

SALT RIVER PROJECT - DESERT BASIN - CASA GRANDE

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1. Introduction

This permit renewal pertains to an existing electrical power plant, now owned and operated by Salt River Project, a political subdivision of the State of Arizona. The SIC Code is 4911. The facility, commonly known as Desert Basin Generating Station, is located in Section 13, Township 6 South, Range 6 East, at 1872 North Burriss Road, Casa Grande, Arizona, upon a parcel also identified by Pinal County Assessor's Parcel # 503-34-015. The source is situated in an area classified as "attainment" for all pollutants.

The facility has a nominal 588 MW generating capacity, provided by two approximately 160 MW combustion turbine driven generators, and a single approximately 260 MW steam turbine generator. Section 10 of this permit recites a list of emission-generating equipment covered under this permit. Emissions consist of typical products-of-combustion. As an informational disclosure, the last section of the permit, entitled "EMISSION INVENTORY TABLE," sets forth good-faith estimates of emissions subject to regulation, as disclosed in the application for permit.

Permit V20610.000 was issued under Title V of the Clean Air Act on September 9, 1999. Minor revision V20610.R01 was issued on August 23, 2000 to correct discrepancies between initial design and final design of the facility. Significant revision V20610.R02 was issued on December 2, 2003 to eliminate the startup and shutdown limits for CO and substitute with an annual cap; full speed/no load (FSNL) testing alternate operating scenario; additional NO_x limit formulation and elimination of monitoring methods from Subpart Da; alternate monitoring method to Subpart GG for fuel nitrogen monitoring; alternate monitoring method to Subpart GG for fuel sulfur monitoring; update SIP-approved applicable requirements. During revision V20610.R02 the Potential to Emit for criteria pollutants was revised to take into consideration the change in CO emissions. Tables 1 and 2 show the revised PTEs. Minor revision V20610.R04 was issued on May 24, 2004 to make administrative changes to the permit.

The plant includes two natural gas fired combustion turbine generators ("CTG") each equipped with a supplementary-fired heat recovery steam generator ("HRSG"), a steam turbine, and a mechanical draft cooling tower. Each CTG/HRSG system has a separate stack. The permittee has installed a dry low-NO_x technology with selective catalytic reduction (SCR) system to comply with the NO_x BACT requirements under the original permit.

This permit renewal does not allow for any facility changes. The technical support document ("TSD"...permits\engrev\V20620.V20636.TSD.wpd) summarizes the administrative changes made to the permit during the renewal. The plant constitutes a "major emitting source" of CO, NO_x, and PM₁₀ emissions. That status potentially subjects modifications at this facility to the "Prevention of Significant Deterioration" (PSD) preconstruction review requirements defined in the Clean Air Act (1990) ("CAA"). The TSD discusses PSD-related issues. The source is also subject to the operating permit requirements under Title V of the CAA.

2. Listing of (*Federally Enforceable*) Applicable Requirements [*Mandated by 40 CFR §70.5(c)(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 50531, 50532 (11/15/78), and specifically the following rules:

- ~~7-1-1.2 Definitions~~
- ~~7-1-1.3.A Air Pollution Prohibited~~
- ~~7-1-1.3.B Air Pollution Prohibited~~
- ~~7-1-2.6 Recordkeeping and Reporting~~
- ~~7-2-1.1 Ambient Air Quality Standards - Non-Specific Particulate~~
- ~~7-2-1.2 Ambient Air Quality Standards - Sulfur Dioxide~~
- ~~7-2-1.4 Ambient Air Quality Standards - Photochemical Oxidants~~
- ~~7-2-1.5 Ambient Air Quality Standards - Carbon Monoxide~~
- ~~7-2-1.6 Ambient Air Quality Standards - Nitrogen Dioxide~~
- ~~7-2-1.7 Ambient Air Quality Standards - Evaluation~~
- 7-3-1.1 Emission Standards - Particulates - Visible Emissions - General
- 7-3-1.2 Emission Standards - Particulate Emissions - Fugitive Dust
- ~~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~~
- 7-3-5.1 NOx Emissions - Fuel Burning Equipment

~~C. Those specific provisions of the PGCAQCD Regulations, as last amended by the Pinal County Board of Supervisors on March 31, 1975, and approved by the Administrator as elements of the Arizona SIP at 44 FR 73033 (12/17/79):~~

- ~~7-2-1.8 Anti-Degradation~~

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 15579 (4/12/82), specifically, the following rules:

- ~~7-1-1.3.C Air Pollution Prohibited~~
- 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 A General Provisions, §§60.1 - 60.18 (Code §6-1-030.1)
- Subpart Da Electric Utility Steam Generating Units, §§60.40a - 60.49a
(Code §6-1-030.3)

1. each CTG/HRSG unit shall:
 - a. incorporate "Low-NO_x" design turbines
 - b. incorporate a system for the selective catalytic reduction of NO_x, including ammonia injection and a catalyst system; or
 - c. exhaust to the atmosphere through a stack not greater than 20' in outlet diameter, nor less than 160' in height above grade;
 - 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 the respective CTG and duct burner elements of each of the HRSG units.
 2. Natural gas heat input to the duct burner elements in each of the HRSG units shall be limited to 1,824,000 million British thermal units (mmBtu) per year, based on a rolling 12-month average.¹
 3. Subject to the option defined below for invoking a startup/shutdown testing program to establish alternative limits on the allowable number of startup events, Permittee shall limit the aggregate number of startup events, considering startups of both of the CTG units, to no more than 638 such events in any rolling 12-month period.
 4. Except for emergencies, the diesel-driven fire pump shall not be operated more than 6 hours per calendar month.
- B. Fuel Use Limitations (Code §3-1-081.)
1. CTG/HRSG Fuels (Code §3-3-250.A.1)
 In the CTG/HRSG units, Permittee is allowed to burn exclusively pipeline natural gas having a sulfur content of 0.0075 grains per dry standard cubic foot or less.
 2. Diesel Driven Fire Pump (Code §5-23-1020)
 In the diesel driven fire pump, Permittee is allowed to burn exclusively diesel fuel having a sulfur content of 0.8% or less.

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.

¹ Based on a heat input capacity of 456 mmBtu/hr., each HRSG unit could operate up to 4000 hours/year at that maximum heat input rate.

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 Section 4. 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 de minimis amount.

C. Emission Limits

1. BACT Limitations (Code §3-3-250.)

a. CTG/HRSO Emission Limitations

1. Steady-state CTG/HRSO BACT Limits

Other than during periods of start-up and shut-down, Permittee shall not cause to be discharged into the atmosphere from either of the gas turbine/steam generator systems during combined CTG/duct burner operations any gases which:

- A. contain nitrogen oxides emissions in excess of 3.0 ppmvd corrected to 15 percent oxygen, based on a rolling 3-hour average.
- B. contain carbon monoxide emissions in excess of 24 ppmvd corrected to 15% oxygen, based on a rolling 3-hour average;
- C. contain PM₁₀ emissions in excess of 23.0 #/hr., based on a rolling 3-hour average;
- D. contain VOC emissions in excess of 19.2 #/hr., based on a rolling 3-hour average;
- E. exhibit opacity in excess of 10%, as measured by Method 9.

2. Steady-state CTG-only BACT Limits

Other than during periods of startup, shut-down, and full-speed-no-load testing as defined under this Permit, Permittee shall not cause to be discharged into the atmosphere from either of the gas turbine/steam generator systems during stand-alone CTG operation any gases which:

- A. contain nitrogen oxides emissions in excess of 3.0 ppmvd corrected to 15 percent oxygen, based on a rolling 3-hour average.
- B. contain carbon monoxide emissions in excess of 15.3 ppmvd corrected to 15% oxygen, based on a rolling 3-hour average;

- C. contain PM₁₀ emissions in excess of 15.3 #/hr., based on a rolling 3-hour average;
- D. contain VOC emissions in excess of 8.2 #/hr., based on a rolling 3-hour average;
- E. exhibit opacity in excess of 10%, as measured by Method 9.

3. BACT Limits on NO_x, VOC and PM₁₀ During Startup

For purposes of regulating all pollutants other than CO, "general start-up" consists of two phases; a first phase, consisting of bringing the CTG up to operating load and temperature and spanning not more than one hour, and a second phase, spanning up to an additional three hours, during which the HRSG units will be brought up to operating temperature.

- A. During the first, one-hour, phase of start-up of the CTG/HRSG units, the CTG/HRSG units shall be exempt from any limitations on emission of NO_x, but Permittee shall exercise "good combustion practice," consisting of adherence to the turbine manufacturers standard operating procedure.
- B. During the second, three-hour, phase of start-up of the CTG/HRSG units, the CTG/HRSG units shall not emit:
 - i. nitrogen oxides in excess of 18.0 ppmvd corrected to 15 percent oxygen on a rolling three-hour average.
 - ii. VOC emissions in excess of those emitted as a result of good combustion practice.
 - iii. PM₁₀ emissions in excess of those emitted as a result of good combustion practice.

4. BACT Limit on CO During Startup

For purposes of regulating CO emissions, "CO start-up" shall consist of a 6-hour period following the initial firing of each turbine, and during that 6-hour period CO emissions shall be exempted from the stack concentration limits defined elsewhere under this permit, but those CO emissions shall be counted for purposes of demonstrating compliance with the CO cap defined elsewhere under this permit. Permittee shall limit each turbine to a maximum of 700 hours per year in such a "CO startup" mode, based on a 12-month average rolled on a calendar-month basis.

5. BACT Limit on NO_x, VOC and PM₁₀ During Shutdown

For purposes of regulating all pollutants other than CO, "general shut-down" consists of a period of no more than three hours required to shut down the combustion turbine and the steam turbine

in an orderly fashion, minimizing load cycling on the steam turbine. During "shutdown," CTG/HRSG units shall not emit:

- i. nitrogen oxides in excess of 18.0 ppmvd corrected to 15 percent oxygen on a rolling three-hour average.
- ii. VOC emissions in excess of those emitted as a result of good combustion practice.
- iii. PM₁₀ emissions in excess of those emitted as a result of good combustion practice.

6. BACT Limit on CO During Shutdown

For purposes of regulating CO emissions, "CO shut-down" shall consist of a 3-hour period prior to the shut-down of a turbine, and during that 3-hour period CO emissions shall be exempted from the stack concentration limits defined elsewhere under this permit, but those CO emissions shall be counted for purposes of demonstrating compliance with the CO cap defined elsewhere under this permit.

7. BACT Limit on CO During Maintenance/testing Operation

For purposes of regulating CO emissions, full-speed-no-load operation, or "maintenance/testing operation," shall consist of an 8-hour period required to perform hardware and circuitry maintenance testing at loads outside of normal operation, and during that 8-hour period CO emissions shall be exempted from the stack concentration limits defined elsewhere under this permit, but those CO emissions shall be counted for purposes of demonstrating compliance with the CO cap defined elsewhere under this permit. Permittee shall not conduct more than four such "maintenance/testing operations" per year, per unit, based on a 12-month average rolled on a calendar month basis.

8. BACT Limit on Ammonia

Permittee shall control ammonia emissions from the CTG/HRSG units to a maximum allowable concentration of 10 ppmvd corrected to 15 percent oxygen.

9. Proper Operation Required at All Times

At all times, Permittee shall operate the CTG/HRSG units in accordance with the manufacturer's specifications in order to minimize emissions of particulate matter, carbon monoxide, and volatile organic compounds.

b. CO Emission Cap

Aggregate CO emissions from the CTG/HRSG units shall be subject to a facility-wide emission cap of 929 tons-per-year, and compliance with that cap

shall be based on 365-day aggregation of CO emissions, recalculated on a calendar-day basis.

c. Cooling Tower Limitations

1. Permittee shall operate drift eliminators in the cooling tower to minimize particulate matter emissions.

2. NSPS Subpart Da Limitations *[40 CFR 60.42a & 60.44a]* Code §6-1-030.

a. Permittee shall not cause to be discharged into the atmosphere from the steam generators any gases which contain particulate matter in excess of 0.03 lb/million btu heat input.

b. Permittee shall not cause to be discharged into the atmosphere from the steam generators any gases which exhibit greater than 20 percent opacity.

c. Permittee shall not cause to be discharged into the atmosphere from the steam generators any gases which contain nitrogen oxides in excess of 0.20 lb/million btu heat input (approximately 57 ppmvd at 15 percent oxygen).

d. Permittee shall not cause to be discharged into the atmosphere from the steam generators any gases which contain nitrogen oxides in excess of 1.6 lb./mW-hr.

e. Emissions of nitrogen oxides shall be reduced by at least 25 percent from the potential combustion concentration.

3. 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 $\text{STD} = \text{NO}_x$ emissions (% by volume at 15% oxygen and on a dry basis)

$$Y = \text{rated heat load (kilojoules per watt) (not greater than 14.4)}$$

Note that 0.0075 percent by volume equals 75 ppmvd.

b. Permittee shall not cause to be discharged into the atmosphere from the gas turbines any gases which contain sulfur dioxide in excess of 0.015 percent by volume at 15 percent oxygen and on a dry basis.

c. Permittee shall not burn in the gas turbines any fuel which contains sulfur in excess of 0.8 percent by weight.

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 hour², 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 (§5-23-1010)

For equipment with a heat input capacity of less than 4,200 million Btu per hour, 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.

E. Particulate Emissions - Control of Fugitive Dust [*Currently federally enforceable pursuant to PGAQCD Reg. 7-3-1.2 (3/31/75) approved as a SIP element at 43 FR 50531 (11/15/78)*] (Code §§2-8-300. and 4-2-040.)

1. Permittee shall not cause, suffer, allow or permit a building or its appurtenances or open area to be used, constructed, repaired, altered or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne. Particulate emissions shall be kept to a minimum by such measures as wetting down, covering, landscaping, paving, treating or by other reasonable means.
2. Permittee shall not cause, suffer, allow or permit the repair, construction or reconstruction of a roadway or alley without taking reasonable precautions to prevent particulate matter from becoming airborne dust and other particulates shall be kept to a minimum by employing temporary paving, dust palliatives, wetting down, detouring or by other reasonable means. Earth or other material shall be removed from paved streets onto which earth or other material has been transported by trucking or earth moving equipment, erosion by water or by other means.

F. Generally Applicable Opacity Limits

1. SIP Limitation - [*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. Since the emissions from the steam generators are limited to the more stringent 20 percent opacity in §5.C.2.b. of this permit, this section is effectively limited to emissions from the cooling tower.

2. Locally Enforceable Limitation (Code §2-8-300)

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

² The turbines are rated at 1932 mmBtu/hr each and the duct burners are rated at 456 mmBtu/hr each.

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. None of the existing point sources at the facility are currently subject to this standard.

3. Code Limitation (Code §5-23-1010) ROTATING EQUIPMENT ONLY

Permittee shall limit the opacity of emissions from any stationary rotating machinery such that opacity does not exceed 40% for longer than 10 consecutive seconds. Visible emissions when starting cold equipment shall be exempt from the requirement of this subparagraph for the first 10 minutes of operation.

G. 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.

H. 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.

I. 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.

J. 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 500°F 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 500°F 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.
 - c. Permittee shall keep monthly records of any use of asphaltic/bituminous material containing more than 1.5 percent by volume solvent-VOC.

6. Compliance Demonstration**A. Testing [Mandated by 40 CFR §70.6(a)(3)]****1. Performance Tests [40 CFR 60.8, Code §§3-1-160 & 3-1-170]**

At least once during the term of this permit unless specified below, 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. A test plan protocol for each test shall be submitted to the District at least thirty (30) days before the testing. The continuous monitoring systems required by this permit shall be operating prior to conducting the performance tests. Separate batteries of tests shall quantify emissions during full-power production of the CTG units alone, and during power production from the combined CTG/HRSG units. Each battery of performance tests shall address:

- a. nitrogen oxides emissions: Ref. Part 60, App. A, Ref. Method 7
- b. carbon monoxide emissions: Ref. Part 60, App. A, Ref. Method 10
- c. particulate matter emissions (PM₁₀): Ref. Part 60, App. A, Ref. Method 5
- d. volatile organic compound emissions (VOC): Ref. Part 60, App. A, Ref. Method 25a
- e. opacity: Ref. Part 60, App. A, Ref. Method 9, 40 CFR §60.11
- f. Ammonia: Applicant's test plan shall define a technically sound test protocol. For the purpose of assessing compliance with respect to the ammonia emission limitation defined in this permit, this test shall be conducted on an annual basis.

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

- a. 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.

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. In addition to any other information required under this permit, the Test Report for all mandatory tests shall, for both of the firing-conditions tested, specifically define:

- a. VOC emissions rates, defined as function of heat input.
- b. PM₁₀ emission rates, defined as a function of heat input.

5. Elective Testing to Assess Startup/shutdown Ambient Impacts

Permittee may, at its election, design a testing program configured to accurately quantify NO_x emission rates, and ambient impacts, during startup and shutdown events. The protocol for any such elective testing program shall be approved in advance by the District. An essential element of the ensuing test report shall be an ambient impact analysis for NO_x emissions, which analysis shall initially quantify the additional mass of NO_x emissions (relative to steady state operation) that a startup/shutdown cycle produces, and from that test-based value, calculate the maximum allowable number of startup/shutdown cycles will still limit anticipated ambient NO_x impacts to no more than 80% of the 1.0 µg/m³ significance level defined in 40 CFR §51.165.b.2. If the calculated number of allowable startup/shutdown cycles exceeds the number under the limitation defined elsewhere under this permit, permittee may submit a minor permit revision application, seeking the substitution of the greater number of allowable startup/shutdown events. If the calculated number of allowable startup/shutdown events falls below the number otherwise allowed under this permit, the Permittee shall submit such a permit revision application to reduce the allowable number of such startup/shutdown events.

6. Full-Speed-No-Load Maintenance/Testing Operation Notices

Notice of any maintenance/testing operations in accordance with this permit shall be submitted to the District upon knowledge of the need for performing the test(s).

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

1. Instrumental emissions monitoring - oxides of nitrogen [40 CFR 60.47a(c) & (d), Code §3-3-260.G.]

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

- a. nitrogen oxides emissions from the CTG/HRSG discharged to the atmosphere.
- b. either the oxygen or carbon dioxide content of flue gas from each of the CTG/HRSG units, with the measurement taken where the NO_x emissions are

monitored.

Monitoring equipment required under this permit subsection shall be installed and operated in accord with the requirements of 40 CFR Part 75.

2. Instrumental emissions monitoring - Carbon monoxide [Code §3-3-260.G.]

On each CTG/HRSG unit, Permittee shall install, calibrate, maintain, and operate a continuous monitoring system, and record the output of the system, for measuring carbon monoxide emissions to the atmosphere. Monitoring equipment required under this subsection shall be installed and operated in accord pursuant to a plan submitted to the District by the permittee at least 120 days prior to the initial performance tests required under this permit. The plan shall give due consideration to the requirements of 40 CFR Part 60, Appendix B, Specifications 4 and/or 4a.

3. Instrumental emissions monitoring - Carbon monoxide cap compliance [Code §§3-1-083, 3-3-260.G.]

On a calendar-day basis, Permittee shall recalculate aggregate CO emissions from the CTG/HRSG units emitted over the preceding 365-calendar-days, and shall compare that total to the annual CO emission cap imposed under this permit. Permittee shall maintain a record of those daily total recalculations, and the daily conclusion regarding compliance with the CO cap.

4. 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, which may be digital in form, detailing:

- a. hours of operation for the CTG/HRSG units in a manner that may be mapped to corresponding NO_x and CO monitoring records, defining periods of normal operation of combined CTG/duct burner operation, CTG stand-alone operation, "general start-up" periods, "CO startup" periods, "general shut-down periods," "CO shut-down periods," and "maintenance/testing operation" periods.
- b. fuel flow/heat input to the CTG/HRSG units, separately defining fuel flow/heat input during the various system operating modes, including during startup phase 1, during startup phase 2, during normal operation of the CTG only, during normal operation of the combined CTG/HRSG 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 non-emergency operation.

5. General parametric emission monitoring requirements [Code §3-3-260.G]

To assess compliance with the hours-of-operation limitations defined above under §5.C.1, within 15 days of the close of each calendar month, Permittee shall retabulate hours-of-operation during the preceding 12 months, reflecting operating time in "CO startup," and "maintenance/testing operation."

6. 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 emissions, by multiplying the aggregate fuel flows/heat input by the corresponding VOC emission factors defined in the initial performance tests, or otherwise defined in this permit.

7. 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 emissions, by multiplying the aggregate fuel flows/heat input by the corresponding PM₁₀ emission factors defined in the initial performance tests, or otherwise defined in this permit.
 - b. On at least a semi-annual basis, Permittee shall conduct a visual opacity screen performed on each stack and 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 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.
 - c. On at least a semi-annual basis, Permittee shall conduct a visual inspection of the cooling tower drift eliminators to ensure proper installation, maintenance and operation.
 - d. As a surrogate measurement for monitoring emissions of particulate matter (PM10) from the cooling tower, Permittee shall maintain on-site a log of cooling tower operation containing the average daily flow rate through the tower.
8. NSPS Subpart GG fuel sulfur monitoring - [40 CFR §60.334.b; Code §6-1-030]

For turbine units affected by the 40 CFR part 60 Subpart GG fuel sulfur limitation defined above as alternative means of quantifying sulfur content in the natural gas fuel for the turbine(s), Permittee shall determine fuel sulfur content by any of:

- a. Sampling the gaseous fuel daily; or
- b. Custom Monitoring pursuant to Rasnic memorandum of August 14, 1987.
 - i. Analysis for fuel sulfur content of the natural gas shall be conducted using one of the approved ASTM reference methods for the measurement of sulfur in gaseous fuels, or an approved alternative method. The reference methods are: ASTM D1072-80; ASTM D3031-81; ASTM D3246-81; and ASTM D4084-82 as referenced in 40 CFR §60.335(b)(2).
 - ii. Commencing upon initial startup sulfur monitoring shall be conducted twice monthly for six months. If this monitoring shows little variability in the fuel sulfur content, and indicates consistent compliance with 40 CFR §60.333, then sulfur monitoring shall be conducted once per quarter for six quarters.
 - iii. If after the monitoring required in b.ii. above, or herein, the sulfur

content of the fuel shows little variability and, calculated as sulfur dioxide, represents consistent compliance with the sulfur dioxide emission limits specified under 40 CFR §60.333, sample analysis shall be conducted twice per annum. This monitoring shall be conducted during the first and third quarters of each calendar year.

- iv. Should any sulfur analysis as required in items b.ii or b.iii above indicate noncompliance with 40 CFR §60.333, the owner or operator shall notify PCAQCD of such excess emissions and the custom schedule shall be re-examined by the Environmental Protection Agency. Sulfur monitoring shall be conducted weekly during the interim period when this custom schedule is being re-examined.
 - v. If there is a change in fuel supply, the owner or operator must notify PCAQCD of such change for re-examination of this custom schedule. A substantial change in fuel quality shall be considered as a change in fuel supply. Sulfur monitoring shall be conducted weekly during the interim period when this custom schedule is being re-examined.
 - vi. Records of sample analysis and fuel supply pertinent to this custom schedule shall be retained for period of three years, and be available for inspection by personnel of federal, state, and local air pollution control agencies; or
- c. ~~To the extent such a monitoring program may be allowed by a future revision to 40 CFR Part 60, Subpart GG, then commencing upon the effective date of that revision, 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;~~ **Maintaining the gas quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the gaseous fuel, specifying that the maximum total sulfur content of the fuel is 20.0 grains/100 scf or less, or**
- d. To the extent such a monitoring program may be allowed by a future revision to 40 CFR Part 60, Subpart GG, then, commencing on the effective date of that revision, annually certifying that the natural gas from the permittee's own pipeline conforms to the Federal Energy Regulatory Commission (FERC) approved Tariff agreement that limits transmission to pipeline quality gas of sulfur content less than 0.8 percent by weight.
9. Parametric emissions monitoring - sulfur dioxide [Code §3-3-260.G.]³
- As a surrogate measurement for monitoring emissions of sulfur dioxide, Permittee shall maintain daily records reflecting total fuel consumption in each CTG/HRSG unit. On a cycle adequate to comply with the emission limitations and semi-annual reporting

³ See 40 CFR Part 75, Appendix D for the antecedent for this monitoring methodology.

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 **in accordance with the procedures set forth in 40 CFR Part 75, Appendix D.** ~~either by:~~

- ~~a. Sampling the gaseous fuel daily; 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.~~

10. Parametric emission monitoring - General Maintenance [Code §3-3-260.G.]

To assure compliance with the general maintenance obligation defined under this permit, Permittee shall maintain repair logs with regard to each CTG, each HRSG, each catalytic reactor unit, each reagent storage system, if any, and the cooling tower drift eliminator.

C. 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 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; all records of maintenance/testing operations; 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 semiannual⁴ report:
 - a. Emissions of nitrogen oxides, carbon monoxide, particulate matter (PM10), volatile organic compounds, and sulfur dioxide;
 - b. Total natural gas consumed;
 - c. CTG-only and CTG/HRSG run times; and
 - d. The number of start-up and shut-down cycles for each CTG/HRSG unit.
3. Permittee shall maintain records of the occurrence and duration of any start-up, shutdown, maintenance/testing operations, or malfunction in the operation of the permitted facility or any air pollution control equipment.

D. 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 semiannual report containing the information required to be recorded pursuant to this permit. All

⁴ 40 CFR Part 60, Subpart Da requires semiannual reporting.

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 quarter. Appendix A of this permit is a form which may be used for the report.

E. 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 the US EPA a certification of compliance with the provisions of this permit. The certification shall:

1. Be signed by a responsible official, namely the president, secretary, treasurer or vice-president of the corporation, 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 beginning of each calendar year-

7. Other Reporting Obligations

A. Deviation Reporting Requirement (Code §3-1-083.A.3.b.) [*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 Section 9.P. of this permit.

B. Annual emissions inventory [Code §§3-1-103, 3-7-590.C.1.]

Since this source would be subject to an ADEQ permitting requirement, 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.

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, 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.

- 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 10/12/95) approved as SIP Elements at 61 FR 15717 (4/9/96)*]

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. Renewal of Permit [*Mandated by* 40 CFR §§70.5(a)(1)(iii), 70.7(c)]

~~An application for renewal of this permit shall be submitted at least ninety days prior to the expiration of this permit unless notified of a different requirement by the District pursuant to Code §§ 3-1-050, or 3-1-089.~~

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. ~~Pinal-Gila Counties Air Quality Control District ("PGCAQCD") Rule §7-1-2.6 RECORDKEEPING AND REPORTING (3/31/75);~~
2. ~~PGCAQCD Rule §7-2-1.8 ANTI-DEGRADATION;~~
 1. PGCAQCD Rule §7-3-1.3 OPEN BURNING;
 2. PGCAQCD Rule §7-3-4.1 INDUSTRIAL - CARBON MONOXIDE EMISSIONS.
 3. 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), 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.)

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)]*

Terms and conditions listed in Sections 5.D.2, 5.F.2., 7.C., 9.F., and 13 are not federally enforceable.

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. 2 - Combustion turbines, Siemens Westinghouse 501F, natural gas fired, 1932 mmbtu/hr each - high heating value.
2. 2 - Duct burner systems, 456 mmbtu/hr each, high heating value.
3. Cooling tower, 138,000 gallon/minute

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:

1. Fire water pump, 263 horsepower, diesel fired, with 300 gallon fuel tank.
2. Soda ash silo, 1800 cubic feet, and lime silo, 2500 cubic feet.
3. Miscellaneous portable generators, steam cleaners, welders <325 bhp.
4. Miscellaneous chemical and petroleum storage tanks ≤250 gallons.
5. Laboratory equipment.
6. Hand held equipment.
7. Abrasive blasting.
8. Parts washers.
9. **Used Oil Tank, 300 gallons.**

13. Emission Inventory Table

EMISSION POINT		CHEMICAL COMPOSITION	EMISSION RATE	
ID	SOURCE	AIR CONTAMINANT	LBS/HR	TONS/YR
1	#1 TURBINE & DUCT BURNER	NITROGEN OXIDES	29.2	107
		CARBON MONOXIDE	139.5	***
		VOLATILE ORGANIC COMPOUNDS	19.2	57.5
		PARTICULATE MATTER (PM10)	23.6	81.3
		SULFUR DIOXIDE	39.4	6.18
2	#2 TURBINE & DUCT BURNER	NITROGEN OXIDES	29.2	107
		CARBON MONOXIDE	139.5	*** ⁵
		VOLATILE ORGANIC COMPOUNDS	19.2	57.5
		PARTICULATE MATTER (PM10)	23.6	81.3
		SULFUR DIOXIDE	39.4	6.18
3	COOLING TOWER	PARTICULATE MATTER (PM10)	3.1	13.6

*** See emission cap defined in body of permit.

Appendix A

Semiannual Report

Permit V20636.000

Abstract

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

Reporting Period - January-June __ July-December __ Year ____

Facility - Salt River Project
1872 E. Burris Rd., Casa Grande, Arizona

Parametric emissions report

Natural gas burned during reporting period _____ therms

Operations report

Power generated during reporting period _____ megawatt-hours

Average water flow in cooling tower _____ gallons/minute

CTG/HRSG Unit #1

Turbine-only "normal" run time _____ hours

Combined CTG/HRSG "normal" run time _____ hours

Start-up cycles _____ each

Shut-down cycles _____ each

CTG/HRSG Unit #2

Turbine-only "normal" run time _____ hours

Combined CTG/HRSG "normal" run time _____ hours

Start-up cycles _____ each

Shut-down cycles _____ each

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.F.1 and 5.F.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

Was daily verification of compliance with the CO cap conducted in accord with ¶6.B.3? YES/NO

Have the monthly hours-of-operation retabulations been performed pursuant to ¶6.B.5? YES/NO

Have opacity screens been performed pursuant to ¶6.B.7? YES/NO

Was fuel sulfur testing/**monitoring** conducted in accordance with ¶6.B.8? YES/NO

Have repair logs been maintained pursuant to ¶6.B.10? YES/NO

Were records of the non-emergency operation of the diesel-driven fire pump maintained during the quarter? 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 _____

Title _____

Date _____

Mail to - Pinal County Air Quality Control District
PO Box 987
Florence, AZ 85232