

ARIZONA PUBLIC SERVICE COMPANY - CASA GRANDE

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1. Introduction

This permit pertains to an electrical power plant, owned and operated by Arizona Public Service Company, an Arizona Corporation. The SIC Code is 4911 and the NAICS Code is 221100. The facility, commonly known as Sundance Power Plant, is located on 2060 West Sundance Road, Casa Grande, Arizona, upon a parcel also identified by Pinal County Assessor's Parcel #401-01-006D. The source is situated in an area classified as non-attainment for PM10 and attainment for all other pollutants.

The plant currently includes ten natural gas fired combustion turbine (CT) with a nominal rating of 45 mw each. Each CT system has a separate stack. The control configuration includes water injection followed by selective catalytic reduction (SCR), as well as an oxidation catalyst.

Significant Revision V20690.R02 authorizes the construction and operation of two (2) additional aero-derivative GE LM6000PC natural gas-fired simple cycle combustion turbines (CTs), identified as Units 11 and 12, with spray intercooling (SPRINT) performance augmentation and a maximum nominal electric output of 49.6 MW each.

This Revision V20690.R01 authorized the facility to install and operate a Turbine Inlet Air Chiller (TIAC) system, including a four cell cooling tower and Thermal Energy Storage (TES). Since the PM10/PM2.5 emissions from the proposed modification do not reach the significance emissions level, this revision qualifies as a minor revision.

The plant is a "major emitting source" of CO, PM10 and NO_x. That status requires that this permit implement the "Prevention of Significant Deterioration" (PSD) requirements defined in the Clean Air Act (1990) ("CAA"). See the 2001 TSDs for a discussion of the Best Available Control Technology (BACT) determination, as well as other PSD-related issues. The source is also subject to the operating permit requirements under Title V of the CAA. This permit will provide authority-to-construct under the PSD program, and authority-to-operate under the Title V program.

For clarification, as required by 40 CFR §70.6(b), all provisions of this permit, other than those expressly identified in permit section 10.B, are federally enforceable.

The Technical Support Document for this permit includes a permitting history section, as well as a summary of any applicable requirements updates or changes made during this renewal.

2. Listing of (*Federally Enforceable*) Applicable Requirements [Mandated by 40 CFR §70.5a(4)]

- A. Those portions of Pinal County Air Quality Control District ("PCAQCD") Regulations ("Code"), as revised by the Pinal County Board of Supervisors on October 12, 1995, and approved by the Administrator as elements of the Arizona State Implementation Plan ("SIP") at 61 FR 15717 (4/9/96). The following all specifically pertain to the issuance of this initial permit:

§3-1-040	Applicability and Classes of Permits
§3-1-050	Permit Application Requirements
§3-1-081	Permit Conditions
§3-1-082	Emission Standards and Limitations
§3-1-083	Compliance Provisions
§3-1-103	Annual Emissions Inventory Questionnaire
§3-1-132	Permit imposed right of entry
§3-1-150	Monitoring
§3-1-160	Test Methods and Procedures
§3-1-170	Performance Tests
§3-1-173	Quality Assurance
§3-1-177	Stack Height Limitation

§§3-3-200 through 3-3-210, and 3-3-250 through 3-3-280 - Permit Requirements for New Major Sources ... [Located in Attainment Areas]

- B. Those specific provisions of the Pinal-Gila Counties Air Quality Control District ("PGCAQCD") Regulations, as adopted by the Pinal County Board of Supervisors on March 31, 1975, and approved by the Administrator as elements of the Arizona State Implementation Plan ("SIP") at 43 FR 53034 (11/15/78), and specifically the following rules:

7-3-5.1 NOx Emissions - Fuel Burning Equipment

- C. Those specific provisions of the PGCAQCD Regulations, as last amended by the Pinal County Board of Supervisors on June 16, 1980, and approved by the Administrator as elements of the Arizona SIP at 47 FR 15581 (4/12/82), specifically, the following rules:

2-8-300 Visibility Limiting Standards

7-3-1.7.F Fuel Burning Equipment

- D. The New Source Performance Standards ("NSPS") 40 CFR Part 60, Subpart GG - Stationary Gas Turbines, §§60.330 - 60.335, Code §6-1-030.39
- E. CAA §112(r) (11/15/90); 40 CFR Part 68 (7/31/98); Chemical Accident Prevention Provisions
- F. Acid Rain Provisions; CAA Title IV, and:

40 CFR Part 72 Permit Regulation - Code §3-6-565

40 CFR Part 73 Sulfur Dioxide Allowance System - Code §3-6-565

40 CFR Part 75 Continuous Emission Monitoring (Acid Rain Program) - Code §3-6-565

- G. CAA §§608 & 611 (11/15/90); 40 CFR Part 82, Subpart F - Recycling and Emissions Reduction (9/7/95); regulations pertaining to use and handling of ozone-depleting substances.
- H. Those specific provisions of the PCAQCD Regulations, as last amended by the Pinal County Board of Supervisors on April 27, 2004, and approved by the Administrator as elements of the Arizona SIP at 75 FR 17307 (4/6/10), specifically, the following rule:
- §4-2-040 Standards (Fugitive Dust Reasonable Precautions)
- I. National Emissions Standards for Hazardous Air Pollutants, 40 CFR Part 63, Subpart ZZZZ, Internal Combustion Engines [§63.6080 - §6175].
- J. The New Source Performance Standards (NSPS) for Stationary Combustion Turbines, 40 CFR Part 60, Subpart KKKK [§60.4300 - §60.4420]
- K. The New Source Performance Standards (NSPS), 40 CFR Part 60, Subpart TTTT, Standards of Performance for Greenhouse Gas Emissions for Electric Generating Units [40 CFR §60.5508 *et seq.* (10/23/15)].

3. Prospective Compliance Requirements

- A. Compliance Plan
[Mandated by 40 CFR §70.(5)(c)(8)] (Code §3-1-083A.7)

Insofar as the Permittee is currently in compliance, the compliance plan consists of continued adherence to the requirements of this permit and those requirements set forth in applicable regulations and statutes.

B. Compliance Schedule
 [Mandated by 40 CFR §§ 70.5(c)(8), 70.6(c)(3)] (Code §3-1-083.A.7)

Insofar as the Permittee is currently in compliance, no compliance schedule to attain compliance is required, with the following exception:

1. Risk Management Program and Plan

If the source has more than a threshold quantity of a regulated substance in a process as determined under 40 CFR 68.115, Permittee shall conform in a timely manner to requirements applicable to this source under CAA §112(r) and 40 CFR part 68, including at a minimum:

- a. Submittal of a complete Risk Management Plan (RMP) to the District or other state or local agency designated by the state for this purpose, by such deadline as may be established under 40 CFR Part 68. The RMP submittal shall include a certification that the plan is complete and accurate;
- b. Submittal of any additional information required for completeness;
- c. Annual certification of implementation of the risk management program as described by the RMP.

4. **Authority to Construct**
[Federally enforceable - Code §§3-1-010, 3-1-040 (as amended 10/12/95) approved as a SIP Element at 65 FR 79741 (12/20/00)]

Emissions from this facility, specifically the equipment described in "Equipment Schedule" section below, and the operating configuration as defined below and more fully described in the application for permit, fall subject to the enforceable limitations identified throughout this permit. Therefore, based on the regulations in effect upon the date of issuance of this permit and a finding that allowable emissions from the equipment described in the Equipment Schedule will neither cause nor contribute to a violation of any ambient air quality standard even without any additional limitations, this permit constitutes authority to construct and operate such equipment. For purposes of future revision to the permit for this facility, each of the limitations of this permit section shall be considered "PSD" limitations.

A. CT System Requirements (CT01-CT12)
 (Code §3-3-250.A.1)

1. Each CT unit shall:
 - a. Incorporate a selective catalytic reduction (SCR) and water injection system for the reduction of NO_x to comply with the operational limitations of this permit;
 - b. Incorporate a catalytic oxidation system for the reduction of CO and VOC to comply with the operational limitations of this permit;
 - c. Exhaust to the atmosphere through a stack not greater than 10.5' in outlet diameter, nor less than 85' in height;
 - d. Each stack shall be equipped with such platforms and sampling ports as may be required to fulfill the testing and monitoring requirements set forth below;
 - e. Include separate fuel-flow meters for each respective CT.

- f. Include NO_x and CO continuous emissions monitoring systems (CEMS) as defined in the compliance provisions of this permit.
 - g. Include systems for monitoring and recording the inlet temperature for each of the turbine units.
2. For each turbine unit, Permittee shall limit the aggregate number of annual operating hours, including startup and shutdown operations, to no more than 7,500 hours in any rolling 12-month period.
 3. Permittee shall limit the number of startup events for each CT unit to no more than 1,000 such events in any rolling 12-month period.
 4. Except for emergencies, the diesel-driven fire pump shall not be operated more than 100 hours per calendar year.

B. PSD Emission Limits

1. Definitions

- a. "Start-up" is defined as the 15-minute period following the indication of a Unit On signal.
- b. "Warm-up" is defined as the 24-minute period following "start-up."
- c. "Shutdown" is defined as the period beginning with the indication of the Shutdown signal and ending with the Unit Off signal.
- d. "Malfunction" is defined as any sudden and unavoidable failure of air pollution control equipment, process equipment or a process to operate in a normal and usual manner, but does not include failures that are caused by poor maintenance, careless operation or any other upset condition or equipment breakdown which could have been prevented by the exercise of reasonable care.

2. Emission Limitations and Associated Requirements (CT01-CT10)
(Code §3-3-250.)

a. CT Emission Rate Limitations

Other than during periods of start-up, warm-up, shut-down, and malfunction, Permittee shall not cause to be discharged into the atmosphere from any of the gas turbine operations any gases which:

- i. Contain nitrogen oxides emissions in excess of 5.0 ppmvd corrected to 15 percent oxygen, based on a rolling, accumulating 3-operating hour average.
- ii. Contain carbon monoxide emissions in excess of any of the following temperature-specific concentration limitations, based on correction to 15% oxygen, and a rolling, accumulating 3-operating hour average:
 - a. 15.0 ppmvd below 59° F.; and
 - b. 7.5 ppmvd at or above 59° F.
- iii. Contain PM₁₀ emissions in excess of 7.0 lbs/hr.;

- iv. Contain VOC emissions in excess of 4.5 lbs/hr.;
 - v. Exhibit opacity in excess of 40%, as measured by Method 9.
- b. CT Start-up and Warm-up Limitations and Requirements
- i. During start-ups of the CT units, the Permittee shall be exempt from any limitations on emission of NO_x, but Permittee shall exercise "good combustion practice," consisting of adherence to standard operating procedure.
 - ii. During warm-ups of the CT units, Permittee shall limit the average NO_x emissions to 25 ppmvd @ 15% O₂ as determined by an average of 24 minutes of warm-up emissions data. Substituted data should not be used to determine compliance with this limit.
 - iii. For emission inventory purposes, Permittee shall use the following emissions during a combined start-up and warm-up event:
 - a. NO_x – 18.61 lbs
 - b. CO – 7.36 lbs
 - c. VOC – 1.73 lbs
- c. CT Shutdown Limitations and Requirements
- i. During shutdown of the CT units, the Permittee shall be exempt from any limitations on emission of NO_x, but Permittee shall exercise "good combustion practice," consisting of adherence to standard operating procedure.
 - ii. For emission inventory purposes, Permittee shall use the following emissions during a shutdown event:
 - a. NO_x – 2.57 lbs
 - b. CO – 0.07 lbs
 - c. VOC – 0.08 lbs
 - iii. If a CT unit shuts down within the 24-minute period immediately following termination of the start-up period, and the conditions of permit condition 4.B.1.c. have been met, the unit shall comply with the requirements of this permit condition 4.B.2.c.
- d. Minimum Operating Load
- Other than during startup, warmup or shutdown or as a result of upset or malfunction, Permittee shall not operate each of the CT units below a minimum of 32% of baseload capacity (approximately 15 mW), based on a 12-month rolling average.
- e. Good Operating Practice
- At all times, Permittee shall operate the CT units in accordance with the manufacturer's specifications in order to minimize emissions of particulate matter, carbon monoxide, and volatile organic compounds. Permittee may

transcribe those manufacturer's specifications into standard operating procedures to be utilized by on-site staff.

C. Voluntary CT Emission Rate Limitations (CT11-CT12)

In order to limit the potential emissions from the two new units to below the federal New Source Review (NSR) and Prevention of Significant Deterioration (PSD), the Permittee is proposing the following emission limits. Other than during periods of start-up, warm-up, shut-down, and malfunction, applicable to Sections 1-4 below only, Permittee shall not cause to be discharged into the atmosphere from any of the gas turbine operations any gases which:

1. Contain nitrogen oxides emissions in excess of 5.0 ppmvd corrected to 15 percent oxygen, based on a rolling, 24 operating hour average.
2. Contain carbon monoxide emissions in excess 15.0 ppmvd corrected to 15 percent oxygen, based on a 24-operating hour average.
3. Contain PM, PM₁₀, or PM_{2.5} emissions in excess of 7.0 lbs/hr.
4. Contain VOC emissions in excess of 4.5 lbs/hr.
5. Exhibit opacity in excess of 40% as measured by Method 9.
6. The combined emissions of carbon monoxide (CO) from CT11 and CT12, may not exceed 44.3 tons in any rolling 12-month period for all periods of operation, including startup and shutdown.
7. The combined emissions of nitrogen oxides (NO_x) from CT11 and CT12 may not exceed 24.7 tons in any rolling 12-month period for all periods of operation, including startup and shutdown.
8. The combined emissions of PM₁₀ or PM_{2.5} from CT11 and CT12 may not exceed 9.3 tons in any rolling 12-month period for all periods of operation, including startup and shutdown.
9. The combined emissions of Volatile Organic Compounds (VOCs) from CT11 and CT12 may not exceed 7.9 tons in any rolling 12-month period for all periods of operation, including startup and shutdown.

D. Operating Limit (CT11-CT12)

The total input to the Units 11 and 12 gas turbine systems combined may not exceed 1,236,000 MMBtu in any rolling 12-month period.

E. NSPS Subpart KKKK Emission Limits (CT11-CT12)

1. NOX Emission Limitations – Subpart KKKK
[40 CFR §60.4320(a), Table 1, §60.4350(g)]

Permittee shall comply with the following:

- a. NOX emission limit of 25 ppm at 15% O₂ or 1.2 lb/MWh (for a combustion turbine firing natural gas with heat input greater than 50 MMBtu per hour and less than or equal to 850 MMBtu per hour):

- i. On a four (4) hour rolling average basis when a valid NO_x emission rate is obtained for at least 3 of the 4 hours while the combustion turbines are operating at greater than or equal to 75% of peak load, and
 - ii. On a thirty (30) operating day rolling average when a valid NO_x data is obtained for a given day and the twenty-nine (29) unit operating days immediately preceding that unit operating day while the combustion turbines are operating at greater than or equal to 75% of peak load.
 - b. NO_x emission limit of 96 ppm at 15% O₂ or 4.7 lb/MWh (for a combustion turbine firing natural gas with output greater than 30 MW) on a four (4) hour rolling average basis while the combustion turbines are operating at less than 75% of peak load.
 - 2. SO₂ Emission Limitations – Subpart KKKK
[40 CFR §60.4330.(a).(1) & (a).(2), Table 2]
 - a. Permittee shall not cause to be discharged into the atmosphere from the stationary combustion turbine any gases which contain SO₂ in excess of 110 nanograms per Joule (ng/J) (0.90 pounds per megawatt-hour (lb/MWh)) gross output; or
 - b. Permittee shall not burn in stationary combustion turbine any fuel which contains total potential sulfur emissions in excess of 26 ng SO₂/J (0.06 lb SO₂/MMBtu) heat input.
- F. CO₂ Emission Limitation – Subpart TTTT (CT11-CT12)
[40 CFR §60.5520.(a), Table 2]
 - 1. Newly constructed or reconstructed stationary combustion turbine that supplies its design efficiency or 50 percent, whichever is less, times its potential electric output or less as net-electric sales on either a 12-operating month or a 3-year rolling average basis and combusts more than 90% natural gas on a heat input basis on a 12-operating-month rolling average basis, shall not discharge from the affected EGU any gases that contain CO₂ in excess of 50 kg CO₂ per gigajoule (GJ) of heat input (120 lbs^cCO₂/MMBtu).
 - 2. The Permittee shall only use natural gas with a consistent chemical composition that results in a consistent emission rate of 160 lb CO₂/MMBtu or less in the combustion turbines.
 - 3. The Permittee shall limit the net electric output for each unit to no more than the design efficiency or 50%, whichever is less, times the potential electric output, on a 3 calendar year rolling average. The design efficiency and potential electric output will be determined during the initial performance test using the methods referenced in 40 CFR 60 Subpart TTTT.

5. Emission Limitations and Controls
[Mandated by 40 CFR §70.6(a)(1)]

- A. Applicable Limitations
(Code §3-1-082)

Where different standards or limitations apply under this permit, the most stringent combination shall prevail and be enforceable.

B. Allowable Emissions
(Code § 3-1-081.A.2.)

Permittee is authorized to discharge or cause to discharge into the atmosphere those emissions of air contaminants as set forth in Sections 3, 4 and 5 of this permit. Unless exempted as an insignificant activity under Code §1-3-140.79a, as a categorical exemption under Code §3-1-040.C., or authorized by a separate permit or by a revision or operational change allowed under this permit or under Chapter 3, Article 2 of the Code, Permittee shall not commence construction of, operate or make any modification to this source in a manner which will cause emissions of any regulated air pollutant in excess of the 5.5lbs/day de minimis amount defined in Code §1-3-140.37.

C. Emission Limits

1. NSPS Subpart GG Limitations (CT01-CT10)
[40 CFR 60.332 & 60.333, Code §6-1-030]

- a. Permittee shall not cause to be discharged into the atmosphere from the gas turbines any gases which contain nitrogen oxides in excess of:

$$\text{STD} = 0.0075(14.4)/Y$$

where STD = NO_x emissions (% by volume at 15% oxygen and on a dry basis)¹

Y = rated heat load (kilojoules per watt) (not greater than 14.4)

- b. In the CT units, Permittee is allowed to burn exclusively pipeline natural gas, provided Permittee shall not burn natural gas having a hydrogen sulfide content in excess of 1 grain 100 scf, or a total sulfur content in excess of 20 grains/100 scf. For compliance reporting and emission inventory purposes, permittee shall quantify SO₂ emissions using an SO₂ emission rate of 0.0006 lbs/mmBtu.

2. NESHAP Limitations on Emergency Compression Ignition Engines
<500 hp constructed before June 12, 2006 and located at minor sources of HAP
[40 CFR §§63.6595, 63.6603, 63.6605]

Permittee shall comply with the following limitations of Table 2d of 40 CFR Part 63, Subpart ZZZZ:

Except during periods of startup, Permittee shall:

- a. Change oil and filter or pass the oil analysis set forth in permit condition §6.C.4 every 500 hours of operation or annually, whichever comes first;
- b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and

¹ The turbines are rated at 446 (HHV) each; that mathematically reduces to an allowable NO_x emission rate of 0.0114 percent by volume, or 114 ppm.

- c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

D. Fuel-Burning Equipment - Particulate Emissions

1. SIP Limitation

[Currently federally enforceable pursuant to PGAQCD Reg. 7-3-1.7 (3/31/75) approved as a SIP element at 43 FR 50531 (11/15/78)]

For equipment with a heat input capacity of less than 4,000 million Btu per hour, particulate emissions shall not exceed²:

$E = 1.02X^{-.231}$, where E = maximum emissions in lbs./hr. for each million BTU per hour heat input, and X = maximum heat input capacity in million BTU per hour.

2. Current Code Limitation
(§5-23-1010)

For equipment with a heat input capacity of less than 4,200 million Btu per hour, particulate emissions shall not exceed³:

$E = 1.02Q^{0.769}$, where E = maximum emissions in lbs./hr. for each million BTU per hour heat input, and Q = maximum heat input capacity in million BTU per hour.

E. Generally Applicable Opacity Limits

1. SIP Limitation

[Currently federally enforceable pursuant to PGAQCD Reg. 7-3-1.1 (6/16/80) approved as a SIP element at 47 FR 15579 (4/12/82)]

The opacity of any plume or effluent shall not be greater than 40 percent as determined by Reference Method 9 in the Arizona Testing Manual (ADEQ, 1992). Nothing in this limitation shall be interpreted to prevent the discharge or emission of uncontaminated aqueous steam, or uncombined water vapor, to the open air.

2. Visibility Limiting Standard

[Federally enforceable pursuant to Code §2-8-300 (5/18/05) approved as a SIP element at 71 FR 15043 (3/27/06)]

The opacity of any plume or effluent from any point source not subject to a New Source Performance Standard adopted under Chapter 6 of the Code, and not subject to an opacity standard in Chapter 5 of the Code, shall not be greater than 20% as determined in Method 9 in 40 CFR 60, Appendix A.

F. Particulate Matter Reasonable Precautions

[Currently federally enforceable pursuant to PCAQCD Reg. 4-2-040 (6/29/93) approved as a SIP element at 72 FR 41896]

² The turbines are rated at 446 mmBtu/hr (HHV) each, and that mathematically reduces to an allowable PM emission rate of 111.16 lb/hr.

³ The turbines are rated at 446 mmBtu/hr (HHV) each, and that mathematically reduces to an allowable PM emission rate of 111.16lb/hr.

1. Permittee shall not cause, suffer, allow, or permit a building or its appurtenances, subdivision site, driveway, parking area, vacant lot or sales lot, or an urban or suburban open area to be constructed, used, altered, repaired, demolished, cleared, or leveled, or the earth to be moved or excavated, or fill dirt to be deposited, without taking reasonable precautions to effectively prevent fugitive dust from becoming airborne.
2. Permittee shall not cause, suffer, allow, or permit a vacant lot, or an urban or suburban open area, to be driven over or used by motor vehicles, such as but not limited to all-terrain vehicles, trucks, cars, cycles, bikes, or buggies, without taking reasonable precautions to effectively prevent fugitive dust from becoming airborne.
3. Permittee shall not disturb or remove soil or natural cover from any area without taking reasonable precautions to effectively prevent fugitive dust from becoming airborne.
4. Permittee shall not cause, suffer, allow or permit transportation of materials likely to give rise to fugitive dust without taking reasonable precautions to prevent fugitive dust from becoming airborne. Earth and other material that is tracked out or transported by trucking and earth moving equipment on paved streets shall be removed by the party or person responsible for such deposits.
5. Permittee shall not cause, suffer, allow or permit the use, repair, construction or reconstruction of any road or alley without taking every reasonable precaution to effectively prevent fugitive dust from becoming airborne.

G. Surface Stabilization

[Federally enforceable pursuant to Code §4-1-010 (10/28/15) approved as a SIP element at 82 FR 20267 (5/1/17), Amended 1/25/23]

1. Vehicle Use in Open Areas and Vacant Lots
(Code §4-1-030.2)
 - a. Permittee shall not cause or allow visible emissions of particulate matter, including fugitive dust generated from the vehicle use in open areas and vacant lots beyond the property line within which the emissions are generated.
 - b. Permittee shall stabilize the open areas and vacant lots on which vehicles are used to by complying with any one of the stabilization requirements listed in PCAQCD Code §4-1-030.2.A.
 - c. Permittee shall apply appropriate control measures to the open areas and vacant lots on which vehicles are used as listed in PCAQCD Code §4-1-030.2.B.
 - d. Permittee shall implement one or more of the control measures described in PCAQCD Code §4-1-030.2.B within 60 calendar days following the initial discovery by the Control Officer of any open areas and vacant lots that are 0.10 acre (4,356 square feet) or larger and having a cumulative of 500 square feet or more that are disturbed by being driven over and/or used by motor vehicles, by off road vehicles, or for material dumping.
 - e. Permittee shall, within 30 calendar days following the initial discovery by the Control Officer of the disturbance or vehicle use on open areas and vacant lots, provide in writing to the Control Officer a description and date of the control measure(s) to be implemented to prevent such disturbance.
 - f. Permittee shall implement all control measures necessary to limit the disturbance or vehicle uses on open areas and vacant lots in accordance with the

requirements of PCAQCD Code §4-1-030.2.B. Control measure(s) shall be considered effectively implemented when the open areas and vacant lots meets the requirements described in PCAQCD Code §4-1-030.2.A.

- g. Use of or parking on open areas and vacant lots by the Permittee shall not be considered vehicles use in open areas and vacant lots.
- h. Establishing initial landscapes without the use of mechanized equipment or conducting landscape maintenance without the use of mechanized equipment shall not be considered vehicle use in open areas and vacant lots.

2. Open Areas and Vacant Lots
(Code §4-1-030.3)

- a. Permittee shall not cause or allow visible emissions of particulate matter, including fugitive dust generated from the open areas and vacant lots beyond the property line within which the emissions are generated.
- b. Permittee shall stabilize the open areas and vacant lots by complying with any one of the stabilization requirements listed in PCAQCD Code §4-1-030.3.A.ii.
- c. Permittee shall apply appropriate control measures to the disturbed open areas and vacant lots as listed in PCAQCD Code §4-1-030.3.B.
- d. Permittee shall implement one or more of the control measures described in PCAQCD Code §4-1-030.3.B within 60 calendar days following the initial discovery by the Control Officer of any open areas and vacant lots that are 0.10 acre (4,356 square feet) or larger and having a cumulative of 500 square feet or more that are disturbed, and if such disturbed area remains unoccupied, unused, vacant, or undeveloped for more than 15 days.
- e. Permittee shall, within 30 calendar days following the initial discovery by the Control Officer of the disturbance on the open areas and vacant lots, provide in writing to the Control Officer a description and date of the control measure(s) to be implemented to prevent such disturbance.
- f. Permittee shall apply the control measures listed in PCAQCD Code §4-1-030.5.A if machinery is used to clear weeds and/or trash from open areas and vacant lots of 5,000 square feet or larger.

3. Unpaved Parking Lots
(Code §4-1-030.4)

- a. Permittee shall not cause or allow visible emissions of particulate matter, including fugitive dust generated from the unpaved parking lots beyond the property line within which the emissions are generated.
- b. Permittee shall apply appropriate control measures to the disturbed unpaved parking lots as listed in PCAQCD Code §4-1-030.4.B.
- c. Permittee shall repair and/or replace the control measures listed in PCAQCD Code §4-1-030.4.B, and shall clean-up immediately any trackout from areas accessible to the public including curbs, gutters and sidewalks when trackout extends a cumulative distance of 25 linear feet or more and at the end of the day for all other trackout.

4. Paved Public Roadway
(Code §4-1-030.7)
 - a. Permittee upon discovery of the mud/dirt on its property due to the trackout or erosion-caused deposition that extends 25 feet or more from the nearest unpaved surface exit onto the paved public roadway shall apply any one of the control measures listed in PCAQCD §4-1-030.7.A.i.
 - b. Permittee shall remove the mud/dirt in a manner that does not cause another source of fugitive dust.
 - c. In the event unsafe travel conditions would result from restricting traffic and removal of such material is not possible within 72 hours due to a weekend or holiday condition, the provisions of PCAQCD Code §4-1-030.7.A.i can be extended upon notification to and approval by the Control Officer.
 - d. Permittee who is the owner and/or operator of any existing paved public roadways shall apply in sufficient quantity a dust suppressants to the total surface area subject to the disturbance and prevent track by applying any one of the control measures listed in PCAQCD §4-1-030.7.A.i, prior to, during and after work on unpaved road shoulders.
 - e. Permittee who is the owner and/or operator having jurisdiction over, or ownership of, public or private paved roads shall construct, or require to be constructed, all new or modified paved roads in conformance with the road shoulder width and drivable median stabilization as required in PCAQCD Code §4-1-030.7.D.
 - f. Unpaved shoulders and medians of paved roads shall be considered to have control measures effectively implemented when fugitive dust emissions do not exceed 20% opacity and silt loading does not equal or exceed 0.33 oz/ft² as determined in PCAQCD Code §4-9-310 except for unpaved shoulders on which gravel has been applied. Where gravel is utilized to prevent trackout from unpaved shoulders and medians of paved roads, surface gravel shall be uniformly applied and maintained to a depth of two (2) inches to comply with the 20% opacity standards, the gravel depth and silt content test methods in PCAQCD Code §4-9-310.
 - g. Permittee who is the owner and/or operator having jurisdiction over, or ownership of, existing public or private paved roads which do not conform with the requirements of PCAQCD Code §4-1-030.7.D shall reconstruct, or require to be reconstructed, the existing nonconforming paved road within 365 calendar days following the initial discovery that the road fails to meet the requirements. The control officer may require short-term stabilization of any paved road subject to the requirements set forth in PCAQCD Codes §§4-1-030.7.D and 4-1-030.7.E

5. Recordkeeping
(Codes §§4-1-040 and 4-1-050)

Permittee, if subject to the above requirements, shall compile and retain records that provide evidence of control measure application including records of receipts/purchase, street sweeping, water applications, maintenance of trackout control devices, gravel pads, fences, wind barriers, tarps, type of treatment/control measure application, extent of coverage, and date applied. The supporting documentation shall be provided as soon as possible but no later than 48 hours upon a verbal or written request by the Control

Officer, excluding weekends. If the Control Officer is at the site where requested records are kept, the records shall be provided without delay. Copies of such records shall be retained for at least two years.

6. Exemptions (Code §4-1-015)
 - a. In the case of legitimate vehicle test and development facilities and operations conducted by or for an equipment manufacturer, where dust is required to test and validate the design integrity, product quality and/or commercial acceptance, those specific activities shall be exempt from the applicable standards and requirements in this Article.
 - b. The standards and requirements of this Article shall not apply to emergency response activities that may disturb the soil conducted by any utility or government agency in order to prevent public injury or to restore critical utilities to functional status. For purposes of this subsection, an emergency response must address a situation arising from a sudden and unforeseeable event beyond the control of the owner and/or operator, including acts of God. Activities by an owner and/or operator to address a disturbance resulting from improperly designed equipment, lack of preventative maintenance, careless or improper operation or operator error shall not qualify as an emergency response.
 - c. The standards and requirements of this Article shall not apply to normal farm cultural practices according to A.R.S. §49-457 and A.R.S. §49-504.4 which are subject to Arizona Department of Environmental Quality (ADEQ) rules R18-2-610, R18-2-610.01, R18-2-611 and R18-2-611.01, R18-2-611.02, R18-2-611.03.
 - d. The standards and requirements of this Article shall not apply to dust generating operations subject to the standards and/or requirements described in Chapter 4, Article 3.
 - e. The standards and requirements of this Article shall not apply to the establishment of initial landscapes without the use of mechanized equipment, conducting landscape maintenance without the use of mechanized equipment, and playing on or maintaining a field used for non-motorized sports. However, establishing initial landscapes without the use of mechanized equipment and conducting landscape maintenance without the use of mechanized equipment shall not include grading, or trenching, performed to establish initial landscapes or to redesign existing landscapes.

H. Additional Plant-Wide Requirements

1. Sandblasting - Plant Wide
(Code §5-4-160.)

Permittee shall use at least one of the following control measures during sandblasting operations:

- a. Vacuum collection system.
- b. Confined blasting.
- c. Wet abrasive blasting.
- d. Hydroblasting.
- e. A control measure that is determined by the Control Officer to be equally effective to control particulate matter emissions.

2. Architectural Coatings
(Code §5-12-370)

Permittee shall not employ, apply, evaporate or dry any architectural coating, as defined in §5-12-370.C, 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.

3. Other Spray Painting
(Code §5-13-390)

Permittee shall conduct spray painting operations except architectural coatings in an enclosed area designed to contain not less than 96% by weight of the overspray. An enclosed area means a 3-sided structure with walls a minimum of 8 feet high.

4. Disposal
(Codes §§5-12-370 and 5-13-390)

Permittee shall not, 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.

5. Cutback and Emulsified Asphalt
(Code §5-16-670)

Except as exempted in §5-16-680, Permittee:

- a. Shall not use or apply the following materials for paving, construction or maintenance:
 1. Rapid cure cutback asphalt;
 2. Any cutback asphalt material, road oils or tar which contains more than 1.5% by volume VOCs which evaporate at 500F or less using ASTM Test Method D-402-76 or more than 27% by volume total solvent in the asphalt binder.
 3. Any emulsified asphalt or emulsified tar containing more than 3% by volume VOCs which evaporate at 500F or less using ASTM Test Method D-244-89.
- b. Shall not store within Pinal County any emulsified or cutback asphalt product which contains more than 1.5% 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.

6. Solvent Cleaning
(§5-15-620)

- a. Solvent cleaners/degreasers shall:
 - i. Provide a leak-free container for solvents and articles being cleaned;
 - ii. Except for a remote reservoir cleaner using unheated solvent, be equipped with a cover which prevents the solvent from evaporating when not processing work;

- iii. Be equipped with a drain configured to return solvent drained from cleaned parts to the container;
 - iv. Be clearly labeled to identify the solvent and explain the proper operation of the cleaner;
 - v. A degreaser/cleaner with a remote reservoir shall be equipped with a sink-like work area sloped sufficiently toward a drain so as to prevent pooling of the solvent, a drain from the sink to the reservoir, with a maximum drain area of 15.5 in², and unless a low-volatility solvent with a boiling point above 248° f is utilized and the solvent is never heated above 120° f., a stopper shall be used to seal the drain opening or a cover placed over the sink when the device is not in use.
 - vi. For a degreaser/cleaner without a remote reservoir, if the degreaser utilizes a low-volatility solvent with a boiling point above 248° f., and the solvent is not agitated in use, Permittee shall maintain a minimum 6" freeboard and keep the cover closed when the apparatus is not in use; or if using solvents which are not low volatility or which are agitated or are heated above 120° F shall have internal drainage and a freeboard ratio of 0.75 or greater; or a water cover may be used to meet the freeboard requirement if the solvent is insoluble in and denser than water; and 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. The degreaser/cleaner shall be equipped with a clear and conspicuous mark for the maximum allowable solvent level; and as an alternative to the foregoing freeboard requirement, be equipped with a hood or enclosure with a ventilation rate of no less than 65 cfm per ft.² of evaporative surface, unless a more stringent requirement applies pursuant to OSHA requirements, and the overall control efficiency of emissions from the cleaner, considering both capture and destruction, shall not be less than 85%.
- b. Permittee shall operate the cold solvent cleaners/degreasers in accordance with the operating requirements listed in Code §5-15-620.H. Each cold solvent/degreaser shall have a permanent, conspicuous label which summarizes the relevant operating requirements.

I. Fuel Use Limitations

1. CT Fuels

(Code §3-3-250.A.1)

See permit condition §5.C.1.b

2. Diesel Driven Fire Pump

(Code §5-23-1020)

In the diesel driven fire pump, Permittee shall not burn diesel fuel having a sulfur content exceeding 500 ppmw.

3. Other Fuels (Code §§3-1-081.G)

The Permittee shall not use used oil, used oil fuel, hazardous waste, and hazardous waste fuel (as defined in federal, state, or county codes and rules) without first obtaining a separate permit or an appropriate permit revision.

J. General Maintenance Obligation

[40 CFR 60.11(d), A.R.S. §49-514(J), Code §§3-1-081.E., 8-1-030.A.3]

At all times, including periods of start-up, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate the permitted facility including associated air pollution control and monitoring equipment in a manner consistent with good air pollution control practice for minimizing emissions.

K Generally Applicable Limits

1. Asbestos NESHAP Compliance
[Currently federally enforceable; 40 CFR Part 61, Subpart M] (Code §§7-1-030, 7-1-060)

Permittee shall comply with Code §§7-1-030.A. and 7-1-060 and 40 CFR Part 61, Subpart M, when conducting any renovation or demolition activities at the facility.

2. Stratospheric Ozone and Climate Protection
[Currently federally enforceable; 40 CFR Part 82 Subpart F]

The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F, Recycling and Emissions Reduction.

L. Acid Rain Requirements
(Code §§3-6-565, 3-1-081.A.6)

1. When provisions or requirements of the regulations incorporated pursuant to Code §3-6-565 (*i.e.* the Acid Rain Program) conflict with any of the other applicable requirements set forth in this permit, the regulations incorporated under §3-6-565 shall apply and take precedence.
2. No permit revision shall be required for increases in emissions that are authorized by allowances acquired pursuant to the Acid Rain Program, provided that such increases do not require a permit revision under any other applicable requirement. Code §3-1-081.A.6.a.
3. No limit shall be placed on the number of allowances held by the source. The source may not, however, use allowances as a defense to noncompliance with any other applicable requirement. Code §3-1-081.A.6.b.
4. Any such allowance shall be accounted for according to the procedures established in regulations promulgated under Part IV of the CAA, commonly known as CAA Title IV. Code §3-1-081.A.6.c.
5. All of the following are prohibited: (Code §3-1-081.A.6.d.)
 - a. Annual emissions of sulfur dioxide in excess of the number of allowances to emit sulfur dioxide held by the owners or operators of the unit or the designated representative of the owners or operators.
 - b. Exceedances of applicable emission rates specified in this permit.
 - c. The use of any allowance prior to the year for which it was allocated.
 - d. Contravention of any other provision of this permit.

M. Emergency Risk Management and Emergency Response Plan Requirements

1. Chemical Accident Prevention Requirements
[Currently federally enforceable; 40 CFR Part 68]

If the facility is subject to 40 CFR Part 68 by having more than a threshold quantity of ammonia, the permittee shall comply with the planning requirements set forth in 40 CFR Part 68 with regard to the ammonia-handling and ammonia-storage at the facility, as well as any other process or facility affected under 40 CFR Part 68, including:

- a. Submittal of a compliance schedule as required under 40 CFR Part 68, by the date required under 40 CFR §68.10(a); or
- b. As part of the compliance certification submitted under 40 CFR §70.6(c)(5), a certification statement that the source is in compliance with all requirements of 40 CFR Part 68, including the registration and submission of a release management plan.

6. Compliance Demonstration

A. Non-NSPS and NSPS Subpart KKKK NOX Testing (CT11 – CT12) *[Mandated by 40 CFR §70.6(a)(3) Codes §§3-1-160 & 3-1-170]*

1. Initial Performance Testing

Within 60 days after achieving maximum production rate of CT11 and CT12, but no later than 180 days after the initial start-up of the CTs, Permittee shall conduct performance tests, using either standard test methods as provided by Code §3-1-160 specified below, or equivalent methods as approved by the District pursuant to approval of the test plan required below, or alternative test methods approved by the EPA (40 CFR Part 60). These tests shall be performed at the maximum practical production rate. The continuous monitoring systems required by this permit shall be operating prior to conducting the performance tests. The performance tests shall address:

- a. Nitrogen oxides (NOX) emissions: Ref. Part 60, App. A, Ref. Method 7E **or** use NOX CEMS RATA as the initial NOX performance test (NSPS Subpart KKKK, 40 CFR Part §60.4400.(b).(5), §60.4405)
- b. Carbon monoxide (CO) emissions: Ref. Part 60, App. A, Ref. Method 10, or use CO CEMS RATA
- c. Particulate matter emissions (PM₁₀, PM_{2.5}): Ref. Part 60, App. A, Ref. Method 5 or 201A and (condensable PM₁₀), Ref. Method 202
- d. Volatile organic compound emissions (VOC): Ref. Part 60, App. A-7, Ref. Method 25a
- e. Opacity: Ref. Part 60, App. A, Ref. Method 9, 40 CFR §60.11

2. Test Protocol

Test protocols for all the tests shall be submitted to the District at least thirty (30) days prior to the test.

3. Performance Test Notice

Notice of any performance test required by this permit shall be submitted to the District at least thirty days (30) days prior to conducting the test.

4. Test Report

A copy of each test report shall be submitted to the District for approval within forty-five (45) days after the test. In addition to any other information required under this permit, the test report shall specifically define that the following pollutants meet the emission limitations specified in §Section 5.C of this permit:

- a. NOX emissions rates, defined as function of heat input and expressed in the same units as the NO_x emission limitations imposed under this permit.
- b. PM₁₀ emission rates, defined as a function of heat input and expressed in the same units as the NO_x emission limitations imposed under this permit.
- c. PM_{2.5} emission rates, defined as a function of heat input and expressed in the same units as the NO_x emission limitations imposed under this permit.
- d. CO emission rates, defined as a function of heat input and expressed in the same units as the NO_x emission limitations imposed under this permit.
- e. VOC emission rates, defined as a function of heat input and expressed in the same units as the NO_x emission limitations imposed under this permit.

5. NSPS (Subpart TTTT) Greenhouse Gas Emissions for Electric Generating Units Testing Requirements - CT11-CT12
[Federally enforceable pursuant to 40 CFR 60.5580]

Design efficiency of the combustion turbines shall be determined using one of the following methods: ASME PTC 22 Gas Turbines (incorporated by reference, see §60.17), ASME PTC 46 Overall Plant Performance (incorporated by reference, see §60.17) or ISO 2314 Gas turbines—acceptance tests (incorporated by reference, see §60.17)

- B. Subsequent Testing (CT01-CT12)
[Mandated by 40 CFR §70.6(a)(3)]

1. Performance Test Methodology
(Code §3-1-160.D) ***[Currently federally enforceable pursuant to PCAQCD Code 3-1-160 (11/03/93) approved as a SIP element at 65 FR 79742]***

Except for ambient air monitoring and emissions testing required under a NSPS or NESHAP, alternate sampling techniques or other means to determine opacity, rate, composition, and/or concentration of emissions in any test plan submitted to the Control Officer may be approved by the Control Officer for the duration of that plan provided that the following four criteria are met:

- a. The alternative or equivalent test method measures the same chemical and physical characteristics as the test method it is intended to replace.
- b. The alternative or equivalent test method has substantially the same or better reliability, accuracy, and precision as the test method it is intended to replace.
- c. Applicable quality assurance procedures are followed in accordance with the Arizona Testing Manual, 40 CFR Part 60 or other methods approved by the Control Officer.
- d. This approval does not include nondelegable functions of the EPA Administrator, including but not limited to approval of alternative or equivalent test methods. As used in 40 C.F.R. 60: "Administrator" means the Control Officer of the Pinal County Air Quality Control District, except that the Control Officer shall not be authorized to approve alternate or equivalent test methods,

alternative work standards or work practices, equivalency determinations or innovative technology waivers as covered in Section 111(h) "Design, equipment, work practice, or operational standard, alternative emission limitation," and Section 111(k) "Innovative technological systems of continuous emission reduction" of the FCAA."

2. Performance Test Methods
[40 CFR 60.8, Code §§3-1-160 & 3-1-170)

Permittee shall conduct performance tests, using standard test methods specified below, or equivalent methods as approved by the District pursuant to approval of the test plan required below. The tests shall be conducted using standard test methods approved by the EPA (40 CFR Part 60). These tests shall be performed at the maximum practical production rate. The continuous monitoring systems required by this permit shall be in place and operating prior to conducting the performance tests.

- a. Nitrogen oxides emissions Ref. Part 60, App. A, Ref. Method 7e or subsidiary method
- b. Carbon monoxide emissions Ref. Part 60, App. A, Ref. Method 10
- c. Particulate matter emissions (filterable PM₁₀) Ref. Part 60, App. A, Ref. Method 5 or 201A and (condensable PM₁₀) Method 202
- d. Volatile organic compound emissions Ref. Part 60, App. A, Ref. Method 25a

3. Test Protocol

A test plan protocol for each test shall be submitted to the District for approval at least thirty (30) days before the testing. The protocol shall specifically identify which CTs are to be tested for compliance demonstration.

4. Performance Test Notices

Notice of any performance test required by this permit shall be submitted to the District at least thirty (30) days prior to running the test.

5. Test Reports

A copy of each test report shall be submitted to the District for approval within forty-five (45) days after the test. In addition to any other information required under this permit, the Test Report for all mandatory tests shall specifically define:

- a. NO_x emissions rates, defined as both as a function of heat input, and expressed in the same units as the NO_x emission limitations imposed under this permit.
- b. CO emissions rates, defined as both as a function of heat input, and expressed in the same units as the CO emission limitations imposed under this permit.
- c. VOC emissions rates, defined both as a function of heat input, and expressed in the same units as the VOC emission limitations imposed under this permit.
- d. PM₁₀ emission rates, defined both as a function of heat input, and expressed in the same units as the PM₁₀ emission limitations imposed under this permit.

6. Recurring Testing (CT01-CT10)

Permittee shall conduct subsequent performance tests for VOCs and PM10 every 5 years from the last test date, using the test methods listed above. Two CTs may be selected for testing and used to represent all of the identical CTs at the facility to meet this requirement and used for emissions calculations and emissions inventory. Selection of the two CTs used shall be rotated for each subsequent testing.

7. Recurring Testing (CT11-CT12)
 - a. Subsequent NO_x performance tests shall be conducted on an annual basis (no more than 14 calendar months following the previous performance test) in accordance with Section §6.A.1 of this permit. If the Permittee elects to demonstrate compliance using the NOX-diluent CEMS, no subsequent performance tests are required, and RATA shall be performed at the frequency required by 40 CFR Part 75, Appendix B, Sections 2.3.1.1 or 2.3.1.2 as applicable.
 - b. Subsequent SO₂ tests shall be conducted on an annual basis (no more than 14 calendar months following the previous performance test). One of the three methodologies described in Section §60.4415 of the Subpart KKKK can be used to conduct the performance tests.
 - c. Permittee shall conduct subsequent performance tests for VOCs and PM₁₀ every 5 years from the last test date, using the test methods listed above. The PM₁₀ test results will be used for emission calculations for PM, PM₁₀, and PM_{2.5} emission limits. One CT may be selected for testing and used to represent both CT11 and CT12 to meet this requirement and for emissions calculations and emissions inventory. Selection of the CT used shall be rotated for each subsequent testing.

C. Monitoring
[Mandated by 40 CFR §70.6(a)(3)]

1. Instrumental Emissions Monitoring - Oxides of Nitrogen
[40 CFR 60.334(b), Code §3-3-260.G.]

Permittee shall install, calibrate, maintain, and operate a continuous emission monitoring system, and record the output of the system, for measuring:

- a. Nitrogen oxides emissions from the CTs discharged to the atmosphere.
- b. Either the oxygen or carbon dioxide content of flue gas from each of the CTs units, with the measurement taken where the NO_x emissions are monitored.
- c. Monitoring equipment required under this permit subsection shall be installed, operated, and quality assured in accordance with the requirements of 40 CFR Part 75. Permittee shall conduct NO_x CEMs evaluations in accord with the RAA and RATA requirements for NO_x CEMs, under 40 CFR Part 75, Appendix A. Evaluations shall be conducted at least annually unless the unit qualifies for an extension under 40 CFR Part 75, Appendix B. The deadline for the next RATA shall be no more than 8 calendar quarters after the quarter in which a RATA was last performed. A 720 operating hour grace period is available if the RATA cannot be completed by the deadline.
- d. On a calendar-month basis, Permittee shall generate a record of cumulative actual nitrogen oxide emissions from CT11 and CT12, emitted for the previous month and for the preceding 12-months and shall compare the total annual nitrogen oxides emissions limitations imposed under Section §4.C.7 for the CT11 and CT12 units. Permittee shall maintain a record of those monthly total calculations, and monthly conclusion regarding compliance with the nitrogen oxide emission limits.

2. Instrumental Emissions Monitoring - Carbon Monoxide
[Code §3-3-260.G.]

- a. On each CT unit, Permittee shall install, calibrate, maintain, and operate a continuous emissions monitoring system, and record the output of the system, for measuring carbon monoxide emissions to the atmosphere. Permittee shall use the quality assurance provisions of 40 CFR Part 75 for the CO monitoring systems with the exception that a quarterly Cylinder Gas Audit (CGA) in accordance with 40 CFR Part 60 shall be conducted every calendar quarter regardless of the instrument span. A CGA will not be required on quarters in which a RATA is performed.
- b. Permittee shall conduct CO CEMs evaluations in accord with 40 CFR Part 60 Appendix B, Performance Specification 4. RATA evaluations shall be conducted at least annually unless the unit qualifies for an extension under 40 CFR Part 75, Appendix B. The deadline for the next RATA shall be no more than 8 calendar quarters after the quarter in which a RATA was last performed. A 720 operating hour grace period is available if the RATA cannot be completed by the deadline.
- c. On each CT unit, Permittee shall install, calibrate, maintain, and operate a continuous inlet air temperature monitoring system, and shall record the output of the system. The plan shall require inlet temperature monitoring and data recording on consistent with the monitoring requirements of 40 CFR 60.
- d. On a calendar-month basis, Permittee shall generate a record of cumulative actual carbon monoxide emissions from CT11 and CT12, emitted for the previous month and for the preceding 12-months and shall compare the total annual carbon monoxide emissions limitations imposed under Section §4.C.6 for the CT11 and CT12 units. Permittee shall maintain a record of those monthly total calculations, and monthly conclusion regarding compliance with the carbon monoxide emission limits.

3. General Parametric Emission Monitoring Requirements
[Code §3-3-260.G.]

To provide a basis for the other aspects of parametric monitoring set forth below, Permittee shall maintain operating logs detailing:

- a. Hours of operation for each CT unit, defining periods of normal operation of CT operation, start-up periods, warm-up periods, and shut-down periods.
- b. Fuel flow/heat input to the CT units, separately defining fuel flow/heat input during the various system operating modes, including during startups, warm-up periods, normal operation of the CT units, and during shutdown.
- c. To verify compliance with the operational limitations on the diesel-driven fire pump, Permittee shall maintain a log reflecting hours of both emergency and non-emergency operation. The log shall further include a narrative explanation of the nature of any "emergency" that required emergency use of the fire pump.

4. Parametric Emissions Monitoring - Volatile Organic Compounds
[Code §3-3-260.G.]

- a. By the 10th day of each month, Permittee shall calculate and record the quantity of VOC emissions from CT11 and CT12, separately for each unit, for the previous calendar month. Calculations shall be performed using records of fuel use data, startup and shutdown events, and emission factors, as provided in paragraph c below.
- b. By the 10th day of each month, Permittee shall calculate and record the combined VOC emissions from CT11 and CT12 on a rolling 12-month total sum basis. This value shall be calculated as the sum of the emissions from both units during the previous month and during the preceding eleven months. Permittee shall compare this 12-month total to the annual VOC emission limitation under Section §4.C of this permit. Records of the monthly total calculations and compliance with the VOC emission limitations shall be maintained.
- c. Monthly total VOC emissions from each of CT11 and CT12 shall be calculated, separately for each unit as the sum of the emissions from that unit during startup and shutdown events, calculated as provided in paragraph d below, and the emissions from that unit during non-startup/shutdown periods, calculated as provided in paragraph e below.
- d. VOC emissions from startup and shutdown events at a combustion turbine shall be calculated as the product of the number of events and an approved emission factor of 2.7 pounds per event. An event is one startup followed by one shutdown.
- e. VOC emissions during non-startup/shutdown operating periods at a combustion turbine shall be calculate as the product of the cumulative heat input during such period, expressed in MMBtu, and the approved emission factor, expressed in lb/MMBtu:
 - i. Permittee shall use an approved VOC emission factor of 0.0096 lb/MMBtu to calculate emissions from a combustion turbine during operating periods from the date of initial startup of a combustion turbine through the last day of the calendar month during which PCAQCD first approves a test-derived emission factor for such combustion turbine in accordance with paragraph f below.
 - ii. Following approval of a test-derived VOC emission factor for a combustion turbine by PCAQCD in accordance with paragraph f below, Permittee shall use the approved test-derived VOC emission factor to calculate emissions during operating periods beginning with the first day of the calendar month after such approval. Permittee shall continue to use such approved test-derived VOC emission factor until it is superseded by approval of a new test-derived VOC emission factor for such combustion turbine.
- f. During each VOC performance test conducted at CT11 or CT12 pursuant to Section §6.A of this permit, Permittee shall calculate a test-derived VOC emission factor for such combustion turbine and shall submit such emission factor to PCAQCD for approval. The test derived emission factor shall be calculated as the arithmetic mean of the emission factor results for all valid runs conducted as part of such performance test. The emission factor result for each run shall be calculated by dividing the measured emission rate during that run, expressed in lb/hr by the heat input rate during that run, expressed in MMBtu/hr.

5. Parametric Emissions Monitoring - Particulate Matter

- a. By the 10th day of each month, Permittee shall calculate and record the quantity of PM/PM10/PM2.5 emissions from CT11 and CT12, separately for each unit, for the previous calendar month. Calculations shall be performed using records of fuel use data, startup and shutdown events, and emission factors, as provided in paragraph c below.
- b. By the 10th day of each month, Permittee shall calculate and record the combined PM/PM10/PM2.5 emissions from CT11 and CT12 on a rolling 12-month total sum basis. This value shall be calculated as the sum of the emissions from both units during the previous month and during the preceding eleven months. Permittee shall compare this 12-month total to the annual PM/PM10/PM2.5 emission limitation under Section §4.C of this permit. Records of the monthly total calculations and compliance with the PM/PM10/PM2.5 emission limitations shall be maintained.
- c. Monthly total PM/PM10/PM2.5 emissions from each of CT11 and CT12 shall be calculated, separately for each unit as the sum of the emissions from that unit during startup and shutdown events, calculated as provided in paragraph d below, and the emissions from that unit during non-startup/shutdown periods, calculated as provided in paragraph e below.
- d. PM/PM10/PM2.5 emissions from startup and shutdown events at a combustion turbine shall be calculated as the product of the number of events and an approved emission factor of 3.7 pounds per event. An event is one startup followed by one shutdown.
- e. PM/PM10/PM2.5 emissions during non-startup/shutdown operating periods at a combustion turbine shall be calculate as the product of the cumulative heat input during such period, expressed in MMBtu, and the approved emission factor, expressed in lb/MMBtu:
 - i. Permittee shall use an approved PM/PM10/PM2.5 emission factor of 0.015 lb/MMBtu to calculate emissions from a combustion turbine during operating periods from the date of initial startup of a combustion turbine through the last day of the calendar month during which PCAQCD first approves a test-derived emission factor for such combustion turbine in accordance with paragraph f below.
 - ii. Following approval of a test-derived PM/PM10/PM2.5 emission factor for a combustion turbine by PCAQCD in accordance with paragraph f below, Permittee shall use the approved test-derived PM/PM10/PM2.5 emission factor to calculate emissions during operating periods beginning with the first day of the calendar month after such approval. Permittee shall continue to use such approved test-derived PM/PM10/PM2.5 emission factor until it is superseded by approval of a new test-derived PM/PM10/PM2.5 emission factor for such combustion turbine.
- f. During each PM/PM10/PM2.5 performance test conducted at CT11 or CT12 pursuant to Section §6.A of this permit, Permittee shall calculate a test-derived PM/PM10/PM2.5 emission factor for such combustion turbine and shall submit such emission factor to PCAQCD for approval. The test derived emission factor shall be calculated as the arithmetic mean of the emission factor results for all

valid runs conducted as part of such performance test. The emission factor result for each run shall be calculated by dividing the measured emission rate during that run, expressed in lb/hr by the heat input rate during that run, expressed in MMBtu/hr.

- g. On at least a semi-annual basis during operations, Permittee shall conduct a visual opacity screen performed on each stack. If visible emission are observed, Permittee shall have a full Method 9 opacity test performed by a certified opacity observer, and shall provide a copy of the resulting report to the District within 10 days.

6. Parametric Emissions Monitoring - Sulfur Dioxide
[Code §3-3-260.G.]

As a surrogate measurement for monitoring emissions of sulfur dioxide, Permittee shall maintain monthly records reflecting total fuel consumption in each CT unit. On a cycle adequate to comply with the emission limitations and semi-annual reporting requirements under this permit, Permittee shall utilize the SO₂ emission calculation methodology set forth in 40 CFR part 75, Appendix D §2.3, to calculate and report SO₂ emissions. Permittee shall determine fuel sulfur content by either:

- a. Maintaining a contractual commitment with the pipeline gas supplier demonstrating that the gas has a hydrogen sulfide content of 1 grain/100 scf or less, and a total sulfur content of 20 grain/100 scf or less; or
 - a. At least annually, sampling and analyzing the composition of the pipeline gas to show whether the gas has a hydrogen sulfide content of 1 grain/100 scf or less, and a total sulfur content of 20 grain/100 scf or less.

7. Sulfur Content Monitoring – Subpart KKKK
[40 CFR Part 60, §60.4365]

Permittee may elect not to monitor the total sulfur content of the fuel combusted in the turbine, if the fuel is demonstrated not to exceed potential sulfur emissions of 26 ng SO₂/J (0.060 lb SO₂/MMBtu) heat input for units located in continental areas and 180 ng SO₂/J (0.42 lb SO₂/MMBtu) heat input for units located in noncontinental areas by using one of the following sources of information to make the required demonstration:

- a. The fuel quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the fuel, specifying that the maximum total sulfur content for oil use in continental areas is 0.05 weight percent (500 ppmw) or less and 0.4 weight percent (4,000 ppmw) or less for noncontinental areas, the total sulfur content for natural gas use in continental areas is 20 grains of sulfur or less per 100 standard cubic feet and 140 grains of sulfur or less per 100 standard cubic feet for noncontinental areas, has potential sulfur emissions of less than less than 26 ng SO₂/J (0.060 lb SO₂/MMBtu) heat input for continental areas and has potential sulfur emissions of less than less than 180 ng SO₂/J (0.42 lb SO₂/MMBtu) heat input for noncontinental areas; or
- b. Representative fuel sampling data which show that the sulfur content of the fuel does not exceed 26 ng SO₂/J (0.060 lb SO₂/MMBtu) heat input. At a minimum, the amount of fuel sampling data specified in section 2.3.1.4 or 2.3.2.4 of appendix D to part 75 of this chapter is required.

8. Periodic Monitoring - Emergency Fire Pump Fuel Sulfur Content.

As a surrogate measurement for quantifying the sulfur content in diesel fuel for the emergency fire pump, Permittee shall maintain a contractual commitment with or a certification from the Permittee's fuel supplier, showing that ~~only~~ diesel fuel meets the requirement of Section§5.I.2 of this permit.

9. Parametric Emission Monitoring - Minimum Load Operation
[Code §3-3-260.G.]

Permittee shall maintain a 12 month rolling average showing the total power produced for each individual turbine, and the number of operating hours for that turbine unit. If permittee elects to also log startup and shutdown events, permittee may correspondingly deduct cold start and shutdown times as defined above for each such start/stop cycle for purposes of tabulating the annual operating hours for that unit. The resulting product of the power produced for each unit divided by the adjusted number of operating hours shall show that the unit operated at least 32% of baseload capacity.

10. Parametric Emission Monitoring - General Maintenance
[Code §3-3-260.G.]

To assure compliance with the general maintenance obligation defined under this permit, Permittee shall maintain repair logs with regard to each CT, and each catalytic reactor unit.

11. Parametric Emission Monitoring - Operating Cycle
[Code §3-3-260.G.]

Permittee shall maintain a 12 month rolling average showing the total number of operating hours, including startup and shutdown, for each individual turbine.

12. Parametric Emission Monitoring - Startup Events
[Code §3-3-260.G.]

Permittee shall maintain a 12 month rolling average showing the total number of startup events for each individual turbine.

13. General Compliance Monitoring (CT11-CT12) – Subpart KKKK
[40 CFR §60.4333.(a)]

Permittee shall maintain the stationary combustion turbine, air pollution control equipment, and monitoring equipment in a manner consistent with good air pollution control practices for minimizing emissions at all times including during startup, shutdown, and malfunction.

D. Excess Emissions (CT11-CT12) - NO_x
[40 CFR Part 60, Subpart KKKK, §60.4380.(b)]

For turbines using continuous emission monitoring, excess emissions and monitoring downtime are defined as:

1. An excess emissions is any unit operating period in which the 4-hour or 30-day rolling average NO_x emission rate exceeds the applicable emission limit in § 60.4320. For the purposes of this subpart, a “4-hour rolling average NO_x emission rate” is the arithmetic average of the average NO_x emission rate in ppm or ng/J (lb/MWh) measured by the continuous emission monitoring equipment for a given hour and the three unit operating hour average NO_x emission rates immediately preceding that unit operating hour.

Calculate the rolling average if a valid NO_x emission rate is obtained for at least 3 of the 4 hours. For the purposes of this subpart, a “30-day rolling average NO_x emission rate” is the arithmetic average of all hourly NO_x emission data in ppm or ng/J (lb/MWh) measured by the continuous emission monitoring equipment for a given day and the twenty-nine unit operating days immediately preceding that unit operating day. A new 30-day average is calculated each unit operating day as the average of all hourly NO_x emissions rates for the preceding 30 unit operating days if a valid NO_x emission rate is obtained for at least 75 percent of all operating hours.

2. A period of monitor downtime is any unit operating hour in which the data for any of the following parameters are either missing or invalid: NO_x concentration, CO₂ or O₂ concentration, fuel flow rate, steam flow rate, steam temperature, steam pressure, or megawatts. The steam flow rate, steam temperature, and steam pressure are only required if you will use this information for compliance purposes.
3. For operating periods during which multiple emissions standards apply, the applicable standard is the average of the applicable standards during each hour. For hours with multiple emissions standards, the applicable limit for that hour is determined based on the condition that corresponded to the highest emissions standard.

E. Excess Emissions (CT11-CT12) - SO₂

[40 CFR Part 60, Subpart KKKK, §60.4385]

If the option to monitor the sulfur content of the fuel is chosen, excess emissions and monitoring downtime are defined as:

1. For samples of gaseous fuel and for oil samples obtained using daily sampling, flow proportional sampling, or sampling from the unit's storage tank, an excess emission occurs each unit operating hour included in the period beginning on the date and hour of any sample for which the sulfur content of the fuel being fired in the combustion turbine exceeds the applicable limit and ending on the date and hour that a subsequent sample is taken that demonstrates compliance with the sulfur limit.
2. If the option to sample each delivery of fuel oil has been selected, immediate switching to one of the other oil sampling options (i.e., daily sampling, flow proportional sampling, or sampling from the unit's storage tank) shall be done if the sulfur content of a delivery exceeds 0.05 weight percent. You must continue to use one of the other sampling options until all of the oil from the delivery has been combusted, and you must evaluate excess emissions according to paragraph (a) of this section. When all of the fuel from the delivery has been burned, you may resume using the as-delivered sampling option.
3. A period of monitor downtime begins when a required sample is not taken by its due date. A period of monitor downtime also begins on the date and hour of a required sample, if invalid results are obtained. The period of monitor downtime ends on the date and hour of the next valid sample.

F. NESHAP Monitoring and Compliance for Emergency Compression Ignition Engines

[40 CFR §§63.6625(e), (f), (h), (i), 63.6640(f)]

1. Permittee shall maintain the engine according to the manufacturer's emission-related written instructions or develop your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.
2. Permittee shall install a non-resettable hour meter if one is not already installed.

3. Permittee shall minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup limitations of Tables 1a, 2a, 2c, and 2d to Subpart ZZZZ apply.
4. Permittee has the option of utilizing an oil analysis program in order to extend the specified oil change requirements of this permit. The oil analysis shall be performed at the same frequency specified for changing the oil in Section §5.C.2 of this permit. The analysis program shall at a minimum analyze the following 3 parameters: total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30% of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20% from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all these limits are not exceeded, Permittee is not required to change the oil. If any of the limits are exceeded, Permittee shall change the oil within 2 days of receiving the results of the analysis, or if not in operation, within 2 days or before commencing operation, whichever is later. Records of the parameters analyzed, results of the analysis and oil changes shall be kept. The analysis program shall be part of the maintenance plan for the engine.
5. Permittee shall not operate the emergency generator other than for emergency operations, maintenance and testing, and operations in non-emergency situations for up to 50 hours per year. These 50 hours cannot be used for peak shaving or to generate income for a facility to supply power to a grid or otherwise supply power as part of a financial arrangement with another entity, except for 15 hours per years which may be used as part of a demand response program if the regional transmission organization has determined there are emergency conditions that could lead to a potential electrical blackout.
6. Operations during emergency situations is not limited.
7. Permittee may operate the emergency generator for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing is limited to 100 hours per year. The 50 hours of non-emergency situations allowed in Subsection 5 4 above count towards the 100 hours for maintenance checks and readiness testing.

G. Recordkeeping

[Mandated by 40 CFR §70.6(a)(3)] [40 CFR §§63.6655(a), (e)](Code §3-1-083)

1. Permittee shall maintain at the source, a file of all measurements, including continuous monitoring-system-, monitoring-device-, and performance- testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required pursuant to any federally enforceable provision of this permit, recorded in a permanent form suitable for inspection.
2. Permittee shall record the following in a permanent logbook, which may be in written or digital form, for inclusion in the semi-annual report:
 - a. Emissions of nitrogen oxides, carbon monoxide, particulate matter (PM10), volatile organic compounds, and sulfur dioxide.
 - b. Total natural gas burned.

- c. CT run times.
 - d. The number of start-up and shut-down cycles for each CT unit.
 - e. Total net electrical output generated.
 - f. Any malfunction in the operation of the permitted facility or any air pollution control equipment that results in a violation of a permit condition.
 - g. For the generator, the records shall specify how many hours were spent for emergency operations and non-emergency purposes.
3. Recordkeeping of Periodic Facility-Wide Activities (§3-1-081.A.3.b)
- Each time an abrasive blasting or spray painting project is conducted, Permittee shall record the following:
- a. Date the project was conducted;
 - b. Duration of the project;
 - c. Type of control measures employed; and
 - d. Material Safety Data Sheets for all paints and solvents used in the project.
4. Permittee shall keep records of the maintenance conducted on the emergency generators to demonstrate that they were operated and maintained according to the maintenance plan or manufacture specification.

H. Compliance Reporting

[Mandated by 40 CFR §§70.6(a)(3) and 70.6(c)(4)] [40 CFR §§63.6640(b), 63.6650(a), (c), (d)](Code §3-1-083.A)

- 1. In order to demonstrate compliance with the provisions of this permit, the Permittee shall submit a semi-annual report containing the information required to be recorded pursuant to this permit. All instances of deviations from permit requirements shall be clearly identified in such reports. For brevity, such deviation reports may incorporate by reference any written supplemental upset reports filed by Permittee during the reporting period. The report shall be submitted to the District within 30 days after the end of each calendar half. Appendix A of this permit is a form which may be used for the report.

I. Regular Compliance/Compliance Progress Certification

[Mandated by 40 CFR §§70.5(c)(8), 70.5(c)(9), 70.6(c)(4), 70.6(c)(5)]

Permittee shall annually submit to the Control Officer, and also to the Administrator of US EPA a certification of compliance with the provisions of this permit. The certification shall be separately submitted to both the District and to the Enforcement Office (AIR 5), EPA Region IX, 75 Hawthorne Street, San Francisco, CA 94105-3901. The certification shall:

- 1. Be signed by a responsible official, as defined in 40 CFR 70.2, or such other person as may be approved by the Control Officer as an administrative amendment to this permit;
- 2. Identify each term or condition of the permit that is the basis of the certification;
- 3. Verify the compliance status with respect to each such term or condition;

4. Verify whether compliance with respect to each such term or condition has been continuous or intermittent;
5. Identify the permit provision, or other, compliance mechanism upon which the certification is based; and
6. Be postmarked within thirty (30) days of the start of each calendar year.

7. Other Reporting Obligations

- A. Deviation Reporting Requirement
(Code §3-1-083.A.3.b., §3-1-081.A.5) **[Mandated by 40 CFR §§70.6(a)(3)(iii)(B), 70.6(g)]**

Permittee shall report any deviation from the requirements of this permit along with the probable cause for such deviation, and any corrective actions or preventative measures taken to the District within fifteen days of when the owner or operator first learned of the deviation unless earlier notification is required by the provisions of Section 9.P. of this permit.

- B. Annual Emissions Inventory
[Code §§3-1-103, 3-7-590.C.1]

Permittee shall complete and submit to the District an annual emissions inventory, disclosing actual emissions for the preceding calendar year. The submittal shall be made on a form provided by the District. The inventory is due by the latter of March 31, or ninety (90) days after the form is furnished by the District.

- C. Greenhouse Gas Reporting
[40 CFR Part 98]

If this source becomes subject to the provisions of 40 CFR Part 98, then Permittee shall comply with these provisions accordingly.

8. Fee Payment

[Mandated by 40 CFR §§70.6(a)(7), 70.9]

As an essential term of this permit, an annual permit fee shall be assessed by the District and paid by Permittee in accord with the provisions of Code Chapter 3, Article 7 generally, and Code §3-1-081.A.9. specifically. The annual permit fee shall be due on or before the anniversary date of the issuance of an individual permit, or formal grant of approval to operate under a general permit. The District will notify the Permittee of the amount to be due, as well as the specific date on which the fee is due.

9. General Conditions

- A. Term
[Mandated by 40 CFR §70.6(a)(2)] (Code §3-1-089)

This permit shall have a term of five (5) years, beginning from the date of issuance.

- B. Basic Obligation
[Mandated by 40 CFR §§70.4(b)(15), 70.6(a)(6)(i), 70.6(a)(6)(ii), 70.7.b] (Code §3-1-081.)

1. The owner or operator ("Permittee") of the facilities shall operate them in compliance with all conditions of this permit, the Pinal County Air Quality Control District ("the District") Code of Regulations ("Code"), and consistent with all State and Federal laws, statutes, and codes relating to air quality that apply to these facilities. Any permit noncompliance is grounds for enforcement action; for a permit termination, revocation

and reissuance, or revision; or for denial of a permit renewal application and may additionally constitute a violation of the Clean Air Act (1990).

2. All equipment, facilities, and systems used to achieve compliance with the terms and conditions of this permit shall at all times be maintained and operated in good working order.

C. Duty to Supplement Application
[Mandated by 40 CFR §§70.5(b), 70.6(a)(6)(v)] (Code §§3-1-050.H, 3-1-081.A.8.e, 3-1-110)

Even after the issuance of this permit, a Permittee, who as an applicant who failed to include all relevant facts, or who submitted incorrect information in an application, shall, upon becoming award of such failure or incorrect submittal, promptly submit a supplement to the application, correcting such failure or incorrect submittal. In addition, Permittee shall furnish to the District within thirty days any information that the Control Officer may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit and/or the Code.

D. Right to Enter
[Mandated by 40 CFR §70.6(c)(2)] (Code § 3-1-132)

Authorized representatives of the District shall, upon presentation of proper credentials, be allowed:

1. To enter upon the premises where the source is located or in which any records are required to be kept under the terms and conditions of this permit;
2. To inspect any equipment, operation, or method required in this permit; and
3. To sample emissions from the source.

E. Transfer of Ownership
[Mandated by 40 CFR §70.7(d)(4)]

This permit may be transferred from one person to another by notifying the District at least 30 days in advance of the transfer. The notice shall contain all the information and items required by Code § 3-1-090. The transfer may take place if not denied by the District within 10 days of the receipt of the transfer notification.

F. Posting of Permit
 (Code §3-1-100)

Permittee shall firmly affix the permit, an approved facsimile of the permit, or other approved identification bearing the permit number, upon such building, structure, facility or installation for which the permit was issued. In the event that such building, structure, facility or installation is so constructed or operated that the permit cannot be so placed, the permit shall be mounted so as to be clearly visible in an accessible place within a reasonable distance of the equipment or maintained readily available at all times on the operating premises.

G. Permit Revocation for Cause
[Mandated by 40 CFR §70.6(a)(6)(iii)] (Code §3-1-140)

The Director of the District ("Director") may issue a notice of intent to revoke this permit for cause pursuant to Code §3-1-140, which cause shall include occurrence of any of the following:

1. The Director has reasonable cause to believe that the permit was obtained by fraud or material misrepresentation;
2. Permittee failed to disclose a material fact required by the permit application form or a regulation applicable to the permit;
3. The terms and conditions of the permit have been or are being violated.

H. Certification of Truth, Accuracy, and Completeness

[Mandated by 40 CFR §§70.5(a)(2), 70.6(a)(3)(iii)(B)] [Federally enforceable - Code §§3-1-083.A.5, 3-1-175 (as amended 2/22/95) approved as SIP Elements at 65 FR 79742 (12/20/00)]

Any application form, report, or compliance certification submitted pursuant to the Code shall contain certification by a responsible official of truth, accuracy, and completeness. This certification and any other certification required under Chapter 3 of the Code shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

I. Expiration and Renewal of Permit

[Mandated by 40 CFR §§70.5(a)(1)(iii), 70.7(c)](Code §3-1-050.C)

Expiration of this permit will terminate the facility's right to operate unless either a timely application for renewal has been submitted in accordance with §§3-1-050, 3-1-055 and 3-1-060, or a substitute application for a general permit under §3-5-490. For Class I permit renewals, a timely application is one that is submitted at least 6 months, but not greater than 18 months prior to the date of the permit expiration. For Class II or Class III permit renewals, a timely application is one that is submitted at least 3 months, but not greater than 12 months prior to the date of permit expiration.

J. Severability

[Mandated by 40 CFR §70.6(a)(5)]

Pursuant to Code § 3-1-081.A.7., the provisions of this permit are severable, and if any provision of this permit is held invalid the remainder of this permit shall not be affected thereby.

K. Permit Shield

[Mandated by 40 CFR §70.6(f)] (Code § 3-1-102.)

Subject to the following schedule of exclusions, compliance with the terms of this permit shall be deemed compliance with any applicable requirement identified in this permit. The permit-shield exclusions include:

1. PGCAQCD Rule §7-2-1.8 ANTI-DEGRADATION;
2. Items listed in Section 10 of this permit as not being federally enforceable.

L. Permit Revisions

[Mandated by 40 CFR §70.7(d), 70.7(e)] (Code Chapter 3, Article 2)

1. This permit may be revised, reopened, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit revision, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.
2. The permittee shall furnish to the Control Officer, within a reasonable time, any information that the Control officer may request in writing to determine whether cause exists for revising, revoking and reissuing, or terminating the permit or to determine compliance with the permit.

3. Permit amendments, permit revisions, and changes made without a permit revision shall conform to the requirements in Article 2, Chapter 3, of the Code.
4. Revision to Obtain Authority to Reconstruct [*Federally enforceable - 40 CFR 63.42(c)*] Code §3-1-040.D.

Prior to commencing a reconstruction, as defined below, Permittee shall apply for and obtain a revision to this permit, which revised permit shall include a final and effective case-by-case determination pursuant to the provisions of 40 CFR 63.43 such that the emissions from the reconstructed facility will be controlled to a level no less stringent than the maximum achievable control technology emission limitation for new sources.

For purposes of this subsection, "reconstruction" is defined as the replacement of components at an existing process or production unit that in and of itself emits or has that potential to emit 10 tons per year of any HAP or 25 tons per year of any combination of HAP, whenever:

- a. The fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable process or production unit; and
- b. It is technically and economically feasible for the reconstructed major source to meet the applicable maximum achievable control technology emission limitation for new sources established under 40 CFR Part 63, Subpart B.

M. Permit Re-opening
[*Mandated by* 40 CFR §§70.6(a)(6)(iii), 70.7(g),] (Code §§ 3-1-050.C.6, 3-1-087.)

1. This permit shall be reopened if:
 - a. Additional applicable requirements under the Clean Air Act (1990) become applicable to this source, and on that date, this permit has a remaining term of three or more years. Provided, that no such reopening under this subparagraph is required if the effective date of the newly applicable requirement is later than the date on which this permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to Code §3-1-089.C.
 - b. If the Permittee becomes subject to a standard promulgated by the Administrator under Section 112(d) of the CAA, the Permittee shall, within 12 months of the date on which the standard was promulgated, submit an application for a permit revision demonstrating how the source will comply with the standard.
 - b. The Control Officer determines that it contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of it;
 - c. The Control Officer determines that it needs to be revised or revoked to assure compliance with the applicable requirements; or
 - d. The EPA Administrator finds that cause exists to terminate, modify, or revoke and reissue this permit.
2. If this permit must be reopened or revised, the District will notify the permittee in accord with Code §3-1-087.A.3.

N. Record Retention
 [*Mandated by* 40 CFR §70.6(a)(3)(ii)(B)] (Code §3-1-083.A.2.b)

Permittee shall retain for a period of five (5) years all documents required under this permit, including reports, monitoring data, support information, calibration and maintenance records, and all original recordings or physical records of required continuous monitoring instrumentation.

O. Scope of License Conferred
 [*Mandated by* 40 CFR §70.6(a)(6)(iv)] (Code §3-1-081.)

This permit does not convey any property rights of any sort, or any exclusive privilege.

P. Excess Emission Reports
 (Code §8-1-030)

1. To the extent Permittee may wish to offer a showing in mitigation of any potential penalty, underlying upset events resulting in excess emissions shall reported as follows:

a. The permittee shall report to the Control Officer any emissions in excess of the limits established by this permit. Such report shall be in two parts:

i. Notifications by telephone or facsimile within 24 hours or the next business day, whichever is later, of the time when the owner or operator first learned of the occurrence of excess emissions, including all available information required under subparagraph b. below.

ii. Detailed written notification within 3 working days of the initial occurrence containing the information required under subparagraph b. below.

b. The excess emissions report shall contain the following information:

i. The identity of each stack or other emission point where the excess emissions occurred.

ii. The magnitude of the excess emissions expressed in the units of the applicable limitation.

iii. The time and duration or expected duration of the excess emissions.

iv. The identity of the equipment from which the excess emissions occurred.

v. The nature and cause of such emissions.

vi. If the excess emissions were the result of a malfunction, steps taken to remedy the malfunction and the steps taken or planned to prevent the recurrence of such malfunctions.

vii. The steps that were or are being taken to limit the excess emissions. To the extent this permit defines procedures governing operations during periods of start-up or malfunction, the report shall contain a list of steps taken to comply with this permit.

viii. To the extent excess emissions are continuous or recurring, the initial notification shall include an estimate of the time the excess emissions

will continue. Continued excess emissions beyond the estimated date will require an additional notification.

10. Additional provisions applicable to Title V Sources

- A. Enforcement by the Administrator and Citizens
[Mandated by 40 CFR §70.6(b)]

All terms and conditions in this permit not excluded in Section 10.B. are enforceable by the Administrator and citizens under the Clean Air Act.

- B. Federal Enforceability Exclusions
[Mandated by 40 CFR §70.6(b)(2)]

To the extent that they are enforceable at all, the following terms and conditions are enforceable only under authority of State law:

- Section 1. - Introduction - This merely constitutes factual background regarding the facility.
- Section 5.D.2 - Fuel Burning Equipment; the cited local rule has not been approved as a SIP element.
- Section 5.F.3 - Opacity; the cited local rule has not been approved as a SIP element.
- Section 9.F - Posting of Permit; the cited local rule has not been approved as a SIP element.

11. Equipment
[Mandated by 40 CFR §70.5(c)(3)(ii)] (Code §3-1-050.B)

Equipment for which emissions are allowed by this permit are as follows:

1. Ten (10) combustion turbines, General Electric LM6000 SPRINT, natural gas fired, 446 mmbtu/hr each HHV, equipped with CEMs, oxidation catalyst and selective catalytic reduction (SCR).
2. Two (2) combustion turbines, General Electric LM6000PC SPRINT, natural gas fired, 467 mmbtu/hr each, HHV, , equipped with CEMs, oxidation catalyst and selective catalytic reduction (SCR).
3. Clean-O-Matic Solvent tank, 85 gal
4. Clarke Fire water pump powered by a John Deere, 183 horsepower, diesel fired engine, manufactured in October 2001
5. Baltimore Aircoil Induce Draft Cooling Tower (4 Cell), Flowrate 8,645 gpm

12. Insignificant Activities
[Mandated by 40 CFR §70.5(c) (Code §3-1-050.E)]

Permittee has disclosed the following insignificant activities in the application for this permit:

Emission Point	Possible Discharge
Acetylene, Butane, Propane Torches/Cylinders	Acetylene, Butane, Propane
Activities Associated with Maintenance Repair or Dismantlement of an Emission Unit or Other Equipment.	VOC
Aerosol Can Usage	VOCs
Ammonia Storage	Ammonia Vapor
Barrels/Totes/Bins (Oil Storage Building) - Miscellaneous Lubricating Oil Storage	Oil Vapors

Brazing and Soldering Activities	PM ₁₀ , Fumes
Cathodic Protection	Ozone
Caustic Tank	Caustic Vapors
Circuit Breakers	Ozone, Oil Vapor
Combustion Turbine Chemicals	Chemical Vapors
Combustion Turbine Gas Vents	Natural Gas
Combustion Turbine – Lube Oil Vents	Oil Vapor
Combustion Turbine – False Start Drains	Oil Vapor
Corona	Ozone
Electric Motors	Ozone
Fuel Oil Storage	VOCs
Gas Yard Vents	Natural gas
Hydraulic Systems Reservoirs	Oil Vapor
Lube Oil Storage Area	Oil Vapor
Normal Use of Consumer Products (e.g. cleaning, janitorial, medical, etc)	CFCs, VOC
Oil Filter Draining	Oil Vapor
Pesticide/Herbicide Activity	Pesticide, Herbicide
Pump/Motor Oil Reservoirs	Oil Vapor
Piping System, Fuel	VOCs
Safety Devices, Fire Extinguishers and Cardox System	PM ₁₀
Septic Tanks – Guard Shack & Admin Building	Methane
Battery Banks	Acid Vapor
Transformers	Oil Vapor
Welding Activities	Welding Fumes
Food Processing Equipment	PM
Tobacco Smoking Areas	PM

Appendix A

**Semi-annual
Permit #V20690.R02**

Abstract

This constitutes a semi-annual report of all required monitoring, documenting emissions during the subject reporting period.

Facility - Arizona Public Service Company
Sundance Power Plant
2060 West Sundance Road, Casa Grande, AZ

Reporting Period – January – June - _____ or July – December _____ Year _____

Parametric Emissions Report

Natural gas burned during reporting period _____ mmBtu

Operations Report

Power generated during the reporting period _____ megawatt-hours

CT Unit #1
"normal" run time _____ hours
Start-up cycles _____ each

CT Unit #2
"normal" run time _____ hours
Start-up cycles _____ each

CT Unit #3
"normal" run time _____ hours
Start-up cycles _____ each

CT Unit #4
"normal" run time _____ hours
Start-up cycles _____ each

CT Unit #5
"normal" run time _____ hours
Start-up cycles _____ each

CT Unit #6
"normal" run time _____ hours
Start-up cycles _____ each

CT Unit #7
"normal" run time _____ hours
Start-up cycles _____ each

CT Unit #8
"normal" run time _____ hours
Start-up cycles _____ each

CT Unit #9
"normal" run time _____ hours
Start-up cycles _____ each

CT Unit #10
"normal" run time _____ hours
Start-up cycles _____ each

CT Unit #11
"normal" run time _____ hours
Start-up cycles _____ each

CT Unit #12
"normal" run time _____ hours
Start-up cycles _____ each

Compliance Requirements

Have the CT system (CT01-CT12) requirements been met as required in Section §4.A of this permit?
Yes _____ No _____

Have the emission limitations for CT01-CT12 been met as required in Section §4.B.2 of this permit?
Yes _____ No _____

Have the voluntary emission rate limitations for CT11-CT12 been met as required in Section §4.C of this permit?
Yes _____ No _____

Has the operating limit for CT11-CT12 been met as required in Section §4.D of this permit?
Yes _____ No _____

Have the NSPS Subpart limitations been met as required in Section §4.E of this permit?
Yes _____ No _____

Has the CO2 emission limitation for Subpart TTTT for CT11-CT12 been met as required in Section §4.F of this permit?
Yes _____ No _____

Were the recordkeeping requirements required in Section §6.G of this permit met? Yes _____ No _____

Generator Report

Operational hours of the emergency generator - _____ hours

Was the emergency generator operated and maintained in accordance with the operational limitations of §5.C.2?
Yes _____ No _____

Were the NESHAP monitoring and compliance requirements for the emergency generator met as required in section §6.F of this permit? Yes _____ No _____

Testing Report

Was the initial testing conducted for CT11-CT12 as required under Section §6.A of this permit?
Yes _____ No _____

If yes, please list the date of the test _____

Were subsequent tests conducted for CT01-CT12 as required under Section §6.B of this permit?

Yes _____ No _____

If yes, please list the date of the most recent test _____

Were the monitoring requirements listed in Section §6.C for the various pollutants met?

Yes _____ No _____

Emissions report

Emissions of nitrogen oxides - _____ tons

Emissions of carbon monoxide - _____ tons

Emissions of particulate matter (PM₁₀) - _____ tons

Emissions of volatile organic compounds - _____ tons

Emissions of sulfur dioxide - _____ tons

Certification by Responsible Official

I certify that, based on information and belief formed after reasonable inquiry, that the statements and information in this report are true, accurate and complete.

Signed _____

Printed Name _____

Title _____

Contact Phone Number _____

Date _____

Email to: compliancereports@pinal.gov, or

Mail to: Pinal County Air Quality Control District
P.O. Box 987
Florence, AZ 85132