



Janet Napolitano
Governor

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

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



Stephen A. Owens
Director

**CERTIFIED MAIL
RETURN RECEIPT REQUESTED**

July 9, 2007

AQD:PS:CTS: 103603

Gary G. Grim, Sr. VP and COO
Arizona Electric Power Cooperative, Inc.
P.O. Box 670
Benson, Arizona 85602

FILE COPY

Subject: Air Quality Control Permit No. 35043
Power Plant - Place ID: 3532

Dear Mr. Grim:

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 Paul A. Babonis at (602) 771-2334.

Sincerely,

Nancy C. Wrona, Director
Air Quality Division

NCW:PAB

Enclosures:

FILE COPY

Arizona Department of Environmental Quality
Air Quality Division

Excess Emissions Report

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 Electric Power Cooperative, Inc. / Apache Generating Station
2. Permit No.: 35043
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 emission 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

The nature and cause of the excess emissions: _____

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

10. 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

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 NO₂ 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) 771-2273
ATTN: Latha Toopal, Compliance Section
Technical Services & Enforcement 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.C.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

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

**AIR QUALITY CONTROL
PERMIT NUMBER 35043**

Has been issued to Arizona Electric Power Cooperative, Inc.
P.O. Box 670
Benson, Arizona 85602

For operation of 3 Steam Units and 4 Gas Turbines

Subject to terms and conditions therein and all applicable Arizona Revised Statutes and the Arizona Administrative Code.



Number: 35043
Issued: July 2, 2007
Expires: July 2, 2012


Nancy C. Wrona, Director, Air Quality Division

TO BE FRAMED AND DISPLAYED IN A CONSPICUOUS PLACE

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
Air Quality Division

1110 W. Washington Street • Phoenix, AZ 85007 • Phone: (602) 771-2316

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 Electric Power Cooperative, Inc.

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

Gary G. Grim

3. MAILING ADDRESS _____ **P.O. Box 670**

Number Street
Benson, Arizona 85602

City or Community State Zip Code

4. ORIGINAL EQUIPMENT LOCATION/ADDRESS _____ **3525 N. Hwy 191 South**

Number Street
Cochise, Cochise County, AZ County, AZ 85606

City or Community State Zip Code

5. FACILITIES OR EQUIPMENT DESCRIPTION _____ **3 Steam Units and 4 Gas Turbines**

6. THIS PERMIT ISSUED SUBJECT TO THE FOLLOWING _____ **Conditions contained in Attachments "A" and "B"**

7. ADEQ PERMIT NUMBER _____ **35043** PERMIT CLASS _____ **I**

PERMIT ISSUED THIS _____ **2nd** DAY OF _____ **July**, 2007



Nancy C. Wrona, Director, Air Quality Division

SIGNATURE

TITLE



ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

AIR QUALITY CLASS I PERMIT

COMPANY: Arizona Electric Power Cooperative, Inc.
FACILITY: Apache Generating Station.
PERMIT #: 35043
DATE ISSUED: July 2, 2007
DATE EXPIRES: July 2, 2012

SUMMARY

This operating permit is issued to Arizona Electric Power Cooperative, Inc. (AEPSCO), the Permittee, for operation of its Apache Generating Station, located approximately 3 miles southeast of the town of Cochise in the Willcox Basin in Cochise County, Arizona. The plant currently supplies electric power to six rural electric distribution systems serving portions of Arizona, California, and New Mexico. It also sells wholesale power to individual municipal, commercial, and industrial customers in Arizona.

The plant supplies power through seven electric generation units: two coal/natural gas-fired steam electric units, a natural gas/fuel oil-fired steam electric unit, and four natural gas/oil-fired gas turbines. The rated generating capacity of the entire plant is approximately 604 MW. Each of the coal/natural gas-fired steam electric units has an electrostatic precipitator and a sulfur dioxide absorption system for controlling particulate matter emission and sulfur dioxide emissions respectively when burning coal. Gas Turbine Nos. 1, 2, 3 and the Steam Unit 1/Gas Turbine No. 1, natural gas/fuel oil-fired steam electric generator have no air pollution control equipment installed on them.

Gas Turbine No. 4 rated at 44MW, is equipped with water injection and Selective Catalytic Reduction (SCR) for controlling nitrogen oxides (NO_x) emissions and an oxidation catalyst system for controlling carbon monoxide (CO) emissions. Gas Turbine No. 4 is limited on the number of hours allowed to burn fuel oil and natural gas in order to control SO₂ and PM/PM₁₀ emissions.

This Class I permit supersedes all previous operating permits issued to AEPSCO. The terms and conditions of these permits are void as of the date of issuance of this Permit. This operating permit incorporates the applicable requirements contained in the underlying construction/installation permits and does not affect those applicable requirements.

All definitions, terms, and conditions used in this permit conform to those in the Arizona Administrative Code R18-2-101 et. seq. (A.A.C.) and 40 Code of Federal Regulations (CFR), except as otherwise defined in this permit. Unless noted otherwise, references cited in the permit conditions refer to the A.A.C. All material permit conditions have been identified within the permit by a double underline. All terms and conditions in this permit are enforceable by the Administrator of the U.S. Environmental Protection Agency, except for those terms and conditions that have been designated as "State Requirements".

Apache Generating Station is a "major source". The potential emission rates of the following pollutants are greater than 100 tons per year: (i) particulate matter, (ii) sulfur dioxide, (iii) nitrogen oxides, (iv)

carbon monoxide, and (v) volatile organic compounds. Apache Generating Station operations are subject to the Acid Rain Program of the Clean Air Act. This permit is issued in accordance with Title V of the Clean Air Act, and Title 49, Chapter 3 of the Arizona Revised Statutes.

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ATTACHMENT "A": GENERAL CONDITIONS

**Air Quality Control Permit No. 35043
For
Apache Generating Station.**

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.
- B. 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.
 3. The Director or the Administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.
 4. The Director or the Administrator determines that the permit needs to be revised or revoked to assure compliance with the applicable requirements.
- C. Proceedings to reopen and reissue a permit, including appeal of any final action relating to a permit reopening, shall follow the same procedures as apply to initial permit issuance and shall, except for reopenings under Condition III.B.1 above, affect only those parts of the permit for which cause to reopen exists. Such reopenings shall be made as expeditiously as practicable. Permit reopenings for reasons other than those stated in Condition III.B.1 above shall not result in a resetting of the five-year permit term.

IV. POSTING OF PERMIT

[A.A.C. R18-2-315]

- A. The Permittee shall post this permit or a certificate of permit issuance where the facility is located in such a manner as to be clearly visible and accessible. All equipment covered by this permit shall be clearly marked with one of the following:
1. Current permit number; or
 2. Serial number or other equipment ID number that is also listed in the permit to identify that piece of equipment.
- B. A copy of the complete permit shall be kept on site.

V. FEE PAYMENT

[A.A.C. R18-2-306.A.9 and -326]

The Permittee shall pay fees to the Director pursuant to ARS § 49-426(E) and A.A.C. R18-2-326.

VI. ANNUAL EMISSION INVENTORY QUESTIONNAIRE

[A.A.C. R18-2-327.A and B]

- A. The Permittee shall complete and submit to the Director an annual emissions inventory questionnaire. The questionnaire is due by March 31st or ninety days after the Director makes the inventory form available each year, whichever occurs later, and shall include emission information for the previous calendar year.
- B. The questionnaire shall be on a form provided by the Director and shall include the information required by A.A.C. R18-2-327.

VII. COMPLIANCE CERTIFICATION

[A.A.C. R18-2-309.2.a, -309.2.c-d, and -309.5.d]

- A. The Permittee shall submit a compliance certification to the Director semiannually, which describes the compliance status of the source with respect to each permit condition. The first certification shall be submitted no later than May 15th, and shall report the compliance status of the source during the period between October 1st of the previous year and March 31st of the 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.
- B. 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. Identification of the methods or other means used by the Permittee 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. The certification shall be based on the methods or means designated in Condition VII.B.2 above. The certifications shall identify each deviation and take it into account for consideration in the compliance certification;
 4. For emission units subject to 40 CFR Part 64, the certification shall also identify as possible exceptions to compliance any period during which compliance is required and in which an excursion or exceedance defined under 40 CFR Part 64 occurred;
 5. All instances of deviations from permit requirements reported pursuant to Condition XII.B of this Attachment; and
 6. Other facts the Director may require to determine the compliance status of the source.
- C. A copy of all compliance certifications shall also be submitted to the EPA Administrator.
- D. If any outstanding compliance schedule exists, a progress report shall be submitted with the semi-annual compliance certifications required in Condition VII.A above.

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.

X. PERMIT REVISION PURSUANT TO FEDERAL HAZARDOUS AIR POLLUTANT STANDARD

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

If this source becomes subject to a standard promulgated by the Administrator pursuant to Section 112(d) of the Act, then the Permittee shall, within twelve months of the date on which the standard is promulgated, submit an application for a permit revision demonstrating how the source will comply with the standard.

XI. ACCIDENTAL RELEASE PROGRAM

[40 CFR Part 68]

If this source becomes subject to the provisions of 40 CFR Part 68, then the Permittee shall comply with these provisions according to the time line specified in 40 CFR Part 68.

XII. EXCESS EMISSIONS, PERMIT DEVIATIONS, AND EMERGENCY REPORTING

A. Excess Emissions Reporting

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

1. Excess emissions shall be reported as follows:

- a. The Permittee shall report to the Director any emissions in excess of the limits established by this permit. Such report shall be in two parts as specified below:

- i. Notification by telephone or facsimile within 24 hours of the time when the Permittee first learned of the occurrence of excess emissions including all available information from Condition XII.A.1.b below.
 - ii. Detailed written notification by submission of an excess emissions report within 72 hours of the notification pursuant to Condition XII.A.1.a.(1) above.
- b. The report shall contain the following information:
- i. Identity of each stack or other emission point where the excess emissions occurred;
 - ii. 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;
 - iii. Date, time and duration, or expected duration, of the excess emissions;
 - iv. Identity of the equipment from which the excess emissions emanated;
 - v. 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; and
 - vii. 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

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 contain a description of the emergency, any steps taken to mitigate emissions, and corrective action taken.
4. In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
5. This provision is in addition to any emergency or upset provision contained in any applicable requirement.

D. Compliance Schedule

[ARS § 49-426.I.5]

For any excess emission or permit deviation that cannot be corrected with 72 hours, the Permittee is required to submit a compliance schedule to the Director within 21 days of such occurrence. The compliance schedule shall include a schedule of remedial measures, including an enforceable sequence of actions with milestones, leading to compliance with the permit terms or conditions that have been violated.

E. Affirmative Defenses for Excess Emissions Due to Malfunctions, Startup, and Shutdown
[A.A.C. R18-2-310]

1. Applicability

This rule establishes affirmative defenses for certain emissions in excess of an emission standard or limitation and applies to all emission standards or limitations except for standards or limitations:

- a. Promulgated pursuant to Sections 111 or 112 of the Act;
- b. Promulgated pursuant to Titles IV or VI of the Clean Air Act;
- c. Contained in any Prevention of Significant Deterioration (PSD) or New Source Review (NSR) permit issued by the U.S. EPA;
- d. Contained in A.A.C. R18-2-715.F; or
- e. Included in a permit to meet the requirements of A.A.C. R18-2-406.A.5.

2. Affirmative Defense for Malfunctions

Emissions in excess of an applicable emission limitation due to malfunction shall constitute a violation. When emissions in excess of an applicable emission limitation are due to a malfunction, 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:

- a. The excess emissions resulted from a sudden and unavoidable breakdown of process equipment or air pollution control equipment beyond the reasonable control of the Permittee;
- 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:
 - i. The excess emissions could not have been prevented through careful and prudent planning and design;
 - ii. 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;

- iii. 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;
- iv. The amount and duration of the excess emissions (including any bypass operation) were minimized to the maximum extent practicable during periods of such emissions;
- v. All reasonable steps were taken to minimize the impact of the excess emissions on ambient air quality;
- vi. 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;
- vii. All emissions monitoring systems were kept in operation if at all practicable; and
- viii. Contemporaneous records documented the Permittee's actions in response to the excess emissions.

- b. If excess emissions occur due to a malfunction during routine startup and shutdown, then those instances shall be treated as other malfunctions subject to Condition XII.E.2 above.

4. Affirmative Defense for Malfunctions during Scheduled Maintenance

If excess emissions occur due to a malfunction during scheduled maintenance, then those instances will be treated as other malfunctions subject to Condition XII.E.2 above.

5. Demonstration of Reasonable and Practicable Measures

For an affirmative defense under Condition XII.E.2 or XII.E.3 above, the Permittee shall demonstrate, through submission of the data and information required by Condition XII.E and A.A.C. R18-2-310.01, that all reasonable and practicable measures within the Permittee's control were implemented to prevent the occurrence of the excess emissions.

XIII. RECORD KEEPING REQUIREMENTS

[A.A.C. R18-2-306.A.4]

- A. The Permittee shall keep records of all required monitoring information including, but not limited to, the following:

1. The date, place as defined in the permit, and time of sampling or measurements;
 2. The date(s) analyses were performed;
 3. The name of the company or entity that performed the analyses;
 4. A description of the analytical techniques or methods used;
 5. The results of such analyses; and
 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]

- A. 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:
 - 1. Administrative Permit Amendment (A.A.C. R18-2-318);
 - 2. Minor Permit Revision (A.A.C. R18-2-319); and
 - 3. Significant Permit Revision (A.A.C. R18-2-320)
- B. The applicability and requirements for such action are defined in the above referenced regulations.

XVII. FACILITY CHANGE WITHOUT A PERMIT REVISION

[A.A.C. R18-2-306.A.4 and -317]

- A. The Permittee may make changes at the permitted source without a permit revision if all of the following apply:
 - 1. The changes are not modifications under any provision of Title I of the Act or under ARS § 49-401.01(19);
 - 2. The changes do not exceed the emissions allowable under the permit whether expressed therein as a rate of emissions or in terms of total emissions;
 - 3. The changes do not violate any applicable requirements or trigger any additional applicable requirements;
 - 4. The changes satisfy all requirements for a minor permit revision under A.A.C. R18-2-319.A; and
 - 5. The changes do not contravene federally enforceable permit terms and conditions that are monitoring (including test methods), record keeping, reporting, or compliance certification requirements.
- B. The substitution of an item of process or pollution control equipment for an identical or substantially similar item of process or pollution control equipment shall qualify as a change that does not require a permit revision, if it meets all of the requirements of Conditions XVII.A and XVII.C of this Attachment.
- C. For each change under Conditions XVII.A and XVII.B above, a written notice by certified mail or hand delivery shall be received by the Director and the Administrator a minimum of 7 working days in advance of the change. Notifications of changes associated with emergency conditions, such as malfunctions necessitating the replacement of equipment, may be provided less than 7 working days in advance of the

change, but must be provided as far in advance of the change, as possible or, if advance notification is not practicable, as soon after the change as possible.

- D. Each notification shall include:
 - 1. When the proposed change will occur;
 - 2. A description of the change;
 - 3. Any change in emissions of regulated air pollutants; and
 - 4. Any permit term or condition that is no longer applicable as a result of the change.
- E. The permit shield described in A.A.C. R18-2-325 shall not apply to any change made under this Section, other than implementation of an alternate to Conditions XVII.A and XVII.B above.
- F. Except as otherwise provided for in the permit, making a change from one alternative operating scenario to another as provided under A.A.C. R18-2-306.A.11 shall not require any prior notice under this Section.
- 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
- C. 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.
- D. 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.
- E. 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.

F. 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.

G. 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. For the purpose of determining compliance with an applicable standard, the arithmetic mean of the results of the three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the three runs is required to be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances beyond the Permittee's control, compliance may, upon the Director's approval, be determined using the arithmetic mean of the results of the other two runs. If the Director or the Director's designee is present, tests may only be stopped with the Director's or such designee's approval. If the Director or the Director's designee is not present, tests may only be stopped for good cause. Good cause includes: forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances beyond the Permittee's control. Termination of any test without good cause after the first run is commenced shall constitute a failure of the test. Supporting documentation, which demonstrates good cause, must be submitted.

H. Report of Final Test Results

A written report of the results of all performance tests shall be submitted to the Director within 30 days after the test is performed. The report shall be submitted in accordance with the Arizona Testing Manual and A.A.C. R18-2-312.A.

XIX. PROPERTY RIGHTS

[A.A.C. R18-2-306.A.8.d]

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

XX. SEVERABILITY CLAUSE

The provisions of this permit are severable. In the event of a challenge to any portion of this permit, or if any portion of this permit is held invalid, the remaining permit conditions remain valid and in force.

XXI. PERMIT SHIELD

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

Compliance with the conditions of this permit shall be deemed compliance with all applicable requirements identified in the portions of this permit subtitled "Permit Shield". The permit shield shall not apply to minor revisions pursuant to Condition XVI.A.2 of this Attachment and any facility changes without a permit revision pursuant to Section XVII of this Attachment.

XXII. PROTECTION OF STRATOSPHERIC OZONE

If this source becomes subject to the provisions of 40 CFR Part 82, then the Permittee shall comply with these provisions accordingly.

ATTACHMENT "B": SPECIFIC CONDITIONS

Air Quality Control Permit No. 35043 For Apache Generating Station.

I. FACILITY-WIDE REQUIREMENTS

- A. The Permittee shall have on site 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.B above of Attachment "A" are submitted, the Permittee shall submit reports of all monitoring activities required by this Attachment performed in the same six month period as applies to the compliance certification period.
[A.A.C. R18-2-306.A.5.a]
- C. The Permittee shall maintain 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; records of emissions related maintenance performed on emission units and emission control units, and all other information required by this part recorded in a permanent form suitable for inspection. The files shall be retained for at least five years following the date of such measurements, maintenance, reports, and records. The most recent two years of data shall be kept on-site.
[40 CFR 60.7(f) and A.A.C. R18-2-306.A.5.a]
- D. The Permittee shall log contemporaneously any change in fuel type for Steam Units 1, 2, or 3, or Gas Turbine Nos. 1, 2, 3 or 4 including:
[A.A.C. R18-2-306.A.13]
1. Type of fuel change;
 2. Date of the fuel change; and
 3. Time of the fuel change.

II. STEAM UNITS 2 AND 3

A. Applicability

This Section applies to Steam Units 2 and 3, both wall-fired steam electric generators.

B. Operating Limitations

1. Fuel Limitation

- a. The Permittee shall burn only the following as fuel in the units:
 - i. Coal;
 - ii. Natural gas;
 - iii. Co-firing of coal and used oil fuel subject to Condition X of this Attachment; and
 - iv. Co-firing of coal and natural gas.
- b. The Permittee shall not fire in ST2 and ST3 used oil (alone or co-fired with coal) for more than a total of 40 hours per year.
[A.A.C. R18-2-306.01 and A.A.C. R18-2-331.A.3.a]
[Material Permit Conditions are indicated with underlines.]

2. Startup

Start-up means the setting in operation of Steam Unit 2 or 3 for any purpose.
[40 CFR 60.2]

3. Shutdown

Shutdown means the cessation of operations of Steam Unit 2 or 3 for any purpose.
[40 CFR 60.2]

4. Malfunction

Malfunction means any sudden and unavoidable failure of air pollution control equipment, process equipment or a process to operate in a normal and usual manner, but does not include failures that are caused by poor maintenance, careless operation or any other upset condition or equipment breakdown which could have been prevented by the exercise of reasonable care.
[A.A.C. R18-2-101.105]

C. Excess Emissions and Monitoring System Performance Reports

- 1. Excess emission and monitoring system performance (MSP) reports for Steam Units 2 and 3 shall be submitted to the Department and EPA Region IX quarterly. All quarterly report shall be postmarked by the 30th day following the end of each calendar quarter. Each excess emission and MSP report shall include the information required in Condition II.C.2 below.
[40 CFR 60.45(g)]
- 2. The summary quarterly report, shall be in the format specified in 40 CFR 60.7(d). The excess emissions report shall include the following information:

[40 CFR 60.7(c)]

- a. Magnitude of excess emissions computed, any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions. The process operating time during the reporting period.

[40 CFR 60.7(c)(1)]

- b. Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility. The nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted.

[40 CFR 60.7(c)(2)]

- c. The date and time identifying each period during which the continuous monitoring system (CMS) was inoperative except for zero and span checks and the nature of the system repairs or adjustments.

[40 CFR 60.7(c)(3)]

- d. When no excess emissions have occurred or the CMS has not been inoperative, repaired, or adjusted, such information shall be stated in the report.

D. Particulate Matter (PM/PM₁₀) and Opacity

1. Emission Limitations and Standards

a. Opacity

- i. The opacity of emissions from the stack of each unit shall not be greater than 20 percent except for periods of startup, shutdown, and malfunction and for one six-minute period per hour of not more than 27 percent.

[40 CFR 60.42(a)(2), 60.11(c), 60.11(e)(1), and A.A.C. R18-2-331.A.3.f)]

[Material Permit Conditions are indicated with underlines.]

- ii. Opacity readings of portions of plumes which contain condensed, uncombined water vapor shall not be used for the purposes of determining compliance with opacity standards.

[40 CFR 60.11(e)(1)]

- b. The Permittee shall not cause to be discharged into the atmosphere from the stack of each unit any gases which contain particulate matter in excess of 43 nanograms per joule heat input (0.10 lb per million Btu) derived from fossil fuel.

[40 CFR 60.42(a)(1)]

2. Air Pollution Control Requirements

- a. The electrostatic precipitators (ESP) shall remain in service until coal fires in the boiler are out, or the minimum inlet temperature to the ESP falls below the manufacturer's design of 525 degrees Fahrenheit. The sulfur dioxide absorption systems (SDAS) shall remain in service until the last coal ball tube mill of that respective unit is removed from service.

[A.A.C. R18-2-306.A.13 and A.A.C. R18-2-331.A.3e]
[Material Permit Conditions are indicated with underlines.]

- b. At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain and operate the electrostatic precipitators in a manner consistent with good air pollution control practice for minimizing particulate matter emissions.

[40 CFR 60.11(d) and A.A.C. R18-2-331.A.3.e]
[Material Permit Conditions are indicated with underlines.]

3. Monitoring/Record keeping/Reporting Requirements

- a. Opacity

The Permittee shall calibrate, maintain, and operate continuous monitoring systems for measuring the opacity of emissions.

[40 CFR 60.45(a), A.A.C. R18-2-331.A.3.c]
[Material Permit Conditions are indicated with underlines.]

- b. The continuous opacity monitoring system (COMS) shall meet the following requirements.

40 CFR 60, Appendix B, Performance Specification 1, "Specification and Test Procedures for Opacity Continuous Emission Monitoring Systems in Stationary Sources"

[40 CFR 60.13(a)]

- i. Apparatus
 - ii. Installation Specifications
 - iii. Design and Performance Specifications
 - iv. Design Specifications Verification Procedure
 - v. Performance Specifications Verification Procedure
 - vi. Equations
- c. The following quality assurance requirements:
 - i. Calibration Checks

The CEMS shall automatically check the zero and span calibration drifts at least once daily in accordance with a written procedure.

[40 CFR 60.13(d)(1) and 40 CFR 60, Appendix B, PS1, 5.2]

ii. Zero and Span Drift Adjustments

1. The zero and span shall, as a minimum, be adjusted whenever the 24-hr zero drift or 24-hr span drift exceeds 4% opacity.

[40 CFR 60.13(d)(1)]

2. The system shall allow for the amount of excess zero and span drift measured at the 24-hour interval checks to be recorded and quantified.

[40 CFR 60.13(d)(1)]

3. The optical surfaces exposed to the effluent gases shall be cleaned prior to performing the zero and span drift adjustments, except for systems using automatic zero adjustments.

[40 CFR 60.13(d)(1)]

4. For systems using automatic zero adjustments, the optical surfaces shall be cleaned when the cumulative automatic zero compensation exceeds 4% opacity.

[40 CFR 60.13(d)(1) and 60.45(3)(f)]

iii. System Checks

1. An automated method for producing a simulated zero opacity condition and an upscale (span) opacity condition using a certified neutral density filter or other related technique to produce a known obscuration of the light beam to provide a system check of the analyzer internal optical surfaces and all electronic circuitry including the lamp and photo detector assembly shall be used by the Permittee.

[40 CFR 60.13(d)(2)]

2. The span value for the continuous monitoring system measuring opacity of emissions shall be 80, 90, or 100 percent.

[40 CFR 60.45(c)(3)]

iv. Minimum Frequency of Operation

Except during periods of system breakdowns, repairs, calibration checks, and zero and span adjustments, the continuous opacity monitoring system shall be in continuous operation and shall

complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period.

[40 CFR 60.13(e)(1)]

v. Data Reduction and Missing Data

1. The Permittee shall reduce all data from the COMS to 6-minute averages. Six-minute opacity averages shall be calculated from 36 or more data points equally spaced over each 6-minute period.

[40 CFR 60.13(h)]

2. Data recorded during periods of system breakdowns, repairs, calibration checks, and zero and span adjustments shall not be included in the data averages computed under the previous paragraph. An arithmetic or integrated average of all data may be used.

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

vi. Annual Preventative Maintenance

The Permittee shall perform clear-stack alignment on opacity transmissometers.

[Installation Permit No. 031204]

d. Compliance Assurance Monitoring for Particulate Matter

i. Primary and Secondary Indicators

1. Primary Indicator

The opacity of exhaust gases shall be an indicator of particulate matter emissions.

[40 CFR 64.6(c)(1)(i)]

2. Secondary Indicator

The secondary current and voltage for each section of each ESP shall be an indicator of ESP performance.

[40 CFR 64.6(c)(1)(i)]

- ii. A COMS shall be used to monitor opacity. The COMS shall be installed and operated in accordance with the requirements specified in Condition II.D.3 above of this Attachment.

[40 CFR 64.6(c)(1)(i) and (ii)]

- iii. Using COMS data, the Permittee shall calculate rolling 1-hour average opacities excluding periods of boiler startup, shutdown, and malfunction. If at any point, excluding periods boiler

startup, shutdown, and malfunction, the opacity is equal to or exceeds 18%, then the Permittee shall:

1. Record the secondary current and secondary voltage for each section of each ESP at that specific moment and determine if the current and/or voltage is within the range established in Condition II.D.3.d.iv below.
2. Record the operational status of the specific boiler (i.e. load change increase or decrease).

A Rolling 1-hour average opacity of 18% or greater and electrical parameters (secondary current and secondary voltage) outside the range established in Condition II.D.3.d.iv shall be considered an excursion.

[40 CFR 64.6(c)(2)]

- iv. The Permittee shall, within 30 days after issuance of this permit, determine and submit to the Department and the Administrator an operational range of the secondary current and the secondary voltage for each section of each ESP.

[40 CFR 64.7(c)]

- v. The Permittee shall maintain the monitoring, including but not limited to maintaining necessary parts for routine repair of the monitoring equipment.

[40 CFR 64.6(c)(3), and - 64.7(b)]

- vi. Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the Permittee shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the boilers are operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of this part, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. The Permittee shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

[40 CFR 64.6(c)(3), 64.9(b)(2)]

- vii. Response to excursions

1. Upon detecting an excursion or exceedance, the Permittee shall restore operation of the boiler (including the control device and associated capture system) to their normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown, or malfunction, and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return operations to within the indicator range, designated condition, or below applicable emission limitation or standard, as applicable.
 2. Determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based in information available, which may include but is not limited to, monitoring results, review of operation, and maintenance procedures and records, and inspection of the control device, associated capture system, and process.
- viii. After approval of the monitoring under this section, if the Permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the Permittee shall promptly notify the Department, and if necessary, submit a proposed modification to this permit to address the necessary monitoring changes. Such a modification may include, but is not limited to, re-establishing indicator ranges or designated conditions, modifying the frequency of conduction monitoring and collecting data, or the monitoring of additional parameters.

- ix. Excursions shall be reported as required by Condition XIV of Attachment "A" of this permit. The report shall include, at a minimum, the following:

[A.A.C. R18-2-309.2.c.(iii)]

1. Summary information on the number, duration and cause (including unknown cause, if applicable) of excursion or exceedances, as applicable, and the corrective actions taken; and
2. Summary information on the number, duration and cause (including unknown cause, if applicable) for monitoring downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable).

- x. The Permittee shall log in ink or electronic format and maintain a record of 1-hr opacity measurements performed and any corrective actions taken. A record of corrective actions taken shall include the date and time of the event and the date and time corrective action, if any, is completed.

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

- xi. The Permittee shall monitor and record on continuous basis (at least once every 15 minutes) the secondary voltage and current for each section of each ESP. If the secondary voltage and/or the current is outside the range established in Condition II.D.3.d.iv above then the Permittee shall record the occurrence and corrective action taken to return the electrical parameters back within the established range. This event alone does not constitute a deviation or an excursion.

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

e. Excess Emissions and Monitoring System Performance Reports

As required by Condition II.C, excess emission and monitoring system performance (MSP) reports for Steam Units 2 and 3 shall be submitted to the Department and EPA Region IX quarterly. Periods of excess emissions and monitoring systems (MS) downtime that shall be reported are defined as follows:

[40 CFR 60.45(g)]

Excess opacity emissions for Units 2 and 3 are defined as any six-minute period during which the average opacity of emissions exceeds 20 percent opacity, except that one six-minute average per hour of up to 27 percent opacity need not be reported.

4. Testing Requirements

a. Opacity

The Permittee shall perform an annual performance test to determine opacity using EPA Reference Method 9.

[40 CFR 60.46(b)(3)]

b. Particulate Matter

i. The Permittee shall perform an annual performance test to determine the particulate matter concentration using EPA Reference Method 5, or 5B, or 17 in accordance with 40 CFR 60.46.

[40 CFR 60.46(b)(2)]

ii. Emission Rate

The emission rate (E) of particulate matter, shall be calculated for each run using the following equation:

[40 CFR 60.46(b)(1)]

$$E = \frac{(C * F_d * (20.9))}{(20.9 - \%O_2)}$$

E = emission rate of pollutant, ng/J (lb/million Btu).

C = concentration of pollutant, ng/dscm (lb/dscf).

F_d = factor as determined from Method 19.

%O₂ = oxygen concentration, percent dry basis.

5. Permit Shield

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

Compliance with the terms of Section II.D of this Attachment shall be deemed compliance with the following applicable requirements: 40 CFR 60.7(c), 40 CFR 60.7(f), 60.11(c), 60.11(e)(1), 40 CFR 60.11(d), 40 CFR 60.13(a), 40 CFR 60.13(d)(1), 40 CFR 60.13(d)(2), 40 CFR 60.13(e)(1), 40 CFR 60.13(h), 40 CFR 60.42(a)(1); 40 CFR 60.42(a)(2), 40 CFR 60.45(a), 40, 40 CFR 60.45(g), 40 CFR 60.45(g)(1), 40 CFR 60.46(b)(1), 40 CFR 60.46(b)(2), 40 CFR 60, Appendix A, Method 9, Section 2.5, 40 CFR 60, Appendix B, PS1, 5.2, 40 CFR 64.6(c)(1)(i), 40 CFR 64.6(c)(1)(i) and (ii), 40 CFR 64.6(c)(2), 40 CFR 64.7(c) 40 CFR 64.6(c)(3), and - 64.7(b), 40 CFR 64.6(c)(3), 64.9(b)(2), 40 CFR 64.6(c)(3), 64.7(d), 40 CFR 64.6(c) (3), 64.9(e), and 64.9(a)(2).

E. Sulfur Dioxide

1. Emission Limitations and Standards

a. Coal

The Permittee shall not cause to be discharged into the atmosphere from the stack of each unit any gases which contain sulfur dioxide in excess of 340 nanograms per joule heat input (0.8 pounds per million Btu) derived from coal.

[A.A.C. R18-2-903.1]

b. Used Oil Fuel

The Permittee shall not cause to be discharged into the atmosphere from the stack of each unit any gases which contain sulfur dioxide in excess of 340 nanograms per joule heat input (0.8 pounds per million Btu) derived from used oil fuel.

[40 CFR 60.43(a)(1)]

c. Combination Fuel

The Permittee shall not cause to be discharged into the atmosphere from the stack of each unit any gases which contain sulfur dioxide in excess of 340 nanograms per joule heat input (0.8 pounds per million Btu) derived from co-firing different fossil fuels.

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

d. Compliance shall be based on the total heat input from all fossil fuels burned, including gaseous fuels.

[40 CFR 60.43(c)]

2. Air Pollution Control Requirements

At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain and operate the sulfur dioxide absorption systems in a manner consistent with good air pollution control practice for minimizing sulfur dioxide emissions.

[40 CFR 60.11(d) and A.A.C. R18-2-331A.3.e]
[Material Permit Conditions are indicated with underlines.]

3. Monitoring/Record keeping/Reporting Requirements

- a. The Permittee shall calibrate, maintain, and operate continuous monitoring systems for measuring the sulfur dioxide emissions.

[40 CFR 60.45(a) and A.A.C. R18-2-331A.3.c]

[Material Permit Conditions are indicated with underlines.]

- b. The continuous emission monitoring systems for SO₂ shall meet the following requirements:

[40 CFR 60.45(a)]

- i. 40 CFR Part 75, Appendix A, "Specification and Test Procedures"

1. Installation and measurement location
2. Equipment specifications
3. Performance specifications
4. Data acquisition and handling systems
5. Calibration gas
6. Certifications tests and procedures
7. Calculations

- ii. 40 CFR Part 75, Appendix B, "Quality Assurance and Quality Control Procedure"

1. Quality control program
2. Frequency of testing

- iii. Data Reduction

The Permittee shall comply with the data reduction requirements of 40 CFR Part 75.10(d)(1).

- iv. The Permittee shall comply with all the applicable record keeping and reporting requirements of 40 CFR part 75 Subparts F and G respectively.

- c. Excess Emission and Monitoring System Performance Reports

- i. As required by Condition II.C, excess emission and monitoring system performance (MSP) reports for Steam Units 2 and 3 shall

be submitted to the Department and EPA Region IX quarterly. Periods of excess emissions and monitoring systems (MS) downtime that shall be reported are defined as follows:

[40 CFR 60.45(g)]

- ii. Excess emissions for sulfur dioxide shall be defined as any three-hour period during which the average emissions (arithmetic average of three contiguous one-hour periods) of sulfur dioxide as measured by a continuous monitoring system exceed the applicable standard in Condition II.E.1. of Attachment "B".

[40 CFR 60.45(g)(2)]

4. Testing Requirements

- a. The Permittee shall perform an annual performance test to determine the sulfur dioxide concentration using EPA Reference Method 6 or 6C in accordance with 40 CFR 60.46.

[40 CFR 60.46(b)(4)]

- b. Emission Rate

The emission rate (E) of SO₂ shall be calculated for each run using the following equation:

[40 CFR 60.46(b)(1)]

$$E = \frac{(C * F_d * (20.9))}{(20.9 - \%O_2)}$$

E = emission rate of pollutant, ng/J (1b/million Btu).

C = concentration of pollutant, ng/dscf (1b/dscf).

F_d = factor as determined from Method 19.

%O₂ = oxygen concentration, percent dry basis.

5. Permit Shield

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

Compliance with the terms of Condition II.E of this Attachment shall be deemed compliance with the following applicable requirements: A.A.C. R18-2-903.1, 40 CFR 60.7(c), 40 CFR 60.7(f), 40 CFR 60.11(d), 40 CFR 60.13(d)(1), 40 CFR 60.13(d)(2), 40 CFR 60.13(e)(2), 40 CFR 60.13(h), 40 CFR 60.43(a)(1), 40 CFR 60.43(c), 40 CFR 60.45(a), 40 CFR 60.45(g), 40 CFR 60.45(g)(2), 40 CFR 60.46(b)(1), 40 CFR 60.46(b)(4), and 40 CFR 60, Appendix B, PS1, 5.2.

F. Nitrogen Oxides

1. Emission Limits and Standards

a. Coal

The Permittee shall not cause to be discharged into the atmosphere from the stack of each unit any gases which contain nitrogen oxides, expressed as NO₂ in excess of 300 nanograms per joule heat input (0.70 lb per million Btu) derived from coal.

[40 CFR 60.44(a)(3)]

b. Natural Gas

The Permittee shall not cause to be discharged into the atmosphere from the stack of each unit any gases which contain nitrogen oxides, expressed as NO₂ in excess of 86 nanograms per joule heat input (0.20 lb per million Btu) derived from natural gas.

[40 CFR 60.44(a)(1)]

c. Used Oil Fuel

The Permittee shall not cause to be discharged into the atmosphere from the stack of each unit any gases which contain nitrogen oxides, expressed as NO₂ in excess of 129 nanograms per joule heat input (0.30 lb per million Btu) derived from used oil fuel.

[40 CFR 60.44(a)(2)]

d. Combination Fuels

When different fossil fuels are burned simultaneously in any combination the applicable standard (in ng/J) is determined by prorating, using the following formula:

[40 CFR 60.44(b)]

$$PSNO_x = \frac{(w * 260) + (x * 86) + (y * 130) + (z * 300)}{w + x + y + z}$$

Where:

PSNO_x = the prorated standard for nitrogen oxides when burning different fuels simultaneously, in nanograms per joule heat input derived from all fossil fuels fired or from all fossil fuels and wood residue fired;

w = the percentage of total heat input derived from lignite;

x = the percentage of total heat input derived from gaseous fossil fuel;

y = the percentage of total heat input derived from liquid fossil fuel; and

z = the percentage of total heat input derived from solid fossil fuel (except lignite).

2. Monitoring/Record keeping/Reporting Requirements

a. The Permittee shall calibrate, maintain, and operate continuous monitoring systems for measuring the nitrogen oxides emissions.

[40 CFR 60.45(a) and A.A.C. R18-2-331A.3(c)]
[Material Permit Conditions are indicated with underlines.]

b. The continuous emission monitoring systems for NO_x shall meet the following requirements:

i. 40 CFR Part 75, Appendix A, "Specification and Test Procedures"

1. Installation and measurement location
2. Equipment specifications
3. Performance specifications
4. Data acquisition and handling systems
5. Calibration gas
6. Certifications tests and procedures
7. Calculations

ii. 40 CFR Part 75, Appendix B, "Quality Assurance and Quality Control Procedure"

1. Quality control program; and
2. Frequency of testing.

iii. 40 CFR Part 75, Appendix C, "Missing Data Estimation Procedures"

Load-Based Procedure for Missing Flow Rate and NO_x Emission Rate Data

iv. 40 CFR Part 75, Appendix F, "Conversion Procedures"

Procedures for NO_x Emission Rate

c. Data Reduction

The Permittee shall comply with the data reduction requirements of 40 CFR Part 75.10(d)(1).

d. The Permittee shall comply with all the applicable record keeping and reporting requirements of 40 CFR Part 75 Subparts F and G respectively.

e. Excess Emissions and Monitoring System Performance Reports

i. As required by Condition II.C, excess emission and monitoring system performance (MSP) reports for Steam Units 2 and 3 shall be submitted to the Department and EPA Region IX quarterly. Periods of excess emissions and monitoring systems (MS) downtime that shall be reported are defined as follows:

[40 CFR 60.45(g)]

ii. Excess emissions for nitrogen oxides shall be defined as any three-hour period during which the average emissions (arithmetic average of three contiguous one-hour periods) of nitrogen oxides as measured by a continuous monitoring system exceed the applicable standards in Section II.F.1 of this Attachment.

[40 CFR 60.45(g)(3)]

3. Testing Requirements

a. The Permittee shall perform an annual performance test to determine the nitrogen oxides concentration using EPA Reference Method 7 or 7E in accordance with 40 CFR 60.46.

[40 CFR 60.46(b)(5)]

b. Emission Rate

The emission rate (E) of NO_x shall be calculated for each run using the following equation:

[40 CFR 60.46(b)(1)]

$$E = \frac{(C * F_d * (20.9))}{(20.9 - \%O_2)}$$

E = emission rate of pollutant, ng/J (1b/million Btu).

C = concentration of pollutant, ng/dscm (1b/dscf).

F_d = factor as determined from Method 19.

%O₂ = oxygen concentration, percent dry basis.

4. Permit Shield

Compliance with the terms of Condition II.F of this Attachment shall be deemed compliance with the following applicable requirements: 40 CFR 60.7(c), 40 CFR 60.7(f), 40 CFR 60.13(d)(1), 40 CFR 60.13(d)(2), 40 CFR 60.13(e)(2), 40 CFR 60.13(h), 40 CFR 60.44(a)(1), 40 CFR 60.44(a)(2), 40 CFR 60.44(a)(3), 40 CFR 60.44(b), 40 CFR 60.45(a), 40 CFR 60.45(g), 40 CFR 60.45(g)(3), 40 CFR 60.46(b)(1), 40 CFR 60.46(b)(5), and 40 CFR 60, Appendix B, PS1, 5.2.

III. STEAM UNIT 1/COMBINED CYCLE OPERATION OF STEAM UNIT 1 AND GAS TURBINE NO. 1

A. Applicability

This Section applies to Steam Unit 1/Combined Cycle Operation of Steam Unit 1 and Gas Turbine No. 1 as detailed in the Equipment List of Attachment "C".

B. Operational Limitations

1. Fuel Limitations

- a. The Permittee shall not use high sulfur oil (fuel sulfur content $\geq 0.90\%$ by weight) as a fuel unless the Permittee demonstrates to the satisfaction of the Director that sufficient quantities of low sulfur oil are not available for use by the source and that it has adequate facilities and contingency plans to assure that the sulfur dioxide ambient air quality standards set forth in A.A.C. R18-2-202 will not be violated.

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

- b. The Permittee shall burn only the following as fuel in Steam Unit 1:

[Installation Permit 24016]

- i. Natural gas;
 - ii. Fuel oil nos. 2 through 6;
 - iii. Co-firing of natural gas and used oil or used oil fuel subject to Condition X of this Attachment;
 - iv. Co-firing of fuel oil nos. 2 through 6 and used oil or used oil fuel subject to Condition X of this Attachment; and
 - v. Co-firing natural gas and fuel oil nos. 2 through 6.
- c. The Permittee shall burn only the following as fuel during combined cycle operation:

- i. Gas Turbine No. 1
 - 1. Natural gas; or
 - 2. Fuel oil no. 2.
- ii. Steam Unit 1
 - 1. Natural gas;
 - 2. Fuel oil nos. 2 through 6;
 - 3. Co-firing of natural gas and used oil or used oil fuel subject to Condition X of this Attachment;
 - 4. Co-firing of fuel oil nos. 2 through 6 and used oil or used oil fuel subject to Condition X of this Attachment; and
 - 5. Co-firing natural gas and fuel oil nos. 2 through 6.

2. Definition of Heat Input

- a. For the purposes of Conditions III.B.2.b and III.B.2.c of this Attachment, "heat input" is defined as the aggregate heat content of all fuels whose products of combustion pass through a stack or other outlet. Compliance tests shall be conducted during operation at the nominal rated capacity of the unit.

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

- b. The total heat input from the burning of all fuels in Steam Unit 1 shall be computed as follows:

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

$$\text{TotalHeatInput} = \sum_{i=1}^k (\text{NHV}_i * U_i)$$

Where:

NHV_i = Net heating value of each fuel "i" at standard temperature and pressure; and

U_i = Fuel firing rate of each fuel "j".

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

- c. The total heat input from the burning of all fuels during combined cycle operation shall be computed as follows:

$$\text{TotalHeatInput} = \sum_{j=1}^n \sum_{i=1}^k (\text{NHV}_{i,j} * U_{i,j})$$

Where:

NHV_i = Net heating value of each fuel “i” at standard temperature and pressure fired in each unit “j” forming the combined cycle operation; and

U_i = Fuel firing rate of each fuel “i” in each unit “j”.
[A.A.C.R18-2-703.B]

3. Permit Shield

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

Compliance with the terms of Condition III.B of this Attachment shall be deemed compliance with the following applicable requirements: A.A.C.R18-2-703.B, and A.A.C.R18-2-703.C.1.

C. Particulate Matter and Opacity

1. Emission Limitations and Standards

a. The Permittee shall not cause, allow or permit to be emitted into the atmosphere any plume or effluent the opacity of which exceeds 20%.
[A.A.C.R18-2-702.B]

b. The Permittee shall not cause, allow or permit the emission of particulate matter in excess of the amounts calculated by the following equation:

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

E = the maximum allowable particulate matter emissions rate in pounds-mass per hour.

Q = the heat input in million Btu per hour.
[A.A.C. R18-2-703.C.1]

2. Monitoring/Record keeping/Reporting Requirements

a. Opacity while Burning Liquid Fuel

The Permittee shall calibrate, maintain, and operate continuous monitoring systems for measuring the opacity of emissions.

- b. The Permittee shall keep on record the contractual agreement with the liquid fuel vendor indicating the following information concerning the liquid fuel being fired for each shipment of fuel oil:
- i. The name of the fuel oil supplier;
 - ii. The heating value of the fuel oil;
 - iii. The density of the fuel oil;
 - iv. The ash content of the fuel oil;
 - v. The sulfur content of the fuel oil from which the shipment came;
 - vi. The method used to determine the ash content of the fuel oil; and
 - vii. The method used to determine the sulfur content of the fuel oil.

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

3. Permit Shield

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

Compliance with the terms of Condition III.C of this Attachment shall be deemed compliance with the following applicable requirements: A.A.C.R18-2-703.B, and A.A.C.R18-2-703.C.1.

D. Sulfur Dioxide

1. Emission Limitations and Standards

The Permittee shall not cause, allow, or permit emissions of more than 1.0 pound sulfur dioxide maximum three hour average per million BTU heat input.

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

2. Monitoring/Record keeping/Reporting Requirements

Sulfur Dioxide while Burning Liquid Fuel

- a. The Permittee shall keep on record the contractual agreement with the liquid fuel vendor indicating the following information concerning the liquid fuel being fired for each shipment of fuel oil:
- i. The name of the fuel oil supplier;
 - ii. The heating value of the fuel oil;
 - iii. The density of the fuel oil;

- iv. The ash content of the fuel oil;
 - v. The sulfur content of the fuel oil from which the shipment came;
 - vi. The method used to determine the ash content of the fuel oil; and
 - vii. The method used to determine the sulfur content of the fuel oil.
- [A.A.C. R18-2-306.A.3.b]

b. Permittee shall maintain records of all emissions calculations performed for any change in (2), (3), or (5) above using the following equation:

$$SO_2 = \frac{2.0 * \text{Weightpercentofsulfur}}{100} * \frac{\text{Density}}{(\text{Heating Value}) * (1\text{MMBtu} / 1,000,000\text{Btu})}$$

SO₂ = Sulfur Dioxide in (lb/MMBtu)

Density = (lb/gal)

Heating Value = (Btu/gal)

3. Permit Shield

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

Compliance with the terms of Condition III.D of this Attachment shall be deemed compliance with the following applicable requirements: A.A.C.R18-2-703.E.1.

IV. GAS TURBINE NOS. 1 (SIMPLE CYCLE), 2, 3, GAS TURBINE 1 DIESEL ENGINE AND AN EMERGENCY DIESEL GENERATOR

A. Applicability

This Section applies to Gas Turbine No. 1 operating as a simple cycle, Gas Turbine No. 2, Gas Turbine No. 3, Gas Turbine No. 1 Diesel Engine, and the emergency diesel generator as detailed in the Equipment List of Attachment "C".

B. Operating Limitations

1. Hours Limitations

a. The Permittee shall not operate the emergency generator for more than 500 hours per year on a rolling 12-month total.

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

b. The Permittee shall keep records of monthly totals of the hours of operation of each internal combustion engine. At the end of each month,

the Permittee shall calculate and record a rolling 12-month total of the hours of operation.

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

2. Fuel Limitations

a. The Permittee shall not use high sulfur oil (fuel sulfur content $\geq 0.90\%$ by weight) as a fuel unless the Permittee demonstrates to the satisfaction of the Director that sufficient quantities of low sulfur oil are not available for use by the source and that it has adequate facilities and contingency plans to ensure that the sulfur dioxide ambient air quality standards set forth in A.A.C. R18-2-202 will not be violated.

[A.A.C. R18-2-719.H]

b. The Permittee shall burn only the following as fuel in the following units:

[Installation Permit 240162 and A.A.C. R18-2-306.A.2]

i. Gas Turbine Nos. 1 and 2

1. Natural gas; or

2. Fuel oil no.2,

ii. Gas Turbine No. 3

1. Natural gas; or

2. Fuel oil nos. 2 through 6;

iii. Gas Turbine 1 Diesel Engine and Emergency Diesel Generator

Diesel fuel

3. Definition of Heat Input

a. For the purposes of conditions IV.B.2 and IV.B.3 of this Attachment, "heat input" is defined as the aggregate heat content of all fuels whose products of combustion pass through a stack or other outlet. Compliance tests shall be conducted during operation at the nominal rated capacity of the unit.

[A.A.C.R18-2-719.B]

b. The total heat input from the burning of all fuels be computed as follows:

$$\text{TotalHeatInput} = \sum_{i=1}^k (\text{NHVi} * \text{Ui})$$

Where:

NHV_i = Net heating value of each fuel "i" at standard temperature and pressure; and

U_i = Fuel firing rate of each fuel "i".

C. Particulate Matter and Opacity

1. Emission Limitations and Standards

a. Opacity

The Permittee shall not cause, allow or permit to be emitted into the atmosphere from any stationary rotating machinery, smoke for any period greater than 10 consecutive seconds which exceeds 40% opacity. Visible emissions when starting cold equipment shall be exempt from this requirement for the first 10 minutes.

[A.A.C.R18-2-719.E]

b. Particulate Matter

The Permittee shall not cause, allow or permit the emission of particulate matter in excess of the amounts calculated by the following equation:

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

E = the maximum allowable particulate matter emissions rate in pounds -mass per hour

Q = the heat input in million Btu per hour.

[A.A.C. R18-2-719.C.1]

2. Monitoring/Record keeping/Reporting Requirements

a. Visible Emissions while Burning Liquid Fuel

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

The Permittee shall monitor opacity according to the following schedule:

- i. If liquid fuel is burned in a unit continuously for a time period greater than 48 hours but less than 168 hours, at least one opacity reading shall be observed at the exit of the unit's stack.
- ii. If liquid fuel is burned in a unit continuously for a time period greater than 168 hours, at least one opacity reading shall be observed during each 168 hour period at the exit of the unit's stack.

b. All opacity readings will be observed in accordance with EPA Reference Method 9. The Permittee shall maintain a record of the opacity readings and the number of hours fuel oil is burned continuously.

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

c. Particulate Matter while Burning Liquid Fuel

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

The Permittee shall keep on record, along with the fuel firing rate, the contractual agreement with the liquid fuel vendor indicating the following information concerning the liquid fuel being fired:

- i. The lower heating value; and
- ii. The ash content.

3. Permit Shield

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

Compliance with the terms of Condition IV.C of this Attachment shall be deemed compliance with the following applicable requirements: A.A.C. R18-2-719.E and -719.C.1.

D. Sulfur Dioxide

1. Emission Limitations and Standards

When firing low sulfur fuel oil, the Permittee shall not cause, allow, or permit emissions of more than 1.0 pound of sulfur dioxide per million Btu heat input.

[A.A.C. R18-2-719.F]

2. Monitoring/Record keeping/Reporting Requirements

a. The Permittee shall report to the Director any daily period during which the sulfur content of the fuel being fired in the stationary rotating machinery exceeds 0.8 percent.

[A.A.C. R18-2-719.I]

b. While Burning Gaseous Fuel

[A.A.C. R18-2-719.I]

The Permittee shall maintain a vendor-provided copy of that part of the Federal Energy Regulatory Commission (FERC)-approved Tariff agreement that contains the sulfur content and the lower heating value of the pipeline quality natural gas.

c. While Burning Liquid Fuel

- i. The Permittee shall keep records of fuel supplier certification including the following information:
 - 1. The name of the oil supplier;
 - 2. The sulfur content, density and the heating content of the oil from which the shipment came; and
 - 3. The method used to determine the sulfur content of the oil.
- ii. The Permittee shall maintain records of all emissions calculations performed for any change in IV.A.D.2.c.1 using the following equation:

$$SO_2 = \frac{2.0 * \text{Weightpercentofsulfur}}{100} * \frac{\text{Density}}{(\text{HeatingValue}) * (1\text{MMBtu} / 1,000,000\text{Btu})}$$

SO₂ = Sulfur Dioxide in (lb/MMBtu)

Density = (lb/gal)

Heating Value = (Btu/gal)

3. Permit Shield

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

Compliance with the terms of this Section shall be deemed compliance with the following applicable requirements: A.A.C.R18-2-703.E.1, -719.I, and -719.J.

E. Nitrogen Oxides

1. Testing Requirements [A.A.C. R18-2-306.A.3 and A.R.S. 49-422]

a. Gas Turbine No. 2

Within six months of being operated for 1200 hours on a 12-month rolling total basis, the Permittee shall conduct a performance test to measure nitrogen oxides emissions from Gas Turbine No. 2.

b. Gas Turbine No. 3

Within six months of being operated for 525 hours on a 12-month rolling total basis, the Permittee shall conduct a performance test to measure nitrogen oxides emissions from Gas Turbine No. 3.

2. The Permittee shall use EPA Reference Method 20 to conduct the performance test for nitrogen oxides emissions as specified in the Arizona Testing Manual for Air Pollutant Emissions.
3. Until a performance test pursuant to this part is completed, the Permittee shall report the 12-month rolling total of hours of operation.
4. Performance tests for nitrogen oxides shall be required only one time during the permit term.

F. Carbon Monoxide

Testing Requirements

[A.A.C. R18-2-306.A.3 and A.R.S. 49-422]

1. Gas Turbine No. 2

Within six months of being operated for 1200 hours on a 12 - month rolling total basis, the Permittee shall conduct one performance test to measure carbon monoxide emissions from Gas Turbine No. 2.

2. Gas Turbine No. 3

- a. Within six months of being operated for 525 hours on a 12-month rolling total basis, the Permittee shall conduct a performance test to measure carbon monoxide emissions from Gas Turbine No. 3.
- b. The Permittee shall use EPA Reference Method 10 to conduct the performance test for carbon monoxide emissions.
- c. Until a performance test pursuant to this part is completed, the Permittee shall report the 12-month rolling total of hours of operation.
- d. Performance tests for carbon monoxide shall be required only one time during the permit term.

V. GAS TURBINE NO. 4

A. Applicability

This Section applies to Gas Turbine 4 as detailed in the Equipment List of Attachment "C".

B. Operational Limitations

1. Fuel Limitations

- a. The Permittee shall burn only the following as fuel in Gas Turbine No. 4:

i. Pipeline quality natural gas;

The Permittee shall not burn natural gas for more than the hours per year calculated by the following equation on a 12-month rolling basis:

[A.A.C. R18-2-306.01 and A.A.C. R18-2-331A.3]
[Material Permit Conditions are indicated with underlines.]

Equation V.1 Natural Gas Limitation

$$X\left(\frac{\text{hr}}{\text{yr}}\right) = \left[\frac{13.5\left(\frac{\text{tonPM}_{10}}{\text{yr}}\right) - \left[EF_{fo}\left(\frac{\text{tonPM}_{10}}{\text{hr}}\right) * Y\left(\frac{\text{hr}}{\text{yr}}\right)\right]}{EF_{ng}\left(\frac{\text{tonPM}_{10}}{\text{hr}}\right)} \right]$$

Where:

X = hours of natural gas burned during the 12-month rolling period.

Y = hours of fuel oil burned during the 12-month rolling period, not to exceed 600.

EF_{ng} = PM₁₀ emissions factor for natural gas, initially provided from manufacturer's data. After initial performance test, the emission factor shall be calculated from the performance test and subsequent tests.

EF_{fo} = PM₁₀ emissions factor for fuel oil, initially provided from manufacturer's data. After initial performance test, the emission factor shall be calculated from the performance test and subsequent tests.

ii. Fuel Oil No. 2

1. The Permittee shall fire fuel oil as an emergency backup fuel only.

2. The Permittee shall not burn fuel oil for more than 600 hours per year.

3. This emergency fuel may be combusted for short periods as a normal maintenance practice to verify that the unit can safely combust the emergency fuel and to conduct performance tests.

[A.A.C. R18-2-306.01]

2. Monitoring/Record keeping/Reporting Requirements

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

- a. The Permittee shall keep on record the contractual agreement with the liquid fuel vendor indicating the following information for each shipment of fuel oil No. 2:

- i. The name of the fuel oil supplier;
- ii. The heating value of the fuel oil;
- iii. The density of the fuel oil;
- iv. The sulfur content of the fuel oil from which the shipment came; and
- v. The method used to determine the sulfur content of the fuel oil.

- b. The Permittee shall record the following when making a fuel change including:

- i. Type of fuel change;
- ii. Date and time of the fuel change; and
- iii. Hours of operation when burning each fuel.

- c. The Permittee shall monitor and record the daily hours of operation for Gas Turbine No. 4.

[A.A.C. R18-2-306.A.3 and 4]

- d. Fuel Oil No. 2 Storage Tank

[40 CFR 60.110(c), 60.116(b)]

The Permittee shall keep readily accessible records showing the dimension of the storage vessel and the analysis showing the capacity of the storage vessel for the life of the source.

3. Permit Shield

Compliance with the terms of Condition V.B of this Attachment shall be deemed compliance with the following applicable requirements: 40 CFR 60.110(c) and 60.116(b).

C. Particulate Matter

1. Emission Limitations and Standards

The Permittee shall not emit more than 13.5 tons per year of PM₁₀ on a 12-month rolling total.

[A.A.C. R18-2-306.01 and 331.A.3.a]

[Material Permit Conditions are indicated with underlines.]

2. Monitoring/Record keeping/Reporting Requirements

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

a. The Permittee shall conduct a rolling 12-month calculation of the emissions of PM₁₀ based upon performance tests and the emission factors calculated for natural gas and fuel oil. The result of these tests and the recorded hours of operation of both fuels, shall be used to calculate the annual PM₁₀ emissions.

b. The PM₁₀ shall be calculated using the formula below, on a monthly basis, by the fifth working day of the month, and shall be compared to the emission limitation in V.C above to determine compliance.

Equation V.2 Particulate Matter₁₀

$$Z\left(\frac{\text{tonsPM}_{10}}{\text{yr}}\right) = \left[EF_{ng}\left(\frac{\text{tons}}{\text{hr}}\right) * X\left(\frac{\text{hr}}{\text{yr}}\right) + EF_{fo}\left(\frac{\text{tons}}{\text{hr}}\right) * Y\left(\frac{\text{hr}}{\text{yr}}\right)\right]$$

where:

X = hours of natural gas burned per 12-month rolling period and

Y = hours of fuel oil burned per 12-month rolling period

EF_{ng} = emissions factor for natural gas

EF_{fo} = emissions factor for fuel oil

3. Testing Requirements

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

Within 180 days of issuance of this Permit, the Permittee shall conduct a performance test to determine the particulate (PM₁₀) emissions in accordance with EPA Reference Method 5.

D. Sulfur Dioxide

1. Emission Limitations and Standards

- a. The Permittee shall not cause to be discharged into the atmosphere, sulfur dioxide (SO₂) emissions in excess of 0.015 percent by volume at 15% oxygen on a dry basis.

[40 CFR 60.333(a)]

- b. The fuel burned in Gas Turbine No. 4 shall not contain sulfur in excess of 0.3 percent by weight.

[A.A.C. R18-2-306.01, -719.J, and -331A.3.a]
[Material Permit Conditions are indicated with underlines.]

- c. The Permittee shall not cause or allow the emissions of SO₂, calculated on a 12-month rolling basis, to exceed 39 tons per year.

[A.A.C. R18-2-306.01 and A.A.C. R18-2-331A.3.a]
[Material Permit Conditions are indicated with underlines.]

2. Monitoring/Record keeping/Reporting Requirements

- a. While burning natural gas, the Permittee shall maintain a vendor-provided copy of that part of the Federal Energy Regulatory Commission (FERC)-approved Tariff agreement that contains the sulfur content and the lower heating value of the pipeline quality natural gas.

[40 CFR 60.334(h)(3)(i)]

- b. While burning fuel oil, the Permittee shall keep records of fuel supplier certification including the following information:

- i. The name of the oil supplier;
- ii. The sulfur content and the heating content of the oil from which the shipment came; and
- iii. The method used to determine the sulfur content of the oil, such as those described in 40 CFR 60.335(b)(10).

[40 CFR 60.334(h)(1)]

- c. At the end of every month, the Permittee shall calculate the rolling twelve month calculation of the emissions of SO₂ based upon the sulfur

content of the fuel . The recorded hours of operation of both fuels, shall be used to calculate the annual SO₂ emissions.

3. Permit Shield

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

Compliance with the terms of Condition V.D of this Attachment shall be deemed compliance with the following applicable requirements: 40 CFR 60.333(a) and 40 CFR 60.334(h)(3)(i).

E. Nitrogen Oxides

1. Emission Limitations and Standards

a. Natural Gas and Fuel Oil No. 2

The Permittee shall not cause to be discharged into the atmosphere, gases which contain nitrogen oxide (NO_x) emissions in excess of the following standard (STD):

Equation V.3 NO_x Emission Limitation

$$\text{STD} = 0.0075 * \frac{14.4}{Y} + F$$

Where:

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

Y = manufacturer's heat rate at rated load (kJoules/Watt-hour).

F = NO_x emissions allowance for fuel-bound nitrogen, per §60.332(a)(3).

[40 CFR 60.332(a)(1)]

b. The Permittee shall not cause or allow the emission of nitrogen oxides, calculated on a 12-month rolling basis, to exceed 39 tons per year.

[A.A.C. R18-2-306.01 and -331.A.3.a]

[Material Permit Conditions are indicated with underlines.]

2. Air Pollution Control Requirements

a. The Permittee shall install, maintain, and operate a water injection system and a selective catalytic reduction (SCR) unit to control nitrogen oxides emissions.

[A.A.C. R18-2-306.01 and A.A.C. R18-2-331.A.3.d and e]
[Material Permit Conditions are indicated with underlines.]

- b. At all times, including periods of startup, shutdown, and malfunction, the Permittee shall maintain and operate the water injection system and the selective catalytic reduction (SCR) system in a manner consistent with good air pollution control practices for minimizing nitrogen oxides emissions.

[A.A.C. R18-2-306.01 and A.A.C. R18-2-331.A.3.e]
[Material Permit Conditions are indicated with underlines.]

- c. Based on manufacturers requirements, the SCR system shall be placed in service as soon as practicable after exhaust gas temperature reaches 570 degrees Fahrenheit and the ammonia vaporizer unit is pre-heated to 700 degrees Fahrenheit (within 45 minutes after the turbine startup).

[40 CFR 60.11(d)]

3. Monitoring/Record keeping/Reporting Requirements

- a. The Permittee shall install, calibrate, maintain, and operate continuous emissions monitoring systems for measuring nitrogen oxides emissions.

[A.A.C. R18-2, 306.01 and A.A.C. R18-2-331.A.3.c]
[Material Permit Conditions are indicated with underlines.]

- b. Excess emissions for Gas Turbine No. 4 using a CEMS for measuring NO_x are defined as any three hour period during which the average emissions exceed the applicable standards in Condition V.E.1.a above.

[A.A.C. R18-2-306.01]

- c. The NO_x CEMS specified in Condition V.E.3.a above shall be used to demonstrate compliance with the NO_x limitation in Condition V.E.1.b above.

[A.A.C. R18-2-306.01]

- d. The continuous emission monitoring systems for NO_x shall meet the following requirements:

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

- i. 40 CFR Part 75, Appendix A, "Specification and Test Procedures":
1. Installation and measurement location;
 2. Equipment specifications;
 3. Performance specifications;
 4. Data acquisition and handling systems;
 5. Calibration gas;

6. Certifications tests and procedures; and
7. Calculations.
- ii. 40 CFR Part 75, Appendix B, "Quality Assurance and Quality Control Procedure":
 1. Quality control program; and
 2. Frequency of testing.
- iii. 40 CFR Part 75, Appendix C, "Missing Data Estimation Procedures"

Load-Based Procedure for Missing Flow Rate and NO_x Emission Rate Data
- iv. 40 CFR Part 75, Appendix F, "Conversion Procedures"

Procedures for NO_x Emission Rate
- v. Data Reduction

The Permittee shall comply with the data reduction requirements of 40 CFR Part 75.10(d)(1).
- vi. The Permittee shall comply with all the applicable record keeping and reporting requirements of 40 CFR Part 75 Subparts F and G respectively.
- e. The Permittee shall use the NO_x CEMS data to calculate the amount of NO_x being emitted on a daily basis.

[A.A.C. R18-2-306.A.3.b]
- f. When the NO_x CEMS is inoperative for any reason, the Permittee shall compute NO_x emissions using the procedures in 40 CFR Part 75, Subpart D.

[A.A.C. R18-2-306.A.3.b]
- g. By the fifth working day of each month, the Permittee shall calculate a rolling 12-month total of the emissions for the previous month.

[A.A.C. R18-2-306.A.3.b]
4. Excess Emissions and Monitoring System Performance Reports for (40 CFR 60, Subpart GG) NO_x Emissions Limitations.

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

 - a. Excess emission and monitoring system performance (MSP) reports for Gas Turbine No. 4 shall be submitted to the Department and EPA Region

IX every calendar quarter. All quarterly reports shall be postmarked by the 30th day following the end of each calendar quarter. Each excess emission and MSP report shall include the information as follows:

- i. The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h), any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions.
 - ii. Specific identification of each period of excess emissions that occurs during startups, shutdowns and malfunctions of the unit. The nature and cause of any malfunction (if known), and the corrective action taken or preventive measures adopted.
 - iii. The date and time identifying each period when the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments.
 - iv. When no excess emissions have occurred or the continuous monitoring system(s) has not been inoperative, repaired, or adjusted, such information shall be stated in the report.
- b. The summary report form shall contain the information and be in the format shown in Figure 1 of 40 CFR 60.7(c) unless otherwise specified by the Administrator. One summary report form shall be submitted for each pollutant monitored.
- i. If the total duration of excess emissions for the reporting period is less than 1 percent of the total operating time for the reporting period and CEMS downtime for the reporting period is less than 5 percent of the total operating time for the reporting period, only the summary report form shall be submitted and the excess emission report described in 40 CFR 60.7(c) need not be submitted unless requested by the Administrator.
 - ii. If the total duration of excess emissions for the reporting period is 1 percent or greater of the total operating time for the reporting period or the total CEMS downtime for the reporting period is 5 percent or greater of the total operating time for the reporting period, the summary report form and the excess emission report described in 40 CFR 60.7(c) shall both be submitted.

[40 CFR 60.7(c), (d), A.A.C. R18-2-306.A.3]

5. Testing Requirements

The Permittee shall conduct annual Relative Accuracy Test Audit (RATA) tests on the nitrogen oxides CEMS using EPA Reference Method 7 or 7E in accordance with 40 CFR 60, Appendix A.

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

6. Permit Shield

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

Compliance with the terms of Condition V.E of this Attachment shall be deemed compliance with the following applicable requirements: CFR 60.11(d) and 40 CFR 60.333(a).

F. Carbon Monoxide Standards (CO)

1. Emission Limitations and Standards

The Permittee shall not cause or allow the emission of carbon monoxide, calculated on a 12-month rolling basis, to exceed 95 tons per year.

[A.A.C. R18-2-306.01 and A.A.C. R18-2-331.A.3.a]
[Material Permit Conditions are indicated with underlines.]

2. Air Pollution Control Requirements

a. The Permittee shall install, maintain, and operate an oxidation catalyst to control carbon monoxide emissions.

[A.A.C. R18-2-306.01 and A.A.C. R18-2-331.A.3.d and e]
[Material Permit Conditions are indicated with underlines.]

b. At all times, including periods of startup, shutdown, and malfunction, the Permittee shall maintain and operate the oxidation catalyst system in a manner consistent with good air pollution control practice for minimizing carbon monoxide emissions.

[40 CFR 60.11(d) and A.A.C. R18-2-331.A.3.e]
[Material Permit Conditions are indicated with underlines.]

3. Monitoring/Record keeping/Reporting Requirements

a. The Permittee shall install, calibrate, maintain, and operate continuous emissions monitoring systems for measuring carbon monoxide emissions.

[A.A.C. R18-2, 306.01 and A.A.C. R18-2-331.A.3.c]
[Material Permit Conditions are indicated with underlines.]

b. The CO CEMS specified in Condition V.F.3.a above shall be used to demonstrate compliance with the CO emission limitations in Condition V.F.1 above.

[A.A.C. R18-2-306.01]

c. The CEMS for CO shall meet the following requirements:

- i. 40 CFR Part 60, Appendix B, "Performance Specifications," Performance Specification 4A, "Specifications and test procedures for carbon monoxide continuous monitoring systems in stationary sources.

- ii. 40 CFR Part 60, Appendix F, "Quality Assurance Procedures"
- iii. The CO monitoring system and monitoring devices shall be installed and operational prior to conducting performance tests under 40 CFR Part 60, §60.8. Verification of operational status shall, as a minimum, include completion of the manufacturer's written requirements or recommendations for installation, operation, and calibration of the device.
[40 CFR 60.13(b)]
- iv. The Permittee shall conduct a performance evaluation of the CO CEMS during any performance test required by Condition V.F or within 30 days thereafter in accordance with the applicable performance specification in Appendix B of 40 CFR Part 60. The Permittee shall conduct CEMS performance evaluations at such other times as may be required by the Director.
[40 CFR 60.13(c)]
- v. The Permittee shall check the zero (or low-level value between 0 and 20 percent of span value) and span (50 to 100 percent of span value) calibration drifts at least once daily in accordance with written procedure. The zero and span shall, as a minimum, be adjusted whenever the 24-hour zero drift or 24-hour span drift exceeds two times the limits of the applicable performance specifications in 40 CFR Part 60, Appendix B. The system must allow the amount of excess zero and span drift measured at the 24-hour interval checks to be recorded and quantified, whenever specified.
[40 CFR 60.13(d)(1)]
- vi. Except for system breakdowns, repairs, calibration checks, and zero span adjustments, the Permittee shall meet minimum frequency of operation as follows: The CO CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.
[40 CFR 60.13(e) and 60.13(e)(2)]
- vii. The Permittee shall use the CO CEMS data to calculate the amount of CO being emitted on a daily basis.
[A.A.C. R18-2-306.A.3.b]
- viii. When the CO CEMS is inoperative for any reason, the Permittee shall calculate CO emissions using the average of the 1-hour period prior to the CEMS failure and the 1-hour period following restoration of CEMS operation. This average shall be substituted into all 1-hour missing averages during the CEMS failure.

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

- ix. By the fifth working day of each month, the Permittee shall calculate a rolling 12-month total of CO emissions for the previous month.

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

4. Testing Requirements

The Permittee shall conduct annual Relative Accuracy Test Audit (RATA) tests on the carbon monoxide CEMS using EPA Reference Method 10; in accordance with 40 CFR 60. Appendix A.

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

5. Permit Shield

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

Compliance with the terms of Condition V.F of this Attachment shall be deemed compliance with the following applicable requirements: 40 CFR 60.333(a)

VI. STEAM CLEANER WATER HEATERS

A. Applicability

This Section applies to the Steam Cleaner Hot Water Heaters detailed in the Equipment List of Attachment "C".

B. Operating Limitations

Fuel Limitations

1. Steam Cleaner Hot Water Heater

The Permittee shall burn only propane in the hot water heaters.

2. Definition of Heat Input

Heat input is defined as the aggregate heat content of all fuels whose products of combustion pass through a stack or other outlet. Compliance tests shall be conducted during operation at the nominal rated capacity of the unit.

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

C. Particulate Matter (PM/PM₁₀) and Opacity

1. Emission Limits and Standards

a. Opacity Standard

The Permittee shall not cause or allow to be discharged into the atmosphere from the steam cleaner hot water heaters any plume or effluent that exceeds 15 percent opacity.

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

b. Particulate Matter Standard

[A.A.C. R18-2-724.C.1]

The Permittee shall not cause, allow or permit the emission of particulate matter, caused by combustion of fuel, from the steam cleaner hot water heaters in excess of the amount calculated by the following equation:

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

E = the maximum allowable particulate matter emissions rate in pounds -mass per hour

Q = the heat input in million Btu per hour

[A.A.C. R18-2-724.C.1]

2. Monitoring/Record keeping/Reporting Requirements

The Permittee shall report all six-minute periods in which the opacity of any plume or effluent exceeds 15 percent from the steam cleaner hot water heaters.

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

3. Permit Shield

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

Compliance with the terms of Condition VI above of this Attachment shall be deemed compliance with the following applicable requirements: A.A.C.R18-2-724.C.1 and A.A.C. R18-2-724.J.

VII. COAL PREPARATION PLANT

A. Applicability

This Section applies to the Coal Preparation Plant detailed in the Equipment List of Attachment "C".

B. Operational Definitions

1. Normal Operation

For the purposes of this Section, under "Normal Operation" none of the following will be in operation:

- a. Crusher;
- b. Sizing screens;
- c. Conveyor #6;
- d. Conveyor #7;
- e. Conveyor #8; or
- f. Conveyor #9.

2. Alternative Operation

For the purposes of this Section, the Permittee will be operating under the "Alternative Operation" when any one of the following is in operation:

- a. Crusher;
- b. Sizing screens;
- c. Conveyor #6;
- d. Conveyor #7;
- e. Conveyor #8; or
- f. Conveyor #9.

C. Particulate Matter and Opacity

1. Emission Limitations and Standards

- a. While under Normal Operations, the Permittee shall not cause, allow or permit to be emitted into the atmosphere any plume or effluent from any of the following equipment in excess of 20 percent opacity, measured in accordance with the EPA Reference Method 9.

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

- i. Railcar Unloading Feeder Nos. 1 through 8;
- ii. Screen Feeders Nos. 1 through 8;
- iii. Conveyor Nos. 1, 3, 4A, 4B, 5-2 and 5-3.
- iv. Transfer Chute from Conveyor No. 1 to Tripper Conveyor 2;
- v. Transfer Chute from Conveyor No. 1 to Conveyor Nos. 4A and 4B;

- vi. Enclosed Transfer Chute Nos. 4A and 4B
 - vii. Feeder Nos. 9 through 13; and
 - viii. Coal Silos.
- b. While operating under Normal Operations, the Permittee shall not cause, allow or permit the discharge of particulate matter into the atmosphere in any one hour from any equipment listed in VII.C.1.a in total quantities in excess of the amounts calculated by the following equation:

$$E = 55.0 * P^{0.11} - 40$$

Where:

E = the maximum allowable particulate emissions rate in pounds-mass per hour.

P = the process weight rate in tons-mass per hour. The total process weight from all similar units employing a similar type process shall be used in determining the maximum allowable emission of particulate matter.

[A.A.C. R18-2-730.A.1.b]

- c. While operating under Alternative Operations, the Permittee shall not cause to be discharged into the atmosphere from any equipment listed below, gases which exhibit 20 percent opacity or greater.

[40 CFR 60.252(c) and A.A.C. R18-2-331.A.3.f]

[Material Permit Conditions are indicated with underlines.].

- i. Railcar Unloading Feeder Nos. 1 through 8;
 - ii. Screen Feeders Nos. 1 through 8;
 - iii. Conveyor Nos. 1, 6, 7, 8 and 9;
 - iv. Transfer Chute from Conveyor No. 1 to Conveyor No. 6;
 - v. Sizing Screens;
 - vi. Crusher; and
 - vii. Transfer Hopper from Conveyor No. 8 to Conveyor No: 9.
- d. While under Alternative Operations, the Permittee shall not cause, allow or permit to be emitted into the atmosphere any plume or effluent from any of the following equipment in excess of 20 percent opacity, measured in accordance with the EPA Reference Method 9.

- i. Transfer Chute from Conveyor No. 1 to Conveyor Nos. 4A and 4B;
 - ii. Transfer Chute from Conveyor No. 1 to Tripper Conveyor 2;
 - iii. Conveyor Nos. 3, 4A, 4B, 5-2, 5-3
 - iv. Enclosed Transfer Chute Nos. 4A and 4B;
 - v. Feeder Nos. 9 through 13; and;
 - vi. Coal Silos.
- e. While under Alternative Operations, the Permittee shall not cause, allow or permit the discharge of particulate matter into the atmosphere in any one hour from any equipment listed in VII.C.1.cd in total quantities in excess of the amounts calculated by the following equation:

$$E = 55.0 * P^{0.11} - 40$$

Where:

E = the maximum allowable particulate emissions rate in pounds-mass per hour.

P = the process weight rate in tons-mass per hour. The total process weight from all similar units employing a similar type process shall be used in determining the maximum allowable emission of particulate matter.

[A.A.C. R18-2-730.A.1.b]

2. Air Pollution Control Requirements

- a. Wet dust suppression shall be maintained and operated at the screen feeders during screening, and at the entrance and exit of the crusher during crushing, in a manner consistent with good air pollution control practices.

[Installation Permit 24014 and A.A.C. R18-2-331.A.3.e]
[Material Permit Conditions are indicated with underlines.]

- b. Dry fogging systems shall be maintained and operated at the railcar unloading area, at the transfer point between Conveyor #1 and Conveyor #2, the Conveyor #2 stack-out tube, the transfer point between Conveyor #3 and Conveyors #4A and #4B and the three rotary plows, in a manner consistent with good air pollution control practices.

[[Installation Permit 24014 and A.A.C. R18-2-331.A.3.e]
[Material Permit Conditions are indicated with underlines.]

- c. Either wet suppression or dry fogging systems shall be maintained and operated at the track hopper feeders in a manner consistent with good air pollution control practices.

[A.A.C. R18-2-331.A.3.e
[Material Permit Conditions are indicated with underlines.]

- d. The Permittee shall maintain and operate at all times, the baghouse used to capture particulate matter emissions associated with the coal silos in a manner consistent with good air pollution control practices.

[Installation Permit 24014 and A.A.C. R18-2-331.A.3.e]
[Material Permit Conditions are indicated with underlines.]

- e. The Permittee shall maintain and operate the coal dust collection system on the coal silos in accordance with the manufacturer's specifications. These specifications shall be on file and readily available for inspection by the Department.

[A.A.C. R18-2-306.A.3.b and 331.A.3e]
[Material Permit Conditions are indicated with underlines.]

3. Monitoring/Record keeping/Reporting Requirements

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

- a. While in Normal Operation, the Permittee shall conduct the following monitoring and recordkeeping for all the equipment listed in Condition VII.C.1.a:

i. Opacity

1. A certified Method 9 observer shall conduct a weekly visual survey of visible emissions from the listed units when they are in operation. The Permittee shall keep a record of the name of the observer, the date on which the observation was made, and the results of the observation.
2. If the observer sees a plume from an emission point that on an instantaneous basis appears to exceed the opacity standard, the observer shall, if practicable, take a six-minute Method 9 observation of the plume.
3. If the six-minute opacity of the plume exceeds the opacity standard, the Permittee shall do the following:
 - i. Adjust or repair the controls or equipment to reduce opacity to below the standard; and

- ii Report it as an excess emission in accordance with Section XII.A of Attachment "A" of this permit.

- 4. If the six-minute opacity of the plume is less than the standard, the observer shall make a record of the following:

- iii Date and time of the test;

- iv Name of observer; and

- v The results of the Method 9 observation.

- ii. Particulate Matter

The Permittee shall maintain records of emissions related maintenance performed on the coal dust collection system.

- b. While under Alternative Operation, the Permittee shall conduct the following monitoring and recordkeeping for all the equipment listed in Conditions VII.C.1.c and d.

- i. The Permittee shall keep a record of the operating times of each piece of equipment. The record shall include:

- 1. date and time of start-up of each operation, and

- 2. date and time of cessation of each operation.

- ii. Opacity observations shall be conducted according to the following schedule:

- 1. At least one opacity observation shall be conducted each time a piece of equipment is operated.

- 2. One opacity observation shall be conducted for each hour of operation of any piece of equipment. If eight consecutive observations record opacities below 20%, the frequency of observations may be reduced to one observation for each day of operation, provided the requirement of Condition VII.C.3.b.ii.1 is satisfied.

- 3. If the six-minute opacity of the plume during any of the opacity observations exceeds 20%, Permittee shall do the following:

- i Adjust or repair the controls or equipment to reduce opacity to below 20%; and

ii Report the occurrence as an excess emission in accordance with Section XII.A of Attachment "A" of this permit.

4. If the six-minute opacity of the plume is less than 20%, the observer shall make a record of the following:

i Date and time of the test;

ii Name of observer; and

iii The results of the Method 9 observation.

4. Permit Shield

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

Compliance with the terms of Condition VII of this Attachment shall be deemed compliance with the following applicable requirements: 40 CFR 60.252(c), A.A.C. R18-2-702.B, Installation Permit 24014.

VIII. LIMESTONE HANDLING SYSTEM

A. Applicability

This Section applies to the Limestone Handling System detailed in the Equipment List of Attachment "C".

B. Operating Limitations

1. The Permittee shall install, calibrate, maintain and operate monitoring devices which can be used to determine daily the process weight of limestone produced. The weighing devices shall have an accuracy of +/- 5 percent over their operating range.

[A.A.C. R18-2-722.F and A.A.C. R18-2-331.A.3.c]
[Material Permit Conditions are indicated with underlines.]

2. The Permittee shall maintain a record of the daily production rates of limestone produced.

[A.A.C. R18-2-306.A.3,b and 722.G]

3. The Permittee shall maintain records of the dates on which wetting agents or dust suppressants were employed during the transfer of limestone to the grizzly.

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

C. Particulate Matter (PM/PM₁₀) and Opacity

1. Emission Limitations and Standards

a. Opacity

The Permittee shall not cause, allow or permit to be emitted into the atmosphere any plume or effluent from any limestone handling operation in excess of 20 percent opacity, measured in accordance with the EPA Reference Method 9.

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

b. Particulate Matter

[A.A.C. R18-2-722.B.1]

The Permittee shall not cause, allow or permit the discharge of particulate matter into the atmosphere in any one hour from any limestone preparation operation in total quantities in excess of the amounts calculated by the following equation:

$$E = 4.10 * P^{0.67}$$

Where:

E = the maximum allowable particulate emissions rate in pounds-mass per hour.

P = the process weight rate in tons-mass per hour. The total process weight from all similar units employing a similar type process shall be used in determining the maximum allowable emission of particulate matter.

2. Air Pollution Control Requirements

- a. The Permittee shall maintain and operate at all times the limestone bin bag filter used to capture particulate matter emissions associated with limestone storage bin in a manner consistent with good air pollution control practices.

[Installation Permit 24014 and A.A.C. R18-2-331.A.3.e]

- b. Spray bar pollution controls shall be utilized in accordance with EPA Control of Air Emissions From Process Operations In The Rock Crushing Industry• (EPA 340/1-79-002), Wet Suppression System• (pages 15-34, amended as of January 1979 (and no future amendments or editions)), as incorporated herein by reference and on file with the Office of the Secretary of State, with placement of spray bars and nozzles as required by the Director to minimize air pollution.

[A.A.C. R18-2-722.D]

- c. The Permittee shall maintain and operate the wetting bars at the transfer from the weigh feeder to the ball mill shoot in accordance with the manufacturer's specifications. These specifications shall be on file and shall be readily available for inspection by the Department.

- d. The Permittee shall use wetting agents or dust suppressants to prevent excessive amounts of particulate matter from becoming airborne during the transfer of limestone to the grizzly.

[A.A.C. R18-2-306.A.2 and 306.A.3.b]

3. Monitoring/Record keeping/Reporting Requirements

a. Opacity

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

- i. A certified Method 9 observer shall conduct a weekly visual survey of visible emissions from the limestone handling system when it is in operation. This weekly observation shall include observation of all exposed transfer points, enclosed transfer points, and the bag filter. Permittee shall keep a record of the name of the observer, the date on which the observation was made, and the results of the observation
- ii. If the observer sees a plume from an emission point that on an instantaneous basis appears to exceed 20% opacity, the observer shall if possible take a six-minute Method 9 observation of the plume.
- iii. If the six-minute opacity of the plume exceeds 20%, Permittee shall do the following:
 - 1. Adjust or repair the controls or equipment to reduce opacity to below 20%; and
 - 2. Report it as an excess emission in accordance with Section XII.A of Attachment A of this permit.
- iv. If the six-minute opacity of the plume is less than 20%, the observer shall make a record of the following:
 - 1. Date and time of the test; and
 - 2. The results of the Method 9 observation.

4. Permit Shield

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

Compliance with the terms of Condition VIII of this Attachment shall be deemed compliance with the following applicable requirements A.A.C. R18-2-702.B, A.A.C. R18-2-722.B.1, A.A.C. R18-2-722.D, A.A.C. R18-2-722.F, and A.A.C. R18-2-722.G

IX. COOLING TOWERS

A. Applicability

This Section applies to Cooling Towers 1, 2, and 3 detailed in the Equipment List of Attachment "C".

B. Particulate Matter (PM/PM₁₀) and Opacity

1. Emission Limits and Standards

a. Opacity

- i. 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]

- ii. If the presence of uncombined water is the only reason for an exceedance of any visible emissions requirement in this Section, the exceedance shall not constitute a violation of the applicable opacity limit.

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

b. Particulate Matter

The Permittee shall not cause, allow or permit the emission of particulate matter in excess of the amounts calculated by the following equation:

$$E = 55.0 * P^{0.11} - 40$$

Where:

E = the maximum allowable particulate emissions rate in pounds-mass per hour.

P = the process weight rate in tons-mass per hour. The total process weight from all similar units employing a similar type process shall be used in determining the maximum allowable emission of particulate matter.

[A.A.C. R18-2-730.A.1.b]

- 2. The Permittee shall not emit gaseous or odorous materials from equipment, operations, or premises in such quantities or concentrations to cause air pollution.

[A.A.C. R18-2-730.D]

3. Where a stack, vent, or other outlet is at such a level that fumes, gas mist, odor, smoke, vapor or any combination thereof constituting air pollution is discharged to adjoining property, the Director may require the installation of abatement equipment or the alteration of such stack, vent, or other outlet by the Permittee thereof to a degree that will adequately dilute, reduce, or eliminate the discharge of air pollution to adjoining property.

[A.A.C. R18-2-730.G]

4. Permit Shield

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

Compliance with the terms of Condition IX.B of this Attachment shall be deemed compliance with the following applicable requirements: [A.A.C.R18-2-702.B, A.A.C. R18-2-730.A.1.b, A.A.C. R18-2-730.D and A.A.C. R18-2-730.G.

X. FUEL OIL STORAGE TANKS

A. Applicability

This Section applies to the 700,000-gallon and 132,000-gallon Fuel Oil Storage Tanks detailed in the Equipment List of Attachment "C".

B. Gaseous Emissions

1. No person shall emit gaseous or odorous materials from equipment, operations or premises under his control in such quantities or concentration as to cause air pollution.

[A.A.C. R18-2-730.D]

2. Where a stack, vent or other outlet is at such a level that fumes, gas mist, odor, smoke, vapor or any combination thereof constituting air pollution is discharging to adjoining property, the Director may require the installation of abatement equipment or the of such stack, vent, or other outlet by the Permittee thereof to a degree that will adequately dilute or eliminate the discharge of air pollution to adjoining property.

[A.A.C. R18-2-730.G]

D. Permit Shield

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

Compliance with the conditions of this Part shall be deemed compliance with A.A.C. R18-2-730.D, and G.

XI. GASOLINE STORAGE TANK

A. Applicability

This Section applies to the Gasoline Storage Tank detailed in the Equipment List of Attachment "C".

B. Operational Requirements

1. Gasoline storage tank shall be equipped with a submerged filling device or acceptable equivalent, for control of hydrocarbon emissions. [A.A.C. R18-2-710.B]
2. All pumps and compressors that handle gasoline shall be equipped with mechanical seals or other equipment of equal efficiency to prevent release of organic contaminants into the atmosphere. [A.A.C. R18-2-710.D]

C. Monitoring and recordkeeping requirements

1. The Permittee shall, for the gasoline storage tank, maintain a file, of the typical Reid vapor pressure of gasoline stored and of dates of storage. Dates on which the storage vessel is empty shall be shown. [A.A.C. R18-2-710.E.1]
2. The Permittee shall record the average monthly temperature and true vapor pressure of gasoline at such temperature if the true vapor pressure is greater than 470 mm Hg (9.1 psia) and the gasoline is stored in a storage vessel other than one equipped with a vapor recovery system or its equivalent. [A.A.C. R18-2-710.E.2.b]
3. The average monthly storage temperature shall be an arithmetic average calculated for each calendar month, or portion thereof, if storage is for less than a month, from bulk liquid storage temperatures determined at least once every seven days. [A.A.C. R18-2-710.E.3]
4. The true vapor pressure shall be determined by the procedures in American Petroleum Institute Bulletin 2517, amended as of February 1980 (and no future editions), which is incorporated herein by reference and on file with the Office of the Secretary of State. This procedure is dependent upon determination of the storage temperature and the Reid vapor pressure, which requires sampling of the petroleum liquids in the storage vessels. Unless the Director requires in specific cases that the stored petroleum liquid be sampled, the true vapor pressure may be determined by using the average monthly storage temperature and the typical Reid vapor pressure. For those liquids for which certified specifications limiting the Reid vapor pressure exist, the Reid vapor pressure may be used. For other liquids, supporting analytical data must be made available upon request to the Director when typical Reid vapor pressure is used. [A.A.C. R18-2-710.E.4]

D. Permit Shield

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

Compliance with the conditions of this Part shall be deemed compliance with A.A.C. R18-2-710.B, D, E.1, E.2.b, and E.4.

XII. USED OIL FUEL

A. Specifications

[A.R.S. 49-426.G.1]

The Permittee may burn used oil or used oil fuel in authorized equipment if the following conditions are met:

1. The flash point of the oil does not fall below 100° F;
2. The oil does not have concentrations of contaminants in excess of the following levels:
 - a. Arsenic 5 ppm
 - b. Cadmium 2 ppm
 - c. Chromium 10 ppm
 - d. Lead 100ppm
 - e. PCBs 2 ppm
3. Used oil or used oil fuel blended with virgin fuel oil does not exceed 5% of the total fuel in any fuel storage tank.

B. Recordkeeping and Reporting Requirements

[A.R.S. 49-426.G.4]

1. All tests conducted pursuant to Section X.C of this Attachment shall be documented and a report submitted to the Department along with the semi-annual compliance certification.
2. The Permittee shall maintain such records as required to document the use of the above fuel including the following:
 - a. Dates on which used oil or used oil fuel was burned;
 - b. Hours of usage of the used oil or used oil fuel; and
 - c. The quantity of used oil or used oil fuel burned.

C. Testing

A representative sample from each source of used oil or used oil fuel shall be tested for Arsenic, Cadmium, Chromium, Lead, and PCBs using approved EPA methods prior to burning.

XIII. FUGITIVE DUST REQUIREMENTS

A. Applicability

This Section applies to any source of air contaminants which, due to lack of an identifiable emissions point or plume, cannot be considered a point source.

B. Particulate Matter and Opacity

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

a. Emission Limitations and Standards

- i. Opacity of emissions from any fugitive dust source shall not be greater than 40% measured in accordance with the Arizona Testing Manual, Reference Method 9.

[A.A.C. R18-2-614]

- ii. The Permittee shall employ the following reasonable precautions to prevent excessive amounts of particulate matter from becoming airborne:

1. Keep dust and other types of air contaminants to a minimum in an open area where construction operations, repair operations, demolition activities, clearing operations, leveling operations, or any earth moving or excavating activities are taking place, by good modern practices such as using an approved dust suppressant or adhesive soil stabilizer, paving, covering, landscaping, continuous wetting, detouring, barring access, or other acceptable means;

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

2. Keep dust to a minimum from driveways, parking areas, and vacant lots where motor vehicular activity occurs by using an approved dust suppressant, or adhesive soil stabilizer, or by paving, or by barring access to the property, or by other acceptable means;

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

3. 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]

4. 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]

5. Take reasonable precautions, such as the use of spray bars, wetting agents, dust suppressants, covering the load, and hoods when crushing, handling, or conveying material likely to give rise to airborne dust;

[A.A.C. R18-2-606]

6. 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]

7. Operate stacking and reclaiming machinery utilized at storage piles at all times with a minimum fall of material, or with the use of spray bars and wetting agents;

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

8. Any other method as proposed by the Permittee and approved by the Director.

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

b. Monitoring and Recordkeeping Requirements

i. The Permittee shall maintain records of the dates on which any of the activities listed in Conditions XIII.B.1.a above through XIII.B.1.a.ii.8 above were performed and the control measures that were adopted.

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

ii. Opacity Monitoring Requirements

1. A certified Method 9 observer shall conduct a monthly visual survey of visible emissions from the fugitive dust sources. The Permittee shall keep a record of the name of the observer, the date and location on which the observation was made, and the results of the observation.

2. If the observer sees a visible emission from a fugitive dust source that on an instantaneous basis appears to exceed applicable opacity standard, then the observer

shall, if practicable, take a six-minute Method 9 observation of the visible emission.

3. If the six-minute opacity of the visible emission is less than or equal to applicable opacity standard, 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.
4. If the six-minute opacity of the visible emission exceeds applicable opacity standard, then the Permittee shall do the following:
 - i Adjust or repair the controls or equipment to reduce opacity to below the applicable standard; and
 - ii Report it as an excess emission under Section XII.A of Attachment "A".

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

c. Permit Shield

Compliance with the terms of Condition XIII.B.2 of this Attachment shall be deemed compliance with A.A.C. R18-2-604.A, -604.B, -605, -606, -607, and -614.

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

2. Open Burning

a. Emission Limitation and Standard

Except as provided in A.A.C. R18-2-602.C.1, C.2, C.3, and C.4, and except when permitted to do so by either ADEQ or the local officer delegated the authority for issuance of open burning permits, the Permittee shall not conduct open burning.

[A.A.C. R18-2-602]

b. Compliance with the requirements of Condition XIII.B.2.a above may be demonstrated by maintaining copies of all open burning permits on file.

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

c. Permit Shield

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

Compliance with the conditions of this Part shall be deemed compliance with A.A.C. R18-2-602.

XIV. MOBILE SOURCE REQUIREMENTS

A. Applicability

The requirements of this Section are applicable to mobile sources which either move while emitting air contaminants or are frequently moved during the course of their utilization but are not classified as motor vehicles, agricultural vehicles, or are agricultural equipment used in normal farm operations. Mobile sources shall not include portable sources as defined in A.A.C. R18-2-101.90.

[A.A.C.R18-2-801.A]

B. Particulate Matter and Opacity

1. Emission Limitations and Standards

a. Off-Road Machinery

The Permittee shall not cause, allow, or permit to be emitted into the atmosphere from any off-road machinery, smoke for any period greater than ten consecutive seconds, the opacity of which exceeds 40%. Visible emissions when starting cold equipment shall be exempt from this requirement for the first ten minutes. Off-road machinery shall include trucks, graders, scrapers, rollers, and other construction and mining machinery not normally driven on a completed public roadway.

[A.A.C.R18-2-802.A and -802.B]

b. Roadway and Site Cleaning Machinery

i. The Permittee shall not cause, allow or permit to be emitted into the atmosphere from any roadway and site cleaning machinery smoke or dust for any period greater than ten consecutive seconds, the opacity of which exceeds 40%. Visible emissions when starting cold equipment shall be exempt from this requirement for the first ten minutes.

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

ii. The Permittee shall take reasonable precautions, such as the use of dust suppressants, before the cleaning of a 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, erosion by water or by other means.

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

c. Unless otherwise specified, no mobile source shall emit smoke or dust the opacity of which exceeds 40%.

[A.A.C.R18-2-801.B]

2. Recordkeeping Requirement

The Permittee shall keep a record of all emissions related maintenance activities performed on the Permittee's mobile sources stationed at the facility as per manufacturer's specifications.

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

3. Permit Shield

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

Compliance with this Section XIV.B shall be deemed compliance with A.A.C. R18-2-801, A.A.C. R18-2-802.A, A.A.C. R18-2-804.A and A.A.C. R18-2-804.B.

XV. OTHER PERIODIC ACTIVITY REQUIREMENTS

A. Abrasive Blasting

Particulate Matter and Opacity

1. Emission Limitations and Standards

a. 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:

i. wet blasting;

ii. effective enclosures with necessary dust collecting equipment; or any other method approved by the Director.

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

b. Opacity

The Permittee shall not cause, allow or permit visible emissions from sandblasting or other abrasive blasting operations in excess of 20% opacity, as measured by EPA Reference Method 9.

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

2. Monitoring and Recordkeeping Requirement

Each time an abrasive blasting project is conducted, 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

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

Compliance with this Part shall be deemed compliance with A.A.C. R18-2-726, A.A.C. R18-2-702.B.

B. Use of Paints

1. Volatile Organic Compounds

a. Emission Limitations and Standards

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

- i. The Permittee shall not conduct or cause to be conducted 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]

ii. The Permittee or their designated contractor shall not either:

1. Employ, apply, evaporate, or dry any architectural coating containing photochemically reactive solvents for industrial or commercial purposes; or

2. Thin or dilute any architectural coating with a photochemically reactive solvent.

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

- iii. For the purposes of Conditions XV.B.1.a.ii, a photochemically reactive solvent shall be any solvent with an aggregate of more than 20 percent of its total volume composed of the chemical compounds classified in Conditions XV.B.1.a.iii.1 through XV.B.1.a.iii.3 below, or which exceeds any of the following percentage composition limitations, referred to the total volume of solvent:

1. A combination of the following types of compounds having an olefinic or cyclo-olefinic type of unsaturation-hydrocarbons, alcohols, aldehydes, esters, ethers, or ketones: 5 percent.
2. A combination of aromatic compounds with eight or more carbon atoms to the molecule except ethylbenzene: 8 percent.
3. A combination of ethylbenzene, ketones having branched hydrocarbon structures, trichloroethylene or toluene: 20 percent.

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

- iv. Whenever any organic solvent or any constituent of an organic solvent may be classified from its chemical structure into more than one of the groups of organic compounds described in Conditions XV.B.1.a.iii.1 through XV.B.1.a.iii.3 above, it shall be considered to be a member of the group having the least allowable percent of the total volume of solvents.

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

- v. The Permittee shall not dispose of by evaporation more than 1.5 gallons of photochemically reactive solvent in any one day.

[SIP Provision R9-3-527.C]

b. Monitoring and Recordkeeping Requirements

- i. Each time a spray painting project is conducted, the Permittee shall log in ink, or in an electronic format, a record of the following:
 1. The date the project was conducted;
 2. The duration of the project;
 3. Type of control measures employed;

4. Material Safety Data Sheets for all paints and solvents used in the project; and

5. The amount of paint consumed during the project.

ii. Architectural coating and spot painting projects shall be exempt from the recordkeeping requirements of Condition XV.B.1.b.i above.

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

c. Permit Shield [A.A.C.R18-2-325]

Compliance with this Part shall be deemed compliance with A.A.C.R18-2-727 and SIP Provision R9-3-527.C.

2. Opacity

a. Emission Limitation and Standard

The Permittee shall not cause, allow or permit visible emissions from painting operations in excess of 20% opacity, as measured by EPA Reference Method 9.

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

b. Permit Shield [A.A.C. R18-2-325]

Compliance with the conditions of this Part shall be deemed compliance with A.A.C.R18-2-702.B.

C. Demolition/Renovation - Hazardous Air Pollutants

1. Emission Limitation and Standard

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

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

2. Monitoring and Recordkeeping Requirement

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

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

3. Permit Shield

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

Compliance with the conditions of this Part shall be deemed compliance with A.A.C. R18-2-1101.A.8.

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ATTACHMENT "C": EQUIPMENT LIST

Air Quality Control Permit No. 35043

For

Apache Generating Station.

PERMITTED EQUIPMENT

EQUIPMENT ID	DESCRIPTION	MAXIMUM CAPACITY	MAKE/MODEL	SERIAL NUMBER	DATE OF MFG.
Steam Unit 1	Wall-fired steam electric	75 MW	B & W	BW-21343	1963
Steam Unit 2	Wall-fired steam electric	195MW	Riley Stoker	3911	1976
Steam Unit 3	Wall-fired steam electric	195MW	Riley Stoker	3912	1976
Gas Turbine 1	Simple cycle gas turbine	10.4 MW	GE Frame 5	127756	1963
Gas Turbine 2	Simple cycle gas turbine	19.8 MW*	MS-5000	225962	1972
Gas Turbine 3	Simple cycle gas turbine	64.9 MW*	Westinghouse W-501B2	27A1101	1975
Gas Turbine 4	Simple cycle gas turbine	44MW	GE LM6000 SPRINT		2002
G-T 1 Startup Diesel Engine	Diesel engine for Startup of Gas Turbine 1	430 hp*	Cummins Vt-903-C	37129857	1990
Emergency Diesel Generator	Emergency Diesel Generator	345 hp	Caterpillar/SR		
Cooling Tower 1	Steam unit cooling tower	60,000 gpm	Davenport Cooling Tech 4ETF/4848.6.19	Cooling Tower 1	1995
Cooling Tower 2	Steam unit cooling tower	117,500 gpm	Marley/6615-3-09	Cooling Tower 2	1976
Cooling Tower 3	Steam unit cooling tower	117,500 gpm	Marley/6615-3-09	Cooling Tower 3	1976
Steam Cleaner Hot Water Heaters	Process heating units	--	--	--	--
Track Hoppers (8)	Coal Preparation Plant	5000 tph	Marathon Steel		1976
Track Feeders (8)	Coal Preparation Plant	900 tph	Vibrantics VF-60HD		1976

**ATTACHMENT "C": EQUIPMENT LIST
Air Quality Control Permit No. #35043**

For

Arizona Electric Power Cooperative, Inc. - Apache Generating Station.

PERMITTED EQUIPMENT

EQUIPMENT ID	DESCRIPTION	MAXIMUM CAPACITY	MAKE/MODEL	SERIAL NUMBER	DATE OF MFG.
Conveyor No. 1, 2, 4 - 9	Coal Preparation Plant	5000 tph	Marathon Steel		1976
Conveyor 3	Coal Preparation Plant	900 tph	Marathon Steel		1976
Conveyor 4a and 4b	Coal Preparation Plant	450 tph	Marathon Steel		1976
Shuttle Conveyor Nos. 5-2 and 5-3	Coal Preparation Plant	450 tph	Marathon Steel		1976
Conveyor Feeder Nos. 9 through 12	Coal Preparation Plant	450 tph	Vibranetics VF-42HD		1976
Conveyor Feeder No. 13	Coal Preparation Plant	900 tph	Vibranetics VF-42HD		1976
Crusher	Coal Preparation Plant	1800 tph	Jeffrey Manufacturing Company	12273	1977
Sizing Screens (8)	Coal Preparation Plant	5000 tph	Marathon Steel V-16		1977
Rotary Plow Feeder	Coal Preparation Plant	5000 tph	Marathon Steel		1976
Coal Silos (6)	Coal Preparation Plant	240 tph	Marathon Steel		1976
Limestone Handling Plant	Storage bin, ball mill, and conveyors	5 tph	--	--	1976

ATTACHMENT "C": EQUIPMENT LIST
Air Quality Control Permit No. #35043
For
Arizona Electric Power Cooperative, Inc. - Apache Generating Station.

CONTINUOUS EMISSION MONITORS

	NOx Monitor	SO₂ Monitor	CO₂ Monitor	Opacity Monitor	Flow Monitor
Steam unit 1	TECO Model 42 D (0-500 ppm)	n/a	Fuji Model ZRH-1 (0-20%)	n/a	n/a
Steam unit 2	TECO Model 42 D (0-500 ppm)	Teledyne Monitor Labs M100E Dual Range (0-500 ppm)	Fuji Model ZRH-1 (0-20%)	Teledyne Monitor Labs Lighthawk 560 (0-100%)	US Ultra flow Model 100
Steam unit 3	TECO Model 42 D (0-500 ppm)	Teledyne Monitor Labs M100E Dual Range (0-500 ppm)	Fuji Model ZRH-1 (0-20%)	Teledyne Monitor Labs Lighthawk 560 (0-100%)	US Ultra flow Model 100
Gas Turbine No. 4	Teledyne Monitor Labs9841A5 Dual Range	N/A	N/A	N/A	N/A

ATTACHMENT "C": EQUIPMENT LIST
Air Quality Control Permit No #35043

For

Arizona Electric Power Cooperative, Inc. - Apache Generating Station

AIR POLLUTION CONTROL EQUIPMENT

EQUIPMENT ID	DESCRIPTION	MAXIMUM CAPACITY (acfm)	MAKE/MODEL	SERIAL NUMBER	DATE OF MFG.
Electrostatic Precipitator	Hot Side ESP - Steam Unit 2	1,104,000 at 710 DEGF	Universal Oil Products 75-342		1976/1977
Sulfur Dioxide Absorption System	Wet limestone scrubber for Steam Unit 2	363,000 (normal operation)	Research Cottrell		1976
Electrostatic Precipitator	Hot Side ESP for Steam Unit 3	1,104,000 at 710 DEGF	Universal Oil Products 75-615		1976/1977
Sulfur Dioxide Absorption System	Wet limestone scrubber for Steam Unit 3	363,000 (normal operation)	Research Cottrell		1976
Selective Catalyst Reduction	NOx Reduction for Gas Turbine 4	N/A	Engelhard VNX Vanadiatitania	SCR-1	2002
CO Oxidation Catalyst	CO Reduction from Gas Turbine 4	N/A	Engelhard Camet CO	CO-1	2002

ATTACHMENT "C": EQUIPMENT LIST
Air Quality Control Permit No #35043

For

Arizona Electric Power Cooperative, Inc. - Apache Generating Station

AIR POLLUTION CONTROL EQUIPMENT

EQUIPMENT ID	DESCRIPTION	MAXIMUM CAPACITY (acfm)	MAKE/MODEL	SERIAL NUMBER	DATE OF MFG.
Coal Dust Collection System	Fabric Filter serving Coal Silos 2A, 2B, 2C, 3A, 3B, and 3C, and Conveyors 4A, 4B, 5-2, and 5-3.	28,000	Air-Cure Inc./ RF Dust CollCollector/376 RF10	325	1996
Limestone Silo Bag Filter	Bag Filter on Limestone Silo.	575	Flex Kleen Research Cottrell/58-BV16-11	12-52-8117	1977

ATTACHMENT "D": Phase II Acid Rain Provisions

Air Quality Control Permit No #35043

For

Arizona Electric Power Cooperative, Inc. - Apache Generating Station

I. STATEMENT OF BASIS

Statutory and Regulatory Authorities: In accordance with Arizona Revised Statutes, Title 49, Chapter 3, Article 2, Section 426.N, and Titles IV and V of the Clean Air Act, the Arizona Department of Environmental Quality issues this Phase II Acid Rain Permit pursuant to Arizona Administrative Code, Title 18, Chapter 2, Article 3, Section 333 (A.A.C. R18-2-333), "Acid Rain".

II. FACILITY WIDE SO₂ ALLOWANCE

Facility Wide SO₂ Allowance[†] Allocations

Emission Units	2007-2010	Post 2010
Steam Unit No. 1, 2, 3 and GT-4	4,951 Tons per Year	4,588 Tons per Year

[†] As defined under 40 CFR §72.2, "Allowance" means an authorization by the Administrator under the Acid Rain Program to emit up to one ton of sulfur dioxide during or after a specified calendar year.

* The number of allowances allocated to Phase II affected units by U.S. EPA may change in a 1998 revision to 40 CFR part 73 Tables 2, 3, and 4. In addition, the number of allowances actually held by an affected source in a unit account may differ from the number allocated by U.S. EPA. Neither of the aforementioned conditions necessitate a revision to the unit SO₂ allowance allocations identified in this permit (See 40 CFR 72.84).

** AEPCO will hold sufficient SO₂ allowances by the annual allowance transfer deadline to account for SO₂ emissions for each calendar year.

III. NO_x LIMITS

A. Steam Unit No. 1

This unit is not subject to a NO_x limit under 40 CFR Part 76.

B. Steam Unit No. 2

Pursuant to 40 CFR 76.8(d)(2), Arizona Department of Environmental Quality approves a NO_x early election compliance plan for Unit 2. The compliance plan is effective for calendar year 2000 through calendar year 2007. Under the compliance plan, the unit's annual average NO_x emission rate for each year, determined in accordance with 40 CFR Part 75, shall not exceed the applicable emission limitation, under 40 CFR 76.5(a)(2) of 0.50 lb/MMBtu for dry bottom, wall-fired boilers. If the unit is in compliance with its applicable emission limitation for each year of the plan, then the unit shall not be subject

to the applicable emission limitation, under 40 CFR 76.7(a)(2), of 0.46 lb/MMBtu until calendar year 2008.

In addition to the described NOx compliance plan, this unit shall comply with all other applicable requirements of 40 CFR Part 76, including the duty to reapply for NOx compliance plan and requirements covering excess emissions

C. Steam Unit No. 3

Pursuant to 40 CFR 76.8(d)(2), Arizona Department of Environmental Quality approves a NOx early election compliance plan for Unit 3. The compliance plan is effective for calendar year 2000 through calendar year 2007. Under the compliance plan, the unit's annual average NOx emission rate for each year, determined in accordance with 40 CFR Part 75, shall not exceed the applicable emission limitation, under 40 CFR 76.5(a)(2) of 0.50 lb/MMBtu for dry bottom, wall-fired boilers. If the unit is in compliance with its applicable emission limitation for each year of the plan, then the unit shall not be subject to the applicable emission limitation, under 40 CFR 76.7(a)(2), of 0.46 lb/MMBtu until calendar year 2008.

In addition to the described NOx compliance plan, this unit shall comply with all other applicable requirements of 40 CFR Part 76, including the duty to reapply for NOx compliance plan and requirements covering excess emissions.

D. Gas Turbine No. 4

This unit is not subject to a NO_x limit under 40 CFR Part 76.

IV. COMMENTS, NOTES AND JUSTIFICATIONS

AEPCO has early-elected for NO_x requirements on Units 2 and 3.

V. PERMIT APPLICATION

The Permittee, and any other owners or operators of the units at this facility, shall comply with the requirements contained in the attached acid rain permit application (OMB No. 2060-0258) signed by the Designated Representative Larry D. Huff on 12/13/95 and revised on 3/8/99 (OMB No. 2060-0258) by new Designated Representative James M. Andrew and Alternate Designated Representative Michael D. Nelson.