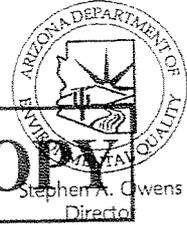




Janet Napolitano  
Governor

# ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

1110 West Washington Street • Phoenix, Arizona 85007-2935  
(602) 771-2300 • www.azdeq.gov



AQD:PS:CTS:117959

**CERTIFIED MAIL  
RETURN RECEIPT REQUESTED**

January 26, 2006

Gregory Smith,  
Arizona Public Service Company  
PO Box 53933  
Mail Stop 4852  
Phoenix, AZ 85072

Dear Mr. Smith:

Subject: Air Quality Permit No. 31876  
Electric Generating Plant Facility - Place ID: 9955

The Arizona Department of Environmental Quality has received payment of the fee requested. Enclosed is a permit for the referenced facility. In accordance with Arizona Revised Statutes, §49-430, this permit should be readily available at all times on the premises.

The permit is issued for a period of five years. Please keep us informed of any changes that would affect your air pollution status during the period of this permit.

You are advised that a permit is a legally enforceable document. If your facility fails to comply with the provisions contained in its permit, you will be subject to enforcement action and could incur civil fines of up to ten thousand dollars per day under A.R.S. §49-463 and/or be subject to criminal penalties in accordance with A.R.S. §49-464.

If you have any questions, please do not hesitate to contact Imran Bajwa at (602) 771-4492.

Sincerely,

Nancy C. Wrona, Director  
Air Quality Division

NCW:imb

Enclosures

cc: Chas Spell, APS  
Ana Yen, EPA Region IX

Northern Regional Office  
1515 East Cedar Avenue • Suite F • Flagstaff, AZ 86004

Southern Regional Office  
400 West Congress Street • Suite 433 • Tucson, AZ 85701  
(520) 628-6733

**FILE**

Arizona Department of Environmental Quality  
Air Quality Division

FILE

**Excess Emissions Report**

COPY

Arizona Administrative Code R18-2-310.01 requires:

Excess emissions shall be reported as follows:

1. The owner or operator of any source issued a permit shall report to the Director any emissions in excess of the limits established by this Chapter or the applicable permit. Such report shall be in two parts as specified below:
  - a. Notification by telephone or facsimile within 24 hours of the time when the owner or operator first learned of the occurrence of excess emissions including all available information from paragraph (2) of this subsection.
  - b. Detailed written notification within 72 hours of the notification pursuant to subparagraph (a) of this paragraph.
2. The excess emissions report shall contain the following information:
  - a. The identity of each stack or other emission point where the excess emissions occurred.
  - b. The magnitude of the excess emissions expressed in the units of the applicable emission limitation and the operating data and calculations used in determining the magnitude of the excess emissions.
  - c. The time and duration or expected duration of the excess emissions.
  - d. The identity of the equipment from which the excess emissions emanated.
  - e. The nature and cause of such emissions.
  - f. 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.
  - g. The steps that were or are being taken to limit the excess emissions. If the source's permit contains procedures governing source operation during periods of start-up or malfunction and the excess emissions resulted from start-up or malfunction, the report shall contain a list of the steps taken to comply with the permit procedures.

1. Company/Facility Name: Arizona Public Service Company / Yucca Power Plant
2. Permit No.: 31876
3. Report Date:     /    /
4. Identity of the stack or other emission point where the excess emissions occurred: \_\_\_\_\_  
\_\_\_\_\_
5. The identity of the process equipment from which the excess emissions originated: \_\_\_\_\_  
\_\_\_\_\_
6. Magnitude and specific pollutant of the excess emissions expressed in units of the applicable emissions limitation: \_\_\_\_\_  
\_\_\_\_\_
7. Operating data and actual calculations used in determining the magnitude of the excess emissions: \_\_\_\_\_  
\_\_\_\_\_
8. Date and Time the Excess Emission event began:     /    /     :       
Date and Time the Excess Emission event ceased:     /    /     :       
Duration or expected duration of excess emissions: Days      Hours      Minutes

FILE

9. The nature and cause of the excess emissions: \_\_\_\_\_

\_\_\_\_\_

COPY

10. If the excess emissions were the result of a malfunction, steps taken to remedy the malfunction and the steps taken to prevent the recurrence of such malfunctions: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

11. The steps that were or are being taken to limit the excess emissions. If the source's permit contains procedures governing source operations during periods of start-up or malfunction and the excess emissions resulted from start-up or malfunction; a list of the steps taken to comply with the permit procedures: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

*Certification of Truth, Accuracy, and Completeness*

By my signature; I, \_\_\_\_\_, hereby certify that based on information and belief formed after reasonable inquiry, the statements and information in this document are true, accurate, and complete.

Signature of responsible official: \_\_\_\_\_ Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

## Instructions for completing the Excess Emission Report form

FILE

COPY

1. **Company Name:** The name of your company and the name of the facility if applicable as it appears on your current ADEQ/AQD operating permit.
2. **Permit No.:** Your current ADEQ/AQD operating permit number.
3. **Report Date:** The date on which this report was completed.
4. **Identity of the stack or other emission point where the excess emissions occurred:**  
A textual description of the stack that the excess emissions were, or are being emitted from. This description may include the stack ID number as designated on your most recent Emissions Inventory submittal.
5. **The identity of the process equipment from which the excess emissions originated:**  
A description of the point of origin of the pollutant emitted in excess. This may include the point ID number from your most recent Emissions Inventory submittal.
6. **Magnitude of the excess emissions expressed in units of the applicable emissions limitation:**  
for example; 60% Opacity, 0.899 lbs/MM Btu, 6.5 lbs/ton feed.
7. **Operating data and calculations used in determining the magnitude of the excess emissions:**  
If surrogate parameters are used to determine emission rates then a description of these surrogate parameters, the emissions factors used to convert them to emission rates, and the equations used to calculate the emissions. A surrogate parameter could be something like combustion chamber temperature used, with the proper factors and equations, to calculate NO<sub>2</sub> emissions.
8. **Date and Time the Excess Emission event began:**  
When the excess emissions started.  
**Date and Time the Excess Emission event ceased:**  
When the excess emissions stopped.  
**Duration or expected duration of excess emissions:**  
How long the excess emissions occurred or if the excess emissions are occurring at the time of the report or are anticipated to occur, the estimated length of time the excess emissions will continue.
9. **The nature and cause of the excess emissions:**  
A comprehensive description of the reason why the excess emission occurred.
10. **If the excess emissions were the result of a malfunction, steps taken to remedy the malfunction and the steps taken to prevent the recurrence of such malfunctions:**  
What actions were taken to stop the excess emissions and what actions were or are being taken to prevent this type of emission from occurring again.
11. **The steps that were or are being taken to limit the excess emissions. If the source's permit contains procedures governing source operations during periods of start-up or malfunction and the excess emissions resulted from start-up or malfunction; a list of the steps taken to comply with the permit procedures:**  
What steps are or were being taken to limit, reduce, or control excess emissions until resumption of normal operation. What was done to comply with permit conditions covering such occurrences.

### Filing Instructions

This completed form may be used to satisfy the requirements of A.A.C. R18-2-310.01 by faxing it, within 24 hours of the time when the owner or operator first learned of the occurrence of excess emissions, to:

(602) 771-4251

ATTN: Steve Burr, Compliance Section, Technical Services Unit

This completed and signed form may be used to satisfy the requirements of A.A.C. R18-2-310.01 by certifying it with an original signature and mailing it, within 72 hours of the initial notification of A.A.C. R18-2-310.01, to:

Arizona Department of Environmental Quality  
Air Quality Division  
Compliance Section, Technical Services Unit  
1110 West Washington Street, 3415A-3  
Phoenix, Arizona 85007-2935

ARIZO

Has been is

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Subject to  
Arizona Rev

Number:

Issued:

Expires:

TO B

MENT OF ENVIRONMENTAL QUALITY

AIR QUALITY CONTROL  
PERMIT NUMBER 31876

Arizona Public Service Company

22 South Somerton Avenue

Phoenix, Arizona 85364

Electric Generating Plant

as therein and all applicable  
Arizona Administrative Code.



*Nancy C. Wrona*

Nancy C. Wrona, Director, Air Quality Division

COPY

TO BE DISPLAYED IN A CONSPICUOUS PLACE

FILE

FILE

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY  
Air Quality Division  
1110 W. Washington Street • Phoenix, AZ 85007 • Phone: (800) 234-5677

**AIR QUALITY CONTROL PERMIT**

(As required by Title 49, Chapter 3, Article 2, Section 49-426, Arizona Revised Statutes)

*This air quality control permit does not relieve applicant of responsibility for meeting all air pollution regulations*

1. PERMIT TO BE ISSUED TO (Business license name of organization that is to receive permit) \_\_\_\_\_

Arizona Public Service Company

2. NAME (OR NAMES) OF OWNER OR PRINCIPALS DOING BUSINESS AS THE ABOVE ORGANIZATION \_\_\_\_\_

Arizona Public Service Company

3. MAILING ADDRESS PO Box 53933 Mail Stop 4852

NUMBER STREET

Phoenix, AZ 85072

CITY OR COMMUNITY STATE ZIP CODE

4. ORIGINAL EQUIPMENT LOCATION/ADDRESS 7522 South Somerton Avenue

NUMBER STREET

Yuma, Yuma County, Arizona 85364

CITY OR COMMUNITY COUNTY STATE ZIP CODE

5. FACILITIES OR EQUIPMENT DESCRIPTION Electric Generating Station

6. THIS PERMIT ISSUED SUBJECT TO THE FOLLOWING Conditions contained in Attachments "A", "B", "C", and "D"

7. ADEQ PERMIT NUMBER 31876 PERMIT CLASS I EXPIRATION DATE January 26, 2011

PERMIT ISSUED THIS 26th DAY OF January, 2006

Nancy C. Wrona, Director, Air Quality Division

SIGNATURE

TITLE

FILE



ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

AIR QUALITY CLASS I PERMIT

**COMPANY:** *Arizona Public Service Company*  
**FACILITY:** *Yucca Power Plant*  
**PERMIT #:** *31876*  
**DATE ISSUED:** *January 26, 2006*  
**EXPIRY DATE:** *January 26, 2011*

---

**SUMMARY**

This operating permit is issued to Arizona Public Service Company (APS), the Permittee, for operation of their Yucca Power Plant, located at 7522 South Somerton Avenue, Yuma, Yuma County Arizona. This is a renewal of Permit No. 1000107.

The Yucca Power Plant is jointly owned by APS and the Imperial Irrigation District. The Yucca Plant provides power to the grid on an as-needed basis. The facility operates five combustion turbines and one steam generating unit and has the capacity to generate 250,000 kilowatts. There is no air pollution control equipment installed on any of the turbine engines or the steam generator at the Yucca Plant. The Yucca Power Plant has two sources of fuel: natural gas and fuel oil. Natural gas is supplied by pipeline, and fuel oil is delivered to the plant by railroad tank cars or trucks.

All definitions, terms, and conditions used in this permit conform to those in the Arizona Administrative Code R18-2-101 (A.A.C). All terms and conditions of this permit are enforceable by the Administrator of the USEPA.

APS Yucca has the potential to emit more than 100 tons per year of sulfur dioxide, nitrogen oxides, carbon monoxide, and particulate matter less than 10 microns (PM<sub>10</sub>) which makes this facility a major source. This permit is issued in accordance with Title V of the Clean Air Act, and Title 49, Chapter 3 of the Arizona Revised Statutes.

ATTACHMENT "A": GENERAL PROVISIONS

Air Quality Control Permit No. 31876  
For  
*Arizona Public Service Company*  
*Yucca Power Plant*

I. PERMIT EXPIRATION AND RENEWAL

[ARS § 49-426.F, A.A.C. R18-2-304.C.2, and -306.A.1]

- A. This permit is valid for a period of five years from the date of issuance. The Permittee shall submit an application for renewal of this permit at least 6 months, but not more than 18 months, prior to the date of permit expiration.

II. COMPLIANCE WITH PERMIT CONDITIONS

[A.A.C. R18-2-306.A.8.a and b]

- A. The Permittee shall comply with all conditions of this permit including all applicable requirements of the Arizona air quality statutes and air quality rules. Any permit noncompliance constitutes a violation of the Arizona Revised Statutes and is grounds for enforcement action; for permit termination, revocation and reissuance, or revision; or for denial of a permit renewal application. In addition, noncompliance with any federally enforceable requirement constitutes a violation of the Clean Air Act.
- B. It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

III. PERMIT REVISION, REOPENING, REVOCATION AND REISSUANCE, OR TERMINATION FOR CAUSE

[A.A.C. R18-2-306.A.8.c, -321.A.1, and -321.A.2]

- A. The 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, termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.
- B. The permit shall be reopened and revised under any of the following circumstances
1. Additional applicable requirements under the Clean Air Act become applicable to the Class I source. Such a reopening shall only occur if there are three or more years remaining in the permit term. The reopening shall be completed no later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless an application for renewal has been submitted pursuant to A.A.C. R18-2-322.B. Any permit revision required pursuant to this subparagraph shall comply with the provisions in A.A.C. R18-2-322 for permit renewal and shall reset the five-year permit term.
  2. Additional requirements, including excess emissions requirements, become applicable to an affected source under the acid rain program. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into the Class I permit.

current year. The second certification shall be submitted no later than November 15th, and shall report the compliance status of the source during the period between April 1st and September 30th of the current year.

The compliance certifications shall include the following:

1. Identification of each term or condition of the permit that is the basis of the certification;
  2. The Identification of the methods or other means used by the owner or operator for determining the compliance status with each term and condition during the certification period;
  3. The status of compliance with the terms and conditions of the permit for the period covered by the certification, including whether compliance during the period was continuous or intermittent, based on the methods or means designated in Condition VII.A.2 above. The certifications shall identify each deviation and take it into account for consideration in the compliance certification;
  4. All instances of deviations from permit requirements reported pursuant to Condition XII.B of this Attachment; and
  5. Other facts the Director may require to determine the compliance status of the source.
- B. A progress report on all outstanding compliance schedules shall be submitted every six months beginning with six months after permit issuance.

#### **VIII. CERTIFICATION OF TRUTH, ACCURACY AND COMPLETENESS**

[A.A.C. R18-2-304.H]

Any document required to be submitted by this permit, including reports, shall contain a certification by a responsible official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

#### **IX. INSPECTION AND ENTRY**

[A.A.C. R18-2-309.4]

Upon presentation of proper credentials, the Permittee shall allow the Director or the authorized representative of the Director to:

- A. Enter upon the Permittee's premises where a source is located, emissions-related activity is conducted, or where records are required to be kept under the conditions of the permit;
- B. Have access to and copy, at reasonable times, any records that are required to be kept under the conditions of the permit;
- C. Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit;
- D. Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the permit or other applicable requirements; and
- E. Record any inspection by use of written, electronic, magnetic and photographic media.

- (7) Steps taken to limit the excess emissions. If the excess emissions resulted from start-up or malfunction, the report shall contain a list of the steps taken to comply with the permit procedures.

2. In the case of continuous or recurring excess emissions, the notification requirements of this section shall be satisfied if the source provides the required notification after excess emissions are first detected and includes in such notification an estimate of the time the excess emissions will continue. Excess emissions occurring after the estimated time period, or changes in the nature of the emissions as originally reported, shall require additional notification pursuant to Condition XII.A.1 above.

[A.A.C. R18-2-310.01.C]

B. Permit Deviations Reporting

[A.A.C. R18-2-306.A.5.b]

The Permittee shall promptly report deviations from permit requirements, including those attributable to upset conditions as defined in the permit, the probable cause of such deviations, and any corrective actions or preventive measures taken. Prompt reporting shall mean that the report was submitted to the Director by certified mail, facsimile, or hand delivery within two working days of the time when emission limitations were exceeded due to an emergency or within two working days of the time when the owner or operator first learned of the occurrence of a deviation from a permit requirement.

C. Emergency Provision

[A.A.C. R18-2-306.E]

1. An "emergency" means any situation arising from sudden and reasonable unforeseeable events beyond the control of the source, including acts of God, that require 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.
2. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if Condition XII.C.3 is met.
3. 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 being properly operated at the time;
  - c. During the period of the 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 Director by certified mail, facsimile, or hand delivery within two working days of the time when emission limitations were exceeded due to the emergency. This notice shall

- b. The air pollution control equipment, process equipment, or processes were at all times maintained and operated in a manner consistent with good practice for minimizing emissions;
- c. If repairs were required, the repairs were made in an expeditious fashion when the applicable emission limitations were being exceeded. Off-shift labor and overtime were utilized where practicable to ensure that the repairs were made as expeditiously as possible. If off-shift labor and overtime were not utilized, the Permittee satisfactorily demonstrated that the measures were impracticable;
- d. The amount and duration of the excess emissions (including any bypass operation) were minimized to the maximum extent practicable during periods of such emissions;
- e. All reasonable steps were taken to minimize the impact of the excess emissions on ambient air quality;
- f. The excess emissions were not part of a recurring pattern indicative of inadequate design, operation, or maintenance;
- g. During the period of excess emissions there were no exceedances of the relevant ambient air quality standards established in Title 18, Chapter 2, Article 2 of the Arizona Administrative Code that could be attributed to the emitting source;
- h. The excess emissions did not stem from any activity or event that could have been foreseen and avoided, or planned, and could not have been avoided by better operations and maintenance practices;
- i. All emissions monitoring systems were kept in operation if at all practicable; and
- j. The Permittee's actions in response to the excess emissions were documented by contemporaneous records

3. Affirmative Defense for Startup and Shutdown

- a. Except as provided in Condition XII.E.3.b below, and unless otherwise provided for in the applicable requirement, emissions in excess of an applicable emission limitation due to startup and shutdown shall constitute a violation. When emissions in excess of an applicable emission limitation are due to startup and shutdown, the Permittee has an affirmative defense to a civil or administrative enforcement proceeding based on that violation, other than a judicial action seeking injunctive relief, if the Permittee has complied with the reporting requirements of A.A.C. R18-2-310.01 and has demonstrated all of the following:
  - (1) The excess emissions could not have been prevented through careful and prudent planning and design;
  - (2) If the excess emissions were the result of a bypass of control equipment, the bypass was unavoidable to prevent loss of life, personal injury, or severe damage to air pollution control equipment, production equipment, or other property;

6. The operating conditions as existing at the time of sampling or measurement.
- B. The Permittee shall retain records of all required monitoring data and support information for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings or other data recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.
- C. All required records shall be maintained either in an unchangeable electronic format or in a handwritten logbook utilizing indelible ink.

#### **XIV. REPORTING REQUIREMENTS**

[A.A.C. R18-2-306.A.5.a]

The Permittee shall submit the following reports:

- A. Compliance certifications in accordance with Section VII of Attachment "A".
- B. Excess emission; permit deviation, and emergency reports in accordance with Section XII of Attachment "A".
- C. Other reports required by any condition of Attachment "B".

#### **XV. DUTY TO PROVIDE INFORMATION**

[A.A.C. R18-2-304.G and -306.A.8.e]

- A. The Permittee shall furnish to the Director, within a reasonable time, any information that the Director 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. Upon request, the Permittee shall also furnish to the Director copies of records required to be kept by the permit. For information claimed to be confidential, the Permittee shall furnish an additional copy of such records directly to the Administrator along with a claim of confidentiality.
- B. If the Permittee has failed to submit any relevant facts or has submitted incorrect information in the permit application, the Permittee shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrected information.

#### **XVI. PERMIT AMENDMENT OR REVISION**

[A.A.C. R18-2-318, -319, and -320]

The Permittee shall apply for a permit amendment or revision for changes to the facility which do not qualify for a facility change without revision under Section XVII, as follows:

- A. Administrative Permit Amendment (A.A.C. R18-2-318);
- B. Minor Permit Revision (A.A.C. R18-2-319); and
- C. Significant Permit Revision (A.A.C. R18-2-320)

The applicability and requirements for such action are defined in the above referenced regulations.

- G. Notwithstanding any other part of this Section, the Director may require a permit to be revised for any change that, when considered together with any other changes submitted by the same source under this Section over the term of the permit, do not satisfy Condition XVII.A above.

## XVIII. TESTING REQUIREMENTS

[A.A.C. R18-2-312]

- A. The Permittee shall conduct performance tests as specified in the permit and at such other times as may be required by the Director.

- B. Operational Conditions during Testing

Tests shall be conducted during operation at the maximum possible capacity of each unit under representative operational conditions unless other conditions are required by the applicable test method or in this permit. With prior written approval from the Director, testing may be performed at a lower rate. Operations during periods of start-up, shutdown, and malfunction (as defined in A.A.C. R18-2-101) shall not constitute representative operational conditions unless otherwise specified in the applicable standard.

- C. Tests shall be conducted and data reduced in accordance with the test methods and procedures contained in the Arizona Testing Manual unless modified by the Director pursuant to A.A.C. R18-2-312.B.

- D. Test Plan

At least 14 calendar days prior to performing a test, the Permittee shall submit a test plan to the Director in accordance with A.A.C. R18-2-312.B and the Arizona Testing Manual. This test plan must include the following:

1. Test duration;
2. Test location(s);
3. Test method(s); and
4. Source operation and other parameters that may affect test results.

- E. Stack Sampling Facilities

The Permittee shall provide, or cause to be provided, performance testing facilities as follows:

1. Sampling ports adequate for test methods applicable to the facility;
2. Safe sampling platform(s);
3. Safe access to sampling platform(s); and
4. Utilities for sampling and testing equipment.

- F. Interpretation of Final Results

Each performance test shall consist of three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in the applicable standard.

ATTACHMENT "B": SPECIFIC CONDITIONS

Air Quality Control Permit No. 31876  
For  
*Arizona Public Service Company*  
*Yucca Power Plant*

I. FACILITY WIDE REQUIREMENTS

- A. At all times, the Permittee shall have, on site or on-call, a person that is certified in EPA Reference Method 9. [A.A.C.R18-2-306.A.3]
- B. At the time the compliance certifications required by Section VII of Attachment "A" are submitted, the Permittee shall submit reports of all monitoring activities required in Attachment "B" performed in the same six month period as applies to the compliance certification period. [A.A.C.R18-2-306.A.5.a]

II. SIMPLE CYCLE COMBUSTION TURBINES AND STARTING DIESEL ENGINES

- A. Voluntarily Accepted Limitations [A.A.C.R18-2-306.A.2 and 306.01]
1. The Permittee shall only combust the following as fuel in the following units:
- a. Gas Turbine Numbers 1, 2, and 3
- (1) Natural gas;
- (2) Fuel oil No.2; or
- (3) Co-firing natural gas and Fuel oil No.2
- b. Gas Turbine Numbers 4 and 21, and Starting Engines CT1, CT2, and CT21
- (1) Fuel oil No.2 only
2. Monitoring and Recordkeeping Requirements
- a. On a monthly basis, the Permittee shall maintain a 12- month rolling total of the hours that each combustion turbine is operated on natural gas.
- b. On a monthly basis, the Permittee shall maintain a 12- month rolling total of the hours that each combustion turbine is operated on fuel oil. [A.A.C.R18-2-306.A.3.c]
- B. Particulate Matter and Opacity
1. Emission Limitation
- a. Permittee shall not emit or cause to be emitted into the atmosphere gases containing particulate matter in excess of the amount calculated by the following equation:

- (a) If the observer, during the visual survey, determines that the opacity of the plume is equal or lower than the baseline opacity, then the observer shall keep a record of the name of the observer, the date on which the observation was made, and the results of the observations.
- (b) If the observer, during the visual survey, sees a plume that on an instantaneous basis appears to exceed the baseline opacity level, then the observer shall take a six-minute Method 9 observation of the plume. If the six minute opacity of the plume is equal or less than the baseline opacity level, the observer shall make a record of the following:
  - i. Location, date, and time of the observation; and
  - ii. The result of the Method 9 observation.
- (c) If the six-minute opacity of the plume exceeds the baseline opacity level but is less than the applicable opacity standard, the Permittee shall adjust or repair the equipment to reduce the opacity to the baseline level. The observer shall make a record of the following:
  - i. Location, date, and time of the observation;
  - ii. The results of the Method 9 observation;
  - iii. Date and time when corrective action was taken; and
  - iv. Type of corrective action taken.
- (d) If the six-minute opacity of the plume exceeds the applicable opacity standard, the Permittee shall do the following:
  - i. Adjust or repair the equipment to reduce opacity to the baseline level;
  - ii. Report it as an excess emission for opacity; and
  - iii. Make a record of the following:
    - a) Location, date, and time of the observation;
    - b) The results of the Method 9 observation;
    - c) Date and time when adjustment and repair was performed; and
    - d) Type of corrective action taken.
- (3) If necessitated by the results of the visual survey, the Permittee may reestablish the baseline opacity level. Reestablishment of the baseline shall be performed utilizing the same procedures used in setting up the initial baseline level. Within 30 days of re-establishing the baseline

- b. Permittee shall not burn high sulfur fuel oil in the simple cycle combustion turbine and the starting diesel engine. High sulfur fuel oil is defined as fuel oil with sulfur content equal to or exceeding 0.9% by weight. [A.A.C.R18-2-719.H]

2. Monitoring and Recordkeeping Requirements

- a. The Permittee shall record daily the sulfur content of the fuel (sulfur weight percent) being fired in each simple cycle combustion turbine and starting diesel engine. [A.A.C.R18-2-719.I]
- b. The Permittee shall report to the Director any daily period during which the sulfur content of the fuel being fired in any simple cycle combustion turbine or starting diesel engine exceeds 0.8%. [A.A.C.R18-2-719.J]
- c. The Permittee shall keep on record a copy of the fuel oil purchase specification sheet. This specification sheet shall include:
  - (1) The sulfur content of the fuel oil (sulfur weight percent);
  - (2) The method used to determine the sulfur content of the fuel oil; [A.A.C.R18-2-306.A.3.c]

3. Testing Requirements

- a. Within 90 days after the rolling twelve-month total of hours of operation on fuel oil exceed the number listed in the table below, the Permittee shall conduct or cause to be conducted a performance test for oxides of sulfur.

Turbine No.	Hours to Trigger Testing Using Fuel Oil
3	5306
4	5306

Only one performance test is required for each turbine per calendar year. Performance testing for oxides of sulfur shall be conducted in accordance with EPA Reference Method 6 as described in 40 CFR 60, Appendix A. The Performance test must be conducted using No.2 fuel oil. [A.A.C.R18-2-312]

- b. To determine compliance with the sulfur limitation specified in Condition II.D.1.b of this Attachment, the Permittee shall use the following method:  
  
ASTM Method D-4294-90 for determining the sulfur content of fuel oil. [A.A.C.R18-2-719.K.1]

4. Permit Shield

Compliance with the conditions of this part shall be deemed compliance with A.A.C.R18-2-719.F, 719.H, 719.I, 719.J and 719.K.1.

a. The Permittee shall record daily the lower heating value of the fuel being fired in the steam unit.

b. Opacity Monitoring

[A.A.C.R18-2-306.A.3.c]

(1) Baseline Opacity

(a) Within 90 days of the date from issuance of this permit, the Permittee shall conduct certified Method 9 performance tests, in accordance with Section XVIII of Attachment "A", on the steam unit, while operating at normal representative working conditions, to establish a stack baseline opacity level for each fuel type the Permittee anticipates using on a routine basis. The average of a minimum of three opacity readings will be used to establish the baseline opacity for each stack. Within 30 days of establishing baseline opacity values, the Permittee shall report the results to the Director.

(b) Prior to the use of any other permitted fuel, the Permittee shall notify the Department and establish baseline opacity levels in accordance with Condition III.B.2.b.(1)(a) above.

(2) Frequency of Opacity Monitoring

A certified Method 9 observer shall conduct a visual survey of visible emissions from the Steam Unit while operating at a normal representative working conditions. A minimum of one survey of visible emissions will be conducted on the steam unit for every 80 hours of operation on fuel oil, and every 720 hours of operation on natural gas.

(a) If the observer, during the visual survey, determines that the opacity of the plume is equal or lower than the baseline opacity, then the observer shall keep a record of the name of the observer, the date on which the observation was made, and the results of the observations.

(b) If the observer, during the visual survey, sees a plume that on an instantaneous basis appears to exceed the baseline opacity level, then the observer shall take a six-minute Method 9 observation of the plume. If the six minute opacity of the plume is equal or less than the baseline opacity level, the observer shall make a record of the following:

- i. Location, date, and time of the observation; and
- ii. The result of the Method 9 observation.

(c) If the six-minute opacity of the plume exceeds the baseline opacity level but is less than the applicable opacity standard, the Permittee shall adjust or repair the equipment to reduce the opacity to the baseline level. The observer shall make a record of the following:

Compliance with the conditions of this part shall be deemed compliance with A.A.C.R18-2-702.B, 703.B, and 703.C.1

[A.A.C.R18-2-325]

C. Nitrogen Oxide

Within 90 days after the rolling twelve-month total of hours of operation exceeds the number listed in the table below, Permittee shall conduct or cause to be conducted a performance test for nitrogen oxides.

Emission Unit	Hours to Trigger Testing Using Fuel Oil	Hours to Trigger Testing Using Natural Gas
Steam Unit	926	1044

Only one performance test is required for each fuel type, per calendar year. Performance testing for nitrogen oxides shall be conducted in accordance with EPA Reference Method 7E as described in 40 CFR 60, Appendix A. The Performance test must be conducted using No.6 fuel oil when the test is triggered by fuel oil usage and natural gas when the test is triggered by natural gas usage.

[A.A.C.R18-2-312]

D. Sulfur Dioxide

1. Emission Limitation

- a. The Permittee shall not emit or cause to be emitted into the atmosphere any gases containing sulfur dioxide in excess of 1.0 pound per million Btu heat input on a three hour average.

[A.A.C.R18-2-703.E.1]

- b. Permittee shall not burn high sulfur fuel oil in the simple cycle combustion turbine and the starting diesel engine. High sulfur fuel oil is defined as fuel oil with sulfur content equal to or exceeding 0.9% by weight.

[A.A.C.R18-2-703.H]

2. Monitoring and Recordkeeping Requirements

[A.A.C.R18-2-306.A.3.c]

- a. The Permittee shall record daily the sulfur content of the fuel (sulfur weight percent) being fired in the steam unit.
- b. The Permittee shall keep on record a copy of the fuel oil purchase specification sheet. This specification sheet shall include:
- (1) The sulfur content of the fuel oil (sulfur weight percent);
  - (2) The method used to determine the sulfur content of the fuel oil.

3. Testing Requirements

[A.A.C.R18-2-312]

- b. For the purpose of this condition, "heat input" is defined as the aggregate heat content of all fuels whose products of combustion pass through a stack or other outlet.

[A.A.C.R18-2-724.B]

- c. Permittee shall not emit or cause to be emitted into the atmosphere gases exhibiting opacity greater than 15 percent.

[A.A.C.R18-2-724.J]

2. Monitoring and Recordkeeping Requirements

[A.A.C.R18-2-306.A.3.c]

- a. The Permittee shall record daily the lower heating value of the fuel being fired in the auxiliary boiler.

- b. Opacity Monitoring

- (1) Baseline Opacity

- (a) Within 90 days of first use of the auxiliary boiler, the Permittee shall conduct certified Method 9 performance tests, in accordance with Section XVIII of Attachment "A", on the auxiliary boiler, while operating at normal representative working conditions, to establish a stack baseline opacity level for each fuel type the Permittee anticipates using on a routine basis. The average of a minimum of three opacity readings will be used to establish the baseline opacity for each stack. Within 30 days of establishing baseline opacity values, the Permittee shall report the results to the Director.

- (b) Prior to the use of any other permitted fuel, the Permittee shall notify the Department and establish baseline opacity levels in accordance with Condition IV.B.2.b.(1)(a) above.

- (2) Frequency of Opacity Monitoring

A certified Method 9 observer shall conduct a visual survey of visible emissions from the auxiliary boiler while operating at a normal representative working conditions. A minimum of one survey of visible emissions will be conducted on the auxiliary boiler for every 80 hours of operation on fuel oil, and every 720 hours of operation on natural gas.

- (a) If the observer, during the visual survey, determines that the opacity of the plume is equal or lower than the baseline opacity, then the observer shall keep a record of the name of the observer, the date on which the observation was made, and the results of the observations.

- (b) If the observer, during the visual survey, sees a plume that on an instantaneous basis appears to exceed the baseline opacity level, then the observer shall take a six-minute Method 9 observation of the plume. If the six minute opacity of the plume is equal or less than the baseline opacity level, the observer shall make a record of the following:

4. Permit Shield

Compliance with the conditions of this part shall be deemed compliance with A.A.C.R18-2-724.B, 724.C.1, and 724.J.

[A.A.C.R18-2-325]

C. Nitrogen Oxide

Within 90 days after the rolling twelve-month total of hours of operation on fuel oil exceed 7624 hours, the Permittee shall conduct or cause to be conducted a performance test for nitrogen oxides on the auxiliary boiler. Only one performance test is required per calendar year. Performance testing for nitrogen oxides shall be conducted in accordance with EPA Reference Method 7E as described in 40 CFR 60, Appendix A. The Performance test must be conducted using No.6 fuel oil.

[A.A.C.R18-2-312]

D. Sulfur Dioxide

1. Emission Limitation

a. Permittee shall not emit or cause to be emitted into the atmosphere any gases containing sulfur dioxide in excess of 1.0 pound per million Btu heat input.

[A.A.C.R18-2-724.E]

b. Permittee shall not burn high sulfur fuel oil in the simple cycle combustion turbine and the starting diesel engine. High sulfur fuel oil is defined as fuel oil with sulfur content equal to or exceeding 0.9% by weight.

[A.A.C.R18-2-724.G]

2. Monitoring and Recordkeeping Requirements

[A.A.C.R18-2-306.A.3.c]

a. The Permittee shall record daily the sulfur content of the fuel (sulfur weight percent) being fired in the auxiliary boiler.

b. The Permittee shall keep on record a copy of the fuel oil purchase specification sheet. This specification sheet shall include:

(1) The sulfur content of the fuel oil (sulfur weight percent);

(2) The method used to determine the sulfur content of the fuel oil.

3. Testing Requirements

a. Within 90 days after the rolling twelve-month total of hours of operation on fuel oil exceed 2930 hours, Permittee shall conduct or cause to be conducted a performance test for oxides of sulfur on the auxiliary boiler. Only one performance test is required per calendar year. Performance testing for oxides of sulfur shall be conducted in accordance with EPA Reference Method 6 described in 40 CFR 60, Appendix A. The Performance test must be conducted using No.6 fuel oil.

[A.A.C.R18-2-312]

- (2) If the observer, during the visual survey, sees a plume that on an instantaneous basis appears to exceed the baseline opacity level, then the observer shall take a six-minute Method 9 observation of the plume. If the six minute opacity of the plume is equal or less than the baseline opacity level, the observer shall make a record of the following:
    - (a) Location, date, and time of the observation; and
    - (b) The result of the Method 9 observation.
  - (3) If the six-minute opacity of the plume exceeds the baseline opacity level but is less than the applicable opacity standard, the Permittee shall adjust or repair the equipment to reduce the opacity to the baseline level. The observer shall make a record of the following:
    - (a) Location, date, and time of the observation;
    - (b) The results of the Method 9 observation;
    - (c) Date and time when corrective action was taken; and
    - (d) Type of corrective action taken.
  - (4) If the six-minute opacity of the plume exceeds the applicable opacity standard, the Permittee shall do the following:
    - (a) Adjust or repair the equipment to reduce opacity to the baseline level;
    - (b) Report it as an excess emission for opacity; and
    - (c) Make a record of the following:
      - i. Location, date, and time of the observation;
      - ii. The results of the Method 9 observation;
      - iii. Date and time when adjustment and repair was performed; and
      - iv. Type of corrective action taken.
- c. If necessitated by the results of the visual survey, the Permittee may reestablish the baseline opacity level. Reestablishment of the baseline shall be performed utilizing the same procedures used in setting up the initial baseline level. Within 30 days of re-establishing the baseline opacity, the Permittee shall report the results to the Director. The report shall also contain a description of the need for re-establishing the baseline.
3. The Permittee shall not cause, allow or permit to be emitted into the atmosphere any plume or effluent the opacity of which exceeds 20 percent, measured in accordance with EPA Reference Method 9.

[A.A.C.R18-2-702.B]

[A.A.C.R18-2-604.B]

- c. Keep dust and other particulates to a minimum by employing dust suppressants, temporary paving, detouring, wetting down or by other reasonable means when a roadway is repaired, constructed, or reconstructed;

[A.A.C.R18-2-605.A]

- d. Take reasonable precautions, such as wetting, applying dust suppressants, or covering the load when transporting material likely to give rise to airborne dust;

[A.A.C.R18-2-605.B]

- e. Take reasonable precautions such as chemical stabilization, wetting, or covering when organic or inorganic dust producing material is being stacked, piled, or otherwise stored;

[A.A.C.R18-2-607.A]

- f. Take reasonable precautions such as use of dust suppressants before the cleaning of site, roadway, or alley. 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, erosions by water or by other means.

[A.A.C.R18-2-804.B]

3. Monitoring, Recordkeeping and Reporting Requirements

a. Open Areas, Roadways & Streets, Storage Piles and Material Handling

- (1) Permittee shall maintain appropriate records to demonstrate compliance with the reasonable precautions outlined in Section VI.A.2.a through IV.A.2.f above.

[A.A.C.R18-2-306.A.3.c]

(2) Quarterly Monitoring Requirements

- (a) A certified Method 9 observer shall conduct a quarterly survey of visible emissions from the non-point sources. The Permittee shall keep a record of the name of the observer, the date on which the observation/survey was conducted, and the results of the observation/survey.

- (b) If the observer sees a plume from a non-point source that on an instantaneous basis appears to exceed 40%, then the observer shall, if practicable, take a six-minute Method 9 observation of the plume. If the six-minute opacity of the plume is less than 40%, the observer shall make a record of the following:

- i. Location, date, and time of the observation; and
- ii. The results of the Method 9 observation.

- (c) If the six-minute opacity of the plume exceeds 40%, then the Permittee shall do the following:

- i. Adjust or repair the controls or equipment to reduce opacity to below 40%; and

[A.A.C.R18-2-702.B]

b. The Permittee shall not cause or allow sandblasting or other abrasive blasting without minimizing dust emissions to the atmosphere through the use of good modern practices. Good modern practices include:

- (1) Wet blasting;
- (2) Effective enclosure with necessary dust collecting equipment; or
- (3) Any other method as approved by the Director.

[A.A.C.R18-2-726]

2. Monitoring, Recordkeeping, and Reporting Requirements

Each time an abrasive blasting project is conducted in an area open to the atmosphere, the Permittee shall log in ink or in an electronic format, a record of the following:

- a. The date the project was conducted;
- b. The duration of the project; and
- c. Type of control measures employed.

[A.A.C.R18-2-306.A.3.c]

3. Permit Shield

Compliance with conditions of this part shall be deemed compliance with A.A.C.R18-2-702.B and A.A.C.R18-2-726.

[A.A.C.R18-2-325]

B. Use of Paints

1. Opacity of Visible Emissions

Any visible plume or effluent from spray painting operations shall not have opacity greater than 20 percent, measured in accordance by EPA Reference Method 9.

[A.A.C.R18-2-702.B]

2. Volatile Organic Compounds

a. Emission Limitations/Standards

While performing spray painting operations, the Permittee shall comply with the following requirements:

- (1) The Permittee shall not conduct any spray painting operation without minimizing organic solvent emissions. Such operations other than architectural coating and spot painting shall be conducted in an enclosed area equipped with controls containing no less than 96 percent of the overspray.

[A.A.C.R18-2-727.A]

- (2) The Permittee shall not either:

(2) Architectural coating and spot painting projects shall be exempt from the recordkeeping requirements of part (1) above.

c. Permit Shield

Compliance with the conditions of this Part shall be deemed compliance with A.A.C.R18-2-726, -727.A, -727.B, -727.C, -727.D and SIP Provisions R9-3-527.C.

[A.A.C.R18-2-325]

3. Demolition/Renovation

a. Emission Limitations/Standards

The Permittee shall comply with the applicable requirements of 40 CFR 61, Subpart M (National Emissions Standards for Hazardous Air Pollutants-Asbestos).

[A.A.C.R18-2-1101.A.8]

b. Monitoring, Recordkeeping, and Reporting Requirements

Permittee shall keep all records in a file. The required records include the "NESHAP Notification for Renovation and Demolition Activities" form and all supporting documents.

[A.A.C.R18-2-306.A.3.c]

4. Nonvehicle Air Conditioner Maintenance and/or Services

a. Emission Limitation/Standards

The Permittee shall comply with the applicable requirements of 40 CFR 82-Subpart F (Protection of Stratospheric ozon-Recycling and Emissions Reduction).

[40 CFR 82, Subpart F]

b. Monitoring, Recordkeeping, and Reporting Requirements

The Permittee shall keep all records required by the applicable requirements of 40 CFR 82-Subpart F in a file on site.

[A.A.C.R18-2-306.A.3.c]

ATTACHMENT "D": EQUIPMENT LIST

Air Quality Control Permit No. 31876  
 For  
 Arizona Public Service Company  
 Yucca Power Plant

Description	Maximum Capacity	Make/ Model	Serial Number	Equipment ID	Date of Manufacture
Tangentially-fired steam electric generating unit	80 MW*	Combustion Engineering	188895	Steam Unit 1	3/4/59
Simple cycle gas turbine generating unit	19.1 MW*	General Electric Frame 5	214363	Gas Turbine 1	7/1/71
Simple cycle gas turbine generating unit	19.1 MW*	General Electric Frame 5	214362	Gas Turbine 2	7/1/71
Simple cycle gas turbine generating unit	54.6 MW*	General Electric Frame 7	217812	Gas Turbine 3	6/20/73
Simple cycle gas turbine generating unit	53.9 MW*	General Electric Frame 7	237986	Gas Turbine 4	7/9/74
Simple cycle gas turbine generating unit	21.6 MW*	General Electric Frame 5	245107	Gas Turbine 21	12/28/78 (Commenced construction prior to October 3, 1977)
Gas turbine no. 1 startup engine	500 HP*	O' Donell-Quigley Model 7123-7000	12VA24361	Diesel Startup Engine CT 1	7/1/71
Gas turbine no. 2 startup engine	500 HP*	O' Donell-Quigley Model 7123-7000	12VA24360	Diesel Startup Engine CT 2	7/1/71
Gas turbine no. 21 startup engine	500 HP*	Massaro Detroit Diesel Allison Model 7123-7000	12VA05831	Diesel Startup Engine CT 21	12/28/78 (Commenced construction prior to October 3, 1977)
Boiler to heat fuel oil for	71.2 MMBtu/hr	Cleaver Brooks DL-68-400-	7869	Auxiliary Boiler	1974