

ARIZONA PUBLIC SERVICE COMPANY- RED ROCK

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1. Introduction

The permit pertains to an electrical power plant, 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 Saguaro Power Plant, is located at Mile Post Marker 228, I-10 in Section 15, Township 10S, Range 10E, Red Rock, Arizona. The source is situated in an area classified as attainment for all pollutants.

The source historically consisted of 5 electrical generating units, including 4 "grandfathered" generating units: 2 steam-electric units (Unit 1 & 2) nominally rated at 115 megawatt ("mW") and 105 mW, and two 55 mW Westinghouse W-501AA simple cycle gas turbine generators (CT1 & CT2). Those "grandfathered" generating units were installed between 1953 and 1973. As such, while those units fall subject to "existing source" performance standards, they antedate all applicable "new source" performance standards. Each steam unit included a boiler, steam turbine-generator, and associated equipment. Two cooling towers were used to supply cooled circulating water to the unit condensers. The 5th unit is CT3, a GE 7EA simple cycle combustion turbine rated at 80 mW.

This Revision, V20692.R01 authorizes the facility to install and operate Battery Energy Storage System (BESS) intended to expand on the existing solar photovoltaic (PV) system. The intended use of BESS to increase the availability of solar powered electricity produced by renewable energy and to provide a flexible response to the variable load requirements during peak demand to its consumers. Both the current Solar PV and the new BESS facilities are located adjacent to Saguaro Power Plant, and therefore incorporated under this permit as one facility. The only emission unit associated with the BESS facility is a 755 HP (578 kW) diesel emergency generator. The fugitive dust requirements would apply to the entire Saguaro Power Plant and the Solar BESS sites.

Revision V20649.R02 allowed for the replacement of both cooling tower units. The new cooling towers have less capacity than the original units resulting in less potential emissions. The replacement also did not trigger any additional monitoring or recordkeeping requirements.

Revision V20649.R01 removed the authority to operate the 2 steam-electric units (Steam Unit 1 and 2), removed the authority to burn fuel oil as an alternative operating scenario and removed the authority to operate an emergency generator. All the equipment involved in these changes was retired by the permittee.

The permit currently allows for the operation of three units, CT1, CT2 and CT3. The permit also allows for the installation and operation of fogging systems on CT1 and CT2 but APS has not done so to date.

For purposes of complying with the Acid Rain program, the Frame 7EA turbine must be equipped with CEMs for NO_x. For purposes of demonstrating continuous "synthetic minor" status, the permit requires that the Frame 7EA turbine be equipped with continuous emission monitors ("CEMs") for both NO_x and CO. NO_x will be monitored in accord with the EPA's Acid Rain requirements, and the permittee will be required to implement a CO CEMs system in accord with established NSPS standards. Since emissions will be directly monitored on the 7EA unit, the caps on NO_x and CO emissions are both set at 97.5% of the threshold provided that if subsequent testing shows that the NO_x and CO CEM's for the Frame 7EA unit cannot maintain the requisite precision, the "allowable" percentage will drop accordingly.

A complete list of equipment from which emissions are allowed by this permit is given in Section 11 of this permit.

All of the power generating units use only pipeline quality natural gas. Natural gas is delivered to the site by pipeline from El Paso Natural Gas Company.

Notwithstanding the historical operating patterns, this permit implicitly acknowledges the "grandfathered" character of the units discussed above, and the permit allows for unlimited operation of the "grandfathered" units.

Given the lack of permit-imposed constraints, the source constitutes a "major source" for NO_x within the meaning of CAA §302(j), which does trigger a requirement for an operating permit under CAA §501 *et seq.* The source also constitutes a "major emitting source" for NO_x within the meaning of 40 CFR §51.166, but since those emission units have not been modified or reconstructed, and the remaining equipment falls subject to "synthetic minor" limitations, the facility still enjoys "grandfathered" status with regard to the PSD permitting program.

2. Listing of Federally Enforceable Applicable Requirements

[Mandated by 40 CFR §70.5(c)(4)] (Code §§3-1-060.B.2.d, 3-1-081.A.2, 3-1-081.A.8.a)

- A. Those specific provisions of the Pinal-Gila Counties Air Quality Control District ("PGAQCD") 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 50531, 53034 (11/15/78), and specifically the following rules:
- | | |
|-----------|--|
| 4-2-040 | Fugitive Dust Standards |
| 7-3-1.3 | Emission Standards - Particulates - Open Burning |
| 7-3-1.7.A | Particulate Emissions - Fuel Burning Equipment |
| 7-3-1.7.C | Particulate Emissions - Fuel Burning Equipment |
| 7-3-1.7.D | Particulate Emissions - Fuel Burning Equipment |
| 7-3-1.7.E | Particulate Emissions - Fuel Burning Equipment |
| 7-3-2.2 | SO ₂ Emissions - Fuel Burning Installations |
| 7-3-4.1 | CO Emissions - Industrial |
- B. Those specific provisions of the Pinal-Gila Counties Air Quality Control District 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 – Performance Standards |
| 7-3-1.7.F | Fuel Burning Equipment |
- C. The New Source Performance Standard General Provisions, 40 CFR Part 60, Subpart A [40 CFR §§60.1 - 60.19 (1998)]; NSPS Standards of Performance for Stationary Gas Turbines, 40 CFR Part 60, Subpart GG [40 CFR §60.330 *et seq.* (7/1/00)].
- D. The Acid Rain Program, 40 CFR Part 72 (1998) and related regulations, Sulfur Dioxide Allowance System, 40 CFR Part 73 (1998) and Continuous Emission Monitoring, 40 CFR Part 75 (1998).
- E. 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.
- F. CAA §112(r) (11/15/90); 40 CFR Part 68 (1998); Chemical Accident Prevention Provisions.

- G. National Emissions Standards for Hazardous Air Pollutants, 40 CFR Part 63, Subpart YYYYY, Stationary Combustion Turbines [40 CFR §63.6080 - 6175].
- H. Asbestos NESHAP Compliance [40 CFR Part 61§§145, 148, 150. Subpart M]
- I. 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)

- J. Standards of Performance for Stationary Compression Ignition Internal Combustion Engines, 40 CFR 60, Subpart IIII [§§60.4202, 60.4205, 60.4207, 60.4211]

3. Compliance Certification

- A. Compliance Plan
[Mandated by 40 CFR §70.5(c)(8)] (Code §§3-1-081.C, 3-1-083.A.7)

Insofar as the Permittee is has certified that it is currently in compliance, the compliance plan consists of continued adherence to the requirements of this permit.

- B. Compliance Schedule
[Mandated by 40 CFR §§ 70.5(c)(8), 70.6(c)(3)] (Code §§3-1-060.B.1, 3-1-083.A.7.c)

Insofar as the Permittee is currently in compliance, no compliance schedule to attain compliance is required.

4. Authority to Construct

- A. Equipment Authorized - Grandfathered Equipment¹

The following equipment constitute “grandfathered” units that antedate both the “major” and “minor” new source review programs: Combustion Turbine 1 (CT1), Combustion Turbine 2 (CT2). Accordingly, this permit does not need to define or otherwise identify the "authority to construct" for those elements of the facility.

- B. Equipment Authorized Under Authority to Construct Provided by Prior Permit Transactions (Code §3-1-081)²

- 1. This permit acknowledges that authority to construct auxiliary turbine generators, consisting of five (5) General Electric TM2500 turbine generator units, was provided under permit revision A20501.R02 issued on April 6, 2001. The subsequent provisions

¹ Permit Revision V20649.R01 removed the authority to operate and associated references to “grandfathered” Steam Unit #1, Steam Unit #2, (3) heated oil tanks and (2) diesel tanks. The alternative operating scenario of burning fuel oil was also removed.

² The 5 GE TM2500 were replaced by the GE 7EA turbine (CT3) and are no longer on site. Permit renewal V20649.000 deleted all applicable requirements concerning the removed units, since the permit already contains specific applicable requirements for CT3.

of this permit include the relevant NSR and operating limitations of that Revision A20501.R02 as continuing applicable requirements.

2. Permit A20501.R02 authorizes installation of one (1) General Electric 7EA combustion turbine, with that installation authority subject to the corresponding installation and operating limitations set forth below in this permit.

C. Equipment Authorized Under Authority to Construct Provided by Prior Permit Transactions (Code §3-1-081)

Permit V20627.000 authorized the installation of inlet fogging systems for units CT1 and CT2. Each fogging system shall be equipped with a system that continuously records, or allows accurate determination of the inlet fogging systems running times.

D. Operational Limitation - CT1 and CT2 inlet fogging systems
[Federally enforceable provision, pursuant to Code §3-1-084 (8/11/94)] (Code §3-1-081.A)

- a. Permittee shall not operate the inlet fogging systems of units CT1 and CT2 more than 400 hours per calendar year total.
- b. Units CT1 and CT2 shall be equipped with a system to continuously record, or allow accurate determination of the inlet fogging systems running times.
- c. The inlet fogging systems shall only operate during natural gas combustion in the affected emission unit.
- d. To avoid an increase of CO emissions, the inlet fogging systems shall automatically shut off when the combustion turbine load drops below 50%.

E. Emission Cap - Frame 7EA Combustion Turbine

Emissions from the Frame 7EA combustion turbine generator shall not exceed the following NO_x and CO caps:

1. NO_x Cap
[Federally enforceable provision, pursuant to Code §3-1-084 (8/11/94)] (Code §3-1-081.A)

The NO_x cap shall be 39 tpy.

2. CO Cap
[Federally enforceable provision, pursuant to Code §3-1-084 (8/11/94)] (Code §3-1-081.A)

The CO cap shall initially be set at 97.5 tpy, but may be adjusted downward to reflect the lowest of the allowable emission rates defined below:

- a. Provided accuracy testing under 40 CFR Part 60, Appendix F shows that the CO CEMs maintain no more than 2.5% error, the allowable rolling 12-month

average of CO emissions that includes the date of the accuracy test shall not exceed 97.5 tpy.

- b. If accuracy testing under 40 CFR Part 60 shows that the CO CEMs maintain a maximum 5% error, the allowable rolling 12-month average of CO emissions that includes the date of that RATA test shall not exceed 95 tpy;
- c. If accuracy testing under 40 CFR Part 60 shows that the CO CEMs exceeds 5% error, the allowable rolling 12-month average of CO emissions that includes the date of that RATA test shall not exceed 90 tpy.

3. Averaging period

[Federally enforceable provision, pursuant to Code §3-1-084 (8/11/94)] (Code §3-1-081.A)

Compliance with all caps for the 7EA unit shall be assessed on the basis of an annual average, rolled monthly, on a calendar-month basis.

F. Other Frame 7EA Cap-Related Installation and Operating Limitations

1. Control Requirement

[Federally enforceable provision, pursuant to Code §3-1-084 (8/11/94)] (Code §3-1-081.A)

- a. The Frame 7EA combustion turbine shall be equipped with dry low-NO_x combustors, and may be equipped with an inlet fogging system configured to enhance power generation and increase power generation efficiency.
- b. The Frame 7EA combustion turbine shall be equipped with a system to continuously record, or allow accurate determination of the mass quantity of natural gas burned, the inlet temperature, the electrical power produced. Each of those parameters shall be recorded whenever the affected unit is operating.

2. Allowable fuels

[Federally enforceable provision, pursuant to Code §3-1-084 (8/11/94)] (Code §3-1-081.A)

The turbine units shall be operated only on pipeline-quality natural gas.

3. Acid Rain Requirements

Permittee shall comply with applicable SO₂, NO_x and CO₂ monitoring requirements under 40 CFR §75, implementing the Acid Rain provisions of the Clean Air Act.

4. Monitoring requirement - Demonstrating Emission Cap Compliance

- a. NO_x

For purposes of demonstrating compliance with the cap limitation under this permit, as well as complying with the requirements of 40 CFR Part 75, Permittee shall operate a continuous monitoring system, for measuring:

- i. nitrogen oxides emissions from the Frame 7EA combustion turbine;
- ii. either the oxygen or carbon dioxide content of flue gas from the turbine, with the measurement taken where the NO_x emissions are monitored.

Monitoring equipment under this permit subsection shall be installed, operated, and quality assured in accordance with the requirements of 40 CFR Part 75.

b. CO

For purposes of demonstrating compliance with the cap limitation under this permit, Permittee shall install a continuous CO monitoring 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 or where there are no run hours on the unit. Accuracy testing for the CO CEMs shall be conducted on the same cycle as required for the RATA testing of the NO_x CEMs.

c. Data Acquisition System Installation

Permittee shall operate a data acquisition system ("DAS"), configured to record data from the CEMs required under this permit subsection, and further configured to calculate emission rates of all CEMs-affected pollutants.

d. Fuel Monitoring

Permittee shall operate a system for monitoring and logging fuel consumption on the 7EA unit.

5. Emission Limitations

[Mandated by 40 CFR §70.6(a)(1)] (Code §3-1-081.A.2)

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

1. General Limitation

[Code § 3-1-0040 (as amended 10/12/95) approved as a SIP Element at 65 FR 79741 (12/20/2000)]

Permittee is authorized to discharge or cause to discharge into the atmosphere those emissions of air contaminants as set forth below. Unless exempted under Code §3-1-040.C., or authorized by a separate permit, by this permit or by a revision or operational change allowed 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 de minimis amount.

2. Insignificant Activities
(Code §§1-3-140.74a, 3-1-040.B.2.a.i, 3-1-050)

Apart from the authority of this permit, Permittee is authorized to discharge or cause to discharge into the atmosphere emissions from insignificant activities, as defined in Code §1-3-140.74a. Appendix B of this permit includes a non-limiting schedule of specific activities that the District concurs qualify for "insignificant" status.

C. Emission Limits

1. Limitation Standard on Emissions of Oxides of Nitrogen - All Generating Units
[PGAQCD Reg. 7-2-1.6 (3/31/75), approved by the Administrator as an element of the Arizona SIP at 43 FR 50531 (11/15/78)]

This limitation-disclaimer applies to emissions from the turbine generating units.

Provided the turbine units are properly maintained and operated, the permitting authority finds that even under worst-case conditions, the maximum combined potential to emit will not cause an ambient concentration of oxides of nitrogen outside of the boundaries of the facility that exceeds the applicable air quality standard of an annual average of 100 micrograms per cubic meter. Accordingly, no additional operating limits apply with respect to emissions of oxides of nitrogen.

2. NSPS Limitation Standard on Emissions of Nitrogen Oxides from the 7EA combustion turbine
[40 CFR 60.332(a)] (6-1-030)

No gases shall be discharged to the atmosphere from the combustion turbines which contain nitrogen oxides in excess of:

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

Where:

STD = allowable NO_x emissions (percent by volume at 15 percent oxygen and on a dry basis)

Y = manufacturer's rated heat rate at manufacturer's rated load.

F = NO_x emission allowance for fuel-bound nitrogen [defined in 40 CFR 60.332(a)(3)]

- 3. NSPS Limitation Standard on Emissions of Sulfur Dioxide from the 7EA combustion turbine
[40 CFR 60.333(a)]
 - a. No gases shall be discharged to the atmosphere from the combustion turbine which contains sulfur dioxide in excess of 0.015 percent by volume at 15 percent oxygen and on a dry basis.
 - b. No fuel shall be burned in the combustion turbine which contains sulfur in excess of 0.8 percent by weight.
- 4. NSPS Standards - Stationary Compression Ignition (CI) and Internal Combustion Engines **[Currently federally enforceable; 40 CFR §60.4202.(a).(2), §60.4205.(b)]** – 755 HP Emergency Generator

a. Generator Emissions Standards

Owners and operators of 2007 model year and later emergency stationary CI ICE with a displacement of less than 30 liters per cylinder shall comply with the following emission standards:

| Unit | Mfg. Date | Displacement (l) | NMHC + NOX g/kw-hr | CO g/kw-hr | PM g/kw-hr |
|---|-----------|------------------|--------------------|------------|------------|
| Kohler 578 kW (755 HP) Emergency Diesel Generator | 2007+ | 2.3 | 6.4 | 3.5 | 0.20 |

b. Generator Smoke Standards **[Federally enforceable provision, pursuant to 40 CFR §60.4202.(a)(2), §60.4205(b)]** – 755 HP Emergency Generator

Smoke from the engines may not exceed the following standards:

- 20 percent during the acceleration mode
- 15 percent during the lugging mode; and
- 50 percent during the peaks in either acceleration or lugging modes

D. Fuel Use Limitations - All Generating Units

1. Primary Fuel

Permittee is allowed to burn only pipeline quality natural gas as the primary fuel in any of the generating units.

2. Other Fuels

(Code §§3-1-081.G, 5-23-1010.F)

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) in the combustion turbines

3. Primary Fuel for the CI Engines, Subpart IIII [40 CFR §60.4207(b)]

Permittee shall only use diesel fuel for the generators and fire pump engines meeting the requirements of 40 CFR §1090.305, which requires that diesel fuel shall:

- a. Have a maximum sulfur content of 15 parts per million (ppm);
- b. Either a minimum cetane index of 40 or a maximum aromatic content of 35.

E. Standards of Performance for Stationary Rotating Machinery (Emergency Generator)
(Code §5-23-1010 and Code §5-23-1015)

1. For equipment having a heat input rate of 4200 million Btu/hr. or less, the maximum allowable emissions shall be determined by the following equation:

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

Where: E = the maximum allowable particulate emissions rate in pounds-mass per hour
Q = the total heat input of all operating fuel burning units on a plant premises in million btu/hr

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

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

Where: E = the maximum allowable particulate emissions rate in pounds-mass per hour
Q = the total heat input of all operating fuel burning units on a plant premises in million btu/hr

3. For references purposes only, the actual values shall be calculated from the applicable equations and rounded off to two decimal places.
4. No person shall cause, allow or permit to be emitted into the atmosphere from any stationary rotating machinery, smoke for any period greater than 10 consecutive seconds which exceeds 40% opacity. Visible emissions when starting cold equipment shall be exempt from this requirement for the first 10 minutes.
5. When low sulfur oil is fired, stationary rotating machinery installations shall burn fuel which limits the emission of sulfur dioxide to 1.0 pound per million Btu heat input.
6. Engines which are used for emergency power generator or for fire-suppression water pumps shall be exempt from the requirements of Code §5-23-1010 if they are no larger than 325 horsepower and are used less than 72 hours per year.

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

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

1. Vacuum collection system.
2. Confined blasting.
3. Wet abrasive blasting.
4. Hydroblasting.
5. Non-dusting abrasive system such as copper reverb slag. Prior to using such a system, the Permittee shall demonstrate that the opacity will be maintained below 40 percent.

G. Opacity Limits - Plant Wide

1. SIP Limitation
[Federally enforceable pursuant to PGAQCD Reg. 7-3-1.1 (6/16/80) approved as a SIP Element at 47 FR 15580 (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 PCAQCD Code §2-8-300 (as amended 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.

H. Mass Emissions Limitations - All Generating Equipment

1. SIP Limitation #1
[PGCAQCD Reg. 7-3-1.7 (3/31/75) approved as a SIP element at 47 FR 15579 (4/12/82)]

For equipment with a heat input capacity of less than 4,000 million Btu per hour, particulate emissions shall not exceed:
 $E = 1.02X^{-.231}$, 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
(§§5-21-930, 5-23-1010)

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

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

I. Particulate Matter Reasonable Precautions

[Currently federally enforceable pursuant to Code §4-2-040 (6/29/93) approved as a SIP element at 72 FR 41896 (8/1/07)]

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.

J. General Maintenance Obligation - Plant Wide
(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 equipment in a manner consistent with good air pollution control practice for minimizing emissions.

K. Additional Applicable Limitations - Plant Wide

1. Asbestos NESHAP Compliance
[40 CFR Part 61, Subpart M] (Code §§7-1-030.A.8, 7-1-060)

Permittee shall comply with Code §§7-1-030.A.8 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
[40 CFR Part 82 Subpart F] (Code §§1-3-140.15, 1-3-140.58.k)

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

3. Use of Paints

a. 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.

b. 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.

c. 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.

4. 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:

- i. Rapid cure cutback asphalt;
- ii. 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.
- iii. 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.

L. Acid Rain Program Requirements - Combustion Turbine
[40 CFR Parts 72, 73, 75 and 76] (Code §3-6-565)

1. Affected Units

For purposes of the continuous emission monitoring and reporting requirements under the Acid Rain program, the Frame 7EA combustion turbine constitutes an "affected unit" and shall be known as "CT3."

- 2. The Acid Rain Phase II Permit application and Certificate of Representation signed by the Designated Representative shall constitute the basis of the Acid Rain Permit element of this permit.
- 3. The Permittee shall comply with the Acid Rain requirements listed in 40 CFR Parts 72, 73 and 75, and any additional requirements listed within this permit. At a minimum, compliance with 40 CFR Part 75 shall include installation and operation of monitoring equipment and/or maintenance of recordkeeping as required under 40 CFR §§75.10, 75.11 and 75.12.
- 4. The Permittee shall hold SO₂ allowances as of the allowance transfer deadline in each compliance subaccount not less than the total annual actual emissions of SO₂ for the previous calendar year as required by the Acid Rain Program. In calculating those allowances, Permittee may utilize SO₂ Allowance Allocations for the respective units, as follows:

| Affected Unit ³ | Pollutant | Years 2000 ≥ 2009 | Years 2010 and thereafter |
|----------------------------|-----------------|-------------------|---------------------------|
| CT3 | SO ₂ | n/a | n/a |

- * Affected unit CT3 refers to the 7EA combustion turbine
- * N/A means no allocations are available for the unit, and allowances must be obtained elsewhere
- * None of the affected units at this facility is subject to a NO_x emission limitation under 40 CFR Part 76.

6. Compliance Demonstration
[Mandated by 40 CFR §70.6(c)] (Code §§3-1-060.b.2.d, 3-1-081.A.2, 3-1-083)

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

³ Affected Steam Unit #1 and Steam Unit #2 that had allocated allowances were decommissioned and removed from the permit via revision V20649.R01

Monitoring requirements here supplement and expand upon any emission-unit-specific monitoring requirements imposed as applicable requirements under the "Authority to Construct" provisions of this permit, or separately defined below with respect to specific emission units.

1. Non-instrumental Emissions Monitoring - Oxides of Nitrogen, Sulfur Dioxide, PM₁₀

a. Affected units

The W-501AA turbine generators shall comply with these monitoring requirements.

b. General Requirement

As a surrogate measurement for monitoring emissions of oxides of nitrogen and PM₁₀, Permittee shall maintain records of the type and quantity of fuel usage in the turbines, as well as the quantity of power produced when combusting those respective fuels. PM₁₀ emissions shall be calculated on the basis of that fuel consumption data, and calculated emission rates shall reflect both filterable and condensable fractions.

As long as the capacity utilization factor for any specific emission unit stays below 10% when combusting exclusively primary fuel, natural gas, over the preceding 12-month period, then for purposes of monitoring emissions for emission inventory reporting, Permittee may rely upon manufacturer's data or AP-42 emission factors. Quantification of emissions based on AP-42 emission factors shall utilize the latest version and supplement of AP-42.

c. Conditional Performance Test Requirement

If a specific emission unit reaches or exceeds a 10% capacity utilization factor, then Permittee shall conduct a performance test for NO_x and PM₁₀. The test(s) shall be conducted within 90 days of triggering the testing requirement, or such longer period as the Control Officer may allow upon a showing of cause. The test(s) shall conform to the requirements set forth elsewhere in this permit, and that test-derived data shall be used for purposes of subsequent emission reporting. Performance testing triggered under this subparagraph need only be conducted once during the life of this permit.

d. Fogging System Hours of Operation

Permittee shall keep records of the hours of operation of the inlet fogging systems for both CT1 and CT2.

2. Non-instrumental Emissions Monitoring - Particulate Matter

As a surrogate measurement for monitoring emissions of particulate matter, Permittee shall maintain records of water flowrate in the cooling towers.

3. Non-instrumental Emissions Monitoring – Nitrogen Oxides

Permittee shall maintain records of the operational hours of the emergency generator.

4. Non-instrumental Emissions Monitoring - Sulfur Dioxide

a. Primary Fuel - Plant Wide

i. Elective Acid Rain Monitoring Protocol

When combusting primary fuel, namely pipeline quality natural gas, and Permittee maintains either a contractual commitment or a copy of a relevant FERC tariff showing that the hydrogen sulfide content of the natural gas is 1 grain/100 scf or less, and that total sulfur content is 20 grain/100 scf or less, then Permittee may quantify SO₂ emissions based upon hourly heat input rate in mmBtu/hr. and a default SO₂ emission rate of 0.0006 lb/mmBtu.

ii. Alternative Physical Monitoring Protocol

Alternatively, Permittee may sample fuel on an on-going basis in accordance with 40 CFR Part 75, Appendix D, 2.3 to quantify fuel sulfur content, and may utilize that value and a mass balance to calculate daily SO₂ emissions.

iii. Permittee shall maintain records of the verification from the fuel supplier that diesel fuel for the emergency generator does not contain more than 15 ppm sulfur by weight.

5. Opacity Monitoring
[Code §3-3-260.]

a. Stack Emissions

i. General Requirement When Combusting Primary Fuel

On at least a semi-annual basis, Permittee shall conduct a visual opacity screen performed on each process and fuel-burning exhaust stack for that emission unit. The individual conducting the opacity screen need not be a certified opacity observer, and the screening need not conform to any EPA reference method. 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. Submission of a report showing an exceedance of the opacity limitation set forth in this permit shall constitute cause to reopen this permit to add additional testing and/or control requirements.

b. Open-area Fugitive Emissions

On at least a semi-annual basis, Permittee shall conduct a visual opacity screen performed on the open areas of the facility. The individual conducting the

opacity screen need not be a certified opacity observer, and the screening need not conform to any EPA reference method. If visible emissions are observed, Permittee shall have a full Method 9 opacity test performed by a certified opacity observer within 48 hours after the screen, and shall provide a copy of the resulting report, along with any possible explanation for the event, to the District within 10 days. Submission of such a report may constitute cause to reopen this permit to add additional testing and/or control requirements.

B. Monitoring Compliance with Emission Caps - Frame 7EA Combustion Turbine
[Federally enforceable provision, pursuant to Code §3-1-084 (8/11/94)] (Code §3-1-081.A)

1. CEMs Monitoring System Requirement

a. General

In order to quantify emissions from the Frame 7EA combustion turbine unit, permittee shall quantify and monitor emissions to show compliance. The NO_x and CO emissions shall be quantified on the basis of the CEMs required elsewhere under this permit.

b. NO_x CEMs Evaluations

Permittee shall conduct an 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.

c. CO CEMs Evaluations

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.

2. Requirement to quantify emissions and demonstrate compliance with cap-limitations
[Federally enforceable provision, pursuant to Code §3-1-084 (8/11/94)] (Code §3-1-083)

a. General Requirement

Permittee shall monitor and record daily emissions of NO_x and CO from the Frame 7EA combustion turbine, shall total and record those daily emissions on a calendar-month basis, and shall maintain and record a rolling annual average of emissions, rolled on a calendar-month basis. In the event that CO CEMs data is

unavailable due to monitoring equipment malfunction, permittee may use Part 75 data substitution methodology to define the missing data.

- b. Bias test and adjustment factor for NO_x RATA data sets **[40 CFR Part 75 Appendix A, 7.6]**

Perform a bias test in accordance with 40 CFR Part 75, Appendix A, 7.6. Each time a RATA is passed and the appropriate bias adjustment factor has been determined, apply the BAF prospectively to all monitoring system data, beginning with the first clock hour following the hour in which the RATA was completed.

- C. Monitoring Compliance - CT1 and CT2
[Federally enforceable provision, pursuant to Code §3-1-084 (8/11/94)] (Code §3-1-081.A.3)

1. Without foggers

At least 60 days before the installation of the foggers in CT1 and CT2, Permittee shall conduct performance tests on either CT1 or CT2 to determine NO_x and CO emissions following the General Testing Requirements of this permit. Testing shall be conducted at full load and during natural gas combustion.

2. With foggers

Within 60 days after the installation of the foggers in CT1 and CT2, Permittee shall conduct performance tests on the same unit as in the previous section, while the foggers are in operations, to determine the NO_x and CO emissions, also following the General Testing Requirements of this permit. Tests shall be conducted under the same conditions as the tests without the foggers, and the testing report shall include the NO_x and CO emissions both “with” the foggers in service and “without” the foggers in service.

- D. Acid Rain Compliance
[Mandated by 40 CFR Parts 72 and 76]

1. SO₂ Allowance-limited Affected Units
[40 CFR Part 75] (Code §3-6-565)

For affected unit defined above as CT3, permittee shall monitor SO₂, NO_x and CO₂ emissions in accord with the requirements of 40 CFR Part 75. At a minimum, monitoring and corresponding records required under this subsection shall conform to the requirements of 40 CFR §§75.10, 75.11 and 75.12.

- E. NSPS Compliance - 7EA Combustion Turbine
[Mandated by 40 CFR §70.6(a)(3)]

1. NSPS Performance Tests
[40 CFR §§60.8 and 60.335, Code §§3-1-160 & 3-1-170)

- a. Since the Permittee conducted the initial test required under either 40 CFR Part 60, Subpart A and Subpart GG and in consideration of the operation of NO_x CEMs, additional NSPS performance tests will not be required for an affected unit equipped with such CEMs, unless the Control Officer elects to impose such an additional testing requirement.

2. SO₂ Limitation Compliance - Parametric emissions monitoring - sulfur dioxide [Code §3-3-260.G.]

As a surrogate measurement for monitoring emissions of sulfur dioxide from an affected unit, Permittee shall maintain daily records reflecting total fuel consumption in each combustion turbine 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, to calculate and report SO₂ emissions. Permittee shall determine fuel sulfur content either by:

- a. Sampling the gaseous fuel on an on-going basis in accordance with 40 CFR Part 75, Appendix D, 2.3 ; or
- b. Maintaining a contractual commitment from 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, in which case Permittee shall be entitled to use a presumptive maximum SO₂ emission rate of 0.0006 lb/mmBtu for purposes of demonstrating compliance with this permit.

F. Emission Testing - General Requirements
[Mandated by 40 CFR §70.6(a)(3)]

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

To the extent this permit requires tests, for purposes of preparing emission inventory data or otherwise, and specific test methods are not defined elsewhere, 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. Any continuous monitoring systems required for purposes of demonstrating compliance with an emission cap shall be in place and operating prior to conducting the performance tests. CEMs required for other purposes may be installed in accord with the schedule allowed by the underlying applicable requirement. Relevant test methods include, but are not limited to:

- a. Nitrogen oxides emissions -Ref. Part 60, App. A, Ref. Method 7e
- 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 Method 201A
- d. Particulate matter emissions - condensable PM₁₀ - Ref. Part 60, App. A, Ref. Method 202
- e. Volatile organic compound emissions - Ref. Part 60, App. A, Ref. Method 25a
- f. Opacity - Ref. Part 60, App. A, Ref. Method 9, 40 CFR §60.11

2. Performance Test Protocols

A test plan protocol for each test shall be submitted to the District at least thirty (30) days before the testing.

3. Performance Test Notices

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

4. Test Reports

A copy of each test report shall be submitted to the District for approval within forty-five days after the test. The test report shall include any relevant information required under this permit.

5. Subsequent Performance Testing
(Code §3-1-050)

In addition to such on-going testing as may be required below as monitoring, the Control Officer may order additional testing pursuant to Code §3-1-050.

G. Generator Compliance Requirements

[Federally enforceable provision, pursuant to 40 CFR § 60.4211(a) and (f)]

- a. Permittee shall operate and maintain each stationary compression ignition ICE and control device according to the manufacturer's emission-related written instructions.
- b. Permittee shall change only those emission-related settings that are permitted by the manufacturer.
- c. There is no time limit on the use of emergency stationary ICE in emergency situations.
- d. Emergency stationary ICE may be operated for a maximum of 100 hours per calendar year for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine.
- e. Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing.
- f. The 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

H. Recordkeeping

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

1. Permittee shall maintain at the source, a file of all measurements, including monitoring-system-, monitoring-device-, and performance- testing measurements; all monitoring system performance evaluations; all 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 hours of operation of #1, #2, and #3 Combustion Turbines and of #1 and #2 Cooling towers in a permanent logbook for inclusion in the semi-annual report.
3. Permittee shall maintain records of the occurrence and duration of any start-up, shutdown or malfunction in the operation of the permitted facility or any air pollution control equipment.
4. All information required pursuant to any federally enforceable provision of this permit, recorded in a permanent form suitable for inspection.

I. Semi-Annual Compliance Reporting***[Mandated by 40 CFR §§70.6(a)(3) and 70.6(c)(4)]*** (Code §3-1-083.A)

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. The report shall be submitted to the District within 30 days after the end of each calendar half.

J. 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 a certification of compliance with the provisions of this permit to the Control Officer, and also 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, namely the president, secretary, treasurer or vice-president of the corporation, the director of fossil generation, the plant manager, 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. Supplemental Upset Reports
[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 the deviation unless earlier notification is required by the provisions of this permit.

- B. Reconstruction Reporting
[40 CFR Part 60, Subpart A, Code §6-1-030.1 and a delegation from the EPA Administrator dated 2/24/93].

If the Permittee proposes to replace components of the turbine units, such that the capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable entirely new unit, the Permittee shall notify the District of the proposed replacements. The notice shall be postmarked 60 days (or as soon as practicable) before construction is commenced, and must include the information required under 40 CFR §60.15(d) (1993).

- C. NSPS Notification
[40 CFR Part 60, Subpart A]

Permittee shall provide notifications required by 40 CFR Part 60, Subpart A, pertaining to installation of, modification of, or a change in the method of operation of NSPS-affected units in a manner that will cause an increase in emissions of a regulated pollutant.

8. Fee Payment
[Mandated by 40 CFR §§70.6(a)(7), 70.9] (Code §3-1-081.A.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, measured 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.
3. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

C. Duty to Supplement Application

[Mandated by 40 CFR §§70.5(b), 70.6(a)(6)(v)] (Code §3-1-081.A.8.e.)

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 aware 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 §§ 3-1-083.A.6, 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;
3. to sample emissions from the source.
4. to have access to and copy, at reasonable times, any records that are required to be kept under the terms of this permit; and
5. to record any inspection by use of written, electronic, magnetic and photographic media.

E. Transfer of Ownership

[Mandated by 40 CFR §70.7(d)(4)] (Code §3-1-090)

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. Application Certification
[Mandated by 40 CFR §70.5(d)] (Code §§ 3-1-050. & 3-1-070.)

All representations with regard to construction plans, operating parameters, and operational procedures in the application for the permit are conditions upon which this permit is issued. Except as provided in Code §3-2-180, any variance from such representation if the change will cause a change in the method of control of emissions, the emission of any new regulated air pollutant in excess of the 5.5 pound-per-day *de minimis* amount defined in Code §1-3-140.37, or will result in an increase in the discharge of regulated air pollutants will be considered a violation of this permit unless the Permittee first applies for a permit, permit revision, or permit amendment, or provides advance notification of the change to the extent required by Code Chapter 3, Article 2.

I. Renewal of Permit
[Mandated by 40 CFR §§70.5(a)(1)(iii), 70.7(c)] (Code §3-1-050.C.2)

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)] (Code §3-1-081.A.7)

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.)

1. Generally

Subject to the following schedule of exclusions, compliance with the terms of this permit shall be deemed compliance with any applicable requirement identified in §2 of this permit. The permit-shield exclusions include:

- a. PGCAQCD Rule §7-3-1.3 Open Burning;
- b. PGCAQCD Rule §7-3-4.1 Industrial – Carbon Monoxide Emissions
- c. 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, specifically Code §3-1-081.A.8.c)

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. Should this source become subject to a standard promulgated by the Administrator pursuant to CAA §112(d), then Permittee shall, within twelve months of the date on which the standard is promulgated, submit an application for a permit revision demonstrating how the source will comply with the standard. (Code §3-1-050.C.5)
5. Revision to Permit Provisions Designated as Federally Enforceable Pursuant to Code §3-1-084 ***[Federally enforceable provision, pursuant to Code §3-1-084 (8/11/94)]***

As an express condition of preserving the federal enforceability of any provision of this permit designated "federally enforceable" pursuant to Code §3-1-084, Permittee shall not make any facility allowed change that would contravene such provision, until thirty (30) days after the Permittee has previously furnished notice of the proposed change to the District and to the Administrator, to thereby allow the Administrator opportunity to comment upon the continued "federal enforceability" of the subject provision after the proposed change.

M. Permit Re-opening

[Mandated by 40 CFR §§70.6(a)(6)(iii), 70.7(f), 70.7(g)] (Code §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. 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.A.8.d)

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

P. Excess Emission Reports: Emergency Provision
[Mandated by 40 CFR §70.6(g)] (Code §3-1-081.E, 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.
- 2. An "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.
- 3. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions of the following subparagraph are met.
- 4. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - a. An emergency occurred and that the permittee can identify the cause(s) of the emergency;

- b. The permitted facility was at the time being properly operated;
- c. During the period of emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and
- d. The permittee submitted notice of the emergency to the Control Officer by certified mail or hand delivery within 2 working days of the time when emissions limitations were exceeded due to emergency. The notice shall contain a description of the emergency, any steps taken to mitigate emissions, and corrective action taken.

Q. Emission Inventory
(Code §3-1-103)

Permittee shall annually prepare and submit an emission inventory of actual emissions. In order of preference, the inventory shall be based on:

- 1. CEMs data where available;
- 2. Mass balance analysis based on fuel testing for sulfur;
- 3. SO₂ quantification conventions allowed under 40 CFR Part 75, Appendix D;
- 4. Parametric monitoring of fuel or other throughput parameters, coupled with AP-42 emission factors, based on the latest edition and supplement for AP-42;
- 5. Parametric monitoring of fuel or other throughput parameters, coupled with performance test data for the emission unit in question;
- 6. Other rational analysis.

10. Additional provisions applicable to Title V Sources
(Code §3-1-081.B.2)

Subject to the following specific exclusions, all terms and conditions of this permit are enforceable by the Administrator and citizens under the Clean Air Act. The exclusions include:

- A. Section 1. Introduction
- B. Section 4. Authority to Construct
- C. Section 5.B. Emission Limitation - NO_x Emission Concentration
- D. Section 5.C.3. Current Code Limitation (§5-23-1010)
- E. Section 5.D. Fuel Use Limitations
- F. Section 9.F. Posting of Permit

G. Section 12. Emission Inventory Table

11. Equipment Schedule
[Mandated by 40 CFR §70.5(c)(3)(iii)] (Code §3-1-040.A)

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

| ID# | Equipment | Manufacturer | Serial Number | Capacity |
|------------------------|--|-----------------------|-------------------|-----------|
| Cooling Tower 1 | Cooling Tower Installed in 2014 | Marley Cross Flow SPX | | 1,500 gpm |
| | Associated Equipment | | | |
| Cooling Tower 2 | Cooling Tower Installed in 2014 | Marley Cross Flow SPX | | 1,500 gpm |
| | Associated Equipment | | | |
| CT1 | Combustion Turbine (installed 1/72) w/inlet fogging system (not installed) | | | 54.50 MW |
| | Combustion Turbine | Westinghouse W-501-AA | 17A5042/1S-79P708 | |
| | Associated Equipment | | | |
| CT2 | Combustion Turbine (installed 2/72) w/inlet fogging system (not installed) | | | 54.50 MW |
| | Combustion Turbine | Westinghouse W-501-AA | 17A5056/1S-80P514 | |
| | Associated Equipment | | | |
| CT3 | Combustion Turbine w/ inlet fogging system- Installed 8/02 | | | 80 MW |
| | Combustion Turbine | General Electric #7EA | 297976/336X922 | |
| | Associated Equipment | | | |
| Other | Admin. Building - Boiler | | | |
| | Sand Blasting Equipment | | | |
| | Air Atomization Spray Gun and Hand Painting | | | |

| | | | | |
|--|---|--------|--------------------------|--------------------|
| | Emergency Diesel Generator | Kohler | John Deere 6135HFG75A | 755 HP (578 kW) |
| | Solar Photovoltaic (PV) System | | | |
| | Battery Energy Storage System (BESS) | | | |

Associated Equipment: One or more of the following systems:

- a. lube oil systems;
- b. fuel delivery systems
- c. water treatment systems;
- d. water supply systems;
- e. service/instrument air system.

Appendix A:

Semi-annual Report

Permit V20692.R01

Abstract

This constitutes an outline of semi-annual report regarding required monitoring, documenting emissions during the subject reporting period. This constitutes a guide only, and is not meant to in any way absolve the permittee of the full burden of the reporting requirements defined in the permit.

Reporting Period - January-June __ July-December __ Year_____

Facility - Arizona Public Service Company
Saguaro Power Plant
Mile Post Marker 228, I-10, T10S, R10E, Sec 14 & 15, Red Rock, Arizona

Fuel Consumption Report

Natural gas burned during reporting period..... _____ therms

Operations Report

Turbine #1 run time _____ hours

Fogging system run time _____ hours

Turbine #2 run time _____ hours

Fogging system run time _____ hours

Frame 7EA Unit run time _____ hours

Emergency Generator Report

Operational hours of the emergency generator - _____ hours

Compliance Report

Frame 7EA Cap Compliance

- Do the records required under §6.B.2, quantifying emissions in accord with §4.F.4 show compliance with the NO_x and CO cap limits as listed in §4.E? Yes_____ No_____
- Did the CO RATA testing under §4.F.4.b result in a reduction of the nominal CO cap as described in §4.E.2? Yes_____ No_____

Other Emission Units and General Issues

- Did any of the W501-AA combustion turbines trigger a performance test requirement under §6.A.1.c? Yes_____ No_____

- Were the opacity screenings required under §6.A.5.a.i performed on all generating units?
Yes_____ No_____
- Were the open area opacity screenings required under §6.A.5.b performed?
Yes_____ No_____
- Were the NSPS-driven auxiliary turbine fuel sulfur monitoring requirements under §6.E.2. met?
Yes_____ No_____
- Were records required under §6.H (generic recordkeeping) been maintained?
Yes_____ No_____
- Did the purchased emergency generator meet the requirements of emission standards as specified in Section §5.C.4 of this permit?
Yes_____ No_____
- Were the record hours of operation for the emergency generator under the limits listed in Section §6.G of this permit maintained? (100 hours maintenance / 50 hours non-emergency)
Yes_____ No_____

Other issues

- On a separate sheet, describe and explain any monitoring activity or recordkeeping that occurred with respect to the Asbestos NESHAP or Stratospheric Ozone requirements respectively defined in §§5.K.1 and 5.K.2 of the permit during the reporting period.
Is such a supplemental disclosure attached? Yes_____ No_____
- On a separate sheet, describe and explain any previously un-reported deviations from the terms of this permit.
Is such a supplemental disclosure attached? Yes_____ No_____

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

Appendix B: Insignificant Activities**A. General information**

(Code §§ 1-3-140.74A, 3-1-050, & 3-3-081)

1. An insignificant is one which accounts for less than 1 percent of a source's emissions of conventional air pollutants or generates less than 200 pounds per year of regulated air pollutants. Additionally, an activity specifically listed as such in the Code is insignificant.
2. Permit application need not provide emissions data regarding insignificant activities and such activities need not be listed in the permit. Insignificant activities need only be listed in the permit application.

B. Non-exclusive list of insignificant activities.

Activities which may generate emissions in insignificant amounts include but are not limited to the following:

1. Short term maintenance activities including but not limited to:
 - a. Abrasive blasting
 - b. Painting
 - c. Solvent use
 - d. Steam cleaning
 - e. Equipment removal and replacement
 - f. Welding, brazing, and soldering operations
2. Operation of Oil/Water Systems/Scrubber Liquid Systems
3. Operation of cooling water, plant water, wastewater, and other water systems.
4. Emissions from testing and sampling.
5. Emissions from oil systems and tanks.
6. Cathodic Protection System
7. Storage of chemicals and fuels
8. Operation of battery systems
9. 500 gallon automotive diesel storage tank