids by weight and at least ½ percent acid by weight, and is used instead of applying a pretreatment coating followed by a primer..
16. **EXTREME HIGH-GLOSS COATING:** A coating when tested by the ASTM D-523 adopted in 1980 shows reflectance of 75 or more on a 60° meter.
17. **EXEMPT ORGANIC COMPOUNDS:** The federally listed non-precursor organic compounds, organic compounds which have been determined to have negligible photochemical reactivity as listed in 40 CFR 51.100(s).
18. **EXTREME-PERFORMANCE COATING:** A coating used on a surface where the coated surface in its intended use is at temperatures consistently in excess of 250°F (121°C). Extreme-performance coatings include but are not limited to, coatings applied to locomotives, railroad cars, farm machinery, plastic, rubber, leather, or glass.
19. **FABRIC:** A textile material. Non-manufactured items from nature are not fabric except for natural threads, fibers, filaments, and similar that have been manufactured into textile fabric.
20. **FILLER:** A relatively non-adhesive substance added to an adhesive to improve its working properties, permanence, strength, or other qualities.
21. **FLEXIBLE PLASTIC PART OR PRODUCT:** A plastic part or product designed to withstand significant deformation without damaging it for its intended use. Not included are flexible plastic parts that are found on a can, coil, metal furniture, or large appliance, or that are already a part of an aerospace component, highway vehicle, mobile equipment, architectural building or structure, or a previously coated marine-vessel .

22. **FLOW COAT:** A non-atomized technique of applying coatings to a substrate with a fluid nozzle in a fan pattern with no air supplied to the nozzle.
23. **HAND APPLICATION METHODS:** Application of coatings by non-mechanical, hand-held equipment including but not limited to paint brushes, hand rollers, caulking guns, trowels, spatulas, syringe daubers, rags, and sponges.
24. **HEAT-RESISTANT COATING:** A coating that must withstand a temperature of at least 400°F during normal use.
25. **HIGH PERFORMANCE ARCHITECTURAL COATING:** A coating used to protect architectural subsections and that meets the requirements of the Architectural Aluminum Manufacturer Association's publication number AAMA 2604-05 (Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels) or 2605-05 (Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels).
26. **HIGH TEMPERATURE COATING:** A coating that is certified to withstand a temperature of 1000°F for 24 hours.
27. **HIGH-VOLUME, LOW PRESSURE (HVLP) SPRAY-GUN:** Spray equipment that is permanently labeled as such and used to apply any coating by means of a spray-gun which is designed and operated between 0.1 and 10 pounds per square inch gauge (psig) air atomizing pressure measured dynamically at the center of the air cap and at the air horns.
28. **HIGHWAY VEHICLE:** A vehicle that is physically capable of being driven upon a highway including, but not limited to, cars, pickups, vans, trucks, truck-tractors, motor-homes, motorcycles, and utility vehicles.
29. **IN USE OR HANDLED:** Actively engaging the materials with activities such as mixing, depositing, brushing, rolling, padding, wiping or removing or transferring material into or out of the container.
30. **LARGE APPLIANCE:** A door, case, lid, panel, or interior support part of residential and commercial washers, dryers, ranges, refrigerators, freezers, water heaters, dishwashers, trash compactors, air conditioners, evaporative coolers, and other similar products.
31. **LOW PRESSURE SPRAY GUN:** An air-atomized spray gun that, by design, functions best at tip pressures below 10 psig (516 mm Hg), measured according to §5-13-500(4)(i)(d) of this rule, and for which the manufacturer makes no claims to the public that the gun can be used effectively above 12 psig (619 mm Hg).
32. **METAL FURNITURE:** Furniture made of metal or any metal part which will be assembled with other parts made of metal or other material(s) to form a furniture piece.
33. **METALLIC COATING:** A coating that contains more than 5 grams of metal particles per liter of coating as applied.

34. **MILITARY SPECIFICATION COATING:** A coating that has a formulation that has been approved by a United States Military Agency for use on military equipment.
35. **MOBILE EQUIPMENT:** Equipment that is physically capable of being driven or drawn on a highway including, but not limited to: construction vehicles (such as mobile cranes, bulldozers, concrete mixers); farming equipment (wheel tractor, plow, pesticide sprayer); hauling equipment (truck trailers, utility bodies, camper shells); and miscellaneous equipment (street cleaners, mopeds, golf carts).
36. **MOLD-SEAL COATING:** The initial coating applied to a new mold or a repaired mold to provide a smooth surface which, when coated with a mold release coating, prevents products from sticking to the mold.
37. **NON-PRECURSOR ORGANIC COMPOUNDS:** Non-Precursor Organic Compounds are compounds having negligible photochemical reactivity. The list of negligible photochemical reactivity compounds is provided in 40 CFR 51.100(s)(1).
38. **OTHER METAL PARTS AND PRODUCTS:** Any metal part or product, excluding the following items that are made of metal: can, coil, furniture, large appliance, aerospace component, metal foil, metal textile fabric, semiconductor metal, highway vehicle, mobile equipment, an architectural building or structure, a previously coated marine-vessel.
39. **PAN BACKING COATING:** A coating applied to the surface of pots, pans, or other cooking implements that are exposed directly to a flame or other heating element.
40. **PLASTIC:** Substrates containing one or more resins and may be solid, porous, flexible, or rigid. Plastics include fiber reinforced plastic composites. Any solid, synthetic: resin, polymer, or elastomer, except rubber. For the purposes of this rule, plastic film is considered film; fabric and paper made of polymeric plastic fibers are considered fabric and paper, respectively.
41. **PREFABRICATED ARCHITECTURAL COMPONENT COATING:** A coating applied to metal parts and products which are to be used as an architectural structure.
42. **PRETREATMENT COATING:** A coating containing no more than 12 percent solids by weight, and at least 1/2 percent acid, by weight, is used to provide surface etching, and is applied directly to metal surfaces to provide corrosion resistance, adhesion and ease of stripping.
43. **PRIMER:** A coating applied directly to substrate for any one or combination of the following purposes: corrosion prevention, protection from the environment, functional fluid resistance, or adhesion of subsequent coatings.
44. **REPAIR COATING:** A coating used to recoat the portion of a completed finish that suffered post-production damage at the facility where the finish was applied.
45. **RESTRICTED SPRAY GUN:** An air-atomizing spray gun that is not a low pressure spray gun, and any other spray gun that is not on the list in §5-13-300.2 of this rule.

46. **SEALANT (BEADED):** A material with adhesive properties that is applied as a rope or bead and that is formulated for use primarily to fill, seal, waterproof, or weatherproof gaps or joints between two surfaces. Sealants include sealant primers and caulks.
47. **SMALL SURFACE COATING SOURCE (SSCS):** A facility from which the total VOC emissions for all surface coating operations that are subject to this rule without, or prior to, any emission control, is less than 2 tons/yr (1814 kg); as demonstrated by both adequate records of coating and diluent use (according to §5-13-500.1 of this rule) and a separate tally of the number of days each month such coating operations occur.
48. **STENCIL COATING:** An ink or a coating that is rolled or brushed onto a template or stamp in order to add identifying letters, symbols and/or numbers.
49. **SURFACE COATING:** A liquid, fluid, or mastic composition that is converted to a solid (or semi-solid) protective, decorative, or adherent film or deposit after application as a thin layer. Surface coating is generally distinct and different from impregnation and from applying adhesive for bonding purposes.
50. **SURFACE COATING OPERATION:** Preparation, handling, mixing, and application of surface coating, and cleanup of application equipment and enclosures at a facility where surface coating is applied.
51. **SURFACE PREPARATION:** Surface preparation is the cleaning of a substrate to remove dirt, oils, and other contaminants prior to the application of surface coatings or sealants.
52. **TEXTURE COATING:** A coating that is applied which, in its finished form, consists of discrete raised spots of the coating.
53. **TOUCH UP COATING:** A coating used to cover minor coating imperfections after the main coating operation. This includes touch-up coating that accompanies the purchase of an object already coated with that coating.
54. **TRANSFER EFFICIENCY:** The ratio of the weight of coating solids adhering to the part being coated, to the weight of coating solids used in the application process expressed as a percentage.
55. **VACUUM-METALIZING COATING:** The undercoat applied to the substrate on which the metal is deposited or the overcoat is applied directly to the metal film. Vacuum metalizing/physical vapor deposition (PVD) is the process whereby the metal is vaporized and deposited in a substrate in a vacuum chamber.
56. **VOC ACTUAL:** VOC Actual includes the VOC Content minus the weight of water and minus the weight of exempt compounds (§5-13-200.12) divided by the total volume of all materials. Units of VOC actual are in pounds of VOC per gallon (or grams per liter) of material and shall be calculated using the following equation:

$$\text{VOC Content of Cleaners or Reducers} = \frac{W_s - W_w - W_{es}}{V_m}$$

Using consistently either English or metric measures in the calculations, where:

W_s = weight of all volatile material in pounds (or grams) including VOC, water, non-precursor organic compounds (§5-13-200.30) and dissolved vapors

W_w = weight of water in pounds (or grams)

W_{es} = weight of all non-precursor organic compounds in pounds (or grams)

V_m = volume of total material in gallons (or liters)

57. **VOC CONTENT:** The organic chemicals in a material that have a high vapor pressure at ordinary room temperature. The high vapor pressure results from a low boiling point, which causes large numbers of molecules to evaporate or sublimate from the liquid or solid form of the compound and enter the surrounding air. The term VOC Content is a general term used throughout the rule and includes VOC, VOC Actual or VOC Regulatory.
58. **VOC REGULATORY: VOC Content Minus Exempt Compounds** The VOC content minus the weight of water and minus the weight of Exempt Compounds divided by the volume of material minus the volume of water and minus the volume of Exempt Compounds. Units of VOC Regulatory are in pounds of VOC per gallon (or grams per liter) of material and shall be calculated using the following equation:

$$\text{VOC Regulatory} = \frac{W_s - W_w - W_{es}}{V_m - V_w - V_{es}}$$

Using consistently either English or metric measures in the calculations, where:

W_s = weight of all volatile material in pounds (or grams), including VOC, water, non-precursor organic compounds and dissolved vapors

W_w = weight of water in pounds (or grams)

W_{es} = weight of all non-precursor organic compounds in pounds (or grams)

V_m = volume of total material in gallons (or liters)

V_w = volume of water in gallons (or liters)

V_{es} = volume of all non-precursor organic compounds in gallons (or liters)

[Adopted November 30, 2016]

5-13-300 – STANDARDS

1. **SURFACE COATINGS:** An owner or operator shall comply with one of the following for all applications of surface coatings:
 - i. Meet the limits in Table 1 of this rule. Coating limits are VOC Regulatory; or
 - ii. Operate an Emission Control System (ECS) in accordance with §5-13-300.5 of this rule when applying a coating that exceeds the VOC limits in Table 1 of this rule; or
 - iii. Qualify for an exemption under §5-13-100.3 or §5-13-100.4 of this rule.

Table 1: Coating Limits For Metal Parts and Products

Coating Category	Air Dried		Baked	
	g VOC/l	lb VOC/gal	g VOC/l	lb VOC/gal
Clear Coat	515	4.3	515	4.3
Camouflage	420	3.5	420	3.5
Electric-Insulating Varnish	420	3.5	420	3.5
Etching Filler	420	3.5	420	3.5
Extreme High-Gloss	420	3.5	360	3.0
Extreme Performance	420	3.5	360	3.0
Heat-Resistant	420	3.5	360	3.0
High Performance Architectural	740	6.2	740	6.2
High Temperature	420	3.5	420	3.5
Metallic	420	3.5	420	3.5
Military Specification	340	2.8	280	2.3
Mold-Seal	420	3.5	420	3.5
Pan Backing	420	3.5	420	3.5
Prefabricated Architectural Component	420	3.5	280	2.3
Pretreatment Coating	420	3.5	420	3.5
Repair	420	3.5	360	3.0
Touch up	420	3.5	360	3.0
Vacuum-Metalizing	420	3.5	420	3.5
Drum Coating, New, Exterior	340	2.8	0.34	2.8
Drum Coating, New, Interior	420	3.5	420	3.5
Drum Coating, Reconditioned, Exterior	420	3.5	420	3.5
Drum Coating, Reconditioned, Interior	500	4.2	500	4.2
OTHER METAL PARTS AND PRODUCTS COATING: includes Adhesive Primer, Caulking, and Beaded Sealants:				
Air Dried	420	3.5		
Baked Coating [above 200°F (93°C)]			360	3.0

2. APPLICATION METHODS FOR SURFACE COATINGS:

- i. An owner or operator shall use one of the following methods for all applications of surface coating materials containing more than 2 pounds of VOC per gallon (240 g/L), minus exempt compounds,(VOC regulatory):
 - a. HVLP Spray-Gun (Low Pressure Spray Gun);
 - b. Electrostatic System;
 - c. A system that atomizes principally by hydraulic pressure, including “airless” and “air assisted airless”;
 - d. Hand Application Methods, including but not limited to:
 - (1) Flow Coat;
 - (2) Roll Coat;
 - (3) Dip-Coating;
 - ii. An owner or operator is allowed to use a device or system other than that described in §5-13-300(2)(i) of this rule for applications of surface coating containing less than 2.0 lb VOC/gal (250 g/l).
3. **CLEANUP OF APPLICATION EQUIPMENT:** An owner or operator shall comply with the following when using VOC-containing material to clean application equipment:
- i. **Spray-Gun Cleaning Requirements:**
 - a. Clean spray-guns without spraying or atomizing a solvent cleaner with the gun.
 - b. **Spray-Gun Cleaning Machine:** Use a spray-gun cleaning machine that complies with the following requirements unless the owner or operator complies with the manual spray-gun cleaning requirements in §5-13-300(3)(ii) of this rule.
 - (1) **Spray-Gun Cleaning Machine-General Requirements:** The spray-gun cleaning machine shall meet all of the following requirements:
 - (a) Be designed to clean spray-guns.
 - (b) Have at least one pump that drives solvent cleaner through and over the spray-gun.
 - (c) Have a basin which permits containment of the solvent cleaner.
 - (d) Be kept in proper repair and free from liquid leaks.
 - (e) Shall be fitted with a cover.
 - (f) Be located on-site where the spray application occurs; and
 - (g) Be operated and maintained according to manufacturer’s or distributor’s instructions.
 - (2) **Automatic Spray-Gun Cleaning Machine:** An automatic spray-gun cleaning machine shall have a self-covering or enclosing cover feature when not loading or unloading that in the cover's closed position allows no gaps exceeding 1/8 inch (3 mm) between the cover and the cabinet.

This self-enclosing feature shall be maintained and consistently cover or enclose to these gap limits.

(3) Non-Automatic Remote Reservoir Spray-Gun Cleaning Machine: Non-automatic Remote Reservoir Spray-Gun Cleaning Machine shall meet all of the following requirements:

(a) Drain solvent cleaner from the sink/work-space quickly into a remote reservoir when work-space is not in use; and

(b) Machine reservoir shall not have cumulative total openings, including the drain opening(s) exceeding two square inches in area so that the reservoir will not allow VOC vapors to escape to the atmosphere; and

(c) Allow a machine design in which the base of the sink/work-space functions as the reservoir's top surface, as long as the fit/seal between sink base and reservoir container allows the reservoir to meet the opening limits specified in §5-13-300(3)(i)(b)(3)(b) of this rule.

ii. Manual Spray-Gun Cleaning Requirements: An owner or operator manually cleaning spray-guns shall comply with the following requirements:

a. Disassembled spray-guns must be cleaned by non-mechanical, hand-held method of application of cleaners including but not limited to paint brushes, hand rollers, caulking guns, trowels, spatulas, syringe daubers, rags, and sponges;

b. Disassembled spray-guns must be soaked in a vat which remains covered at all times, except when the application equipment is being handled in the container, or transferred into or out of the container;

c. Solvent cleaners used to clean spray-guns shall be less than 10 percent VOC (excluding water and non-precursor organic compounds) and shall contain less than 8.0 percent VOC by weight (including water and non-precursor organic compounds) and calculated pursuant to VOC Regulatory as defined in this rule.

4. WORK PRACTICES-HANDLING, DISPOSAL AND STORAGE OF VOC-CONTAINING MATERIAL: An owner or operator of any surface coating facility shall store, handle, and dispose of VOC-containing material in a way to prevent the evaporation of VOC to the atmosphere. Work practices limiting VOC emissions include but are not limited to the following:

i. Use and Storage: An owner or operator shall cover and keep covered each VOC-containing material which is not currently in use. A person shall store finishing and cleaning materials in closed or covered leak-free containers.

ii. Disposal of VOC-Containing Material: An owner or operator shall store all VOC-containing materials intended for disposal including, but not limited to, rags, waste coatings, waste brushes, waste rollers, waste applicators, waste solvents, and their residues, in closed, leak free containers. The containers shall be clearly marked "Disposal of VOC Material" and remain covered with a leak tight cover, when not in use.

- iii. Minimize spills of VOC-containing coatings, thinners, and coating-related waste materials; and
 - iv. Convey VOC-containing coatings, thinners, and coating-related waste materials from one location to another in closed containers or pipes.
 - v. Use of VOC Solvent for Surface Coating Cleanup: An owner or operator may choose to use a VOC cleaning solvent for the cleaning of coating-application equipment, if such application equipment does not use spray devices and the same principal solvent is used for cleaning as is used in the coating.
5. EMISSION CONTROL SYSTEM (ECS) REQUIREMENTS:
- i. ECS Control Efficiencies: To meet the requirements pursuant to §5-13-300(1)(ii) of this rule, an ECS shall be operated as follows:
 - a. Overall ECS Efficiency: The ECS shall prevent at least 90% of the mass of the VOC emitted by each coating or process from entering the atmosphere except those controlled pursuant to the alternative in §5-13-300(5)(i)(c)(2) of this rule.
 - b. Capture Efficiency:
For an ECS used pursuant to §5-13-300(1)(ii) of this rule, capture shall be at least 90%.
 - c. Control Efficiency of The Emissions Processing Subsystem:
 - (1) The ECS shall reduce the mass of VOC entering it by at least 90 percent.
 - (2) Alternative for Very Dilute Input: For VOC input-concentrations of less than 100 ppm (as carbon) at the inlet of the ECS emissions processing subsystem, an ECS' VOC processing subsystem also satisfies the processor efficiency requirements of this rule if:
 - (a) The VOC output is consistently less than 20 mg VOC/m³ (as carbon) adjusted to standard conditions; and
 - (b) The ECS consistently shows an overall control efficiency of at least 90% when tested pursuant to §5-13-500(4)(i)(b) of this rule, at VOC input-concentrations exceeding 100 ppm (as carbon).
 - d. All VOC coatings used that are in excess of the VOC limits in Table 1 of this rule shall be clearly identified such that coating-operators are informed that an ECS must be used.
 - ii. Operation and Maintenance (O&M) Plan Required for ECS:
 - a. An owner or operator shall provide and maintain (an) O&M Plan(s) for any ECS, any other emission processing equipment, and any ECS monitoring devices used pursuant to this rule or to an air pollution control permit.
 - b. The owner or operator shall submit to the Control Officer for approval the O&M Plans of each ECS and each ECS monitoring device used pursuant to this rule.

- c. The owner or operator shall comply with all identified actions and schedules provided in each O&M Plan.
- iii. Providing and Maintaining ECS Monitoring Devices: Any owner or operator incinerating, adsorbing, or otherwise processing VOC emissions pursuant to this rule shall provide, properly install and maintain in calibration, in good working order and in operation, devices described in the facility's O&M Plan that indicate temperatures, pressures, rates of flow, or other operating conditions necessary to determine if air pollution control equipment is functioning properly and is properly maintained. Records shall be kept pursuant to §5-13-500.2 which demonstrate that the ECS meets the overall control standard required by §5-13-300(5)(i) of this rule.
- iv. O&M Plan Responsibility: An owner or operator of a facility that is required to have an O&M Plan pursuant to §5-13-300(5)(ii) must fully comply with all O&M Plans that the owner or operator has submitted for approval, but which have not yet been approved, unless notified otherwise by the Control Officer in writing. If revisions to the plan have been submitted and not yet been approved by the Control Officer, then an owner or operator shall comply with the most recent O&M plan on file at Pinal County Air Quality Control District.
- v. Operation and Maintenance (O&M) Plan Contents For an ECS:
 - a. An O&M Plan for any ECS including any ECS monitoring devices shall include all of the following information:
 - (1) ECS equipment manufacturer;
 - (2) ECS equipment model;
 - (3) ECS equipment identification number or identifier that owner or operator subject to this rule assigns to such ECS equipment when manufacturer's equipment identification number is unknown,; and
 - (4) Information required by §5-13-500.1 of this rule.
 - b. 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 modified.
 - c. Deficient Plan: The owner or operator subject to this rule, who receives a written notice from the Control Officer that the O&M Plan is deficient or inadequate, must make written revisions to the O&M Plan for any ECS including any ECS monitoring devices, and must submit such revised O&M Plan to the Control Officer within five working days of receipt of the Control Officer's written notice, unless such time period is extended by the Control Officer, upon written request, for good cause. During the time such owner or operator is preparing revisions to the O&M Plan, such owner or operator shall still comply with all requirements of this rule.

[Adopted November 30, 2016]

5-13-400 – ADMINISTRATIVE REQUIREMENTS

1. **COMPLIANCE SCHEDULE VOC LIMITS:**
 - i. Emission Control System (ECS): Any owner or operator installing an ECS shall:
 - a. Implement all recordkeeping provisions of this rule.
 - b. Announce the intention to use an ECS to the Control Officer in writing if:
 - (1) The ECS is used as an alternative to meeting the spray-gun provisions of §5-13-300.2 of this rule; or
 - (2) The ECS is used as an alternative to meeting the gun cleaning machine provisions of §5-13-300.3 of this rule.
 - c. One year after rule adoption of this rule, the ECS announced pursuant to §5-13-400(1)(i)(b) shall be in continuous use.
 - ii. VOC limits and Rule Requirements: Upon adoption of this rule, the owner or operator shall discontinue shelf purchase of materials that are non-compliant with §5-13-300(1)(i). The owner or operator has up to 6 months after rule adoption to complete use of existing non-compliant materials already purchased. A schedule for achieving compliant use of materials shall be prepared and made available to an inspector upon request. This schedule shall specify that 6 months after rule adoption complete material compliance shall be achieved.
2. **COMPLIANCE SCHEDULE O&M PLAN:**
 - i. O&M Plans for ECS equipment subject to this rule shall be revised /updated 3 months after rule adoption.
 - ii. The Control Officer shall take final action on an O&M Plan revision/update to address the newly amended provisions of this rule within thirty calendar days of the filing of the complete O&M Plan revision/update. The Control Officer shall notify the applicant in writing of approval or denial.

[Adopted November 30, 2016]

5-13-500 – MONITORING AND RECORDS

1. **RECORDKEEPING AND REPORTING:** The owner or operator shall comply with the following recordkeeping requirements,
 - i. The type and amount used of each VOC-containing coating which is regulated by name or type in Table 1 of this rule, and update each VOC-containing material, related to surface coating, that is not addressed by this table. This includes, but is not limited to, thinners, surfacers, and diluents.
 - ii. Records shall be retained for five years and shall be made available to the Control Officer upon request.
 - iii. Current Lists:
 - a. Maintain a current list of coatings, or any other VOC-containing materials regulated by this rule. This list shall include:

VOC content for each as received (before thinning). Express VOC content in 1 of 3 forms:

- (1) Pounds VOC per gallon;
- (2) Grams VOC per liter; ; or
- (3) The percent VOC by weight along with the specific gravity or density,
(Two numbers are required).

b. An owner operator using any VOC coating subject to §5-13-300.1 of this rule shall have on site the written value of the VOC coating in one of the following forms:

- (1) A manufacturer's technical data sheet;
- (2) A manufacturer's safety data sheet (MSDS); or
- (3) Actual test results.

c. Usage or Purchase Records:

(1) Monthly: Records of the amount of VOC coatings used shall be updated by the end of month for the previous month. Show the type and amount of each make-up (as described in §5-13-500(1)(iii) of this rule) and all other VOC cleaners or solvents to which this rule is applicable.

(2) Annually:

(i) Low VOC Coatings: Use of low VOC coatings shall be updated at least annually.

(ii) Low-VOC Cleaner: An owner and/or operator need not keep a record of a cleaning substance that is made by diluting a concentrate with water or non-precursor compound(s) to a level that qualifies as a "Low VOC Cleaner" if records of the concentrate usage are kept in accordance with this rule.

(3) Grouping by VOC Content: For purposes of recording usage, an operator may give VOC coatings, cleaners, and solvents of similar VOC content a single group-name, distinct from any product names in the group. The total usage of all the products in that group is then recorded under just one name. (In such a case, the operator must also keep a separate list that identifies the product names of the particular solvents included under the group name). To the group name shall be assigned the highest VOC content among the members of that group, rounded to the nearest 10th of a pound of VOC per gallon of material, or to the nearest gram VOC per liter of material.

d. Facilities That Are Not Small Surface-Coating Sources: Facilities that are not small surface-coating sources shall for all coatings (except those recorded

under §5-13-100(3)(v)(c) low usage allowance), make the following listings for coatings that have VOC limits listed in Table 1 of this rule:

- (1) VOC Before Reducing: The VOC content of each coating as received, minus exempt compounds. (This figure is sometimes called the “EPA Method 24” VOC content on manufacturer’s data sheets). If the coating is a multi-part coating, list the manufacturer’s final VOC content.
 - (2) List Maximum VOC Content of Coating As Applied: For each coating that you thin/reduce or add any additive to, record in a permanent log either of the following:
 - (a) The maximum number of fluid ounces thinner/reducer added to a gallon of unreduced coating (or maximum g/liter), and the maximum fluid ounces of every other additive mixed into a gallon of the coating; or
 - (b) The VOC content of the coating, after adding the maximum amount of thinner/reducer and other additives added as determined by the formula in the definition of VOC Regulatory in this rule.
 - e. Aerosol Spray Cans: Maintain purchase records for aerosol spray-cans, including VOC content.
- iv. Frequency of Updating Usage or Purchase Records: Maintain records according to the following schedule:
- a. Small Surface-Coating Sources: Small surface-coating sources shall update each month’s records of coating use by the end of the following month.
 - b. All Other Sources: For a source that does not meet the definition of small surface-coating source, update records monthly for each coating used that complies with the VOC limits in Table 1 of this rule. Complete a month’s update by the end of the following month.
- v. Grouping By VOC Content: The highest VOC content among the members of that grouping shall be assigned to that grouping, rounded to the nearest 10th of a pound. To identify what products belong within each group, after each group name and the group’s VOC content of material must appear the name of each product in the group and its VOC content of material. For example: For flexible plastic parts, you use 20 gallons of primer that has 3.04 lb VOC/gal., 30 gallons of primer having 3.14 lb VOC/gal., and 40 gallons of primer having 2.89 lb VOC/gal. You may record usage as 90 gallons of flexible plastic primer containing 3.1 lb VOC/gal. If grams VOC per liter is used to record VOC content, round off to the nearest whole number of grams.

2. ECS RECORDING REQUIREMENTS:

- i. On each day an ECS is used at a facility pursuant to this rule, the owner or operator shall:
 - a. Record the amount and VOC content of coating, the amount of catalyst/hardener, and the amounts of solvent, reducer, and diluent used that were subject to ECS control pursuant to this rule; and

- b. Make a permanent record of the operating parameters of the key systems as required by the O&M Plan; and
 - c. Make a permanent record of the maintenance actions taken within 24 hours of the action's completion for each day or period the O&M Plan requires maintenance be done.
 - ii.. An explanation shall be entered for scheduled maintenance that is not performed during the period designated for it in the O&M Plan.
- 3. O&M PLAN RECORDS: An owner or operator of a facility shall maintain all of the following records in accordance with an approved O&M Plan for any ECS,
 - i. Periods of time an approved ECS is operating to comply with this rule;
 - ii. Periods of time an approved ECS is not operating;
 - iii. Flow rates;
 - iv. Pressure drops;
 - v. Other conditions necessary to determine if the approved ECS is functioning properly;
 - vi. Results of visual inspections; and
 - vii. Correction action taken, if any.
- 4. COMPLIANCE DETERMINATION AND TEST METHODS:
 - i. Compliance Determination: The following means shall be used to determine compliance with this rule. When more than one test method is permitted for a determination, an exceedance of the limits established in the rule determined by any of the applicable test methods constitutes a violation of this rule.
 - a. Measurement of VOC content of materials subject to §§5-13-300.1 or 5-13-300.2 of this rule shall be conducted and reported using one of the following means:
 - (1) VOC content of coatings, solvents, and other substances having less than 5% solids will be determined by the test method in §§5-13-500(4)(ii)(f) of this rule (BAAQMD Method 31 [April 15, 1992]) or 5-13-500(4)(ii)(g) (SCAQMD Method 313-91 [April 1997]) of this rule.
 - (2) The VOC content of coatings or other materials having 5% or more solids will be determined by the test method in §5-13-500(4)(ii)(c) (EPA Method 24), §§5-13-500(4)(ii)(f) (BAAQMD Method 31 [May 18, 2005]) or 5-13-500(4)(ii)(g) (SCAQMD Method 313-91 [April 1997]) of this rule.
 - (a) Plastics, powder coatings, and radiation-cured coatings shall be cured according to the procedures actually used in the coating process being tested before final VOC-emission determinations are made.

- d. EPA Method 25 (“Determination of Total Gaseous Non-methane Organic Emissions as Carbon”) and its submethods (40 CFR 60, Appendix A).
 - e. EPA Test Methods 204 (“Criteria for and Verification of a Permanent or Temporary Total Enclosure”), 204a, 204b, 204c, 204d, 204e, and 204f (Appendix M, 40 CFR 51).
 - f. California’s Bay Area Air Quality Management District (BAAQMD) Method 31 (May 18, 2005), “Determination of Volatile Organic Compounds in Paint Strippers, Solvent Cleaners, and Low Solids Coatings.”
 - g. California’s South Coast Air Quality Management District (SCAQMD) Method 313-91 (April 1997).
- iii. Test Methods for ECS: For coatings/adhesives controlled pursuant to §5-13-300(2)(i) or §5-13-300(5)(iii) of this rule:
- a. Measurements of VOC emissions from an ECS shall be conducted in accordance with EPA Methods 18 or its submethods, or by Method 25 or its submethods (40 CFR 60, Appendix A).
 - b. Capture efficiency of an ECS shall be determined by mass balance in combination with ventilation/draft rate determinations done in accordance with §5-13-500(4)(iii)(c) of this rule or with US EPA Test Methods 204, 204a, 204b, 204c, 204d, 204e, and 204f (Appendix M, 40 CFR 51).
 - c. Ventilation/draft rates shall be determined by EPA Methods 2, 2a, 2c, and 2d (40 CFR 60, Appendix A).

[Adopted November 30, 2016]

5-13-390. Spray Paint and Other Surface Coating Operations

- A. To limit emissions of volatile organic compounds, no person shall conduct any spray paint operation except architectural coating, as defined in §5-12-370, without utilizing an enclosed area designed to contain not less than ninety-six percent (96%) by weight of the overspray. For purposes of this rule an enclosed area means a three (3) sided structure with walls a minimum of eight (8) feet high.
- B. Disposal Limitation
No person shall, during any one day, dispose of a total of more than one and one-half gallons of any photochemically reactive solvent, as defined in §5-12-370, or of any material containing more than one and one-half gallons of any such photochemically reactive solvent, by any means which will permit the evaporation of such solvent into the atmosphere.

[Adopted effective June 16, 1980 as R7-3-3.4. Revised and renumbered October 12, 1995.]

ARTICLE 14. Reserved

ARTICLE 15. SOLVENT CLEANING

5-15-600. General

- A. The purpose of this article is to control the emissions of volatile organic compounds from solvent cleaning operations.
- B. This article is applicable to all surface cleaning and degreasing operations using organic solvents to remove surface impurities and prepare parts or products for painting, plating, repair, inspection, assembly, heat treatment, machining or for any other use.

[Adopted effective November 3, 1993.]

5-15-610. Definitions

For the purpose of this article, the following definitions shall apply:

- 1. CARRY-OUT - Solvent carried out of a degreaser along with a part being removed from the degreaser. The solvent may exist as a liquid coating the part or a liquid entrapped in cavities and irregular surfaces within or on the part.
- 2. COLD DEGREASER/CLEANER - Any batch-loaded, non-boiling organic solvent degreaser.
- 3. CONVEYORIZED DEGREASER - Any degreaser which uses an integral, continuous, mechanical system for moving materials or parts to be cleaned into and out of a solvent liquid or vapor cleaning zone.
- 4. DEGREASER/CLEANER - Any liquid container and ancillary equipment designed to clean surfaces using solvents.
- 5. EVAPORATIVE SURFACE AREA -
 - a. For cold cleaning tanks, evaporative surface area is:
 - i. The surface area of the solvent.
 - ii. The surface area of the solvent sink or work area for a remote reservoir.
 - b. For vapor degreasing tanks, evaporative surface area is the surface area of the top of the solvent vapor/ air interface.
 - c. For conveyORIZED solvent degreaser tanks, evaporative surface area is:
 - i. For cold cleaners, the surface area of the solvent.
 - ii. For vapor degreasers, the surface area of the top of the vapor/air interface.
- 6. FREEBOARD HEIGHT -
 - a. For cold cleaning tanks, freeboard height is the distance from the top of the solvent to the top of the tank.
 - b. For nonconveyORIZED vapor degreasing tanks, freeboard height is the distance from the solvent vapor/ air interface to the top of the tank.
 - c. For conveyORIZED degreasers, freeboard height is the vertical distance from the lowest part of any opening to the center of the vapor/air interface or, for nonboiling solvent, to the highest solvent level.
- 7. FREEBOARD RATIO - The freeboard height divided by the smaller of the inside length or the inside width of the degreaser/ cleaner evaporative surface area.
- 8. INITIAL BOILING POINT - The boiling point of a solvent.
- 9. LOW VOLATILITY SOLVENT - A solvent with an initial boiling point greater than 248°F (120°C) used at a temperature at least 180°F (100°C) below the initial boiling point.
- 10. OPEN-TOP VAPOR DEGREASER - Any batch-loaded, boiling organic solvent degreaser.

11. **REFRIGERATED FREEBOARD CHILLER** - A control device which is mounted above any cooling-water jacket or primary condenser coils, consisting of secondary coils which carry a refrigerant to provide a chilled air blanket above the solvent vapor/ air interface to reduce emissions from the degreaser bath.
12. **SOLVENT** - For the purpose of this article, any liquid which as used contains more than 10 percent by weight of dissolved or suspended liquid organic compound(s) and which is used to dissolve, clean, strip, or remove impurities, coatings, or films from surfaces. This excludes those detergents, which when in their undiluted form are solid and have a vapor pressure less than 1.0 mm Hg at the temperature of use.
13. **VAPOR/AIR INTERFACE** - For the purpose of this article, the narrow zone, usually near the top of the solvent-mist (condensation) layer, where the vertical temperature gradient is highest within a vapor degreaser.
14. **VAPOR LEVEL CONTROL SYSTEM** - A combination of a coolant sensing system and a vapor sensing system consisting of:
 - a. A condenser flow switch and thermostat which shuts off the sump heat if either the condenser coolant stops circulating or becomes warmer than 85°F (29°C); and
 - b. A manually-reset safety switch which turns off the sump heater if the temperature sensor senses that the temperature is rising above the designed operating level at the vapor/air interface; and
 - c. A manually reset switch which turns off the spray-system pump if the level of the vapor/ air interface drops more than 4 inches (10 cm).
15. **WIPE CLEANING** - That method of cleaning which utilizes a material such as a rag wetted with a solvent, coupled with a physical rubbing process to remove contaminants from surfaces.

[Adopted effective November 3, 1993.]

5-15-620. Performance standards

- A. Any person who uses a solvent degreaser/ cleaner shall equip it with the following:
 1. A leakfree container (degreaser) for the solvents and the articles being cleaned.
 2. An apparatus or non-porous cover which prevents the solvent from evaporating when not processing work in the degreaser. A cover is not required for a remote reservoir cleaner using unheated solvent.
 3. A facility for draining cleaned parts such that the drained solvent is returned to the container.
 4. A permanent, conspicuous label which summarizes operating requirements contained in Subsection H. of this section.
- B. A cold degreaser/ cleaner with remote reservoir shall be equipped with the following:
 1. A sink-like work area which is sloped sufficiently towards the drain to prevent pooling of solvent.
 2. A single drain opening or cluster of openings served by a single drain for the solvent to flow from the sink into the enclosed reservoir. Such opening(s) shall be contained within a contiguous area not larger than 15.5 in² (100 cm²).
 3. If a low volatility solvent is not used or if the solvent is heated above 120°F (49°C), a stopper shall seal the drain opening or a cover shall be placed over the top of the sink when the reservoir is not in use.
- C. A cold degreaser/ cleaner without a remote reservoir shall be equipped with the following as applicable:

1. A freeboard height of not less than 6 in. (15.2 cm) and a cover for a cold degreaser/cleaner using only non-agitated, low volatility solvent(s).
 2. A cold degreaser using solvents which are not low volatility solvents or which are agitated or are heated above 120°F (50°C) shall have internal drainage and:
 - a. Have a freeboard ratio of 0.75 or greater; or
 - b. A water cover may be used to meet the freeboard requirement of Paragraph a. of this subdivision above if the solvent is insoluble in and denser than water; and
 - c. A cover shall be used that is of a sliding or rolling type which is designed to easily open and close without disturbing the vapor zone.
 3. A permanent, conspicuous mark shall locate the maximum allowable solvent level which conforms to the applicable freeboard requirements.
 4. In lieu of the freeboard requirements, the following may be used: An emission control system consisting of a hood or enclosure to collect emissions, which are vented to a processing device. The overall control efficiency (capture multiplied by equipment control) of the system shall not be less than 85 percent. The capture system shall have a ventilation rate no greater than 65 cfm per ft² (20 m³/min-m²) of evaporative surface, unless that rate must be changed to meet federal and State Occupational Safety and Health Administration requirements, and is approved in writing by the Control Officer.
- D. No person shall operate a batch-loaded vapor degreaser unless it is equipped with the following:
1. An impermeable cover that is a sliding, rolling or guillotine (bi-parting) type which is designed to easily open and close without disturbing the vapor zone.
 2. A vapor level control system.
 3. A primary condenser.
 4. In addition to the above, one of the following:
 - a. Either a freeboard such that the freeboard ratio is greater than or equal to 0.75; or
 - b. For an open-top vapor degreaser which commenced construction before November 3, 1993, an enclosed design such that the cover or door opens only when the dry item is actually entering or exiting the degreaser.
 5. In addition to the above, a vapor degreaser having an evaporative surface area greater than 10.75 ft² (1.0 m²) shall comply with Paragraphs a. , b. or c. of this subdivision as follows:
 - a. A refrigerated freeboard chiller for which the chilled air blanket temperature in degrees Fahrenheit at the coldest point on the vertical axis through the horizontal center of the vapor/air interface either shall be no greater than 30 percent of the initial boiling point of the solvent in degrees Fahrenheit or no greater than 40.0°F (4.4°C), but for non-precursor organic compound solvents such temperatures shall not exceed 105°F (40. 6°C).
 - b. A refrigerated condenser coil (in place of an unrefrigerated coil) having a minimum cooling capacity of 100 percent of the boiling-sump heat input rate and conforming to the same air-blanket temperature requirements as Paragraph a. of this subdivision.
 - c. An emission control system consisting of a hood or enclosure to collect emissions, which are vented to a processing device. The overall control efficiency (capture multiplied by equipment control) of the system shall not be less than 85 percent. The capture system shall have a ventilation rate no

greater than 65 cfm per ft² of evaporative surface (20m³/min-m²), unless that rate must be changed to meet federal and State Occupational Safety and Health Administration requirements and is approved in writing by the Control Officer. This system may also be used in lieu of the freeboard requirement.

- E. No person shall operate a non-vapor conveyORIZED degreaser unless it complies with Subdivisions 1. , 2. and 3. as follows:
1. The degreaser is equipped with either a drying tunnel or another means such as a rotating basket, sufficient to prevent cleaned parts from carrying out solvent liquid or vapor;
 2. The degreaser has minimized openings. Entrances and exits should silhouette workloads so that the average clearance between parts and the edge of the degreaser opening is either less than 4 in. (10 cm) or less than 10 percent of the width of the opening. During shutdown hours a cover shall be used to close the entrance and exit and any opening greater than 16 in² (104 cm²).
 3. The degreaser has a freeboard ratio greater than or equal to 0.75.
 4. The following may be used in lieu of Subdivision 3. of this subsection: An emission control system consisting of a hood or enclosure to collect emissions, which are vented to a processing device. The overall control efficiency (capture multiplied by equipment control) of the system shall not be less than 85 percent. The capture system shall have a ventilation rate no greater than 65 cfm per square foot of evaporative surface (20m³/min-m²), unless that rate must be changed to meet federal and State occupational safety and health administration requirements, and is approved in writing by the Control Officer.
- F. No person shall operate a vapor conveyORIZED degreaser/cleaner unless it complies with the subdivisions below:
1. The degreaser/ cleaner is equipped with either a drying tunnel or another means such as a rotating basket, sufficient to prevent cleaned parts from carrying out solvent liquid or vapor.
 2. The degreaser/ cleaner has minimized openings. Entrances and exits should silhouette workloads so that the average clearance between parts and the edge of the degreaser opening is either less than 4 in. (10 cm) or less than 10 percent of the width of the opening. During shutdown hours a cover shall be used to close off the entrance and exit and any openings such that a total not exceeding 16 in² (104 cm²) is uncovered.
 3. The degreaser/cleaner is equipped with a vapor level control system.
 4. The degreaser/ cleaner is equipped with a primary condenser or complies with Subdivision 6. a. of this subsection.
 5. The degreaser/ cleaner has a verified freeboard ratio greater than or equal to 0.75 or complies with Subdivision 6. of this subsection.
 6. A degreaser with an evaporative surface area greater than or equal to 21.5 ft² (2 m²) must comply with Paragraphs a. , b. or c. of this subdivision:
 - a. The degreaser is equipped with a refrigerated freeboard chiller such that the chilled air blanket temperature in degrees Fahrenheit at the coldest point on the vertical axis in the center of the vapor/air interface either shall be no greater than 30 percent of the initial boiling point of the solvent in degrees Fahrenheit or no greater than 40°F (4.4°C), but for non-precursor organic compound solvents such temperatures shall not exceed 105°F (40.6°C).

- b. The degreaser is equipped with a refrigerated condenser coil (in place of an unrefrigerated coil) having a minimum cooling capacity of 100 percent of the boiling-sump heat input rate and conforming to the same air-blanket temperature requirements as Paragraph a. of this subdivision.
 - c. An emission control system consisting of a hood or enclosure to collect emissions, which are vented to a processing device. The overall control efficiency (capture multiplied by equipment control) of the system shall not be less than 85 percent, the capture system shall have a ventilation rate no greater than 65 cfm per ft² of evaporative surface (20 m³/min-m²), unless that rate must be changed to meet federal and State Occupational Safety and Health Administration requirements, and is approved in writing by the Control Officer.
- G. Reserved
- H. Any person who employs solvent cleaning (degreasing) must conform to the following operating requirements:
- 1. Operate and maintain the degreasing equipment and emission control equipment in proper working order.
 - 2. Do not allow any solvent to leak from any portion of the degreasing equipment.
 - 3. All solvent storage, including the storage of waste solvent and waste solvent residues, shall at all times be in closed containers which are legibly labeled with their contents.
 - 4. Do not dispose of any solvent, including waste solvent, in such a manner as will cause or allow its evaporation into the atmosphere. Records of its disposal/recovery shall be kept in accordance with hazardous waste disposal statutes.
 - 5. Do not remove any device designed to cover the solvent unless processing work in the degreaser or performing maintenance on the degreaser.
 - 6. Drain cleaned parts for at least 15 seconds after cleaning or until dripping ceases (non-vapor degreasing only).
 - 7. If using a solvent spray system, use only a continuous, undivided stream (not a fine, atomized, or shower type spray) at a pressure which does not exceed 10 psig or cause liquid solvent to splash outside of the solvent container. In a conveyORIZED degreaser/cleaner a shower-type spray may be allowed, provided that the spraying is conducted in a totally confined space that is separated from the environment.
 - 8. Perform solvent agitation, where necessary, through pump recirculation or by means of a mixer. Do not use air agitation of the solvent bath. Covers shall be placed over ultrasonic cleaners when the cleaning cycle exceeds 15 seconds.
 - 9. Do not place porous or absorbent materials such as cloth, leather, wood or rope in or on a degreaser.
 - 10. For batch-loaded vapor degreasers:
 - a. Workloads shall not occupy more than half of the degreaser's open-top area.
 - b. The workload shall not be so massive that the vapor level drops more than 4 in. (10 cm) when the workload is removed from the vapor zone.
 - c. Do not spray solvent above the vapor/air interface level.
 - d. Minimize solvent carry-out by the following measures:
 - i. Rack parts to facilitate drainage.
 - ii. Limit the vertical speed of mechanical hoists moving parts in and out of the degreaser to less than 2 inches per second and less than 11 ft/min (3.3 m/min). (Does not apply to hand-loading.)

- iii. Degrease the workload in the vapor zone at least 30 seconds or until condensation ceases.
 - iv. For manual loading/unloading, tip out any pools of solvent on the cleaned parts before removal.
 - v. Allow parts to dry within the degreaser until visually dry.
 - vi. The following sequence shall be used for start-up and shut-down:
 - (1) When starting the degreaser/cleaner, the cooling system shall be turned on before, or simultaneously with, the sump heater.
 - (2) When shutting down, the sump heater shall be turned off before, or simultaneously with, the cooling system.
11. For open-top degreasers and conveyORIZED degreasers:
 - a. Exhaust ventilation shall not exceed 65 cfm per ft² (20 m³/min/m²) of degreaser opening unless necessary to comply with industrial safety requirements.
 - b. Comfort fans shall not be used near degreasers.
 - c. Water should not be visually detectable in the organic solvent exiting the water separator.
 12. For conveyORIZED degreasers, a person shall minimize solvent carry-out by the following measures:
 - a. Rack parts to facilitate drainage.
 - b. Maintain the vertical conveyor speed at less than 11 ft/min (3.3 m/min).

[Adopted effective November 3, 1993. Amended February 22, 1995. Amended July 12, 2000.]

5-15-622. Degreasers - SIP Limitation

- A. No person shall use or conduct any vapor phase degreasing operation without minimizing organic solvent vapor diffusion emissions by good modern practices such as but not limited to the use of a free board chiller or other effective device operated and maintained in accordance with solvent and equipment manufacturers' specifications.
- B. Spray degreasing shall be conducted in an enclosure equipped with controls which will minimize the emissions of organic solvents.

[Adopted effective June 16, 1980 as R7-3-3.4. Revised and renumbered October 12, 1995.]

5-15-630. Exemptions

- A. The provisions of these standards do not apply to wipe cleaning except for §§5-15-620.H. 3. and 4. Recordkeeping provisions do apply to wipe cleaning.
- B. The provisions of these standards shall not apply to any cold solvent degreaser/dip-tank with a liquid surface area of 1 square foot (0.09 square meters) or less, or with a maximum capacity of 1 gallon (3.79 liters) or less except that these shall be covered when work is not being processed.
- C. The provisions of this article do not apply to the cleanup of coating equipment after use, which is covered by Chapter 5, Article 13.

[Adopted effective November 3, 1993.]

5-15-640. Monitoring and records

- A. Solvent Records Required:

1. Any person subject to the provisions of this article shall keep records adequate to show the type and total amount of make-up solvent used in all solvent cleaning operations.
 2. Determination of emissions from wipe cleaning may be made on a facility-wide rather than on a per-department basis.
 3. Records shall also be kept on the amount of volatile organic compound(s) and of non-precursor (exempt) organic compound(s) contained in each solvent, expressed in pounds per gallon or grams per liter. Such records shall be retained for two years and shall be made available to the Control Officer upon request.
- B. Test methods:
1. Measurement of organic compound emissions shall be conducted and reported in accordance with EPA Test Method 24 (40 C.F.R. Part 60, Appendix A).
 2. Measurements of the water and exempt solvent content shall be conducted in accordance with ASTM Test Methods D-4457-85 and D-3792-86.
 3. Total absolute vapor-pressure of solvents containing VOC shall be determined in accordance with ASTM Test Method D-2879-83, "Vapor Pressure-Temperature Relationship and Initial Decomposition Temperature of Liquids by Isoteniscope".
 4. Control efficiency shall be determined by EPA Method 25 or EPA Method 25A (40 C.F.R. Part 60, Appendix A), in combination with the appropriate capture efficiency method.
 5. Capture and control efficiencies shall be determined by mass balance or with an approved EPA test method in combination with ventilation/draft rate determinations.
 6. Ventilation/draft rates shall be determined by EPA Methods 2, 2A, 2C and 2D (40 C.F.R. Part 60, Appendix A).
 7. Temperature measurements shall be done with an instrument with an accuracy and precision of ± 1 oF .
 8. Initial boiling point shall be determined by ASTM Test D-1078-86.

[Adopted effective November 3, 1993. Amended October 12, 1995. Revised May 14, 1997.]

ARTICLE 16. CUTBACK AND EMULSIFIED ASPHALT

5-16-650. General

- A. The purpose of this article is to control emissions of volatile organic compounds from the use of cutback and emulsified asphalt and other bitumens.
- B. The provisions of this article apply to the use and application of cutback and emulsified asphalt or tar materials for the paving, construction or maintenance of highways, streets, roads, parking lots, and driveways, and to the application of such materials onto soil and earthworks.

[Adopted effective November 3, 1993.]

5-16-660. Definitions

For the purpose of this article, the following definitions shall apply:

1. ASPHALT CEMENT - The dark brown to black cementitious material (solid, semisolid, or liquid in consistency), of which the main constituents are naturally occurring bitumens or bitumens resulting from petroleum refining.

2. ASPHALT RUBBER - An asphaltic binder made with asphalt cement and at least 3 percent of ground tire rubber by weight.
3. BITUMEN - A class of black or dark-colored (solid, semi-solid or viscous) cementitious substances, natural or manufactured, composed principally of high molecular weight hydrocarbons, of which asphalts, tars, pitches and asphaltites are typical.
4. CUTBACK ASPHALT - An asphalt cement liquified with any solvent-VOC.
5. DUST PALLIATIVE - A light application of cutback or emulsified asphalt for controlling loose dust.
6. EMULSIFIED ASPHALT/EMULSIFIED TAR - Any liquified asphalt or tar produced by dispersing asphalt cement or tar into water by means of high speed agitation and an emulsifying agent.
7. MEDIUM CURE CUTBACK ASPHALT - A cutback asphalt which meets ASTM specification D-2027.
8. PATCHING MIX - A cutback asphalt used for road repair.
9. PENETRATING PRIME COAT - The low viscosity liquid asphalt or tar applied to a relatively absorbent surface to prepare it for new superimposed construction. P rime coats do not include dust palliatives or tack coats.
10. RAPID CURE CUTBACK ASPHALT - A cutback asphalt which falls generally within the specifications of ASTM designation D-2028-76, and which may deviate from D-2023-76 in some limited way, and which generally cures more quickly than medium cure cutback asphalt.
11. SOLVENT-VOC - For the purpose of this article, any volatile organic compound which is used with an asphalt or tar to give fluidity and other desired properties and which volatilizes at 500°F (260°C) or less.
12. TACK COAT - An application of liquified asphalt to an existing, relatively nonabsorbent surface to provide a thorough bond between that surface and the superimposed layer.
13. TAR - For the purpose of this article, any non-asphalt bitumen. This includes road tar produced by distilling coal tar or blending coal-tar pitch with lighter coal-tar fractions.

[Adopted effective November 3, 1993. Amended February 22, 1995.]

5-16-670. Performance standards

- A. No person shall sell, offer for sale, use or apply the following materials for paving, construction, or maintenance of highways, streets, driveways, parking lots or for any other use to which this article applies:
 1. Rapid cure cutback asphalt.
 2. Any cutback asphalt material, road oils, or tar which contains:
 - a. More than 1.5 percent by volume VOCs which evaporate at 500°F (260°C) or less using ASTM Test Method D-402-76; or
 - b. More than 27 percent by volume total solvent in the asphalt binder.
 3. Any emulsified asphalt or emulsified tar containing more than 3 percent by volume VOCs which evaporate at 500°F (260°C) or less as determined by ASTM Method D-244-89.
- B. By April 3, 1994, no person shall sell, offer for sale, manufacture or store for sale or for use within Pinal County any emulsified or cutback asphalt product which contains more than 1.5 percent by volume solvent-VOC unless such material lot included a designation of solvent-VOC content on data sheet(s) expressed in percent solvent-VOC by volume.

[Adopted effective November 3, 1993, Amended October 13, 2010]

5-16-680. Exemptions

The provisions of §5-16-670. Paragraphs A. 2. , A. 3. and B. shall not apply to:

1. Asphalt that is used as a penetrating prime coat, patching mix or stockpiled for future use. Penetrating prime coats do not include dust palliatives or tack coats.
2. Any asphalt/bituminous material sold in Pinal County for shipment and use outside Pinal County if the person claiming such exemption clearly labels each container of materials entitled to such exemption or upon request (during normal business hours) immediately provides the Control Officer with shipping records demonstrating the asphalt material is not for use within Pinal County.
3. A person may use up to 3 percent solvent-VOC by volume for batches of asphalt rubber which cannot meet paving specifications by adding heat alone only if the request is made to the Control Officer, who shall evaluate such requests on a case-by-case basis. The Control Officer shall not approve such requests unless complete records are kept and full information is supplied including savings realized by using discarded tires. The Control Officer shall not approve such requests when it would cause a person to exceed 1100 lbs (500 kg) usage of solvent-VOC in asphalt rubber in a calendar year unless the applicant can demonstrate that in the previous 12 months no solvent-VOC has been added to at least 95 percent by weight of all the asphalt rubber binder made by the person or caused to be made for the person. This subdivision does not apply to batches which yield 1.5 percent or less solvent-VOC evaporated using the test in §5-16-690.B. 1.

[Adopted effective November 3, 1993.]

5-16-690. Monitoring and records

- A. The owner or operator of any facility subject to this article which manufactures, mixes, stores, ships, uses or applies any asphaltic/bituminous material containing more than 1.5 percent by volume solvent-VOC shall keep monthly records of the amount and type received, used and shipped, as well as the solvent-VOC content of this material. Material safety data sheets (MSDS) or technical data sheets shall be kept available. These records must be made available to the Control Officer upon written request.
- B. Test Methods:
 1. Solvent-VOC content of non-emulsified asphalts and tars shall be determined by American Society of Testing and Materials (ASTM) Method D-402-76. For the purpose of this article, the end point of the distillation shall be at 500°F (260°C).
 2. Solvent-VOC content of emulsified asphalts and tars shall be determined using ASTM Method D -244-89. The end point of the distillation shall be at 500°F (260°C).
 3. Measurement of exempt compound content in cutback and emulsified asphalts shall be conducted and reported in accordance with ASTM Test Method D-4457-85.
 4. Tests to assist in determining the solvent-VOC content of the asphaltic binder of an asphaltic concrete are: ASTM Method D-2172 "Test for Quantitative Extraction of Bitumen from Bituminous Paving Mixtures" and ASTM Method D -1856 "Test for Recovery of Asphalt from Solution by ABSON Method".

[Adopted effective November 3, 1993.]

ARTICLE 17. (Repealed 6/20/96.))

ARTICLE 18. STORAGE OF ORGANIC LIQUIDS

5-18-740. Storage of Volatile Organic Compounds; Organic Compound Emissions

- A. No person shall place, store or hold in any stationary tank, reservoir or other container, of more than 40,000 gallons capacity, any gasoline or any petroleum distillate having a vapor pressure of 1.5 pounds per square inch absolute or greater under actual storage conditions unless such tank, reservoir or other container is a pressure tank maintaining working pressures sufficient at all times to prevent hydrocarbon vapor or gas loss to the atmosphere, or is equipped with a floating roof or vapor recovery system or other vapor emission control device.
- B. No person shall load or permit the loading of gasoline into any stationary tank with a capacity of 250 gallons or more unless such tank is equipped with either submerged filling inlets or with vapor recovery or emission control systems such that loss of vapor to the atmosphere during filling operations shall be minimized. The provisions of this Section B shall not apply to the loading of gasoline into any tank having a capacity of less than 2,000 gallons which was installed prior to June 26, 1967 nor to any underground tank installed prior to June 26, 1967 where the fill line between the fill connection and tank is offset.

[Adopted effective March 31, 1975 as R7-3-3.1. Approved as an element of the applicable SIP at 43 FR 53034 (11/15/78). Renumbered February 22, 1995.]

5-18-742. Standards of performance for storage vessels for petroleum liquids

- A. No person shall place, store or hold in any reservoir, stationary tank or other container, having a capacity of 40,000 (151,400 liters) or more gallons, any petroleum liquid having a vapor pressure of 1.5 pounds per square inch absolute or greater under actual storage conditions, unless such tank, reservoir or other container is a pressure tank maintaining working pressure sufficient at all times to prevent hydrocarbon vapor or gas loss to the atmosphere, or is equipped with one of the following vapor loss control devices, properly installed, in good working order and in operation:
 - 1. A floating roof consisting of a pontoon type double-deck type roof resting on the surface of the liquid contents and equipped with a closure seal to close the space between the roof eave and tank wall and a vapor balloon or vapor dome, designed in accordance with accepted standards of the petroleum industry. The control equipment shall not be used if the petroleum liquid has a vapor pressure of 12 pounds per square inch absolute or greater under actual storage conditions.
 - a. All tank gauging and sampling devices shall be gas-tight except when gauging or sampling is taking place.
 - b. There shall be no visible holes, tears, or other openings in the seal or any seal fabric. Where applicable, all openings except drains shall be equipped with a cover, seal, or lid. The cover, seal, or lid shall be in a closed position at all times, except when the device is in actual use.
 - c. Automatic bleeder vents shall be closed at all times, except when the roof is floated off or landed on the roof leg supports.
 - d. Rim vents, if provided, shall be set to open when the roof is being floated off the roof leg supports, or at the manufacturer's recommended setting.
 - 2. Other equipment proven to be of equal efficiency for preventing discharge of hydrocarbon gases and vapors to the atmosphere.

- B. Any other petroleum liquid storage tank shall be equipped with a submerged filling device, or acceptable equivalent, for the control of hydrocarbon emissions.
- C. All facilities for dock loading of petroleum products, having a vapor pressure of 1.5 pounds per square inch absolute or greater at loading pressure, shall provide for submerged filling or acceptable equivalent for control of hydrocarbon emissions.
- D. All pumps and compressors which handle volatile organic compounds shall be equipped with mechanical seals or other equipment of equal efficiency to prevent the release of organic contaminants into the atmosphere.
- E. The monitoring of operations required by this Section is as follows:
 - 1. The owner or operator of any petroleum liquid storage vessel to which this Section applies shall for each such storage vessel maintain a file of each type of petroleum liquid stored, of the typical Reid vapor pressure of each type of petroleum liquid stored and of dates of storage. Dates on which the storage vessel is empty shall be shown.
 - 2. The owner or operator of any petroleum liquid storage vessel to which this Section applies shall for such storage vessel determine and record the average monthly storage temperature and true vapor pressure of the petroleum liquid stored at such temperature if either:
 - a. The petroleum liquid has a true vapor pressure, as stored, greater than 26 mm Hg (0.5 psia) but less than 78 mm Hg (1.5 psia) and is stored in a storage vessel other than one equipped with a floating roof, a vapor recovery system or their equivalents; or
 - b. The petroleum liquid has a true vapor pressure, as stored, greater than 470 mm Hg (9.1 psia) and is stored in a storage vessel other than one equipped with a vapor recovery system or its equivalent.
 - 3. The average monthly storage temperature shall be an arithmetic average calculated for each calendar month, or portion thereof, if storage is for less than a month, from bulk liquid storage temperatures determined at least once every seven days.
 - 4. The true vapor pressure shall be determined by the procedures in American Petroleum Institute Bulletin 2517, amended as of February, 1980 (and no future editions), which is incorporated herein by reference and on file with the Office of the Secretary of State. This procedure is dependent upon determination of the storage temperature and the Reid vapor pressure, which requires sampling of the petroleum liquids in the storage vessels. Unless the Director requires in specific cases that the stored petroleum liquid be sampled, the true vapor pressure may be determined by using the average monthly storage temperature and the typical Reid vapor pressure. For those liquids for which certified specifications limiting the Reid vapor pressure exist, the Reid vapor pressure may be used. For other liquids, supporting analytical data must be made available upon request to the Director when typical Reid vapor pressure is used.

[Adopted February 22, 1995.]

ARTICLE 19. LOADING OF ORGANIC LIQUIDS

5-19-800. General

All facilities for dock loading of petroleum products having a vapor pressure of 1.5 pounds per square inch absolute or greater at loading pressure, shall provide for submerged filling or acceptable equivalent for control of hydrocarbon emissions.

[Renumbering & codification of former PGCAQCD Reg. 7-3-3.2 (3/31/75), readopted February 22, 1995.]

ARTICLE 20. STORAGE AND LOADING OF GASOLINE AT GASOLINE DISPENSING FACILITIES

5-20-100. GENERAL

1. Purpose: To limit emissions of volatile organic compounds (VOC) from gasoline during storage and loading of gasoline at gasoline dispensing facilities.
2. Applicability: This Article applies to an owner or operator who operates a gasoline dispensing facility, including those located at airports in the Pinal County portion of the Phoenix-Mesa 2008 8-hour ozone National Ambient Air Quality Standard (NAAQS) nonattainment area, namely T1N, R8E; T1S, R8E (Sections 1 through 12) as defined in 40 CFR 81.303.
3. Exemptions:
 - a. This Article does not apply to the storage and loading of the following fuels:
 - i. Diesel
 - ii. Liquefied petroleum gas (LPG)
 - b. Aviation gasoline loaded at airports: The loading of aviation gasoline into storage tanks at airports, and the subsequent transfer of aviation gasoline within the airport, is exempt from §5-20-300.4 and section §5-20-300.5(a) of this Article. The storage of aviation gas at airports is subject to this Article.
 - c. Bulk gasoline plant or bulk gasoline terminal: This Article does not apply to a bulk gasoline plant or a bulk gasoline terminal.
 - d. Stationary gasoline dispensing tanks for farm operations: Any stationary gasoline dispensing tank used exclusively for the fueling of implements of normal farm operations must comply with Section §5-20-300.2 (General Housekeeping Requirements), but is exempt from all other requirements of this rule.
 - e. Control of VOC Vapors exemption: The Stage 1 Vapory Recovery System provisions of §5-20-300.5.b of this Article shall not apply to the following stationary gasoline dispensing tanks:
 - i. Non-resale gasoline dispensing operations: Any stationary gasoline dispensing facility receiving less than 120,000 gallons of gasoline in any 12 consecutive calendar months, dispensing no resold gasoline, and having each stationary gasoline tank equipped with a permanent

submerged fill pipe is exempt from §5-20-300 of this Article. However, any operation shall become subject to the provisions of §5-20-300 of this Article by exceeding the 120,000 gallon threshold, and shall remain subject to such provisions even if annual emissions later fall below this threshold.

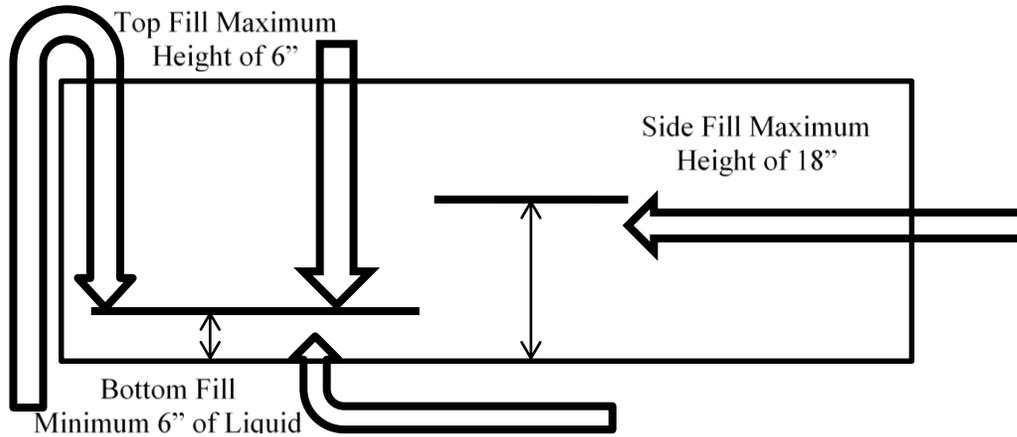
- ii. Stationary gasoline dispensing tanks of 1,000 gallons or less: Any stationary gasoline dispensing tank having a capacity of 1,000 gallons or less which was installed prior to October 2, 1978, provided that such tank is equipped with a permanent submerged fill pipe. Where, because of government regulation including, but not limited to, Fire Department codes, such a fill pipe cannot be installed, the gasoline shall be delivered into the tank using a nozzle extension that reaches within 6 inches of the tank bottom.
- f. The owner or operator of a gasoline dispensing facility that is unattended or when there is only one owner or operator under control of the gasoline dispensing facility present, the owner or operator of the gasoline dispensing facility is exempt from §5-20-300.4.

[Adopted November 30, 2016]

5-20-200. DEFINITIONS

1. **AVIATION GASOLINE** – A type of gasoline used to fuel a piston engine aircraft.
2. **CARB-CERTIFIED**: A vapor control system, subsystem, or component that has been specifically approved by system configuration and manufacturer's name and model number in an executive order of the California Air Resources Board (CARB), pursuant to Section 41954 of the California Health and Safety Code.
3. **COAXIAL VAPOR BALANCE SYSTEM**: A type of vapor balance system in which the gasoline vapors are removed through the same opening through which the fuel is delivered.
4. **DUAL-POINT VAPOR BALANCE SYSTEM**: A type of vapor balance system in which the storage tank is equipped with an entry port for a gasoline fill pipe and a separate exit port for a vapor connection. [40 CFR 63.11132].
5. **GASOLINE**: Any petroleum distillate, petroleum distillate/alcohol blend, petroleum distillate/organic compound blend, or alcohol having a Reid vapor pressure between 4.0 and 14.7 psi (200-760 mm Hg.), as determined by §5-20-500(4)(b) of this Article, and which is used as a fuel for internal combustion engines.
6. **GASOLINE CARGO TANK**: A delivery tank truck or railcar which is loading or unloading gasoline, or which has loaded or unloaded gasoline on the immediately previous load. This includes any hoses the vessel carries through which deliveries must be made.
7. **GASOLINE DISPENSING FACILITY (GDF)**: Any stationary facility which dispenses gasoline into the fuel tank of a motor vehicle, motor vehicle engine, nonroad vehicle, or nonroad engine, including nonroad vehicle or nonroad engine used solely for competition. These facilities include, but are not limited to, facilities that dispense gasoline into on-road and off-road, street, or highway motor vehicles, lawn equipment, boats, test engines, landscaping equipment, generators, pumps, and other gasoline fueled engines and equipment. [40 CFR 63.11132]

8. **GASOLINE VAPORS:** Vapors, originating from liquid gasoline, that are usually found in mixture with air. Included are any droplets of liquid gasoline or of gasoline vapor condensate that are entrained by the vapor.
9. **LEAK-FREE:** A condition in which there is no liquid gasoline escape or seepage of more than 3 drops per minute from gasoline storage, handling, and ancillary equipment, including, but not limited to, seepage and escaped from above ground fittings.
10. **MARICOP COUNTY (MC) VAPOR TIGHTNESS TEST:** The complete pressure, vacuum, and vapor-valve testing of a gasoline cargo tank that is performed according to Maricopa County specifications as described in Maricopa County Air Quality Rule 352.
11. **POPPETTED DRY BREAK:** A type of vapor loss control equipment that opens only by connection to a mating device to ensure that no gasoline vapors escape from the stationary dispensing tank before the vapor return line is connected.
12. **STAGE 1 VAPOR RECOVERY (VR) SYSTEM:** At a gasoline dispensing facility, the use of installed vapor recovery equipment designed to reduce by at least 95% the VOC vapor that would otherwise be displaced into the atmosphere from a stationary dispensing tank when gasoline is delivered into the tank by a gasoline cargo tank. This reduction may be done either by capturing the displaced vapors within the gasoline cargo tank, and or by processing the vapors on site with an emission processing device.
13. **STATIONARY DISPENSING TANK:** Any stationary tank which dispenses gasoline directly into a motorized vehicle's fuel tank, dispenses gasoline into an aircraft's fuel tank, or dispenses gasoline into a watercraft's fuel tank that directly fuels its engine(s).
14. **SUBMERGED FILL:** Any discharge pipe or nozzle which meets the applicable specifications as follows:
 - a. **Top-Fill or Bottom-Fill Tanks:** The end of the discharge pipe or nozzle is totally submerged when the liquid level is six inches (15 cm) from the bottom of the tank.
 - b. **Side-Fill:** At its highest point within the storage tank that is less than 2,000,000 gallon capacity, the end of the discharge pipe or nozzle is totally submerged when the liquid level is 18 inches (46 cm) from the bottom of the tank.
 - c. **Horizontal Fill:** At its highest point within a floating roof tank of 2,000,000 gallons or greater capacity, the end of the discharge pipe or nozzle may be up to 39.4 inches (1 meter) above the tank bottom if the discharge pipe or nozzle is kept completely submerged, including when the roof rests on its legs, except when the tank is being emptied completely.



15. VAPOR LOSS CONTROL EQUIPMENT: Any piping, hoses, equipment, or devices which are used to collect, store and/or process VOC vapors at a service station or other gasoline dispensing operation.
16. VAPOR TIGHT: A condition in which a suitable detector at the site of (potential) leakage of vapor shows less than 10,000 ppmv when calibrated with methane; or the detector shows less than 1/5 LEL (lower explosive limit) subsequent to calibration with a gas specified by the manufacturer and is used according to the manufacturer's instructions.

[Adopted November 30, 2016]

5-20-300. STANDARDS

1. MANUFACTURERS, SUPPLIERS, AND OWNERS OR OPERATORS:
 - a. A manufacturer, supplier, owner or operator shall not supply, offer for sale, sell, install or allow the installation of an aboveground or underground storage tank, any type of vapor recovery system or any of its components unless the tank, system and components meet the following:
 - i. Replacement Components for a Vapor Recovery System: A vapor recovery system for which there is a CARB specification shall be replaced with components that comply with one of the following:
 1. The equipment is supplied by the manufacturer as a CARB-certified component; or
 2. The equipment is rebuilt by a person who is authorized by CARB to rebuild that specific CARB-certified component.
 - ii. All vapor return lines from dispensing tanks shall be equipped with CARB-certified, spring loaded, vapor-tight, poppetted dry break valves.
 - iii. After [date of rule adoption], each new or rebuilt installed component shall be clearly identified with a permanent identification affixed by the certified manufacturer or rebuilder.
 - b. A licensed Vapor Recovery Registered Service Representative (RSR) in the State of Arizona shall install an aboveground or underground storage tank or vapor recovery system components.
 - c. Coaxial Vapor Balance System Prohibition: An owner or operator shall not

- i. Install a coaxial fill pipe in a new installation; or
 - ii. Reinstall a coaxial fill pipe during any changes to the tank when the top of the tank is exposed and the vapor port bung is pre-configured to accept vapor recovery piping.
- d. The owner or operator of a stationary dispensing tank shall verify that vapor recovery equipment (if required by this rule) is properly connected and in use at all times while gasoline is actively being loaded. If the gasoline dispensing facility is unattended or there is only one owner or operator under control of the gasoline dispensing facility on-site, the owner or operator of the cargo tank is responsible for the proper connection and use of the vapor recovery equipment (if required by this rule) while gasoline is being actively loaded.
- e. An owner or operator shall load, allow the loading, or provide equipment for the loading of gasoline from any cargo tank identified with a current Maricopa County Pressure Test decal into any stationary gasoline storage tank.

2. GENERAL HOUSEKEEPING REQUIREMENTS:

- a. An owner or operator shall not store gasoline or permit the loading of gasoline in any stationary gasoline storage tank located above or below ground unless all of the following conditions are met:
 - i. Minimize gasoline spills;
 - ii. Clean up spills as expeditiously as practicable;
 - iii. Cover all open gasoline containers and all gasoline storage tank fill-pipes with a gasketed seal when not in use;
 - iv. Minimize gasoline sent to open waste collection systems that collect and transport gasoline to reclamation and recycling equipment, such as oil/water separators;
 - v. Properly dispose of any VOC containing material.

3. GASOLINE STORAGE EQUIPMENT AND OPERATION REQUIREMENTS:

- a. An Underground Storage Tank (UST) must meet all of the following conditions unless exempt from the vapor recovery system requirements per §5-20-100.3 of this Article:
 - i. The UST is equipped and maintained according to §5-20-300.1 of this rule;
 - ii. For an existing GDF, maintain a dual-point vapor recovery system OR a coaxial vapor balance system. For new installations or modifications to existing GDF, install and maintain a dual-point vapor recovery system with separate fill and vapor connection points;
 - iii. A pressure vacuum vent is installed and maintained per manufacturer specifications;
 - iv. The vapor recovery system is maintained and operated according to the manufacturer's specifications and the applicable CARB Executive Orders including the corresponding CARB approved Installation, Operation and Maintenance Manual;

- v. A permanent submerged fill pipe is installed and maintained to ensure the highest point of the discharge opening is no more than six inches (6") from the bottom of the UST;
 - vi. Each fill pipe is equipped with gasketed vapor tight cap;
 - vii. Each popped dry break is equipped with vapor tight seal and gasketed vapor tight cap;
 - viii. Each gasketed vapor tight cap is maintained in a closed position except when the fill pipe or popped dry break it serves is actively in use;
 - ix. The fill pipe assembly, including fill pipe, fittings and gaskets, is maintained to prevent vapor leakage from any portion of the vapor recovery system; and
 - x. A spill containment receptacle is installed and maintained free of standing liquid, debris and other foreign matter. The spill containment receptacle shall be equipped with an integral drain valve or other CARB-certified equipment, to return spilled gasoline to the underground stationary storage tank. The drain valve shall be maintained closed and free of vapor emissions at all times except when the valve is actively in use.
- b. An Above Ground Storage Tank (AST) with a capacity greater than 250 gallons must meet all of the following conditions:
- i. A permanent submerged fill pipe is installed and maintained to ensure the highest point of the discharge opening is no more than six inches (6") from the bottom of the AST. If the AST is side filled, the fill pipe discharge opening is no more than 18 inches above the tank bottom;
 - ii. A pressure vacuum vent is installed and maintained per manufacturer specifications;
 - iii. Each fill pipe is equipped with a gasketed vapor tight cap;
 - iv. Each popped dry break is equipped with a vapor tight seal and is covered with a gasketed vapor tight cap;
 - v. All threads, gaskets, and mating surfaces of the fill pipe assembly shall prevent liquid or vapor leakage at the joints of the assembly;
 - vi. Each gasketed vapor tight cap is maintained in a closed position except when actively in use;
 - vii. If an AST is equipped with a spill containment receptacle, it shall be maintained to be free of standing liquid, debris and other foreign matter;
 - viii. A spill containment receptacle is installed at each fill pipe;
 - ix. Each spill containment receptacle equipped with an integral drain valve or other approved equipment that returns spilled gasoline to the aboveground storage tank shall be maintained closed vapor tight except when the valve is actively in use; and
 - x. Any overfill prevention equipment shall be approved, installed and maintained vapor tight to the atmosphere. Any device mounted within the fill pipe shall be so designed and maintained that no vapor from the vapor space above the gasoline within the tank can penetrate into the fill pipe or through any of the fill pipe assembly into the atmosphere.

4. LOADING OF GASOLINE:

- a. When more than one owner or operator is present at a gasoline dispensing facility, prior to accepting a load of gasoline, the owner or operator of a gasoline dispensing facility shall verify all of the following:
 - i. The gasoline cargo tank clearly displays a valid Maricopa County (Mc) Vapor Tightness Test decal that is permanently mounted near the front on the right (passenger) side of the vessel.
 - ii. The owner or operator of the gasoline cargo tank connects the vapor return hose.

5. CONTROL OF VOC VAPORS:

- a. Gasoline vapors displaced from a stationary dispensing tank by gasoline being delivered shall be handled by a Stage 1 Vapor Recovery System, unless the tank is exempted by §5-20-100.3 of this rule.
- b. Stage 1 Vapor-Recovery System Configuration:
 - i. Replacement: No part of a vapor recovery system for which there is a CARB specification shall be replaced with anything but CARB-certified components.
 - ii. Vapor Valves:
 - 1. All vapor return lines from a stationary dispensing tank shall be equipped with CARB-certified, spring-loaded, vapor-tight, poppetted dry break valves.
 - 2. Vapor valves shall be inspected weekly to determine if closure is complete and gaskets are intact; a record shall be made pursuant to §5-20-500.2 of this rule.
 - iii. Above Ground Systems: An above ground dispensing tank shall have CARB-certified fittings wherever CARB so specifies.
 - iv. Installation of New Gasoline Tank: Each new gasoline tank installation shall use CARB-certified fittings exclusively wherever CARB so specifies, and:
 - 1. Shall have its own separate, functioning dual-point vapor return line;
 - 2. Is allowed to have a combination vapor recovery system that in addition to having a separate dual-point vapor return line, also has vapor piping/fittings linking it to one or more (other) stationary gasoline dispensing tanks.
 - v. New Coaxial Prohibited:
 - 1. No coaxial fill pipes shall be installed in new installations; and
 - 2. No coaxial fill pipes shall be reinstalled in major modifications in which the top of the tank is exposed and the vapor port bung is pre-configured to accept vapor recovery piping.
- c. Equipment Maintenance and Use Required:
 - i. All vapor loss control equipment shall be:
 - 1. Installed as required;
 - 2. Operated as recommended by the manufacturer; and
 - 3. Maintained leak-free, vapor-tight and in good working order.
 - ii. Coaxial Systems: Both spring-loaded and fixed coaxial fill pipes shall be

1. Maintained according to the standards of their manufacturer(s); and
2. Be operated so that there is no obstruction of vapor passage from the tank to the cargo tank.

[Adopted November 30, 2016]

5-20-400. ADMINISTRATIVE REQUIREMENTS

1. The owner or operator of a gasoline dispensing facility shall conduct inspections of the stationary gasoline storage tank.
 - a. The inspection shall include, but is not limited to all of the following:
 - i. The spill containment receptacle shall be maintained:
 1. Free of cracks, rust and defects;
 2. Free of foreign material;
 3. Empty of liquid, including gasoline; and
 4. The drain valve, if installed, shall properly seal.
 - ii. The external fittings of the fill pipe assembly shall be:
 1. Intact and not loose;
 2. Covered with a gasketed cap that fits securely onto the fill pipe.
 - iii. The poppetted dry break shall be:
 1. Equipped with a vapor tight seal;
 2. Covered with a gasketed cap that fits securely onto the poppetted dry break.
 - b. The inspections shall be conducted:
 - i. At least once per calendar week; or
 - ii. If the gasoline dispensing facilities receives gasoline loads less than once per calendar week, the inspection shall take place upon completion of the receipt of the load of gasoline.
2. Burden of Proof:
 - a. Proving Exempt Status: The burden of proof of eligibility for exemption from a provision of this rule is on the owner or operator. An owner or operator seeking such an exemption shall maintain adequate records and furnish them to the Control Officer upon request.
 - b. Providing Proof of Equipment Compliance: It is the responsibility of the owner or operator to provide proof, when requested by the Control Officer, that a vapor recovery system or its modifications meet the requirements of this Article.
3. CARB Decertification: An owner or operator shall not install or reinstall a component related to vapor recovery that has been decertified by CARB.

[Adopted November 30, 2016]

5-20-500. MONITORING AND RECORDS

1. MONITORING FOR LEAKS
 - a. Combustible Gas Detector or Organic Vapor Analyzer – Test Procedure: During loading of gasoline into storage tanks, the peripheries of all potential sources of leakage at the loading facility are checked with a combustible gas detector (CGD) or organic vapor analyzer(OVA) as follows:

- i. Calibration: Within four hours prior to monitoring, the CGD or OVA shall be suitably calibrated in a manner and with the gas specified by the manufacturer for 20 percent LEL response, or calibrated with methane for a 10,000 ppm response.
 - ii. Probe Distance: The probe inlet shall be one inch (2.5 cm) or less from the potential leak source when searching for leaks. The probe inlet shall be one inch (2.5 cm) from the leak source when the highest detector reading is being determined for a discovered leak. When the probe is obstructed from moving within one inch (2.5 cm) of an actual or potential leak source, the closest practicable probe distance shall be used.
 - iii. Probe Movement: The probe shall be moved slowly, not faster than 1.6 inches per second (4 centimeters per second). If there is any meter deflection at a potential or actual leak source, the probe shall be positioned to locate the point of highest meter response.
 - iv. Probe Position: The probe inlet shall be positioned in the path of the vapor flow from a leak such that the central axis of the probe-tube inlet shall be positioned coaxial with the path of the most concentrated vapors.
 - b. Method 21-Determination of Volatile Organic Compound Leaks, Alternative Screening Procedure 8.3.3:
 - i. Spray a soap solution over all potential leak sources. The soap solution may be a commercially available leak detection solution or may be prepared using concentrated detergent and water. A pressure sprayer or squeeze bottle may be used to dispense the solution.
 - ii. Observe the potential leak sites to determine if any bubbles are formed.
 - 1. If no bubbles are observed, the source is presumed to have no detectable vapor leaks.
 - 2. If any bubbles are observed, the instrument techniques of §5-20-500.1.a of this rule shall be used to determine if a vapor leak exists.
 - c. Optical Gas Imaging: An owner or operator may use an optical gas imaging instrument to identify vapor leaks. If a vapor leak is detected, the instrument techniques listed in Section §5-20-500.1.a of this rule shall be used to determine if a vapor leak exists.
2. COMPLIANCE INSPECTIONS: Any gasoline dispensing facility required by this rule to be equipped with vapor loss control devices may be subject to monitoring for vapor tightness and liquid leak tightness during any working hours. Such a tank may be opened for gauging or inspection when loading operations are not in progress, provided that such tank is part of an open system or is served by a positive-pressure relief valve with a relief setting not exceeding +1/2 lb psig.
3. GASOLINE DISPENSING FACILITY RECORDKEEPING: The owner or operator of each gasoline dispensing facility in the Pinal County portion of the Phoenix 8-hour ozone nonattainment area shall maintain records as follows:
 - a. The total amount of gasoline received each month shall be recorded by the end of the following month.

- b. The owner or operator of a gasoline dispensing facility shall record inspections in a permanent record or log book:
 - i. By the end of Saturday of the following week; or
 - ii. If the gasoline dispensing facilities receives gasoline loads less than once per calendar week, the owner or operator shall record the inspection within three days after the receipt of the load of gasoline.
 - iii. These records and any reports or supporting information required by this rule or by the Control Officer shall be retained for at least 5 years.
 - iv. Records of the past 12 months shall be in a readily accessible location and must be made available to the Control Officer within 24 hours upon verbal or written request.

- 4. COMPLIANCE DETERMINATION: The test methods referenced in §5-20-500.5 of this rule, shall be used in the ways given in the subsections that immediately follow. When more than one test method is permitted for a determination, an exceedance of the limits established in this rule determined by any of the applicable test methods constitutes a violation of this rule. For routine information collection, the Control Officer may accept a manufacturer's data sheet (MSDS), data certified by an officer of the supplying company, or test data for the product of inquiry.
 - a. Control efficiency of vapor loss control equipment and vapor collection/processing systems shall be determined according to EPA Method 2A and either EPA Method 25A or 25B, or by CARB-approved test methods. EPA Method 2B shall be used for vapor incineration devices.
 - b. Vapor pressure of gasoline shall be determined using ASTM D323-15a Standard Test Method for Vapor Pressure of Petroleum Products (Reid Method or ASTM D4953-15, Standard Test Method for Vapor Pressure of Gasoline and Gasoline-Oxygenate Blends (Dry Method. ASTM D323-15a shall be used for gasoline either containing no oxygenates or MTBE (methyl tertiary butyl ether) as the sole oxygenate. Method ASTM 4953-15 shall be used for oxygenated gasoline.
 - c. Vapor Leaks:
 - i. If a determination of leak tight status is to be made on Stage 1VR system or spill containment equipment at a gasoline dispensing facility or on a cargo tank at the station, the method in §5-20-500(4)(c) of this rule shall be used.
 - ii. §5-20-500(4)(c) of this rule probe distance and movement parameters notwithstanding, if it has been established that there are no other interfering vapor escapes, it is an exceedance if a reading by the Control Officer from an established vapor escape above 1/5 LEL (or 10,000 ppm as methane) is sustained for at least 5 seconds, and the probe is either consistently further than 1 inch from the source and/or the probe is consistently being moved faster than 4 cm per second.
 - iii. The Control Officer may count it as a failure to perform weekly inspections pursuant to §5-20-300.3 of this rule if foreign material is found in a spill containment receptacle and there is no record of an inspection's being performed in the preceding 10 days.

5. TEST METHODS: The EPA test methods as they exist in the Code of Federal Regulations (CFR) as listed below, are adopted by reference. The CARB test methods as they exist in Stationary Source Test Methods, Volume 2, on April 8, 1999, as listed in §5-20-500(5)(c) of this rule, are adopted by reference. The other test methods listed here are also adopted by reference, each having paired with it a specific date that identifies the particular version/revision of the method that is adopted by reference. These adoptions by reference include no future editions or amendments.
- a. EPA Test Methods:
 - i. EPA Methods 2a (“Direct Measurement of Gas Volume Through Pipes and Small Ducts”), and 2b (“Determination of Exhaust-Gas Volume Flow-Rate From Gasoline Vapor Incinerators“).40 CFR 60, Appendix A.
 - ii. EPA Method 21 - Determination of Volatile Organic Compound Leaks.
 - iii. EPA Method 21-Determination of Volatile Organic Compound Leaks, Alternative Screening Procedure 8.3.3
 - iv. EPA Method 25 (“Determination of Total Gaseous Nonmethane Organic Emissions as Carbon”) and its submethods (40 CFR 60, Appendix A).
 - v. EPA Method 27 (“Determination Of Vapor Tightness Of Gasoline Delivery Tank Using Pressure-Vacuum Test”) in 40 CFR 60, Appendix A.
 - vi. Optical Gas Imaging: Alternative Work Practice for Monitoring Equipment Leaks, 40 CFR 60.18(g). An owner or operator may use an optical gas imaging instrument instead of a 40 CFR part 60, Appendix A-7, Method 21to monitor for equipment volatile organic compound leaks.
 - b. ASTM Standards:
 - i. ASTM D323-15a “Standard Test Method for Vapor Pressure of Petroleum Products (Reid Method).
 - ii. ASTM D4953-15 “Standard Test Method for Vapor Pressure of Gasoline and Gasoline-Oxygenate Blends (Dry Method)
 - c. CARB Certification and Test Procedures for Gasoline Vapor Recovery Systems:
 - i. California Environmental Protection Agency, Air Resources Board Vapor Recovery Test Procedure TP-201.1B, Static Torque of Rotatable Phase I Adaptors, October 8, 2003 edition, California Air Resources Board, P.O. Box 2815, 2020 L. Street, Sacramento, California 95812-2815.
 - ii. California Air Resources Board Vapor Recovery Test Procedure TP-201.1,—Volumetric Efficiency for Phase I Vapor Recovery Systems, adopted April 12, 1996, and amended February 1, 2001, and October 8, 2003.
 - iii. CARB Test Procedure TP-201.1A - “Determination of Efficiency of Phase I Vapor Recovery Systems of Dispensing Facilities with Assist Processors”.
 - iv. California Environmental Protection Agency, Air Resources Board Vapor Recovery Test Procedure TP-201.1E, Leak Rate and Cracking Pressure of Pressure/Vacuum Vent Valves, October 8, 2003 edition, California Air Resources Board, P.O. Box 2815, 2020 L. Street, Sacramento, California 95812-2815.

- v. California Environmental Protection Agency, Air Resources Board Vapor Recovery Test Procedure TP-201.1C, Leak Rate of Drop Tube/Drain Valve Assembly, October 8, 2003 edition, California Air Resources Board, P.O. Box 2815, 2020 L. Street, Sacramento, California 95812-2815.
 - vi. California Environmental Protection Agency, Air Resources Board Vapor Recovery Test Procedure TP-201.1D, Leak Rate of Drop Tube Overfill Protection Devices and Spill Container Drain Valves, October 8, 2003 edition, California Air Resources Board, P.O. Box 2815, 2020 L. Street, Sacramento, California 95812-2815.
 - vii. California Air Resources Board Vapor Recovery Test Procedure TP-201.3—Determination of 2-Inch WC Static Pressure Performance of Vapor Recovery Systems of Dispensing Facilities, adopted April 12, 1996, and amended July 26, 2012.
 - viii. Bay Area Air Quality Management District Source Test Procedure ST-30—Static Pressure Integrity Test—Underground Storage Tanks, adopted November 30, 1983, and amended December 21, 1994.
- d. Additional Test Methods:
- i. San Diego County Air Pollution Control District Test Procedure TP-96-1, March 1996, Third Revision, Air Pollution Control District, 9150 Chesapeake Drive, San Diego, CA 92123-1096.
 - ii. American Petroleum Institute Standard API STD 650 Welded Tanks for Oil Storage, Twelfth Edition, Includes Errata 1 (2013), Errata 2 (2014), and Addendum 1 (2014).

[Adopted November 30, 2016]

ARTICLE 21. FOSSIL FUEL-FIRED INDUSTRIAL AND COMMERCIAL EQUIPMENT

5-21-920. Fossil Fuel fired Industrial and Commercial Equipment Standard Applicability

This Article applies to installations in which fuel is burned for the primary purpose of producing steam, hot water, hot air or other liquids, gases or solids and in the course of doing so the products of combustion do not come into direct contact with process materials. When any products or by-products of a manufacturing process are burned for the same purpose or in conjunction with any fuel, the same maximum emission limitations shall apply.

[Adopted February 22, 1995.]

5-21-930. Fossil Fuel Fired Industrial and Commercial Equipment Particulate Emission Standard

- A. The heat content of coal shall generally be determined according to ASTM Method D-271, "Laboratory Sampling and Analysis of Coal or Coke" or ASTM Method D-2015, "Gross Calorific Value of Solid Fuel by the Adiabatic Bomb Calorimeter" . These methods shall be used as guides by may be modified, adjusted or added to by the Control Officer to suit, specific sampling conditions or needs based upon good practice, judgement and experience.

- B. For purposes of this regulation, the heat input shall be the aggregate heat content of all fuel whose products of combustion pass through a stack or other outlet. The heat input value used shall be the equipment manufacturer or designer's guaranteed maximum input, whichever is greater. The total heat input of all fuel-burning units on a plant or premises shall be used for determining the maximum allowable amount of particulate matter which may be emitted.
- C. No person shall cause, allow or permit the emission of particulate matter, caused by combustion of fuel, in excess of the amounts calculated by one of the following equations:
 1. For equipment having a heat input rate of 4200 million Btu/hr or less, the maximum allowable emissions shall be determined by the following equation:

$$E = 1.02Q^{0.769}$$

where:

E = the maximum allowable particulate emissions rate in pounds-mass per hour.

Q = the total heat input of all operating fuel-burning units on a plant or premises in million Btu/hr.

2. For equipment having a heat input rate greater than 4200 million Btu/hr, the maximum allowable emissions shall be determined by the following equation:

$$E = 17.0Q^{0.432}$$

where "E" and "Q" have the same meaning as in Subdivision 1. of this subsection.

[Adopted February 22, 1995. Revised July 12, 2000.]

ARTICLE 22. FOSSIL FUEL-FIRED STEAM GENERATORS

5-22-950. Fossil Fuel Fired Steam Generator Standard Applicability

The provisions of this article are applicable to steam power generating facilities. For purposes of this Article, a new source is one that commenced construction on or after March 31, 1975.

[Former PGCAQCD Reg. 7-3-2.2 (3/31/75) and 7-3-5.1 (3/31/75). Codified February 22, 1995.]

5-22-960. Fossil Fuel Fired Steam Generator Sulfur Dioxide Emission Limitation

- A. Steam power generating installations which are new sources shall not emit more than 0.80 pounds of sulfur dioxide, maximum two-hour average, per million Btu heat input when oil is fired. Steam power generating installations shall not emit more than 1.0 pounds of sulfur dioxide maximum two-hour average, per million Btu heat input when oil is fired.
- B. Steam power generating installations which are new sources shall not emit more than 0.80 pounds of sulfur dioxide, maximum two-hour average, per million Btu heat input when coal is fired. Steam power generating installations shall not emit more than 1.0 pounds of sulfur dioxide, maximum two-hour average, per million Btu heat input when coal is fired.

[Former PGCAQCD Reg. 7-3-2.2 (3/31/75). Codified February 22, 1995.]

5-22-970. Fossil Fuel Fired Steam Generator Nitrogen Oxide Emission Limitation

- A. Steam power generating installations which are new sources shall not emit more than 0.20 pounds of nitrogen oxides, maximum two-hour average, calculated as nitrogen dioxide, per million Btu heat input when gaseous fossil fuel is fired.
- B. Steam power generating installations which are new sources shall not emit more than 0.30 pounds of nitrogen oxides, maximum two-hour averages calculated as nitrogen dioxide, per million Btu heat input when liquid fossil fuel is fired.
- C. Steam power generating installations which are new sources shall not emit more than 0.70 pounds of nitrogen Oxides, maximum two-hour average, calculated as nitrogen dioxide, per million Btu heat input when solid fossil fuel is fired.

[Former PGCAQCD Reg. 7-3-5.1 (3/31/75). Codified February 22, 1995.]

ARTICLE 23. STATIONARY ROTATING MACHINERY

5-23-990. General

The provisions of this article are applicable to the following affected facilities: all stationary gas turbines, oil-fired turbines or internal combustion engines. This article also applies to an installation operated for the purposes of producing electric or mechanical power with a resulting discharge of sulfur dioxide in the installation's effluent gases.

[Adopted effective November 3, 1993.]

5-23-1000. Definitions

For the purpose of this article, the following definition shall apply:

- 1. HEAT INPUT - The aggregate heat content of all fuels whose products of combustion pass through a stack or other outlet.
- 2. HIGH SULFUR OIL - Fuel oil containing 0.90 percent or more sulfur by weight.
- 3. LOW SULFUR OIL - Fuel oil containing less than 0.90 percent but higher than 0.5 percent sulfur by weight.
- 4. VERY LOW SULFUR OIL - Fuel oil containing 0.5 percent or less sulfur by weight.
- 5. SUPPLEMENTARY CONTROL SYSTEM - A system by which sulfur dioxide emissions are curtailed during periods when meteorological conditions conducive to ground-level concentrations in excess of ambient air quality standards for sulfur dioxide either exist or are anticipated.

[Adopted effective November 3, 1993.]

5-23-1010. Performance standards

- A. No person shall cause, allow or permit the emission of particulate matter, caused by combustion of fuel, from any stationary rotating machinery in excess of the amounts calculated by one of the following equations:
 - 1. For equipment having a heat input rate of 4200 million Btu/hr or less, the maximum allowable emissions shall be determined by the following equation:

$$E = 1.02Q^{0.769}$$

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where:

E = the maximum allowable particulate emissions rate in pounds-mass per hour.

Q = the total heat input of all operating fuel-burning units on a plant or premises in million Btu/hr.

2. For equipment having a heat input rate greater than 4200 million Btu/hr, the maximum allowable emissions shall be determined by the following equation:

$$E = 17.0Q^{0.432}$$

where "E" and "Q" have the same meaning as in Subdivision 1. of this subsection.

- B. For reference purposes only, the two equations in Subsection A. of this section are plotted in A.A.C. Title 18, Chapter 2, Appendix 11, Figure 1 (December 31, 1991). The emission values obtained from the graph are approximately correct for the heat input rates shown. However, the actual values shall be calculated from the applicable equations and rounded off to two decimal places.
- C. No person shall cause, allow or permit to be emitted into the atmosphere from any stationary rotating machinery, smoke for any period greater than 10 consecutive seconds which exceeds 40% opacity. Visible emissions when starting cold equipment shall be exempt from this requirement for the first 10 minutes.
- D. When low sulfur oil is fired, stationary rotating machinery installations shall burn fuel which limits the emission of sulfur dioxide to 1.0 pound per million Btu heat input.
- E. When high sulfur oil is fired, stationary rotating machinery installations shall not emit more than 2.2 pounds of sulfur dioxide per million Btu heat input.
- F. Any permit issued for the operation of a source, or any renewal or modification of such a permit, shall include a condition prohibiting the use of high sulfur oil by the permittee. This condition may not be included in the permit if the applicant demonstrates to the satisfaction of the Control Officer both that sufficient quantities of low sulfur oil are not available for use by the source and that it has adequate facilities and contingency plans to insure that the sulfur dioxide ambient air quality standards set forth in Chapter 2, Article 1 will not be violated.
 1. The terms of the permit may authorize the use of high sulfur oil under such conditions as are justified.
 2. In cases where the permittee is authorized to use high sulfur oil it shall submit to the District monthly reports detailing its efforts to obtain low sulfur oil.
 3. When the conditions justifying the use of high sulfur oil no longer exist, the permit shall be modified accordingly.
 4. Nothing in this article shall be construed as allowing the use of a supplementary control system or other form of dispersion technology.

[Adopted effective November 3, 1993. Amended February 22, 1995.]

5-23-1015. Exemptions

Engines which are used for emergency power generation or for fire-suppression water pumps shall be exempt from the requirements of this article if they are no larger than 325 horsepower and are used no more than 72 hours per calendar year. The exemption of this section shall not apply to engines using high sulfur oil for fuel.

[Adopted effective November 3, 1993.]

5-23-1020. Monitoring and records

- A. The owner or operator of any stationary rotating machinery subject to the provisions of this article shall record daily the sulfur content and lower heating value of the fuel being fired in the machine whenever a fuel other than natural gas is used. Sulfur content and lower heating value may be obtained by mass balance analysis.
- B. The owner or operator of any stationary rotating machinery subject to the provisions of this article shall report to the Control Officer any daily period during which the sulfur content of the fuel being fired in the machine exceeds 0.8% .
- C. The test methods and procedures required by this article are as follows:
 - 1. To determine compliance with the standards prescribed in §5-23-1010, the following reference methods shall be used:
 - a. Reference Method 20 in 40 C .F.R. Part 60, Appendix A for the concentration of sulfur dioxide and oxygen.
 - b. ASTM Method D -129-91 (Test Method for Sulfur in Petroleum Products, General Bomb Method) for the sulfur content of liquid fuels.
 - c. ASTM Method D -1072-90 (Test Method for Total Sulfur in Fuel Gases) for the sulfur content of gaseous fuels.
 - 2. To determine compliance with the standards prescribed in Subsection B. of this section, the following reference methods shall be used:
 - a. ASTM Method D -129-91 (Test Method for Sulfur in Petroleum Products, General Bomb Method) for the sulfur content of liquid fuels.
 - b. ASTM Method D -1072-90 (Test Method for Total Sulfur in Fuel Gases) for the sulfur content of gaseous fuels.
- D. Compliance tests shall be conducted during operation at the normal rated capacity of each unit.

[Adopted effective November 3, 1993. Revised May 14, 1997.]

ARTICLE 24. MISCELLANEOUS AND UNCLASSIFIED SOURCE REQUIREMENTS

5-24-1030. Generally Applicable Minimum Standards of Performance

- A. No source shall cause or permit the emission of pollutants at rates greater than the following:
 - 1. For particulate matter discharged into the atmosphere in any one hour from any unclassified process source in total quantities in excess of the amounts calculated by one of the following equations:
 - a. For process sources having a process weight rate of 60,000 pounds per hour (30 tons per hour) or less, the maximum allowable emissions shall be determined by the following equation:

$$E = 4.10P^{0.67} \text{ where:}$$

E = the maximum allowable particulate emissions rate in pounds-mass per hour.

P = the process weight in tons-mass per hour.

- b. For process weight rate greater than 60,000 pounds per hour (30 tons per hour), the maximum allowable emissions shall be determined by the following equation:

$$E = 55.0P^{0.11-40}$$

where "E" and "P" are defined as indicated in subparagraph (a) of this paragraph.

2. Sulfur dioxide) 600 parts per million.
 3. Nitrogen oxides expressed as NO₂) 500 parts per million.
- B. For purposes of this Section, the total process weight from all similar units employing a similar type process shall be used in determining the maximum allowable emission of particulate matter.
- C. Emission limit values calculated from the applicable equations shall be rounded off to two decimal places.
- D. No person shall emit gaseous or odorous materials from equipment, operations or premises under his control in such quantities or concentrations as to cause air pollution.
- E. No person shall operate or use any machine, equipment or other contrivance for the treatment or processing of animal or vegetable matter, separately or in combination, unless all gaseous vapors and gas entrained effluents from such operations, equipment or contrivance have been either:
1. Incinerated to destruction, as indicated by a temperature measuring device, at not less than 1,200 degrees Fahrenheit if constructed or reconstructed prior to January 1, 1989, or 1,600 degrees Fahrenheit with a minimum residence time of 0.5 seconds if constructed or reconstructed thereafter; or
 2. Passed through such other device which is designed, installed and maintained to prevent the emission of odors or other air contaminants and which is approved by the Control Officer.
- F. Materials including solvents or other volatile compounds, paints, acids, alkalies, pesticides, fertilizers and manure shall be processed, stored, used and transported in such a manner and by such means that they will not evaporate, leak, escape or be otherwise discharged into the ambient air so as to cause or contribute to air pollution. Where means are available to reduce effectively the contribution to air pollution from evaporation, leakage or discharge, the installation and use of such control methods, devices, or equipment shall be mandatory.
- G. Where a stack, vent or other outlet is at such a level that fumes, gas mist, odor, smoke, vapor or any combination thereof constituting air pollution are discharged to adjoining property, the Control Officer may require the installation of abatement equipment or the alteration of such stack, vent or other outlet by the owner or operator thereof to a degree that will adequately dilute, reduce or eliminate the discharge of air pollution to adjoining property.
- H. No person shall allow hydrogen sulfide to be emitted from any location in such manner and amount that the concentration of such emissions into the ambient air at any occupied place beyond the premises on which the source is located exceeds 0.03 parts per million by volume for any averaging period of 30 minutes or more.
- I. No person shall cause, allow or permit discharge from any stationary source carbon monoxide emissions without the use of complete secondary combustion of waste gases generated by any process source.

- J. No person shall allow hydrogen cyanide to be emitted from any location in such manner and amount that the concentration of such emissions into the ambient air at any occupied place beyond the premises on which the source is located exceeds 0.3 parts per million by volume for any averaging period of eight hours.
- K. No person shall allow sodium cyanide dust or dust from any other solid cyanide to be emitted from any location in such manner and amount that the concentration of such emissions into the ambient air at any occupied place beyond the premises on which the source is located exceeds 140 micrograms per cubic meter for any averaging period of eight hours.
- L. No owner or operator of a facility engaged in the surface coating of miscellaneous metal parts and products may operate a coating application system subject to this Section that emits volatile organic compounds in excess of any of the following:
 1. 4.3 pounds per gallon (0.5 kilograms per liter) of coating, excluding water, delivered to a coating applicator that applies clear coatings.
 2. 3.5 pounds per gallon (0.42 kilograms per liter) of coating, excluding water delivered to a coating applicator in a coating application system that is air dried or forced warm air dried at temperatures up to 194° F (90°C).
 3. 3.5 pounds per gallon (0.42 kilograms per liter) of coating, excluding water, delivered to a coating applicator that applies extreme performance coatings.
 4. 3.0 pounds per gallon (0.36 kilograms per liter) of coating, excluding water, delivered to a coating applicator for all other coatings and coating application systems.
- M. If more than one emission limitation in subsection (L) of this Section applies to a specific coating, then the least stringent emission limitation shall be applied.
- N. All VOC emissions from solvent washings shall be considered in the emission limitations in subsection (L) of this Section, unless the solvent is directed into containers that prevent evaporation into the atmosphere.
- O. As an alternative compliance with the emission limits of subsection (L), the owner or operator may install and operate an emission control system with a combined capture and control efficiency of 90 percent or greater as needed to achieve an equivalent level of control as determined by EPA Test Methods 204 and its sub methods.

[Adopted February 22, 1995, Amended October 13, 2010]

5-24-1032. Federally Enforceable Minimum Standard of Performance - Process Particulate Emissions

- A. No person shall cause, suffer, allow or permit the discharge of particulate matter into the atmosphere in any one hour from any process source whatsoever, except incineration and fuel-burning equipment, in total quantities of particulate matter discharged into the atmosphere in any one hour from any unclassified process source in excess of the amounts calculated by one of the following equations:
 1. For process sources having a process weight rate of 60,000 pounds per hour (30 tons per hour) or less, the maximum allowable emissions shall be determined by the following equation:

$$E = 4.10P^{0.67} \text{ where:}$$

E = the maximum allowable particulate emissions rate in pounds-mass per hour.

P = the process weight in tons-mass per hour.

2. For process weight rate greater than 60,000 pounds per hour (30 tons per hour), the maximum allowable emissions shall be determined by the following equation:

$$E = 55.0P^{0.11-40}$$

where "E" and "P" are defined as indicated in subparagraph (1) of this paragraph.

- B. Any process source subject to allowable rate of emissions as defined in this section must capture, to the maximum practical extent, all particulate matter resulting from operation of individual equipment comprising the complete process. Failure to control these "Fugitive" emissions in a manner satisfactory to the Control Officer, or which exceed the opacity requirements of Chapter 2, Article 8, will result in a non-compliance status even though the requirements of subsection 1 of this section have been complied with. Fugitive dust resulting from vehicular movement required by normal operation of a process source must be controlled as defined by Chapter 4, Article 2.

[Former PGCAQCD Reg. 7-3-1.8 (3/31/75). Codified February 22, 1995.]

5-24-1040. Carbon monoxide emissions - industrial processes

No person shall cause, suffer, allow or permit discharge from any source carbon monoxide emissions without the use of complete secondary combustion of waste gases generated by any process source.

[Former PGCAQCD Reg. 7-3-4.1 (3/31/75). Codified February 22, 1995.]

5-24-1045. Sulfite pulp mills - sulfur compound emissions

No person shall cause, suffer, allow or permit discharge into the atmosphere of an amount in excess of nine pounds of sulfur oxides, calculated as sulfur dioxide, per air-dried ton of pulp produced from a sulfite pulp mill. The total emissions shall include sulfur oxides emitted from blow pits, washer vents, storage tanks and digester relief and recovery system.

[Former PGCAQCD Reg. 7-3-2.3 (3/31/75). Codified February 22, 1995.]

5-24-1050. Reduced sulfur emissions - default limitation; conditional repeal

- A. In any portion of Pinal County deemed non-attainment for sulfur dioxide, no person shall cause, suffer, allow or permit reduced sulfur to be discharged into the atmosphere from any industry not covered by another express limitation under this Code regarding emissions of reduced sulfur, reduced sulfur, which includes sulfur equivalent from all sulfur emissions including but not limited to sulfur dioxide, sulfur trioxide and sulfuric acid, in excess of ten percent of the sulfur entering the process as feed.
- B. Upon the formal concurrence by the EPA in the total deletion of this provision, and its predecessor regulations, from inclusion within the Arizona SIP, this section shall be repealed.

[Former PGCAQCD Reg. 7-3-2.5 (3/31/75). Codified February 22, 1995. Amended June 20, 1996.]

5-24-1055. Pumps and Compressors - organic compound emissions

All pumps and compressors which handle volatile organic compounds shall be equipped with mechanical seals or other equipment of equal efficiency to prevent the release of organic contaminants into the atmosphere.

[Former PGCAQCD Reg. 7-3-3.3 (3/31/75). Codified February 22, 1995.]

ARTICLE 25. SEWAGE TREATMENT PLANTS

5-25-1080. Sludge incineration

- A. No person shall cause, allow or permit to be emitted into the atmosphere, from any municipal sewage treatment plant sludge incinerator:
1. Smoke, fumes, gases, particulate matter or other gas-borne material which exceeds 20 percent opacity for more than 30 seconds in any 60-minute period.
 2. Particulate matter in concentrations in excess of 0.1 grain per cubic foot, based on dry flue gas at standard conditions, corrected to 12 percent carbon dioxide.
- B. The owner or operator of any sludge incinerator subject to the provisions of this article shall monitor operations by doing all of the following:
1. Install, calibrate, maintain and operate a flow measuring device which can be used to determine either the mass or volume of sludge charged to the incinerator. The flow measuring device shall have an accuracy of $\pm 5\%$ over its operating range.
 2. Provide access to the sludge charged so that a well-mixed representative grab sample of the sludge can be obtained.
 3. Install, calibrate, maintain and operate a weighing device for determining the mass of any municipal solid waste charged to the incinerator when sewage sludge and municipal solid wastes are incinerated together. The weighing device shall have an accuracy of $\pm 5\%$ over its operating range.
- C. Test methods:
1. The reference methods set forth in 40 C.F.R. Part 60, Appendix A shall be used to determine compliance with the standards prescribed in Subsection A. of this section as follows:
 - a. Method 5 for concentration of particulate matter and associated moisture content;
 - b. Method 1 for sample and velocity traverses;
 - c. Method 2 for volumetric flow rate; and
 - d. Method 3 for gas analysis.
 2. For Method 5, the sampling time for each run shall be at least 60 minutes and the sampling rate shall be at least 0.015 dscm/min (0.53 dscf/min), except that shorter sampling times, when necessitated by process variables or other factors, may be approved by the Control Officer.

[Adopted effective November 3, 1993. Revised May 14, 1997.]

ARTICLE 26. MISCELLANEOUS METAL PROCESSING PLANTS

5-26-1082. Applicability

The performance standards under this Article shall apply to the following facilities:

- A. Secondary lead smelters;
- B. Brass and bronze ingot production facilities;

[Adopted February 22, 1995.]

5-26-1084. Miscellaneous Metal Processing Plants - Performance Standards

- A. No person shall cause, allow or permit the discharge of particulate matter into the atmosphere in any one hour from any secondary lead smelter in total quantities in excess of the amounts calculated under §5-24-1030.A. 1.
- B. The opacity of emissions subject to the provisions of this Section shall not exceed 20 percent.
- C. The test methods and procedures required by this Section are as follows:
 - 1. The reference methods set forth in 40 CFR 60, Appendix A shall be used to determine compliance with the standards prescribed in subsection (A) of this Section as follows:
 - a. Method 5 for the concentration of particulate matter and the associated moisture content.
 - b. Method 1 for sample and velocity traverses.
 - c. Method 2 for velocity and volumetric flow rate.
 - d. Method 3 for gas analysis.
 - 2. For Method 5, the sampling time for each run shall be at least 60 minutes and the sampling rate shall be at least 0.9 dscm/hr (0.53 dscf/min), except that shorter sampling times, when necessitated by process variables or other factors, may be approved by the Control Officer. Particulate sampling shall be conducted during representative periods of furnace operation including charging and tapping.

[Adopted February 22, 1995.]

ARTICLE 27. IRON AND STEEL PLANTS

5-27-1086. Applicability

The performance standards under this Article shall apply to the following facilities:

- A. Iron and steel plants.

[Adopted February 22, 1995.]

5-27-1088. Irons and Steel Plants - Performance Standards

- A. No person shall cause, allow or permit the discharge of particulate matter into the atmosphere in any one hour from any secondary lead smelter in total quantities in excess of the amounts calculated under §5-24-1030.A. 1.
- B. The opacity of emissions subject to the provisions of this Section shall not exceed 20 percent.
- C. Monitoring of operations under this Section is as follows:
 - 1. The owner or operator of an affected facility shall maintain daily records of the time and duration of each steel production cycle.
 - 2. The owner or operator of any affected facility that uses Venturi scrubber emission control equipment shall install, calibrate, maintain and continuously operate the following monitoring devices:

- a. A monitoring device for the continuous measurement of the pressure loss through the Venturi constriction of the control equipment. The monitoring device shall be certified by the manufacturer to be accurate within ± 250 pascals (± 1 inch water).
 - b. A monitoring device for the continuous measurement of the water supply pressure to the control equipment. The monitoring device is to be certified by the manufacturer to be accurate within ± 5 percent of the design water supply pressure. The pressure sensor or tap shall be located close to the water discharge point.
 3. All monitoring devices required in subsection (F)(2) of this Section shall be recalibrated annually and at other times as the Control Officer may require, in accordance with the procedures in AAC Title 18, Chapter 2, Appendix 9.
- D. The test methods and procedures required under this Section are as follows:
1. The reference methods set forth in the 40 CFR 60, Appendix A shall be used to determine compliance with the standards prescribed in subsection (A) of this Section as follows:
 - a. Method 5 for concentration of particulate matter and associated moisture content.
 - b. Method 1 for sample and velocity traverses.
 - c. Method 2 for volumetric flow rate.
 - d. Method 3 for gas analysis.
 2. For Method 5, the sampling for each run shall continue for an integral number of cycles with total duration of at least 60 minutes. The sampling rate shall be at least 0.9 dscm/hr (0.53 dscf/min), except that shorter sampling times, when necessitated by process variables or other factors, may be approved by the Control Officer. A cycle shall start at the beginning of either the scrap preheat or the oxygen blow and shall terminate immediately prior to tapping.

[Adopted February 22, 1995. Revised May 14, 1997.]

ARTICLE 28. COAL PREPARATION PLANTS

5-28-1090. Applicability

The provisions of this Article are applicable to any of the following affected facilities in coal preparation plants: thermal dryers, pneumatic coal-cleaning equipment, coal processing and conveying equipment including breakers and crushers, coal storage systems, and coal transfer and loading systems. For purposes of this Section, the definitions contained in 40 CFR 60.251 are adopted by reference and incorporated herein.

[Adopted February 22, 1995.]

5-28-1092. Coal Preparation Plants - Performance Standards

- A. No person shall cause, allow or permit the discharge of particulate matter into the atmosphere in any one hour from any coal preparation plant in total quantities in excess of the amounts calculated under §5-24-1030.A.1.

- B. Fugitive emissions from coal preparation plants shall be controlled in accordance with Chapter 4 of this Code.
- C. The test methods and procedures required by this Section are as follows:
 - 1. The reference methods in 40 CFR 60, Appendix A are used to determine compliance with standards prescribed in subsection (B) of this Section as follows:
 - a. Method 5 for the concentration of particulate matter and associated moisture content.
 - b. Method 1 for sample and velocity traverses.
 - c. Method 2 for velocity and volumetric flow rate.
 - d. Method 3 for gas analysis.
 - 2. For Method 5, the sampling time for each run shall be at least 60 minutes and the minimum sample volume is 0.85 dscm (30 dscf), except that short sampling times or smaller volumes, when necessitated by process variables or other factors, may be approved by the Control Officer. Sampling shall not be started until 30 minutes after start-up and shall be terminated before shutdown procedures commence. The owner or operator of the affected facility shall eliminate cyclonic flow during performance tests in a manner acceptable to the Control Officer.
 - 3. The owner or operator shall construct the facility so that particulate emissions from thermal dryers or pneumatic coal cleaning equipment can be accurately determined by applicable test methods and procedures under paragraph (1) of this subsection.

[Adopted February 22, 1995.]

ARTICLE 29. STEEL PLANTS; ELECTRIC ARC FURNACES

5-29-2000. Applicability

The provisions of this Article are applicable to steel plants operating an electric arc furnace.

[Adopted February 22, 1995.]

5-29-2002. Electric Arc Furnace Steel Plants - Performance Standards

- A. No person shall cause, allow or permit the discharge of particulate matter into the atmosphere in any one hour from any electric arc furnaces or dust-handling equipment which are affected facilities in any steel plant in total quantities in excess of the amounts calculated under §5-24-1030.A. 1.
- B. An opacity standard of 40 percent shall not be exceeded by steel plant electric arc furnaces and their appurtenances for more than an aggregate of three minutes in any 45 minute period.
- C. A continuous monitoring system for the measurement of the opacity of emissions discharged into the atmosphere from the control device shall be installed, calibrated, maintained, and operated by the owner or operator subject to the provisions of this Section.
- D. The test methods and procedures required under this Section are as follows:
 - 1. Reference methods in 40 CFR 60, Appendix A shall be used to determine compliance with the standards prescribed under subsection (A) of this Section as follows:

- a. Method 5 for concentration of particulate matter and associated moisture content.
 - b. Method 1 for sample and velocity and volumetric flow rate.
 - c. Method 2 for velocity and volumetric flow rate.
 - d. Method 3 for gas analysis.
2. For Method 5, the sampling time for each run shall be at least four hours. When a single EAF is sampled, the sampling time for each run shall also include an integral number of heats. Shorter sampling times, when necessitated by process variables or other factors, may be approved by the Control Officer. The minimum sample volume shall be 4.5 dscm (160 dscf).

[Adopted February 22, 1995.]

ARTICLE 30. KRAFT PULP MILLS

5-30-2010. Applicability

The provisions of this Article are applicable to the following affected facilities in kraft pulp mills: digester system, brown stock washer system, multiple-effect evaporator system, black liquor oxidation system, recovery furnace, smelt dissolving tank, lime kiln, and condensate stripper system. In pulp mills in which kraft pulping is combined with neutral sulfite semi-chemical pulping, the provisions of this Section are applicable when any portion of the material charged to an affected facility is produced by the kraft pulping operation.

[Adopted February 22, 1995.]

5-30-2012. Kraft Pulp Mills - Performance Standards

- A. No person shall cause, allow or permit the discharge of particulate matter into the atmosphere in any one hour from any kraft pulp mill in total quantities in excess of the amounts calculated under §5-24-1030.A.1.
- B. No person shall cause, allow or permit the discharge of total reduced sulfur measured as hydrogen sulfide (H₂S) in excess of the following amounts:
 1. From any recovery furnace, any gases which contain H₂S in excess of 20 ppm by volume corrected to eight percent oxygen.
 2. From any lime kiln, any gases which contain H₂S in excess of 40 ppm by volume corrected to ten percent oxygen.
- C. Any owner or operator subject to the provisions of this Section shall install, calibrate, maintain, and operate the following continuous monitoring systems:
 1. A continuous monitoring system to monitor and record the opacity of the gases discharged into the atmosphere from any recovery furnace. The span of this system shall be set at 70 percent opacity.
 2. A continuous monitoring system, to monitor and record the concentration of H₂S emissions discharged into the atmosphere from any recovery furnace or lime kiln. The span shall be set at H₂S concentration of 50 ppm.
 3. A continuous monitoring system to monitor and record the percent of oxygen by volume in the gases discharged from any recovery furnace or lime kiln. The continuous monitoring system shall be located downstream of the control device for the recovery furnace or lime kiln, and all measurements

shall be made on a dry basis. The span of this system shall be set at 20 percent oxygen.

4. For any lime kiln or smelter dissolving tank using a scrubber emission control device:
 - a. A monitoring device for the continuous measurement of the pressure loss of the gas stream through the control equipment. The monitoring device shall be certified to the manufacturer to be accurate within a gauge pressure of ± 500 pascals (ca. ± 2 inches of water gauge pressure).
 - b. A monitoring device for the continuous measurement of the scrubbing liquid supply pressure to the control equipment. The monitoring device shall be certified by the manufacturer to be accurate within ± 15 percent of design scrubbing liquid supply pressure. The pressure sensor or tap shall be located close to the scrubber liquid discharge point, although the Control Officer may be consulted for approval of alternative locations.

D. The test methods and procedures required by this Section are as follows:

1. Reference methods in 40 CFR 60, Appendix A except as provided under R18-2-312 shall be used to determine compliance with this Section as follows:
 - a. Method 5 for the concentration of particulate matter and the associated moisture content.
 - b. Method 1 for sample and velocity traverses.
 - c. Method 3 for gas analysis.
 - d. Method 9 for visible emissions.
 - e. Method 11 for total reduced sulfur as hydrogen sulfide.
2. For Method 5, the sampling time for each run shall be at least 60 minutes and the sampling rate shall be at least 0.85 dscm/hr (0.53 dscf/min), except that shorter sampling times, when necessitated by process variables or other factors, may be approved by the Control Officer. Water shall be used as the cleanup solvent instead of acetone in the sample recovery procedure outlined in Method 5. For determination of compliance with this Section, particulate measurements shall at least be made on the recovery furnace, smelt dissolving tank, and lime kiln. All concentrations of particulate matter from the lime kiln and recovery furnace shall be corrected to ten volume percent oxygen and eight volume percent oxygen, respectively, when the oxygen concentrations exceed these values.

[Adopted February 22, 1995.]

ARTICLE 31. LIME MANUFACTURING FACILITIES

5-31-2020. Applicability

The provisions of this Article are applicable to the following affected facilities used in the manufacture of lime: rotary lime kilns, vertical lime kilns, lime hydrators, and limestone crushing facilities. This Section is also applicable to limestone crushing equipment which exists apart from other lime manufacturing facilities.

[Adopted February 22, 1995.]

5-31-2022. Lime Manufacturing Facilities - Performance Standards

- A. No person shall cause, allow or permit the discharge of particulate matter into the atmosphere in any one hour from any kraft pulp mill in total quantities in excess of the amounts calculated under §5-24-1030.A.1.
- B. Fugitive emissions from lime plants shall be controlled in accordance with Chapter 4 of this Code.
- C. The owner or operator subject to the provisions of this Section shall install, calibrate, maintain, and operate a continuous monitoring system, except where expressly provided otherwise in this Section, to monitor and record the opacity of the gases discharged into the atmosphere from any rotary lime kiln. The span of this system shall be set at 70 percent opacity.
- D. The owner or operator of any rotary lime kiln using a wet scrubbing emission control device subject to the provisions of this Section shall not be required to monitor the opacity of the gases discharged as otherwise required under this Section.
- E. The test methods and procedures required by this Section are as follows:
 - 1. The reference methods in 40 CFR 60, Appendix A shall be used to determine compliance with this Section as follows:
 - a. Method 5 for the measurement of particulate matter.
 - b. Method 1 for sample and velocity traverses.
 - c. Method 2 for velocity and volumetric flow rate.
 - d. Method 3 for gas analysis.
 - e. Method 4 for stack gas moisture.
 - f. Method 9 for visible emissions.
 - 2. For Method 5, the sampling time for each run shall be at least 60 minutes and the sampling rate shall be at least 0.85 dscm/hr (0.53 dscf/min), except that shorter sampling times, when necessitated by process variables or other factors, may be approved by the Control Officer.
 - 3. Because of the high moisture content of the exhaust gases from the hydrators, in the range of 40 to 85 percent by volume, the Method 5 sample train may be modified to include a calibrated orifice immediately following the sample nozzle when testing lime hydrators. In this configuration, the sampling rate necessary for maintaining isokinetic conditions can be directly related to exhaust gas velocity without a correction for moisture content.

[Adopted February 22, 1995. Unconditionally amended May 30, 2001.]

ARTICLE 32. NONFERROUS METALS INDUSTRY SOURCES

5-32-2030. Applicability

The provisions of this Article are applicable to the following affected facilities: mines, mills, concentrators, crushers, screens, material handling facilities, fine ore storage, dryers, roasters, and loaders.

[Adopted February 22, 1995.]

5-32-2032. Nonferrous Metals Industry Sources - Performance Standards

- A. No person shall cause, allow or permit the discharge of particulate matter into the atmosphere in any one hour from any facility subject to this Article in total quantities in excess of the amounts calculated under §5-24-1030.A.1.
- B. No person shall cause, allow or permit to be discharged into the atmosphere from any dryer or roaster the operating temperature of which exceeds 700° F, reduced sulfur in excess of ten percent of the sulfur entering the process as feed. Reduced sulfur includes sulfur equivalent from all sulfur emissions including sulfur dioxide, sulfur trioxide, and sulfuric acid.
- C. The owner or operator of any mining property subject to the provisions of this Section shall record the daily process rates and hours of operation of all material handling facilities.
- D. A continuous monitoring system for measuring sulfur dioxide emissions shall be installed, calibrated, maintained and operated by the owner or operator where dryers or roasters are not expected to achieve compliance with the standard under subsection (B) of this Section.
- E. The test methods and procedures required by this Section are as follows:
 - 1. The reference methods in 40 CFR 60, Appendix A shall be used to determine compliance with the standard prescribed in this Section as follows:
 - a. Method 5 for the concentration of particulate matter and the associated moisture content.
 - b. Method 1 for sample and velocity traverses.
 - c. Method 2 for velocity and volumetric flow rate.
 - d. Method 3 for gas analysis and calculation of excess air, using the integrated sample technique.
 - e. Method 6 for concentration of SO₂.
 - 2. For Method 5, Method 1 shall be used to select the sampling site and the number of traverse sampling points. The sampling time for each run shall be at least 60 minutes and the minimum sampling volume shall be 0.85 dscm (30 dscf), except that smaller sampling times or volumes, when necessitated by process variables or other factors, may be approved by the Control Officer. The probe and filter holder heating systems in the sampling train shall be set to provide a gas temperature no greater than 160°C (320° F).
 - 3. For Method 6, the sampling site shall be the same as that selected for Method 5. The sampling point in the duct shall be at the centroid of the cross section or at a point no closer to the walls than 1 m (3.28 ft.). For Method 6, the sample shall be extracted at a rate proportional to the gas velocity at the sampling point.
 - 4. For Method 6, the minimum sampling time shall be 20 minutes and the minimum sampling volume 0.02 dscm (0.71 dscf) for each sample. The arithmetic mean of two samples shall constitute one run. Samples shall be taken at approximately 30-minute intervals.

[Adopted February 22, 1995.]

ARTICLE 33. AMMONIUM SULFIDE MANUFACTURING PLANTS

5-33-2040. Applicability

The provisions of this Article are applicable to the following affected facilities in ammonium sulfide manufacturing plants: sulfide unloading facilities, reactor-absorbers, bubble cap scrubbers, and fume incinerators.

[Adopted February 22, 1995.]

5-33-2042. Ammonium Sulfide Manufacturing Plants - Performance Standards

- A. No person shall cause, allow or permit to be emitted into the atmosphere, from any type of incinerator or other outlet smoke, fumes, gases, particulate matter or other gas-borne material, the opacity of which exceeds 20 percent.
- B. No person shall cause, allow or permit to be emitted into the atmosphere from any emission point from any incinerator, or to pass a convenient measuring point near such emission point, particulate matter of concentrations in excess of 0.1 grain per cubic foot, based on dry flue gas at standard conditions, corrected to 12 percent carbon dioxide.
- C. No person shall allow hydrogen sulfide to be emitted from any location in such manner and amount that the concentration of such emissions into the ambient air at any occupied place beyond the premises on which the source is located exceeds 0.03 parts per million by volume for any averaging period of 30 minutes or more.
- D. Where a stack, vent or other outlet is at such a level that fumes, gas mist, odor, smoke, vapor or any combination thereof constituting air pollution are discharged to adjoining property, the Control Officer may require the installation of abatement equipment or the alteration of such stack, vent, or other outlet by the owner or operator thereof to a degree that will adequately dilute, reduce or eliminate the discharge of air pollution to adjoining property.
- E. The owner or operator of any ammonium sulfide tailgas incinerator subject to the provisions of this section shall do both of the following:
 - 1. Install, calibrate, maintain, and operate a flow measuring device which can be used to determine either the mass or volume of tailgas charged to the incinerator. The flow measuring device shall have an accuracy of \pm five percent over its operating range.
 - 2. Provide access to the tailgas charged so that a well-mixed representative grab sample can be obtained.
- F. The test methods and procedures required by this Section are as follows:
 - 1. The reference methods in 40 CFR 60, Appendix A shall be used to determine compliance with the standards prescribed in this Section as follows:
 - a. Method 5 for the concentration of particulate matter and the associated moisture content.
 - b. Method 1 for sample and velocity traverse.
 - c. Method 2 for velocity and volumetric flow rate.
 - d. Method 3 for gas analysis and calculation of excess air, using the integrated sample technique.

- e. Method 11 shall be used to determine the concentration of H₂S and Method 6 shall be used to determine the concentration of SO₂.
- 2. For Method 5, the sampling time for each run shall be at least 60 minutes and the minimum sample volume shall be 0.85 dscm (30.0 dscf), except that shorter sampling times and smaller sample volumes, when necessitated by process variables or other factors, may be approved by the Control Officer.
- 3. Particulate matter emissions, expressed in g/dscm, shall be corrected to 12 percent CO₂ by using the following formula:

$$\frac{C_{12} = 12c}{\%CO_2}$$

where:

C₁₂ = the concentration of particulate matter corrected to 12 percent CO₂,
 c = the concentration of particulate matter as measured by Method 5, and
 %CO₂ = the percentage of CO₂ as measured by Method 3, or when applicable, the adjusted outlet CO₂ percentage.

- 4. If Method 11 is used, the gases sampled shall be introduced into the sampling train at approximately atmospheric pressure. Where fuel gas lines are operating at pressures substantially above atmosphere, this may be accomplished with a flow control valve. If the line pressure is high enough to operate the sampling train without a vacuum pump, the pump may be eliminated from the sampling train. The sample shall be drawn from a point near the centroid of the fuel gas line. The minimum sampling time shall be 10 minutes and the minimum sampling volume 0.01 dscm (0.35 dscf) for each sample. The arithmetic average of two samples of equal sampling time shall constitute one run. Samples shall be taken at approximately 1-hour intervals. For most fuel gases, sample times exceeding 20 minutes may result in depletion of the collecting solution, although fuel gases containing low concentrations of hydrogen sulfide may necessitate sampling for longer periods of time.
- 5. If Method 5 is used, Method 1 shall be used for velocity traverses and Method 2 for determining velocity and volumetric flow rate. The sampling site for determining CO₂ concentration by Method 3 shall be the same as for determining volumetric flow rate by Method 2. The sampling point in the duct for determining SO₂ concentration by Method 3 shall be at the centroid of the cross section if the cross sectional area is less than 5 m² (54 ft²) or at a point no closer to the walls than 1 m (3.28 feet) if the cross sectional area is 5 m² or more and the centroid is more than one meter from the wall. The sample shall be extracted at a rate proportional to the gas velocity at the sampling point. The minimum sampling time shall be 10 minutes and the minimum sampling volume 0.01 dscm (0.36 dscf) for each sample. The arithmetic average of two samples of equal sampling time shall constitute one run. Samples shall be taken at approximately one-hour intervals.

[Adopted February 22, 1995.]

ARTICLE 34. STANDARDS OF PERFORMANCE FOR EXISTING MUNICIPAL SOLID WASTE LANDFILLS

5-34-2050. Applicability

- A. The provisions of this Article apply to the operator and owner of each municipal solid waste landfill ("MSW landfill") at which:
 - 1. Waste was accepted at any time since November 8, 1987, or additional design capacity is available for future waste deposition; and
 - 2. The landfill is not already subject to the municipal solid waste landfill New Source Performance Standard, 40 CFR Part 60, Subpart WWW, as incorporated by reference in Code §6-1-030.74.
- B. For purposes of this Section, "municipal solid waste landfill or MSW landfill" means an entire disposal facility in a contiguous geographic space where household waste is placed in or on land. An MSW landfill may also receive other types of waste regulated under Resource Conservation and Recovery Act ("RCRA") Subtitle D, including such wastes as commercial solid waste, nonhazardous sludge, conditionally exempt small quantity generator waste, and industrial solid waste. Portions of an MSW landfill may be separated by access roads. An MSW landfill may be publicly or privately owned.

[Adopted May 14, 1997. Revised July 12, 2000.]

5-34-2052. Notification Requirements

- A. **Initial Design Capacity Report Notification Requirement**

The operator or owner of every MSW landfill subject to this Article shall, whether the MSW landfill is still operating or not, prepare and submit to the District an initial design capacity report. The initial design capacity report shall be due on August 14, 1997, and shall contain the following information:

 - 1. A map or plot of the landfill, providing the size and location of the landfill, and identifying all areas where solid waste may be landfilled according to the provisions of:
 - a. the most recent plan filed pursuant to ARS §49-762; or
 - b. a State, local, Tribal or RCRA construction or operating permit.
 - 2. The maximum design capacity of the landfill. Where the maximum design capacity is specified in the State, local, Tribal or RCRA construction or operating permit, or in a plan filed pursuant to ARS §49-762, a copy of the permit or plan specifying the maximum design capacity may be submitted as part of the report. If the maximum design capacity is not already specified in such an existing document, the maximum design capacity shall be calculated using good engineering practices. As part of the report, the calculations shall be provided, along with such parameters as depth of solid waste, solid waste acceptance rate, compaction practices, and other reasonable information as may be necessary to verify the maximum design capacity of the landfill.
- B. **Amended Design Capacity Report Notification Requirement**

For facilities subject to an initial design capacity report requirement under this Article, the operator or owner shall submit an amended design capacity report to the District that provides notification of any increase in the design capacity of the MSW landfill above 2.5

million megagrams or 2.5 million cubic meters, whether the increase results from an increase in the permitted area or depth of the landfill, a change in the operating procedures, or any other means. The amended design capacity report shall be submitted within 90 days of the issuance of an amended construction or operating permit, or the placement of waste in additional land, or the change in operating procedures which will result in an increase in maximum design capacity, whichever occurs first.

C. **Emission Calculation Report Requirement**

If any MSW landfill design capacity report, whether initial or amended, shows a design capacity in excess of either 2.5 million cubic meters or 2.5 million megagrams, then the operator or owner shall include with that design capacity report an initial non-methane organic compound ("NMOC") emission rate report, as required under Code §6-1-030.74, adopting by reference the municipal solid waste landfill NSPS, 40 CFR Part 60, Subpart WWW.

[Adopted 5/14/97. Revised July 12, 2000.]

5-34-2054. Additional Requirements

Any operator or owner of a MSW landfill required to submit an initial NMOC emission rate report under this Article shall thereafter comply with the requirements for a landfill subject to Code §6-1-030.74, adopting by reference the municipal solid waste landfill NSPS, 40 CFR Part 60, Subpart WWW, including at a minimum the applicable monitoring, reporting, recordkeeping, emission standard, control and closure requirements therein.

[Adopted May 14, 1997. Revised July 12, 2000.]

ARTICLE 35. STANDARDS OF PERFORMANCE FOR EXISTING HOSPITAL/MEDICAL/INFECTIOUS WASTE INCINERATORS

5-35-2060. Applicability

- A. This Article applies to any hospital/medical/infectious waste incinerator (HMIWI) that commenced construction on or before June 20, 1996. An incinerator subject to this section is not subject to §5-3-100. The following types of incinerators are not subject to this article:
1. An incinerator during periods when only pathological waste, low-level radioactive waste, or chemotherapeutic waste is burned, if the owner or operator of the incinerator does both of the following:
 - a. Notifies the Control Officer of an exemption claim; and
 - b. Keeps records on a calendar quarter basis of the periods of time when only pathological waste, low-level radioactive waste, or chemotherapeutic waste is burned.
 2. Any co-fired incinerator if the owner or operator of the incinerator:
 - a. Notifies the Control Officer of an exemption claim;
 - b. Provides an estimate of the relative weight of the hospital waste, medical/infectious waste, and other fuels or wastes to be burned; and
 - c. Keeps records on a calendar quarter basis of the weight of hospital waste and medical/infectious waste burned, and the weight of all other fuels and wastes burned at the co-fired incinerator.

3. Any incinerator required to have a permit under Section 3005 of the Solid Waste Disposal Act.
 4. Any incinerator subject to 40 CFR 60, Suparts Cb, Ea or Eb (standards or guidelines for certain municipal waste incinerators) as incorporated by reference in §6-1-030.
 5. Any pyrolysis unit, as defined in 40 CFR §60.51c.
 6. Cement kilns firing hospital waste or medical/infectious waste.
- B. A physical or operational change made to an existing HMIWI unit solely for the purpose of complying with emission limitations under this section is not considered a modification and does not result in an existing HMIWI unit becoming subject to the provisions of §6-1-030.9.
- C. For purposes of §3-1-040.A.B.1.e, an HMIWI subject to this article constitutes a solid waste incinerator unit required to obtain a permit pursuant to §129(e) of the Clean Air Act (1990), and shall require a Class I permit from and after September 15, 2000.

[Adopted July 12, 2000.]

5-35-2062. Definitions

- A. In addition to the definitions provided in 40 CFR §60.51c as incorporated by reference in §6-1-030.9, the following definitions apply to this Article:
1. "Hospital/medical/ infectious waste incinerator" or "HMIWI" or "HMIWI unit" means any device that combusts any amount of hospital waste or medical/ infectious waste.
 2. "Rural HMIWI" means any HMIWI that is located more than 50 miles from the boundary of the nearest Standard Metropolitan Statistical Area and that burns less than 2,000 pounds per week of hospital waste and medical/ infectious waste. The 2,000 pounds per week limitation does not apply during performance tests.
 3. " Standard Metropolitan Statistical Area" or "SMSA" means any area listed in Office of Management and Budget (OMB) Bulletin 93-17 entitled "Revised Statistical Definitions for Metropolitan Area" dated June 30, 1993.
 4. " State Plan" means the plan that 40 CFR Part 60 Subpart Ce requires states to develop to regulate existing HMIWI built on or before June 20, 1996.

[Adopted July 12, 2000.]

5-35-2064. Emission Limitations and Other Operational Requirements

- A. An owner or operator of an HMIWI shall comply with the following emission limitations:
1. The emissions limitations in Table 1, unless the HMIWI is a rural HMIWI;
 2. The emissions limitations in Table 2, if the HMIWI is a rural HMIWI.
 3. An owner or operator of an HMIWI shall not cause to be discharged into the atmosphere from the stack of that HMIWI any gases that exhibit greater than 10% opacity (6-minute block average).
 4. An owner or operator of a large existing HMIWI shall comply with the opacity requirements in 40 CFR 60.52c (c), (D), and (e).

- B. An owner or operator of an HMIWI shall comply with the operator training requirements found in 40 CFR 60.53c as incorporated by reference in §6-1-030 within 1 year following approval of the State Plan.
- C. An owner or operator of an HMIWI shall comply with the waste management requirements found in 40 CFR 60.33c as incorporated by reference in §6-1-030.
- D. An owner or operator of a rural HMIWI shall comply with the following inspection requirements:
 1. The owner or operator shall conduct or hire another party to conduct an initial equipment inspection within 1 year following approval of the State Plan.
 2. At a minimum, an inspection shall include the following:
 - a. Inspect all burners, pilot assemblies, and pilot sensing devices for proper operation. Clean pilot flame sensor, as necessary.
 - b. Inspect adjustment of primary and secondary chamber combustion air, and adjust as necessary.
 - c. Inspect hinges and door latches, and lubricate as necessary.
 - d. Inspect dampers, fans and blowers for proper operation.
 - e. Inspect HMIWI door and door gaskets for proper sealing.
 - f. Inspect motors for proper operation.
 - g. Inspect primary chamber refractory lining. Clean and repair or replace lining as necessary.
 - h. Inspect incinerator shell for corrosion or hot spots.
 - i. Inspect secondary/tertiary chamber and stack, clean as necessary.
 - j. Inspect mechanical loader, including limit switches, for proper operation, if applicable.
 - k. Visually inspect waste bed (grates), and repair or seal, as appropriate.
 - l. For the burn cycle that follows the inspection, document that the incinerator is operating properly and make and necessary adjustments.
 - m. Inspect each air pollution control device for proper operation, if applicable.
 - n. Inspect waste heat boiler systems to ensure proper operation, if applicable.
 - o. Inspect bypass stack components.
 - p. Ensure proper calibration of thermocouples, sorbent feed systems and other monitoring equipment.
 - q. Generally observe that the equipment is maintained in good operating condition.
 3. Within 10 operating day following an equipment inspection the owner or operator shall complete all necessary repairs unless the owner or operator obtains written approval from the control Officer establishing a date by which all necessary repairs of the facility shall be completed.
 4. The owner or operator of any rural HMIWI shall conduct or hire another party to conduct an equipment inspection annually (no more than 12 months following the previous annual equipment inspection), as outlined in subsections (2) and (3).

[Adopted July 12, 2000.]

5-35-2066. Compliance Verification Requirements

- A. The owner or operator of an HMIWI shall comply with the following compliance, performance testing, and monitoring requirements:
1. Except as provided in subsection (2), existing HMIWI shall meet the requirements for compliance and performance testing in 40 CFR 60.56c excluding the fugitive dust emission testing requirements under subsections 60.56c(b)(12) and (c)(3).
 2. A rural HMIWI shall meet the following compliance and performance testing requirements:
 - a. conduct the performance testing requirements in 40 CFR 60.56c(a), (b)(1) through (b)(9), (b)(11) (Hg only), and (c)(1). The 2,000 lb/week limitation under 40 CFR 60.333(b) does not apply during performance tests.
 - b. Establish maximum charge rates and minimum secondary chamber temperature as site-specific operating parameters during the initial performance test to determine compliance with applicable emission limitations.
 - c. Ensure that the facility does not operate above the maximum charge rate or below the minimum secondary chamber temperature measured as 3-hour rolling averages (calculating each hour as the average of the previous 3 operating hours) at all times except during periods of startup, shutdown and malfunction. Operating parameter limits do not apply during performance tests. Operation above the maximum charge rate or below the minimum secondary chamber temperature shall constitute a violation of the established operating parameter.
 - d. Except as provided in (2)(e), operating the facility above the maximum charge rate and below the minimum secondary chamber temperature (each measured on a 3-hour rolling average) simultaneously constitutes a violation of the PM, Co, and dioxin/furan emission limitations.
 - e. The owner or operator may conduct a repeat performance test within 30 days after violation of any applicable operating parameter to demonstrate that the facility is not in violation of any applicable emission limit. Repeat performance tests conducted under this paragraph must be conducted using the identical operating parameters that indicated a violation under 2.d.
 3. The owner or operator shall comply with the monitoring requirements listed in 40 CFR 60.57c of Subpart Ec, except as provided for under subsection (4).
 4. A rural HMIWI shall meet the following monitoring requirements:
 - a. Install, calibrate (to manufacturer's specifications), maintain, and operate a device for measuring and recording the temperature of the secondary chamber on a continuous basis, the output of which shall be recorded, at a minimum, once every minute throughout operation.
 - b. Install, calibrate (to manufacturer's specifications), maintain, and operate a device that automatically measures and records the date, time, and weight of each charge fed into the HMIWI.

- c. Shall obtain monitoring data at all times during HMIWI operation except during periods of monitoring equipment malfunction, calibration, or repair. At a minimum, valid monitoring data shall be obtained for 75% of the operating hours per day and for 90% of the operating hours per calendar quarter that the facility is incinerating hospital waste or medical/ infectious waste.
- B. An owner or operator of an HMIWI shall comply with the following reporting and recordkeeping requirements:
 1. Each HMIWI shall comply with the requirements listed in 40 CFR 50. 58c(B), (c), (d), (e), and (f), excluding 40 CFR 60. 58c(b)(2)(ii) (fugitive emissions) and (b)(7) (siting).
 2. Each rural HMIWI shall perform all of the following:
 - a. Maintain records of the annual equipment inspection, and required maintenance, and any repairs not completed within 10 days after an inspection or the time-frame established by the control officer.
 - b. Submit an annual report to Pinal County Air Quality, P.O. Box 987, Florence, Arizona 85232. The report shall contain information recorded under subsection (2)(a) and be submitted no later than 60 days following the year in which the data were collected. The owner or operator shall send subsequent reports no later than 12 calendar months following the previous report (after receiving a Class I permit, the owner or operator shall submit these reports semiannually). The facility' manager shall sign the report.

[Adopted July 12, 2000.]