

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. 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.

This Revision V20690.R01 authorizes 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:

- 7-3-1.2 Emission Standards - Particulate Emissions - Fugitive Dust
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:
- 7-3-1.1 Visible Emissions; General
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. Those specific provisions of the PCAQCD Regulations, as last amended by the Pinal County Board of Supervisors on May 18, 2005, and approved by the Administrator as elements of the Arizona SIP at 71 FR 15043 (3/27/06), specifically, the following rule:
§2-8-300 (Opacity) Performance Standards
- J. National Emissions Standards for Hazardous Air Pollutants, 40 CFR Part 63, Subpart ZZZZ, Internal Combustion Engines [40 CFR §63.6080 - 6175].

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
 (Code §3-3-250.A.1)

1. Each CT unit shall:
 - a. incorporate a system for the reduction of NO_x, which shall consist of a system for the selective catalytic reduction of NO_x, including ammonia injection and a catalyst system that will meet the operational limitations of this permit;
 - b. incorporate a system for the reduction of CO, which shall consist of a system for the catalytic oxidation of CO that will meet 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 monitoring systems 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
(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 systems during CT operations any gases which:

1. contain nitrogen oxides emissions in excess of 5.0 ppmvd corrected to 15 percent oxygen, based on a rolling, accumulating 3-operating hour average.
2. 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:
 - i. 15.0 ppmvd below 59°F.; and
 - ii. 7.5 ppmvd at or above 59°F.
3. contain PM₁₀ 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.

b. CT Start-up and Warm-up Limitations and Requirements

1. 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.

2. 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.
3. 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

1. 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.
2. 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
3. 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. Timing and Progress of Construction
(Code §3-3-210.4)

This permit shall be subject to termination if the proposed construction on the first phase (up to ten turbines) has not begun within 18 months of permit issuance, or if during the construction work for the first phase is suspended for more than 18 months. The second phase of construction for turbines authorized by this permit may commence at any time during the term of this permit. However, for any turbine units that are not under construction within 18 months of the issuance of this permit, then prior to commencing construction on that second phase, the Permittee will need to first obtain a prior significant revision to this permit in order to revisit the BACT determination for those additional turbines.

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
[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;

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.

- b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and
- 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 §4-1-030 (10/28/15) approved as a SIP element at 82 FR 20267 (5/1/17)]

1. Permittee shall not cause or allow visible fugitive dust emissions from open areas / vacant lots (areas not currently utilized for an activity) to exceed 20% opacity based on EPA Method 9 or the continuous plume or intermittent plume methods listed in PCAQCD Code §4-9-340.
2. Permittee shall erect barriers or no trespassing signs upon evidence of trespass on open areas / vacant lots.
3. Permittee shall stabilize any open area / vacant lot greater than 1.0 acre that has 0.5 acre or more of disturbed surface and sign up for the Pinal County Dust Control forecast within 30 days of discovery. The open area / vacant lot shall be stabilized the day leading up to and the day that is forecast to be high risk for dust emissions.
4. Permittee shall not remove vegetation from open areas / vacant lots without applying dust suppressants before and during the weed abatement. Trackout onto paved surfaces must be prevented or eliminated and dust suppressants must be applied following weed abatement to stabilize the entire surface.
5. Stabilization of open areas / vacant lots is determined by the drop ball, threshold friction velocity, flat vegetation or standing vegetation methods listed in PCAQCD Code 4-9-320.
6. Permittee shall not cause or allow visible fugitive dust emissions from unpaved lots (areas being utilized for an activity) greater than 5000 square feet to exceed 20% opacity based on EPA Method 9 or the continuous plume or intermittent plume methods listed in PCAQCD Code §4-9-340.

7. Permittee shall not allow silt loading equal to or greater than 0.33 oz/ft² or allow the silt content to exceed 8% on unpaved lots greater than 5000 square feet.
8. Permittee shall stabilize unpaved lots greater than 5000 square feet by paving, applying a dust suppressant or graveling.
9. Permittee shall clean up trackout on a paved public roadway that exceeds 50 feet within 24 hours of discovery and limit opacity to 20% or less while using a rotary brush or broom.
10. Permittee shall make a record of the control measures applied.

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:
 - 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.
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. Testing
[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 five 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

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.

B. 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 CT discharged to the atmosphere.
- b. either the oxygen or carbon dioxide content of flue gas from each of the CT 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.

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 emission 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.

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.]

As a surrogate for monitoring actual emissions, Permittee shall periodically calculate the quantity of VOC emissions on a basis adequate to comply with the reporting requirements under this permit, by multiplying the aggregate fuel flows/heat input by the corresponding VOC emission factors defined in an approved performance test, or otherwise defined in this permit.

5. Parametric Emissions Monitoring - Particulate Matter
[Code §3-3-260.G.]

- a. As a surrogate for monitoring actual PM₁₀ emissions, Permittee shall periodically calculate the quantity of PM₁₀ emissions, by multiplying the aggregate fuel flows/heat input by the corresponding PM₁₀ emission factors defined in an approved performance test, or otherwise defined in this permit.
- b. 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

- b. 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. 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 5.1.2 of this permit.

8. 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.

9. 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.

10. 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.

11. 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.

C. 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 year 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.

D. 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; and
 - c. CT run times.
 - d. The number of start-up and shut-down cycles for each CT unit.
 - e. For the generator, the records shall specify how many hours were spent for emergency operations and non-emergency purposes, and if the generator was used for demand response, the records shall include a description of the emergency situation, and the time the engine was operated as part of the demand response.

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. 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.

5. 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.

E. 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.

F. 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; 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.

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. 10 Combustion turbines, General Electric LM6000 SPRINT, natural gas fired, 446 mmbtu/hr each - high heating value, equipped with CEMs, oxidation catalyst and selective catalytic reduction (SCR).
2. Clean-O-Matic Solvent tank, 85 gal
3. Clarke Fire water pump powered by a John Deere, 183 horsepower, diesel fired engine, manufactured in October 2001
4. 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.R01**

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

Emergency Generator run time (starting May 3, 2013)..... _____ emergency hours
_____ non-emergency Hours

Was the emergency generator operated and maintained in accordance with the operational limitations of §5.C.2? YES / NO

Pursuant to §5.H were records of surface stabilization control measures implemented on open areas/vacant lots and unpaved lots maintained? YES / NO

If required, 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

Pursuant to the NO_x emission limitation of ¶4.B.2.a.1, did the monitoring records under ¶6.B.1 show continuous compliance during the reporting period? YES / NO

Pursuant to the CO emission limitations of ¶4.B.2.a.2, did the monitoring records under ¶6.B.2 show continuous compliance during the reporting period? YES / NO

Pursuant to ¶6.B.3.c, were records of the non-emergency operation of the diesel-driven fire pump maintained during the reporting period? YES / NO

Have opacity screens been performed pursuant to ¶6.B.5? YES / NO

- Pursuant to ¶6.B.6, has natural gas sulfur content been monitored by:
 - maintaining a contractual commitment to purchase only conforming pipeline natural gas?..... YES / NO
 - testing and analyzing gas on at least an annual basis? YES / NO

Pursuant to ¶6.B.7, has diesel fuel sulfur content been monitored by maintaining a contractual commitment or certification from the fuel supplier to meet Section §5.I.2 of this permit?..... YES / NO

Pursuant to ¶6.B.8, have monthly rolling averages of power production, calculated as a function of baseload, been maintained? YES / NO
○Do those averages show compliance with ¶4.B.2.d? YES / NO

Have repair logs been maintained pursuant to ¶6.B.9? YES / NO

Pursuant to ¶6.B.10, have monthly rolling averages of operating hours been maintained?..... YES / NO
○Do those averages show compliance with ¶4.A.2? YES / NO

Pursuant to ¶6.B.11, have monthly rolling averages of startup operations been maintained? YES / NO
○Do those averages show compliance with ¶4.A.3? YES / NO

Pursuant to §6.E, 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

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 _____

Date _____

Contact Phone Number _____

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

Email to: compliancereports@pinal.gov