ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

AIR QUALITY CLASS I PERMIT

COMPANY:	**Tucson Electric Power Company**
FACILITY:	**Springerville Generating Station**
PERMIT #:	**32008**
DATE ISSUED:	**July 21, 2006**
EXPIRY DATE:	**July 21, 2011**

SUMMARY

This Class I, Title V operating permit renewal is issued to Tucson Electric Power Company(TEP), the Permittee, for operation of its Springerville Generating Station(SGS), located in Apache County, approximately 15 miles North of Springerville, Arizona. The area is either unclassified or is classified as being in attainment for all criteria pollutants. The Springerville Generating Station is classified as a Class I, Major Source.

An *Approval to Construct* for two coal-fired steam electric generating units was issued by EPA on December 21, 1977, to the facility. These two pulverized coal-fired, steam generating units are rated to produce a combined output of approximately 760 net megawatts. Each unit typically operates 24 hours per day, seven days per week, and 365 days per year. Both units normally burn coal. Units 1 & 2 have a capacity to process 5,272,000 tons of coal per year. Units 1 and 2 are also permitted to burn dual fuel (co-firing of fuel oil and coal for units 1 & 2, and co-firing of used oil and coal for unit 1). Baghouses are utilized to control particulate matter emissions. Spray Dry Absorbers are used to control SO_2. Low NOx burners, overfire air ports and good operating practices control NOx emissions.

A significant permit revision for the construction of two (2) new pulverized coal-fired steam electric generating units, "Unit 3" and "Unit 4" was issued April 29, 2002. Each of these units will be rated to produce approximately 400 net megawatts and will be fired primarily with coal. Both Unit 3 and Unit 4 will typically operate 24 hours per day, seven days per week, and 365 days per year. Each of the new units will utilize a baghouse to capture particulate matter emissions; spray dry absorbers to control emissions of sulfur dioxide and other acid gases; and low-NOx burners and selective catalytic reduction (SCR) units to control nitrogen oxides emissions. The major modification was subject to PSD review for, PM, $PM_{10,}$ CO, VOC, and fluorides. The applicant voluntarily accepted "caps" on facility-wide emissions of SO_2, NO_x, and sulfuric acid mist. Thus, PSD review was not required for these pollutants.

In addition to the pulverized coal-fired steam electric generating units, SGS includes various ancillary facilities such as an oil-fired auxiliary boiler, a coal preparation plant, coal storage piles, lime storage and handling facilities, two mechanical-draft wet cooling towers. As part of the major modification to add Units 3 and 4, two new mechanical-draft wet cooling towers using high-efficiency drift eliminators, new lime storage and handling facilities using enclosures and fabric filters, and new anhydrous ammonia storage tanks will be installed. A new coal preparation plant may be constructed, or the existing coal preparation plant may be expanded.

SGS is a "major source". The potential emission rates of the following pollutants are greater than 100 tons per year: (1) Particulate Matter with an aerodynamic diameter less than 10 microns, (2) Sulfur Dioxide, (3) Nitrogen Oxides, (4) Carbon Monoxides, (5) Volatile Organic Compounds, (6) fluorides, and (7) sulfuric acid mist. In addition, SGS has potential emission rates of hazardous air pollutants in excess of 25 tons per year in total, and in excess of the major source threshold of 10 tons per year for one or more of the following pollutants: (1) cyanide compounds, (2) hydrogen chloride, and (3) hydrogen fluoride. SGS is 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. 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 of this permit are enforceable by the Administrator of the United States Environmental Protection Agency (U.S. EPA), except for those terms and conditions that are specifically designated as "State Requirements."

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ATTACHMENT "A": GENERAL PROVISIONS

Air Quality Control Permit No. 32008

For

TUCSON ELECTRIC POWER COMPANY – Springerville 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.

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, and whether the methods or other means provide continuous or intermittent data;

3. The status of compliance with the terms and conditions of this permit for the period covered by the certification, based on the methods or means designated in Condition VII.A.2 above. The certifications shall identify each deviation and take it into account for consideration in the compliance certification;

4. 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.

B. A copy of all compliance certifications shall also be submitted to the EPA Administrator.

C. 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:

      (1) 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.

      (2) 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:

      (1) Identity of each stack or other emission point where the excess emissions occurred;

(2) 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;

(3) Date, time and duration, or expected duration, of the excess emissions;

(4) Identity of the equipment from which the excess emissions emanated;

(5) Nature and cause of such emissions;

(6) 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

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

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

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

B. Permit Deviations Reporting [A.A.C. R18-2-306.A.5.b]

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

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

1. An “emergency” means any situation arising from sudden and reasonable unforeseeable events beyond the control of the source, including acts of God, that require immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly

designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

2. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if Condition XII.C.3 is met.

3. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:

   a. An emergency occurred and that the Permittee can identify the cause(s) of the emergency;

   b. The permitted facility was being properly operated at the time;

   c. During the period of the emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and

   d. The Permittee submitted notice of the emergency to the Director by certified mail, facsimile, or hand delivery within two working days of the time when emission limitations were exceeded due to the emergency. This notice shall 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:

(1) The excess emissions could not have been prevented through careful and prudent planning and design;

(2) If the excess emissions were the result of a bypass of control equipment, the bypass was unavoidable to prevent loss of life, personal injury, or severe damage to air pollution control equipment, production equipment, or other property;

(3) 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;

(4) The amount and duration of the excess emissions (including any bypass operation) were minimized to the maximum extent practicable during periods of such emissions;

(5) All reasonable steps were taken to minimize the impact of the excess emissions on ambient air quality;

(6) 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;

(7) All emissions monitoring systems were kept in operation if at all

practicable; and

(8) 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]

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

A. Administrative Permit Amendment (A.A.C. R18-2-318);

B. Minor Permit Revision (A.A.C. R18-2-319); and

C. Significant Permit Revision (A.A.C. R18-2-320)

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

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

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

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

D. Test Plan

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

1. Test duration;

2. Test location(s);

3. Test method(s); and

4. Source operation and other parameters that may affect test results.

E. Stack Sampling Facilities

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

1. Sampling ports adequate for test methods applicable to the facility;

2. Safe sampling platform(s);

3. Safe access to sampling platform(s); and

4. Utilities for sampling and testing equipment.

F. Interpretation of Final Results

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

G. 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 [A.A.C. R18-2-306.A.7]

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.B of this Attachment and any facility changes without a permit revision pursuant to Section XVII of this Attachment.

XXII. PROTECTION OF STRATOSPHERIC OZONE [40 CFR Part 82]

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

XXIII. ACID RAIN

A. When provisions or requirements of the regulations incorporated pursuant to A.A.C. R18-2-333.A (Acid Rain) conflict with any of the applicable requirements, the regulations incorporated by A.A.C. R18-2-333.A (Acid Rain) shall apply and take precedence.

[A.A.C. R18-2-333]

B. No permit revision shall be required for increases in emissions that are authorized by allowances acquired pursuant to the acid rain program, provided that such increases do not require a permit revision under any other applicable requirement.

[A.A.C. R18-2-306.A.6.a]

C. No limit shall be placed on the number of allowances held by the source. The source

may not, however, use allowances as a defense to noncompliance with any other applicable requirement.

[A.A.C. R18-2-306.A.6.b]

D. Any such allowance shall be accounted for according to the procedures established in regulations promulgated under Title IV of the Act.

[A.A.C. R18-2-306.A.6.c]

E. All of the following are prohibited:

1. Annual emissions of sulfur dioxide in excess of the number of allowances to emit sulfur dioxide held by the owners or the operators of the unit or the designated representative of the owners or the operators as of the applicable allowance transfer deadline;
2. Exceedances of applicable emission rates;
3. The use of any allowance prior to the year for which it was allocated; and
4. Contravention of any other provision of the permit.

[A.A.C. R18-2-306.A.6.d]

ATTACHMENT "B": SPECIFIC CONDITIONS

Air Quality Control Permit No. 32008

For

TUCSON ELECTRIC POWER COMPANY – Springerville Generating Station

I. FACILITY WIDE LIMITATIONS

A. The Permitee shall have on site or on call a person that is certified in EPA Reference Method 9.

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

B. At the time the compliance certifications required by Section VII of Attachment "A" are submitted, the Permittee shall submit reports of all monitoring activities required by Attachment "B" performed during the six month compliance term.

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

C. The permit conditions or portions of the permit conditions which are material pursuant to A.A.C. R18-2-331 and A.R.S. §49-464 are indicated by a <u>double underlined print</u>.

D. Definitions

The terms used in this permit shall have the following meaning:

1. "Boiler operating day" means a 24-hour period during which fossil fuel is combusted in a steam generating unit for the entire 24 hours for units constructed, reconstructed, or modified on or before February 28, 2005. For units constructed, reconstructed, or modified after February 28, 2005, boiler operating day means a 24-hour period between 12 midnight and the following midnight during which any fuel is combusted at any time in the steam-generating unit. It is not necessary for fuel to be combusted the entire 24-hour period.

[40 CFR 60.41Da]

2. "Calendar Day" means any 24-hour period between 12:00 midnight and the following midnight in Arizona.

[Consent Decree of June 24, 2005, CV01-2189 PCT EHC(D.Ariz.), §3(b)]

3. "Cooling Tower 1" and "Cooling Tower 2" are the existing mechanical-draft wet cooling towers at the Springerville Generating Station.

[Condition No. I.B.2. of Attachment "B" of Significant Permit Revision No. 1001554 to Permit No. 1000105]

4. "Cooling Tower 3" and "Cooling Tower 4" are the new mechanical-draft wet cooling towers at the Springerville Generating Station associated with Units 3 & 4.

[Condition No.I.B.3. of Attachment "B" of Significant Permit Revision No. 1001554 to Permit No. 1000105]

5 "EPC contract" means a turnkey engineering, procurement and construction contract in which the contractor undertakes to deliver to the owner a complete, operating facility by a date certain for a fixed price (subject to modification through change orders and other amendments) and in which the contractor is responsible to the owner for the facility's design, engineering, procurement, construction, installation, start-up, testing and completion.

[Condition No.I.B.4 of Attachment "B" of Significant Permit Revision No. 1001554 to Permit No. 1000105]

6. "Gross Output" means the gross useful work performed by the steam generated. The gross useful work performed is equal to the gross electrical output from the turbine/generator set.

[40 CFR 60.41Da]

7. "Heat Input" means the aggregate gross calorific value of all fuels whose products of combustion pass through a stack or other outlet. The gross calorific value of solid and liquid fuels shall be determined in accordance with appropriate test methods that are incorporated by reference at 40 CFR 60.17 or A.A.C. R18-2-724.

[A.A.C. R18-2-724 and 40 CFR Part 60, Appendix A, Method 19]

8. "Major Burner Malfunction" is, for the purposes of complying with the NOx emission limitation in Specific Condition II.E.1.c. of Attachment "B", a Malfunction (as defined in Specific Condition I.B.9. of Attachment "B") that is unanticipated and that requires extensive repairs to the low NOx burners and the Secondary Overfire Air dampers that are internal to the boiler at Unit 1 or 2.

[Consent Decree of June 24, 2005, CV01-2189 PCT EHC (D. Ariz.), § 3(f)]

9.. "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.

[40 CFR 60.2]

10. "NOx" means total oxides of nitrogen, except nitrous oxide, which are expressed as nitrogen dioxide using EPA Reference Method 7.

11.. "Operating day" means a 24-hour period during which fossil fuel is combusted in a steam generating unit for the entire 24 hours. For the purposes of Unit 3 and Unit 4, this term shall have the same meaning as "boiler operating day" as

defined at 40 CFR 60.41Da.

[40 CFR 60.2]

12 "Potential combustion concentration" means the theoretical emissions that would result from combustion of a fuel without emission control systems.

[40 CFR 60.41Da , A.A.C. R18-2-406.A.4]

13. "PM" or "Particulate Matter" mean any airborne, finely divided solid or liquid material, other than uncombined water, with an aerodynamic diameter smaller than 100 micrometers, and which is expressed as PM using EPA Reference Method 5.

[Consent Decree of June 24, 2005, CV01-2189 PCT EHC (D. Ariz.), § 3(j)]

14.. "Shutdown" means the cessation of operation of a steam generating unit for any purpose.

[40 CFR 60.2]

15. "SO_2" means sulfur dioxide.

[Consent Decree of June 24, 2005, CV01-2189 PCT EHC (D. Ariz.), § 3(l)]

16. "Startup" means the setting in operation of a steam generating unit for any purpose.

[40 CFR 60.2]

17. "Steam generating unit" shall mean Unit 1, Unit 2, Unit 3, or Unit 4. For the purposes of Unit 1 and Unit 2, this term shall have the same meaning as "fossil-fuel fired steam generating unit" as defined at 40 CFR 60.41(a). For the purposes of Unit 3 and Unit 4, this term shall have the same meaning as "electric utility steam generating unit" as defined at 40 CFR 60.41Da.

[Condition No.I.B.12 of Attachment "B" of Significant Permit Revision No. 1001554 to Permit No. 1000105]

18. Unit means Unit 1, Unit 2, Unit 3, or Unit 4

19. "Unit 1" and "Unit 2"

Unit 1 and Unit 2 are the existing steam generating units at the Springerville Generating Station.

[Condition No.I.B.13 of Attachment "B" of Significant Permit Revision No. 1001554 to Permit No. 1000105]

[Consent Decree of June 24, 2005, CV01-2189 PCT EHC (D. Ariz.), § 3(o)]

20. "Unit 3" and "Unit 4"

Unit 3 and Unit 4 are the proposed new steam generating units at the Springerville Generating Station. Each of these units is an "affected facility" under 40 CFR Part 60, Subpart Da, "Standards of Performance for Electric

Utility Steam Generating Units for Which Construction is Commenced After September 18, 1978."

[Condition No.I.B.14 of Attachment "B" of Significant Permit Revision No. 1001554 to Permit No. 1000105]

21. For purposes of the sulfur dioxide standard in Specific Condition II.D.1.d of Attachment "B" and the nitrogen oxide standard in Specific Condition II.E.1.c. of Attachment "B" to the operating permit, the following capitalized terms shall be defined as follows:

a. "Emission Rate" means the total amount of a pollutant emitted from an emission unit during a given time period, expressed in lbs/MMBtu, derived for SO_2 and NO_x from a SO_2 or NO_x continuous emission monitoring system and diluent (O_2 or CO_2) monitoring system consistent with 40 CFR Part 75.

b. "Hourly Average" means the calculated arithmetic average hourly emission rate, expressed in lbs/MMBtu, derived from an SO_2 and/or NO_x continuous emission monitoring system and diluent (CO_2 or O_2) monitoring system consistent with 40 CFR 75, collected during an hour, beginning on the hour.

c. "Daily Average" means the arithmetic average of the Hourly Averages for a Unit in a Day.

d. "Combined Daily Average" means the arithmetic average of the Daily Averages of Unit 1 and Unit 2 on a given day. For days when only one Unit has any operating hours, the Combined Daily Average shall be the Daily Average for that Unit.

e. "Monthly Average" means the arithmetic average of the Combined Daily Average Emission Rates for Units 1 and 2 for a calendar month.

[Consent Decree of June 24, 2005, CV01-2189 PCT EHC (D. Ariz.), § 17(d)]

22. For purposes of the sulfur dioxide control efficiency in Specific Condition II.D.2.b.of Attachment "B", the following capitalized terms shall be defined as follows:

a. "Hourly Average Stack Outlet Sulfur Dioxide Concentration" means the calculated arithmetic average hourly emission rate, expressed in lbs/MMBtu, derived from an SO_2 and/or NO_x continuous emission monitoring system and diluent (CO_2 or O_2) monitoring system consistent with 40 CFR 75, collected during an hour, beginning on the hour, using the SGS' existing SO_2 Continuous Emission Monitoring System.

b. "Hourly Average Boiler Inlet Sulfur Dioxide Concentrations" means the calculated hourly inlet sulfur dioxide concentration, expressed in lbs/MMBtu, derived from all valid measurements or data points collected from the monitoring system (referred to in Specific Condition II.A.3.i of Attachment "B") during an hour, beginning on the hour; provided

however, that (A) in the event the monitoring system is not in operation due to maintenance and/or malfunction, the Permittee shall substitute for each hour the average sulfur dioxide concentration from the previous 30 days of data from such monitoring system; and (B) if the monitoring system has not yet been in service for 30 days, the Permittee shall use the previous 30 days of coal analysis as received from the coal vendor.

[Consent Decree of June 24, 2005, CV01-2189 PCT EHC (D. Ariz.), § 18(f)]

E. For the purposes of this permit, unless otherwise specified in the applicable standards, for any facilities subject to the new source performance standards from 40 CFR Part 60, compliance with such standards other than opacity standards shall be determined in accordance with performance tests. The performance tests shall be conducted and data reduced in accordance with the test methods and procedures contained in the Specific Conditions for each emission unit or group of emission units.

[40 CFR 60.11(a) and 60.8(b)]

F. For the purposes of this permit, for any facilities subject to the new source performance standards from 40 CFR Part 60, compliance with the new source opacity standards shall be determined by conducting observations in accordance with EPA Reference Method 9, or any alternative method that is approved by the Director, unless Permittee elects to submit continuous opacity monitoring system data for compliance with the opacity standards.

[40 CFR 60.11(b)]

G. For the purposes of submitting compliance certifications or establishing whether or not Permittee has violated or is in violation of any new source performance standards from 40 CFR Part 60 subsumed under Attachment "B", nothing in Attachment "B" shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether a source would have been in compliance with such standards if the appropriate performance or compliance test or procedure had been performed.

[40 CFR 60.11(g)]

H. For the purposes of this permit, the EPA Reference Method 9 reading shall be defined as an average of 24 consecutive opacity observations recorded at 15-second intervals. A set is composed of any 24 consecutive observations. Sets need not be consecutive in time and in no case shall two sets overlap. For each set of 24 observations, calculate the average by summing the opacity of the 24 observations and dividing this sum by 24.

[A.A.C. R18-2-306.A.3.b and 40 CFR Part 60, Appendix A, Method 9]

I. AUTHORIZATION TO CONSTRUCT AND CONDITIONAL AUTHORIZATION TO OPERATE MODIFICATIONS TO SGS

[40 CFR §70.8(c)(4)][Significant Permit Revision No. 1001554 to Permit No. 1000105]
[Consent Decree of June 24, 2005, CV01-2189 PCT EHC (D. Ariz.), § 12]

1. This is an authorization to make modifications to SGS, including the construction of Unit 3 and Unit 4, under the approved State Implementation Plan.

2. The permit includes the following caps on total emissions of sulfur dioxide and nitrogen oxides:

   a. A cap on total emissions from Units 1 and 2 (the "Two-Unit Cap"), which will apply commencing December 31, 2006 and until the Three-Unit or Four-Unit cap goes into effect. Prior to December 31, 2006, the "Two-Unit Cap" will apply on the Permittee's election.

   b. A cap on total emissions from Units 1 and 2 together with either Unit 3 or 4 (the "Three-Unit Cap"), which will apply after Unit 3 or 4 becomes operational.

   c. A cap on total emissions from Units 1, 2, 3 and 4 (the "Four-Unit Cap"), which will apply when both Units 3 and 4 become operational.

3. Specific Conditions IV.B.1, IV.C.1, and IV.D.1 of Attachment "B" establish the levels of the emission caps for sulfur dioxide, nitrogen oxides, and sulfuric acid mist. Specific Conditions IV.B.2, IV.C.2, and IV.D.2 of Attachment "B" establish the compliance demonstration requirements for the sulfur dioxide, nitrogen oxides, and sulfuric acid mist emission caps.

4. Permittee's authority to operate any new unit is subject to the following conditions:

   a. Except as provided in 40 C.F.R. 52.21(r)(2), Permittee must execute an EPC contract covering Unit 3 or Unit 4 and must issue final notice to proceed with construction to the EPC contractor within 18 months after April 29, 2002.

   b. Within 30 months after April 29, 2002, Permittee must begin a continuous program of on-site construction of Unit 3 or Unit 4 pursuant to the terms of the EPC and must not discontinue this program for any period exceeding 18 months except as provided in 40 C.F.R. 52.21(r)(2).

   c. By no later than December 31, 2007, Permittee must do one of the following:

      (1) Begin operation of Unit 3 or Unit 4; or

      (2) Notify the Department in writing that Permittee elects to subject Units 1 and 2 to the Two-Unit Cap.

   d. By no later than December 31, 2009, Permittee must begin operation of the new unit.

   e. If Unit 4 has not begun operation by December 31, 2009, the provisions

of paragraph 4.d. shall not apply to Unit 4 as long as:

(1) The Unit 4 begins operation by no later than December 31, 2012 and

(2) A new cap on total emission from Units 1, 2, 3, and 4 (the "Four-Unit Cap) will be applicable following commencement of operation of Unit 4 as follows:

SO_2	10,662.0 tons per year
NO_x	8,940.0 tons per year

f. If Unit 4 has not begun operation by December 31, 2012, the permit revision for SGS (Permit No. 1001554) portion affecting Unit 4 shall lapse, but the permit and its conditions shall remain in effect for Units 1,2, and 3.

II. UNIT 1 AND UNIT 2 (P1 and P2)

A. Applicability

This Section applies to Units 1 and 2 as described in Section I.D. "Definitions" of Attachment "B" of this permit and Attachment "C" of this permit.

B. Operating Limitations

1. Fuel Limitations

a. Unit 1 [A.A.C. R18-2-306.A.2 and A.R.S. 426.G.1]

(1) The Permittee shall burn only the following as fuel in Unit 1:

(a) Coal;
(b) Co-firing of coal and fuel oil;
(c) Co-firing of coal and used oil subject to the limitations of Specific Conditions II.B.1.a.(2) and II.B.1.a.(3) of Attachment "B"; and
(d) Fuel oil during times of startup or shutdown.

(2) The maximum amount of used oil consumed in Unit 1 shall not exceed 2,500 gallons per hour, based on a calendar-day block average, or 100,000 gallons per year, based on a 12-month rolling total.

(3) The Permittee shall only burn on-specification used oil or on-site generated on-specification used oil fuel (on-spec used oil) along with coal in the Unit 1, if the following conditions are met:

(a) The flash point of the on-spec used oil does not fall below 100 degrees Fahrenheit.

(b) The Permittee shall comply with all applicable requirements of A.R.S. §49-801 through §49-803- Management of Used Oil.

(c) The on-spec used oil shall not contain contaminants in excess of the following levels:

Arsenic	5 ppm
Cadmium	2 ppm
Chromium	10 ppm
Lead	100 ppm
PCBs	2 ppm

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

(1) The Permittee shall burn only the following as fuel in Unit 2:

(a) Coal;
(b) Co-firing of coal and fuel oil; or
(c) fuel oil during times of startup or shutdown

c. Monitoring/Recordkeeping/Reporting Requirements

(1) The Permittee shall log in ink or in an electronic format a record of any change in fuel type at Unit 1 and Unit 2 including:

(a) Type of the fuel change;

(b) Date of the fuel change; and

(c) Time of the fuel change.

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

(2) Used Oil [A.R.S.§ 49-426.G.4]

(a) All analyses of used oil performed pursuant to Specific Condition II.B.1d.(1) of Attachment "B" shall be documented and a report submitted to the Department along with the compliance certification.

(b) The Permittee shall maintain such records as required to document the use of used oil including the following:

(i.) Dates on which the used oil was burned;

(ii.) Hours used oil was burned;

(iii.) The quantity of used oil burned.

d. Testing Requirements

(1) Used Oil

Permittee shall perform or cause to be performed an analysis of a representative sample of any used oil to be combusted in Unit 1. The analysis shall include flash point and concentrations (ppm) of Arsenic, Cadmium, Chromium, and Lead using the analytical methods specified in EPA Publication SW-846, Third Edition, including update III B (document number 955-001-00000-1). All sample analyses shall be conducted in laboratories certified by the Arizona Department of Health Services.

[A.R.S.§ 49-426.G.2]

(2) Coal sampling

Coal shall be sampled before entering the boilers. This sample shall be analyzed for moisture, ash, sulfur content, and gross calorific value. Analysis of coal samples provided by the coal supplier may be utilized for this purpose. The results of these analyses shall be retained for at least five years following the

date of measurements. All sampling, sample preparation and analyses performed or caused to be performed shall be performed to the current ASTM standard methods.

[Condition XI of EPA Approval to Construct of December 2,1977]

(3) Monitoring system. On or prior to December 31, 2006, the Permittee shall install and certifiy, and thereafter operate either an in-line elemental coal analyzer upstream of both the Unit 1 and Unit 2 boilers, which will be available to both Units, or an "as-fired" fuel monitoring system (upstream of the coal pulverizers) meeting the requirements of EPA Reference Method 19 in 40 CFR 60 to determine the potential sulfur dioxide inlet concentration.

[Consent Decree of June 24, 2005, CV01-2189 PCT EHC (D. Ariz.), § 7]

2. Vapor Extractor Blower Vents, Generator Seal Oil Vapor Extractor and Hydraulic Fluid Reservoir Vapor Extractors

The Permittee shall process, store, use, and transport materials including solvents or volatile compounds in such a manner and by such means that they will not evaporate, leak, escape, or be otherwise discharged into the atmosphere so as to cause or contribute to air pollution. Where means are available to reduce effectively the contribution to air pollution from evaporation, leakage, or discharge, the installation and usage of such control methods, devices, or equipment shall be mandatory.

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

3. Good Air Pollution Control Practices.

The Permittee shall at all times, including periods of Startup, Shutdown, and Malfunction, maintain and operate Unit 1 and Unit 2 in a manner consistent with good air pollution control practices for minimizing emissions. Without limiting the Permittee's obligations in the event of a Malfunction, from and after the effective date of this Permit, the Permittee shall address each Malfunction affecting Unit 1 or Unit 2 and take corrective action, when possible, within 24 hours of when the Permittee first learns of the Malfunction. Malfunctions that cannot be corrected within a 24 hour period shall be reported to the ADEQ within two (2) business days and a plan for bringing the affected Unit(s) into compliance shall be submitted to the ADEQ within seven (7) business days, unless the Malfunction can be corrected within seven (7) business days.

[Consent Decree of June 24, 2005, CV01-2189 PCT EHC (D. Ariz.), § 15]

4. Permit Shield

Compliance with this Section shall be deemed compliance with A.A.C.R-18-

730.F. and Condition XI of EPA Approval to Construct of December 2,1977, , Consent Decree of June 24, 2005, CV01-2189 PCT EHC (D. Ariz.), § 15

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

C. Particulate Matter (PM/PM_{10}) and Opacity

1. Emission Limitations/Standards

a. Opacity

The Permittee shall not cause to be discharged into the atmosphere from the stack of Unit 1 or Unit 2 any gases which exhibit greater than 15 percent opacity except for periods of startup, shutdown, and malfunction as defined in Conditions No. I.D.9, 14, and 16 of Attachment "B" of this permit..

[Condition XIII of Approval to Construct of December 21, 1977, ,

40 CFR §60.11.(c) and A.A.C. R18-2-331.A.3.f]

b. Particulate Matter

(1) The Permittee shall not cause to be discharged into the atmosphere from the stacks of Unit 1 and Unit 2 any gases which contain particulate matter in excess of 0.034 lb per million Btu derived from fossil fuel except for periods of startup, shutdown, and malfunction as defined in Conditions No. I.D.9, 14, and 16 of Attachment "B" of this permit.

[Condition XIII of Approval to Construct of December 21, 1977, 40 CFR §60.8 (c)]

(2) Unless otherwise specified, the Particulate Matter emission limit defined above shall be measured by manual testing on a one-hour average (the average of three one-hour tests).

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

(3) At all times from and after January 1, 2006, the Permittee shall not cause to be discharged to the atmosphere from the stack of Unit 1 and Unit 2 any gases which contain Particulate Matter in excess of 0.03 lb/MMBtu derived from fossil fuel, except for periods of Start-up, Shutdown, or Malfunction as defined in Conditions No. I.D.9, 14, and 16 of Attachment "B" of this permit.

[Consent Decree of June 24, 2005, CV01-2189 PCT EHC (D. Ariz.), § 11]

2. Air Pollution Control Requirements

a. Particulate Matter

At all times when the equipment is in operation, including periods of startup, shutdown, and malfunction as defined in Conditions No. I.D.9, 14, and 16 of Attachment "B" of this permit., the Permittee shall, to the extent practicable, maintain and operate four (4) Joy baghouses 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]

3. Monitoring, Recordkeeping, and Reporting Requirements

a. Opacity

(1) Monitoring for Opacity

(a) The Permittee shall install, calibrate, maintain, and operate continuous monitoring systems, and shall record the output of the systems, for measuring the opacity of emissions discharged to the atmosphere from Unit 1 and 2.

[40 CFR 60.45(a), A.A.C. R18-2-331.A.3.c, and A.A.C. R18-2-306.A.3]

(b) The Permittee shall comply with all recordkeeping and reporting requirements of 40 CFR Part 75, Subparts F and G respectively.

(c) The continuous opacity monitoring systems (COMS) shall meet the following data reduction requirements:

[40 CFR 60.13(h)]

(i) 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.

(ii) 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.

(2) NSPS Requirements for Continuous Monitoring Systems

The continuous opacity monitoring system for opacity as required by Specific Condition III.C.3.a.(1)(a) of Attachment "B" shall meet the following requirements:

(a) Calibration requirements at 40 CFR 60.13(d)

(b) Operational requirements at 40 CFR 60.13(e)

(c) Performance Specifications at 40 CFR Part 60, Appendix B.

(d) Notification and recordkeeping requirements at 40 CFR 60.7.

b. Compliance Assurance Monitoring for Particulate Matter

(1) The Permittee shall maintain and continuously operate Continuous Opacity Monitoring Systems (COMS) to measure visible emissions (Opacity) which is indicative of operation of the Unit 1 and Unit 2 fabric filter in a manner necessary to comply with particulate matter emission standards. The fabric filter parameters have been identified in the following Table.

[40 CFR 64.6(c)(1) and A.A.C. R18-2-306.A.3.c., and R18-2-406.A.4]

This table summarizes certain requirements that are applicable to Springerville Generating Station operations pursuant to 40 CFR Part 64 and A.A.C. R18-2-306.A.3.a.i.

Summary of CAM Requirements applicable to Unit 1 and 2 (PM Limits)

Unit 1 and 2 PM Limits:		
Indicators	Indicator No. 1: Visible Emissions Opacity	Indicator No. 2: Bag condition.
Measurement Approach	Visible Emissions (Opacity) will be measured continuously with a continuous Opacity Monitoring System (COMS) installed on each stack.	Sampling and analysis of representative bag samples will be done once per year. The analyses of representative bag samples will be used as a factor in determining when bag replacement is to be scheduled. The Baghouse will have an inspection and maintenance program that includes an internal inspection of the baghouse to be performed during a scheduled major outage. Any known broken bags will be either replaced or capped off until ready to be replaced. Compartments with one or more broken bags, that have not been capped off or replaced, will be isolated.

Indicator Range	Visible Emissions greater than 12 percent Opacity based on a 3-hour rolling average (except during unit startup, shutdown, and malfunction as defined in Conditions No. I.D.9, 14, and 16 of Attachment "B" of this permit.).	An excursion is defined as failure to sample and analyze bag condition at least once per year. Excursions trigger an inspection, corrective action, and a reporting requirement.
Performance Criteria - Data Representativeness	Visible emissions (Opacity is measured on stack)	Scheduled internal baghouse inspection includes a visual inspection of the entire baghouse including individual bag compartments for signs of bag failure.
Performance Criteria - Operation Status	n/a	n/a
Performance Criteria - QA/QC Practices	TEP is required by the permit to meet the QA/QC requirements of 40 CFR Part 60, Appendix B, Performance Specification 1, "Specification and Test Procedures for Opacity Continuous Emission Monitoring Systems in Stationary Sources"	Experienced personnel perform inspections and maintenance.
Performance Criteria - Monitoring Frequency	Continuous opacity monitoring with data recorded as 6-minute averages.	Varies.
Performance Criteria - Data Collection Procedure	Continuous	Results of inspections and maintenance activities performed are recorded. Results of annual bag analysis are kept on-file.
Performance Criteria - Averaging Period	3-hour rolling average of visible emissions (Opacity)	n/a

(2) A three-hour rolling average opacity, except during startup, shutdown and malfunction (as defined in Conditions No. I.D.9, 14, and 16 of Attachment "B" of this permit). of 12 percent or greater shall constitute an excursion.

[40 CFR 64.3(a)(2), A.A.C. R18-2-306.A.3.b, and R18-2-406.A.4]

(3) The three-hour rolling average opacity parameter shall be equipped with an alarm.

[40 CFR 64.6(c)(1), A.A.C. R18-2-306.A.3.b, and R18-2-406.A.4]

(4) Each three-hour rolling average opacity, except during startup, shutdown and malfunction (as defined in Conditions No. I.D.9, 14, and 16 of Attachment "B" of this permit). during which a fabric filter parameter alarm is activated shall constitute an excursion for the purposes of responding to and reporting excursions under 40 CFR Part 64, § 64.7.

[40 CFR 64.6(c)(2) and A.A.C. R18-2-306.A.3.b, and R18-2-406.A.4]

(5) Prior to making any changes to the alarm set point or alarm delay time, the Permittee shall submit written notification to the

Department. Such notification shall include the proposed new alarm set point or alarm delay time and the reason for the proposed change. The proposed change may be made without the prior approval of the Department.

[40 CFR 64.6(c)(2), A.A.C. R18-2-306.A.3.b, and R18-2-406.A.4]

(6) The Permittee shall conduct monitoring in accordance with the following provisions.

[40 CFR 64.7(c), A.A.C. R18-2-306.A.3.b, and R18-2-406.A.4]

(a) The Permittee shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant specific emission unit is operating. 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).

(b) Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable.

(7) The Permittee shall to the extent practicable respond to excursions as follows.

[40 CFR 64.7(d), A.A.C. R18-2-306.A.3.b, and R18-2-406.A.4]

(a) The Permittee upon detecting an excursion or exceedance shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.

(b) The Permittee shall, to the extent practicable, minimize the period of any startup, shutdown, or malfunction and take 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, shutdown, malfunction (as defined in Conditions No. I.D.9, 14, and 16 of Attachment “B” of this permit) conditions).

(8) For the purposes of permit deviation reporting under Condition XII of Attachment "A", the Permittee shall include the following information required by 40 CFR Part 64, § 64.9(a).

[40 CFR 64.7(d), A.A.C. R18-2-306.A.3.b, and R18-2-406.A.4]

(a) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective action taken:

(b) 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).

c. Excess Emissions

(1) Excess emission and monitoring system performance (MSP) reports for Unit 1 and Unit 2 shall be submitted to the Department and EPA Region IX for 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 required in Specific Condition II.C.3.c.(2) of Attachment "B". Periods of excess emissions and monitoring systems (MS) downtime that shall be reported are defined as follows:

[40 CFR 60.45(g)]

Opacity

Excess emissions for Unit 1 and Unit 2 are defined as any six-minute period during which the average opacity of emissions exceeds 15 percent opacity except for periods of startup, shutdown, or malfunction as defined in Conditions No. I.D.9, 14, and 16 of Attachment "B" of this permit.

[40 CFR 60.45(g)(1), Condition No. II.C.4.a.(1) of Attachment "B" of Significant Revision No. 1001554 to Title V Permit No. 1000105]

(2) The summary quarterly report form submission required in paragraph II.C.3.c.(1) above 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) The 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.

(b) Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions (as defined in Conditions No. I.D.9, 14, and 16 of Attachment "B" of this permit.) of the affected facility. The nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted.

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

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

(3) In addition to Specific Conditions II.C.3.c.(1)-(2) above, Permittee shall report emissions exceeding an emission limitation or standard in accordance with Section XII.B of Attachment "A" of this permit.

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

4. Testing Requirements

a. Emission Rate Calculation

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

[40 CFR 60.46(b)(1)]

$E = C F_d (20.9)/(20.9 - \% O_2)$

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

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

$\%O_2$ = oxygen concentration, percent dry basis.

F_d = factor as determined from Method 19.

(2) In addition to Specific Condition II.C.4.a.(1) above, Permittee may follow the methodology specified in 40 CFR § 60.46(d)(1) to determine the emission rate (E) of particulate matter.

[40 CFR 60.46(d)(1)]

b. Particulate Matter [A.A.C.R18-2-306.A.3.c & 312]

Permittee shall perform an annual performance test to determine the particulate matter concentration using EPA Reference Method 5.

5. Permit Shield

Compliance with this Section shall be deemed compliance with , Condition XIII of Approval to Construct of December 21, 1977, 60.45(a), 60.45(g),60.45(g)(1),60.46(b)(1), 60.46(d)(1), and 60.46(b(2).

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

D. Sulfur Dioxide (SO_2)

1. Emission Limitations/Standard.

a. The Permittee shall not cause to be discharged into the atmosphere from the stacks of Unit 1 and Unit 2 any gases which contain sulfur dioxide in excess of 0.690 pounds per million Btu derived from fossil fuel except for periods of startup, shutdown, and malfunction as defined in Conditions No. I.D.9, 14, and 16 of Attachment "B" of this permit.

[Condition XIII of Approval to Construct of December 21, 1977 and 40 CFR §60.8.(c)]

b. Compliance shall be based on the total heat input from all fossil fuels burned.

[40 CFR 60.43(c)]

c. Unless otherwise specified, the Sulfur Dioxide emission limit defined above shall be measured by manual testing on a one-hour average (the average of three one-hour tests).

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

d. At all times from and after December 31, 2006, including periods of Startup, Shutdown, and/or Malfunction (as defined in Conditions No. I.D.9, 14, and 16 of Attachment "B" of this permit), the Permittee shall not cause to be discharged to the atmosphere from the stack of Unit 1 and Unit 2 any gases which contain sulfur dioxide in excess of 0.27 pounds per million Btu derived from fossil fuels, based on a 12-month rolling average, averaged over Units 1 and 2.

[Consent Decree of June 24, 2005, CV01-2189 PCT EHC (D. Ariz.), § 8]

2. Air Pollution Control Equipment

a. At all times when the system is in operation, including periods of startup, shutdown, and malfunction as defined in Conditions No. I.D.9, 14, and 16 of Attachment "B" of this permit., the Permittee shall, to the extent practicable, maintain and operate the Niro dry flue gas desulfurization 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. R18-2-331.A.3.e]

b. At all times from and after December 31, 2006, except for periods of Start-up, Shutdown, and/or Malfunction (as defined in Conditions No. I.D.9, 14, and 16 of Attachment "B" of this permit), , SO_2 emissions from Unit 1 and Unit 2 shall be limited to 15% or less of the potential boiler inlet SO_2 concentration (85% reduction) based on a 90-day rolling average, averaged over Units 1 and 2.

[Consent Decree of June 24, 2005, CV01-2189 PCT EHC (D. Ariz.), § 9]

c. Early SO_2 Controls. From and after January 1, 2006 through December 31, 2006, except for periods of Startup, Shutdown, or Malfunction (as defined in Conditions I.D.9, 14, and 16 of Attachment "B" of this permit) and periods where, in the exercise of good engineering judgment and good air pollution control practices, a reduced level of scrubbing is necessary to test, break in or adjust equipment:

(1) The Permittee shall scrub the entire flue gas stream on each of Unit 1 and Unit 2 using all four Spray Dryer Absorber modules unless unit load requires a lesser number of Spray Dryer Absorbers in service to maintain the appropriate flue gas flow distribution; provided that, in no event shall any flue gas flow be bypassed around the Spray Dryer Absorbers unscrubbed.

(2) The Permittee shall operate Units 1 and 2 to achieve 80 percent reduction in SO_2 on a 90-day rolling average over Unit 1 and Unit 2 in accordance with Specific Condition II.D.3.f of Attachment "B".

[Consent Decree of June 24, 2005, CV01-2189 PCT EHC (D. Ariz.), § 13]

3. Monitoring, Recordkeeping, and Reporting Requirements

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

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

b. The continuous emission monitoring systems for SO_2 shall meet the following requirements:

(1) 40 CFR Part 75, Appendix A, "Specification and Test Procedures"

(a) Installation and measurement location

(b) Equipment specifications

(c) Performance specifications

(d) Data acquisition and handling systems

(e) Calibration gas

(f) Certifications tests and procedures

(g) Calculations

(2) 40 CFR Part 75, Appendix B, "Quality Assurance and Quality Control Procedure"

(a) Quality control program

(b) Frequency of testing

(3) Data Reduction

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

c. The Permittee shall comply with all applicable recordkeeping and reporting requirements of 40 CFR Part 75 Subparts F and G respectively.

d. Excess Emissions

(1) Excess emission and monitoring system performance (MSP) reports for Unit 1 and Unit 2 shall be submitted to the

Department and EPA Region IX for 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 required in Specific Condition II.D.3.d.(2) of Attachment "B." Periods of excess emissions and monitoring systems (MS) downtime that shall be reported are defined as follows:

[40 CFR 60.45(g)]

Sulfur Dioxide

Excess emissions for Unit 1 and Unit 2 are 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 are in excess of the applicable standard in Specific Condition II.D.1.a of Attachment "B".

[40 CFR 60.45(g)(2)]

(2) The summary quarterly report form submission required in paragraph II.D.3.d (1) above 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) The 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.

(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.

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

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

(3) In addition to Specific Conditions II.D.3.d.(1)-(2) above, Permittee shall report emissions exceeding an emission limitation or standard in accordance with Section XII.B of Attachment "A" of this permit.

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

e. Compliance Assurance Monitoring for SO_2

(1) The Permittee shall maintain a CEMS for SO_2 which is indicative of operation of the Unit 1 and Unit 2 spray dryer absorption (SDA) system in a manner necessary to comply with sulfur dioxide emission standards. The following table summarizes certain requirements applicable to the Permittee pursuant to 40 CFR Part 64 and A.A.C.R18-2-306.A.3.a.i.

[40 CFR 64.6(c)(1),A.A.C. R18-2-306.A.3.b]

Unit 1 and Unit 2 SO_2 Limits: Lime Spray Dryer Flue Gas Desulfurization System	
	Indicator: The continuous SO_2 emission monitoring system for each stack.
Measurement Approach	Indicator will be monitored with a Continuous SO_2 Emission Monitoring System (CEMS)
Indicator Range	The indicator range will be an arithmetic average of three contiguous one-hour (3-hour average) SO_2 emission greater than 0.600 pounds per million Btu (except for periods of startup, shutdown, and malfunction as defined in Conditions No. I.D.9, 14, and 16 of Attachment "B" of this permit.).
Performance Criteria Data Representativeness	SO_2 emissions are measured on each stack and used to calculate an arithmetic average of three contiguous one-hour periods (the 3-hour average).
Performance Criteria Operation	n/a
Performance Criteria QA/QC Practices	Each of the SO_2 CEMS will meet the 40 CFR Part 75, Appendix B, "Quality Assurance and Quality Control Procedure"
Performance Criteria Monitoring Frequency	Measurements of SO_2 emissions on each stack are collected by the continuous SO_2 emissions monitoring system data acquisition and handling system (DAHS). An arithmetic average of three contiguous one-hour (3-hour average) SO_2 emissions is calculated and recorded by the DAHS.
Performance Criteria Data Collection Procedure	Continuous
Performance Criteria Averaging Period	An arithmetic average of three contiguous one-hour (3-hour average) SO_2 emissions pounds per million Btu.

(2) Parameter monitored shall be equipped with an alarm.

[40 CFR 64.6(c)(1), A.A.C. R18-2-306.A.3.b, and R18-2-406.A.4]

(3) A parameter, except during startup, shutdown and malfunction (as defined in Conditions No. I.D.9, 14, and 16 of Attachment "B" of this permit) that departs from an indicator range shall constitute an excursion.

[40 CFR 64.3(a)(2), A.A.C. R18-2-306.A.3.b, and R18-2-406.A.4]

(4) Each departure from an indicator range, except during startup, shutdown and malfunction (as defined in Conditions No. I.D.9, 14, and 16 of Attachment "B" of this permit) shall constitute an excursion for the purposes of responding to and reporting excursions under 40 CFR Part 64, § 64.7.

[40 CFR 64.6(c)(2) and A.A.C. R18-2-306.A.3.b, and R18-2-406.A.4]

(5) Prior to making any changes to the alarm set point or alarm delay time, the Permittee shall submit written notification to the Department. Such notification shall include the proposed new alarm set point or alarm delay time and the reason for the proposed change. The proposed change may be made without the prior approval of the Department.

[40 CFR 64.6(c)(2), A.A.C. R18-2-306.A.3.b, and R18-2-406.A.4]

(6) The Permittee shall conduct monitoring in accordance with the following provisions.

[40 CFR 64.7(c), A.A.C. R18-2-306.A.3.b, and R18-2-406.A.4]

(a) The Permittee shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant specific emission unit is operating. 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).

(b) Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable.

(7) The Permittee shall to the extent practicable respond to excursions as follows.

[40 CFR 64.7(d), A.A.C. R18-2-306.A.3.b, and R18-2-406.A.4]

(a) The Permittee upon detecting an excursion or

exceedance shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.

(b) The Permittee shall minimize, to the extent practicable, the period of any startup, shutdown, or malfunction (as defined in Conditions No. I.D.9, 14, and 16 of Attachment "B" of this permit) and take 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, shutdown, malfunction conditions).

(8) For the purposes of permit deviation reporting under Condition XII of Attachment "A", the Permittee shall include the following information required by 40 CFR Part 64, § 64.9(a).

[40 CFR 64.7(d), A.A.C. R18-2-306.A.3.b, and R18-2-406.A.4]

(a) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective action taken:

(b) 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).

f. Monitoring for Compliance with the SO_2 emission limit as set forth in Specific Condition II.D.1.d of Attachment "B" and The Permittee's compliance with the SO_2 emission limit as set forth in Specific Condition II.D.1.d of Attachment "B" shall be determined as follows:

(1) From and after December 31, 2006, the Permittee shall record Hourly Average Emission Rate (as defined in Specific Condition I.D.21.(a)-(b) of Attachment "B") data for SO_2 in lbs/MMBtu for each hour of Unit operation.

(2) From and after December 31, 2007, each calendar month the Permittee shall calculate a 12-month rolling average emission rate calculated as the arithmetic average of the immediately prior 12 Monthly Averages (as defined in Specific Condition I.D.21.(e) of Attachment "B"), in lbs/MMBtu. This calculation shall be made available for review by the fifth working day following the end of each rolling 12-month average period.

(3) If the calculated 12-month rolling average emission rate exceeds the applicable mass emission limit set forth in Specific Condition II.D.1.d of Attachment "B", the Permittee shall be in violation of such mass emission limit, and shall be deemed to have been in violation for each Day in the last occurring calendar month included in the calculation of such 12-month rolling average emission rate.

[Consent Decree of June 24, 2005, CV01-2189 PCT EHC (D. Ariz.), § 17]

(4) Unless explicitly specified elsewhere in this Permit, all average emission rates shall:

(a) include all periods of Startup, Shutdown, Malfunction (as defined in Conditions No. I.D.9, 14, and 16 of Attachment "B" of this permit), and emergency and

(b) exclude the following:

(1) data for a Unit on a day that has not operated for at least one hour;

(2) data for a Unit from periods when the Unit is not operating; and

(3) other inappropriate data as specified in the applicable EPA testing regulations at 40 CFR Part 60, Appendix A, and Part 75 (e.g., from periods of malfunction by the monitoring system).

[Consent Decree of June 24, 2005, CV01-2189 PCT EHC (D. Ariz.), § 19]

g. Monitoring for SO_2 Control Efficiency. The Permittee's compliance with the SO_2 reduction requirement as set forth in Specific Condition II.D.2.b. of Attachment "B" shall be determined as follows:

(1) From and after December 31, 2006, except for periods of Startup, Shutdown or Malfunction (as defined in Conditions No. I.D.9, 14, and 16 of Attachment "B" of this permit), the Permittee shall separately record

(a) Hourly Average Boiler Inlet Sulfur Dioxide Concentrations (as defined in Specific Condition I.D.22.(b) of Attachment "B") and

(b) Hourly Average Stack Outlet Sulfur Dioxide Concentrations (as defined in Specific Condition I.D.22.(a) of Attachment "B"), for Unit 1 and Unit 2.

(2) For each Calendar Day the Permittee shall calculate

(a) the arithmetic average of the Hourly Average Boiler Inlet Sulfur Dioxide Concentrations, expressed in lbs/MMBtu, for each of Unit 1 and Unit 2 in a Day (the "Combined Daily Inlet Average"), and

(b) the arithmetic average of the Hourly Average Stack Outlet Sulfur Dioxide Concentrations, expressed in lbs/MMBtu, for each of Unit 1 and Unit 2 in that Day (the "Combined Daily Outlet Average").

(3) For each Calendar Day, the Permittee shall calculate the daily average SO_2 reduction rate for Unit 1 and 2 as follows: (Combined Daily Inlet Average – Combined Daily Outlet Average) ÷ Combined Daily Inlet Average, expressed as a percentage (the "Daily Average Reduction Rate").

(4) From and after April 1, 2007 (i.e., 91 days after December 31, 2006), each Calendar Day the Permittee shall calculate and record a 90-day rolling average Daily Average Reduction Rate calculated as the arithmetic average of the immediately prior 90 Daily Average Reduction Rates.

(5) If that average calculated above is less than the 85% SO_2 reduction requirement set forth in Specific Condition II.D.2.b of Attachment "B", the Permittee shall be in violation of such SO_2 reduction requirement for the last occurring Calendar Day included in the calculation of such 90-day rolling average Reduction Rate.

[Consent Decree of June 24, 2005, CV01-2189 PCT EHC (D. Ariz.), § 18]

(6) Unless explicitly specified elsewhere in this Permit, all average emission reduction efficiencies shall:

(a) Include all period of emergency, and

(b) exclude the following

(a) data for Unit on a day that has not operated for at least one hour;

(b) data for a Unit from periods when the Unit is not operating; and

(c) other inappropriate data as specified in the applicable EPA testing regulations at 40 CFR Part 60, Appendix A, and Part 75 (e.g., from periods of malfunction by the monitoring system).

[Consent Decree of June 24, 2005, CV01-2189 PCT EHC (D. Ariz.), § 19]

4. Testing Requirements

The Permittee shall perform an annual performance test to determine the sulfur dioxide concentration using EPA Reference Method 6 or 6C.

[A.A.C.R18-2-306.A.3.c & 312]

5. Permit Shield

Compliance with this Section shall be deemed compliance with Condition XIII of Approval to Construct of December 21, 1977, 60.43(c), 60.45(a), 60.45(g), 60.45(g)(2), 60.46(b)(1), and 60.46(d)(1).

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

E. Nitrogen Oxides (NOx)

1. Emission Limitations/Standards

a. The Permittee shall not cause to be discharged into the atmosphere from the stacks of Unit 1 and Unit 2 any gases which contain nitrogen oxides, expressed as NO_2 in excess of 0.697 pounds per million Btu derived from fossil fuel except for periods of startup, shutdown, and malfunction as defined in Conditions No. I.D.9, 14, and 16 of Attachment "B" of this permit.

[Condition XIII of Approval to Construct of December 21, 1977 and 40 CFR §60.8.(c)]

b. Unless otherwise specified, the Nitrogen Oxides (NOx) emission limit defined above shall be measured by manual testing on a one-hour average (the average of three one-hour tests).

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

c. At all times from and after December 31, 2006, except for periods of Major Burner Malfunction, the Permittee shall not cause to be discharged to the atmosphere from the Stack of Unit 1 and Unit 2 any gases which contain nitrogen oxides, expressed as NO_2, in excess of 0.22 lb/MMBtu derived from fossil fuel, based on a 12-month rolling average, average over Units 1 and 2. The exception for periods of operation during a Major Burner Malfunction is applicable only if

(1) the Permittee reports the Major Burner Malfunction to ADEQ within two (2) business days and,

(2) within seven (7) business days the Permittee provides the ADEQ with a compliance plan to correct the Major Burner Malfunction as expeditiously as practible.

[Consent Decree of June 24, 2005, CV01-2189 PCT EHC (D. Ariz.), § 10]

2. Monitoring/Recordkeeping/Reporting Requirements

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

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

b. The continuous emission monitoring systems for NOx and CO_2 shall meet the following requirements:

(1) 40 CFR Part 75, Appendix A, "Specification and Test Procedures"

(a) Installation and measurement location

(b) Equipment specifications

(c) Performance specifications

(d) Data acquisition and handling systems

(e) Calibration gas

(f) Certifications tests and procedures

(g) Calculations

(2) 40 CFR Part 75, Appendix B, "Quality Assurance and Quality Control Procedure"

(a) Quality control program

(b) Frequency of testing

(3) Data Reduction

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

c. The Permittee shall comply with all applicable recordkeeping and reporting requirements of 40 CFR Part 75 Subparts F and G respectively.

d. Excess Emissions

(1) Excess emission and monitoring system performance (MSP) reports for Unit 1 and Unit 2 shall be submitted to the Department and EPA Region IX for 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 required in Specific Condition II.E.2.d.(2) of Attachment "B". Periods of excess emissions and monitoring systems (MS) downtime that shall be reported are defined as follows:

[40 CFR 60.45(g)]

Nitrogen Oxides

Excess emissions for Unit 1 and Unit 2 are 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 are in excess of the applicable standard in Specific Condition II.E.1.a. of Attachment "B".

[40 CFR 60.45(g)(2)]

(2) The summary quarterly report form submission required in paragraph II.E.2.d. (1) above 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) The 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.

(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.

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

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

(3) In addition to Specific Conditions II.E.2.d.(1)-(2) above, Permittee shall report emissions exceeding an emission limitation or standard in accordance with Section XII.B of Attachment "A" of this permit.

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

e. Monitoring for Nitrogen Dioxide emission limit set forth in Specific Condition II.E.1.c. of Attachment "B".

The Permittee's compliance with the NOx emission limit as set forth in Specific Condition II.E.1.c. of Attachment "B" shall be determined as follows:

(1) From and after December 31, 2006, the Permittee shall record Hourly Average Emission Rate (as defined in Specific Condition I.D.22.(a)-(b) of Attachment "B") data for NOx in lbs/MMBtu for each hour of Unit operation.

(2) From and after December 31, 2007, each calendar month the Permittee shall calculate a 12-month rolling average emission rate calculated as the arithmetic average of the immediately prior 12 Monthly Averages (as defined in Specific Condition I.D.21.(e) of Attachment "B"), in lbs/MMBtu. This calculation shall be made available for review by the fifth working day following the end of each rolling 12-month average period.

(3) If the calculated 12-month rolling average emission rate exceeds the applicable mass emission limit set forth in Specific Condition II.E.1.c of Attachment "B", the Permittee shall be in violation of such mass emission limit, and shall be deemed to have been in violation for each Day in the last occurring calendar month included in the calculation of such 12-month rolling average emission rate.

[Consent Decree of June 24, 2005, CV01-2189 PCT EHC (D. Ariz.), § 17]

(4) Unless explicitly specified elsewhere in this Permit, all average emission rates shall include all periods of Startup, Shutdown,

Malfunction (as defined in Conditions No. I.D.9, 14, and 16 of Attachment "B" of this permit), and emergency and exclude the following:

(1) data for Unit on a day that has not operated for at least one hour;

(2) data for a Unit from periods when the Unit is not operating; and

(3) other inappropriate data as specified in the applicable EPA testing regulations at 40 CFR Part 60, Appendix A, and Part 75 (e.g., from periods of malfunction by the monitoring system).

[Consent Decree of June 24, 2005, CV01-2189 PCT EHC (D. Ariz.), § 19]

3. Testing Requirements

The Permittee shall perform an annual performance test to determine the nitrogen oxides concentration using EPA Reference Method 7 or 7E.

[A.A.C.R18-2-306.A.3.c & 312]

4. Early NOx Controls.

a. The new Low NOx Burners that were installed on Unit 1 and Unit 2 in connection with Significant Permit Revision No. 10015554 to Title V Permit No. 1000105 shall be operated.

b. During the period between January 1, 2006 and December 31, 2006, the Permittee shall operate Unit 1 and Unit 2 to reduce NOx emissions in a manner (to the maximum extent practicable) consistent with achieving the limits in Specific Condition II.E.1.c.. of Attachment "B" whenever the Unit is operating, except during periods of Startup, Shutdown, Malfunction (as defined in Conditions No. I.D.9, 14, and 16 of Attachment "B" of this permit) and/or Major Burner Malfunction and where, in the exercise of good engineering judgment and good air pollution control practices, a reduced level is necessary to test, break-in or adjust the new equipment.

[Consent Decree of June 24, 2005, CV01-2189 PCT EHC (D. Ariz.), § 14]

5. Permit Shield

Compliance with this Section shall be deemed compliance with Condition XIII Approval to Construct of December 21, 1977, , 40 CFR 60.45(a), 60.45(g),60.45(g)(2), 60.46(d)(1), and 60.46(b)(1).

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

III. UNIT 3 AND UNIT 4 (P3 and P4)

A. Applicability

This Section applies to Unit 3 and 4 as described in Section I.D. "Definitions" of Attachment "B" of this Permit and Attachment "C" of this permit.

B. Operating Limitations

1. Fuel Limitations

a. The Permittee shall burn only coal and No. 2 distillate oil as fuel in Unit 3 and Unit 4.

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

b. The Permittee shall not allow or permit the heat input from all fuels to exceed 4,200 million Btu per hour for Unit 3 or Unit 4. Compliance with this heat input limitation shall be based on a 30-day rolling average.

[A.A.C. R18-2-406.A.4]

c. The Permittee shall maintain the following records:

(1) Date, time, types of fuels and ranks of coal burned in each boiler unit; and

(2) 30-day rolling average of heat input in million Btu per hour from all fuels to each unit.

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

2. Vapor Extractor Blower Vents, Generator Seal Oil Vapor Extractor and Hydraulic Fluid Reservoir Vapor Extractors

The Permittee shall process, store, use, and transport materials including solvents or volatile compounds in such a manner and by such means that they will not evaporate, leak, escape, or be otherwise discharged into the atmosphere so as to cause or contribute to air pollution. Where means are available to reduce effectively the contribution to air pollution from evaporation, leakage, or discharge, the installation and usage of such control methods, devices, or equipment shall be mandatory.

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

3. Mercury General Provisions

a. The Permittee shall comply with the following applicable requirements::

(1) The Permittee shall develop and implement a written startup, shutdown, and malfunction plan as defined in Conditions No. I.D.9, 14, and 16 of Attachment "B" of this permit. The plan shall describe in detail, procedures for operating and maintaining Unit 3 and Unit 4 during periods of startup, shutdown, and malfunction and a program of corrective action for malfunctioning process and air pollution control equipment used to comply with the relevant emission standards.

[Condition No. III.E.1. of Significant Permit Revision No. 1001554 to Title V Permit No. 1000105]

(2) For the purposes of Specific Condition III.B.3.a.(1) of Attachment "B", each of the fabric filter baghouses and dry flue gas desulfurization systems required by Specific Conditions III.C.2.a. and III.D.2, respectively, of Attachment "B" shall be considered air pollution control equipment.

[Condition No. III.E.2. of Significant Permit Revision No. 1001554 to Title V Permit No. 1000105]

C. Particulate Matter (PM/PM_{10}) and Opacity

1. Emission Limitations/Standards

a. Opacity Standard

On and after the date on which the initial performance test required to be conducted under 60.8 is completed, the Permittee shall not cause to be discharged into the atmosphere from the stack of Unit 3 or Unit 4 any gases which exhibit greater than 15 percent opacity, based on a six-minute average, except for periods of startup, shutdowns, or malfunction as defined in Conditions No. I.D.9, 14, and 16 of Attachment "B" of this permit.

[40 CFR 60.42Da(b), R18-2-406.A.4 and A.A.C. R18-2-331.A.3.f]

b. Particulate Matter Emission Standards

(1) On and after the date on which the initial performance test required to be conducted under 60.8 is completed, the Permittee shall not cause to be discharged into the atmosphere from the stack of Unit 3 or Unit 4 any gases which contain particulate matter in excess of 0.015 lb per million Btu heat input derived from combustion of fuel. Compliance with this emission limit shall be determined using a three-hour averaging period.

[A.A.C. R18-2-406.A.4]

(2) On and after the date on which the initial performance test required to be conducted under 60.8 is completed, the Permittee shall not cause to be discharged into the atmosphere from the stack of Unit 3 or Unit 4 any gases which contain PM_{10} (including both filterable PM_{10} and condensible PM_{10}) in excess of 0.055 lb per million Btu heat input derived from combustion of fuel. Compliance with this emission limit shall be determined using a three-hour averaging period.

[A.A.C. R18-2-406.A.4]

(3) The particulate matter emission limits in Specific Conditions III.C.1.b(1) and III.C.1.b(2) above shall apply at all times except during periods of startup, shutdown, or malfunction as defined in Conditions No. I.D.9, 14, and 16 of Attachment "B" of this permit.

[A.A.C. R18-2-406.A.4]

(4) NSPS Subpart Da limit for Unit 4

The Permittee shall not cause to be discharged into the atmosphere from the stack of Unit 4 any gases which contain particulate matter in excess of either 0.14 lb/MWh gross energy output; or 0.015 lb/MMBtu heat input derived from the combustion of solid, or liquid fuel.

As an alternative to meeting the above requirements for Unit 4, the Permittee may elect to not exceed 0.03 lb/MMBtu heat input derived from the combustion of solid or liquid fuel and 99.9 percent reduction. Compliance with the daily average particulate matter emission limitations is determined by calculating the arithmetic average of all hourly emission rates for particulate matter each boiler operating day, except for data obtained during startup, shutdown, and malfunction.

[40 CFR 60.42Da(c) & (d), 40 CFR 60.48Da (g)(3]

2. Air Pollution Control Requirements

a. Particulate Matter

(1) At all times when the equipment is in operation, including periods of startup, shutdown, and malfunction as defined in Conditions No. I.D.9, 14, and 16 of Attachment "B" of this permit., the Permittee shall, to the extent practicable, maintain and operate the fabric filter baghouses 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]

(2) The fabric filter baghouses shall not be bypassed, except during periods of startup or shutdown (as defined in Conditions No. I.D.14 and 16 of Attachment "B" of this permit), while Unit 3 or Unit 4 is combusting fossil fuel.

[A.A.C. R18-2-406.A.4]

3. Monitoring/Recordkeeping/Reporting Requirements

a. Opacity

(1) Monitoring for Opacity

(a) The Permittee shall install, calibrate, maintain, and operate continuous monitoring systems, and shall record the output of the systems, for measuring the opacity of emissions discharged to the atmosphere from Unit 3 and Unit 4.

[40 CFR 60.49Da(a), 40 CFR 75.10(a), A.A.C. R18-2-331.A.3.c, and R18-2-406.A.4]

(b) The continuous opacity monitoring systems (COMS) shall meet the following data reduction requirements:

[40 CFR 60.13(h)]

(i) 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.

(ii) 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.

(c) For Unit 4, the Permittee must use opacity monitoring equipment as an indicator of continuous particulate matter control device performance and demonstrate compliance with Specific Condition III.C.1.a. In addition, baseline parameters shall be established as the highest hourly opacity average measured during the performance test. If any hourly average opacity

measurement is more than 110 percent of the baseline level, the owner or operator will conduct another performance test within 60 days to demonstrate compliance. A new baseline is established during each stack test. The new baseline shall not exceed the opacity limit specified in Specific Condition III.C.1.a.

[40 CFR 60.48Da (o)(2)]

(2) NSPS Requirements for Continuous Monitoring Systems

The continuous monitoring system for opacity as required by Specific Condition III.C.3.a.(1)(a) of Attachment "B", shall meet the following requirements:

(a) Calibration requirements at 40 CFR 60.13(d).

(b) Operational requirements at 40 CFR 60.13(e).

(c) Performance Specifications at 40 CFR Part 60, Appendix B.

(d) Notification and recordkeeping requirements at 40 CFR 60.7.

(3) Acid Rain Program Requirements for Continuous Monitoring Systems

The continuous monitoring systems for opacity as required by Specific Condition III.C.3.a.(1)(a) of Attachment "B", shall meet all applicable requirements at 40 CFR Part 75. This shall include, but shall not be limited to, the following requirements:

(a) Hourly operating requirements at 40 CFR 75.10(d)

(b) Data reduction requirements at 40 CFR 75.10(d)(2)

(c) Certification and recertification requirements at 40 CFR 75.20.

(4) The Permittee shall comply with all applicable recordkeeping and reporting requirements of 40 CFR Part 75, Subparts F and G, respectively.

b. Compliance Assurance Monitoring for Particulate Matter

(1) The Permittee shall install, calibrate, maintain, and continuously operate triboelectric fabric filter bag leak detection systems, and record the output of the systems, for detecting increases in particulate matter concentrations in the exhaust gases discharged to the atmosphere from Unit 3 and Unit 4. The following table summarized certain requirements applicable to the Permittee pursuant to 40 CFR Part 64 and A.A.C.R18-2-306.A.3.a.i.

[40 CFR 64.6(c)(1) and A.A.C. R18-2-306.A.3.b, R18-2-331.A.3.c]

Unit 3 and Unit 4 PM Limits: Fabric Filter Baghouses	
	Indicator: Bag leak detection system signal
Measurement Approach	Relative PM concentration is indicated by a triboelectric signal
Indicator Range	Signal above the alarm set point, to be determined during initial system verification testing
Performance Criteria - Data Representativeness	Sensor must provide output of relative particulate matter loading
Performance Criteria - Operation	n/a
Performance Criteria - QA/QC Practices	Inspections and maintenance activities must be performed on the bag leak detection system
Performance Criteria - Monitoring Frequency	Relative PM concentration is recorded continuously
Performance Criteria - Data Collection Procedure	Relative PM concentration is recorded continuously
Performance Criteria - Averaging Period	Investigation and possible corrective action are initiated within 24 hours after the alarm sounds for Unit 3 and within 1 hour after the alarm sounds for Unit 4.

(2) Each bag leak detection system shall be installed, calibrated, maintained, and operated in accordance with the manufacturer's specifications.

[40 CFR 64.6(c)(1) and A.A.C. R18-2-306.A.3.b]

(3) Each bag leak detection system shall be equipped with an audible alarm.

[40 CFR 64.6(c)(1) and A.A.C. R18-2-306.A.3.b]

(4) The alarm set point and alarm delay time for each bag leak detection system shall be established during the initial system verification, consistent with the protocol developed under Specific Condition III.C.3.b.(8) below.

[40 CFR 64.6(c)(1) and A.A.C. R18-2-306.A.3.b]

(5) Each three-hour rolling average block during which a bag leak detection system alarm is activated shall constitute an excursion for the purposes of responding to and reporting excursions under 40 CFR § 64.7.

[40 CFR 64.6(c)(2) and A.A.C. R18-2-306.A.3.b]

(6) The Permittee shall submit to the Department, information relating to the specifications for each bag leak detection system as follows:

[40 CFR 64.6(c)-(d) and A.A.C. R18-2-306.A.3.b]

(a) The proposed location of the sensor component(s) of the bag leak detection system;

(b) The proposed composition of the sensor and insulator component(s) of the bag leak detection system; and

(c) The proposed data recording mechanism to be used in conjunction with the bag leak detection system.

(7) The information required by Specific Condition III.C.3.b.(6) of Attachment “B” shall be submitted at least 90 days prior to the initial startup of Unit 3 for the Unit 3 bag leak detection system and at least 90 days prior to the initial startup of Unit 4 for the Unit 4 bag leak detection system.

(8) The Permittee shall submit to the Department for its approval a protocol for conducting the initial verification of each bag leak detection system, including the following minimum elements:

[40 CFR 64.6(c)-(d) and A.A.C. R18-2-306.A.3.b]

(a) Alarm set point. The protocol shall provide for establishing the alarm set point at a level that is above the normal baseline conditions and cleaning peaks but below the maximum range of the bag leak detector.

(b) Alarm delay time. The alarm delay time is the amount of time, prior to activating the audible alarm, that the triboelectric signal will remain above the alarm set point. The protocol shall provide for establishing the alarm delay time at a level consistent with the manufacturer's recommendations, not to exceed 15 seconds.

(9) The protocol required by Specific Condition III.C.3.b.(8) of Attachment "B" shall be submitted at least 30 days prior to the performance test of Unit 3 for the Unit 3 bag leak detection system and at least 30 days prior to the performance test of Unit 4 for the Unit 4 bag leak detection system. For the purposes of Specific Condition III.C.3.b.(9), "performance test" shall mean the performance test required by 40 CFR Part 60, Subpart A, § 60.8.

(10) Prior to making any changes to the alarm set point or alarm delay time, the Permittee shall submit written notification to the Department. Such notification shall include the proposed new alarm set point or alarm delay time and the reason for the proposed change. The proposed change may be made without the prior approval of the Department.

[40 CFR 64.6(c)(2) and A.A.C. R18-2-306.A.3.b]

(11) The Permittee shall conduct monitoring using each bag leak detection system in accordance with the provisions of 40 CFR Part 64, § 64.7(c).

[40 CFR 64.7(c) and A.A.C. R18-2-306.A.3.b]

(12) The Permittee shall respond to excursions in accordance with the provisions of 40 CFR Part 64, § 64.7(d).

[40 CFR 64.7(d) and A.A.C. R18-2-306.A.3.b]

(13) For the purposes of permit deviation reporting under Condition XII of Attachment "A", the Permittee shall include all information required by 40 CFR Part 64, § 64.9(a).

[40 CFR 64.7(d) and A.A.C. R18-2-306.A.3.b]

c. NSPS Subpart Da Monitoring Requirements for Unit 4

(1) If the output-based emissions limitation for Unit 4 under Specific Condition III.C.1.b.(4) is used to demonstrate compliance then the Permittee shall install, certify, operate, and maintain a continuous monitoring system for measuring particulate matter emissions. If the input-based emission limitation for Unit 4 under Specific Condition III.C.1.b.(4) is used to demonstrate compliance then the Permitte as an option may install, certify, operate, and maintain a continuous monitoring system for measuring particulate matter in lieu of Specific Condition III.C.3.b.(2) & (3).

[40 CFR 60.49Da(t)]

(2) For Unit 4, the Permittee shall install, calibrate, continuously operate, and maintain a bag leak detection systems, and record the output of the systems, for detecting increases in particulate matter concentrations in the exhaust gases discharged to the atmosphere.

[40 CFR 60.48Da (o)(4), 40 CFR 64.6(c)(1) and A.A.C. R18-2-306.A.3.b, R18-2-331.A.3.c]

(3) For Unit 4, the Permittee shall install, calibrate, maintain, and continuously operate a bag leak detection system in accordance with (a) through (h) below:

[40 CFR 60.48Da (o)(4)]

(a) Install and operate a bag leak detection system for each exhaust stack of the fabric filter.

[40 CFR 60.48Da (o)(4)(i)]

(b) Each bag leak detection system must be installed, operated, calibrated, and maintained in a manner consistent with the manufacturer's written specifications and recommendations and in accordance with the guidance provided in EPA–454/R–98–015, September 1997.

[40 CFR 60.48Da (o)(4)(ii)]]

(c) The bag leak detection system must be certified by the manufacturer to be capable of detecting particulate matter emissions at concentrations of 10 milligrams per actual cubic meter or less.

[40 CFR 60.48Da (o)(4)(iii)]

(d) The bag leak detection system sensor must provide output of relative or absolute particulate matter loadings.

[40 CFR 60.48Da (o)(4)(iv)]

(e) The bag leak detection system must be equipped with a

device to continuously record the output signal from the sensor.

[40 CFR 60.48Da (o)(4)(v)]

(f) The bag leak detection system must be equipped with an alarm system that will sound automatically when an increase in relative particulate matter emissions over a preset level is detected. The alarm must be located where it is easily heard by plant operating personnel. Corrective actions must be initiated within 1 hour of a bag leak detection system alarm.

[40 CFR 60.48Da (o)(4)(vi)]

(g) For positive pressure fabric filter systems that do not duct all compartments of cells to a common stack, a bag leak detection system must be installed in each baghouse compartment or cell.

[40 CFR 60.48Da (o)(4)(vii)]

(h) Where multiple bag leak detectors are required, the system's instrumentation and alarm may be shared among detectors.

[40 CFR 60.48Da (o)(4)(viii)]

d. NSPS Subpart Da Reporting Requirements

(1) For particulate matter emissions, the performance test data from the initial and subsequent performance test and from the performance evaluation of the continuous monitors (including the transmissometer) are submitted to the Department and the Administrator.

[40 CFR 60.51Da(a)]

(2) For any periods for which opacity emissions data are not available, the Permittee shall submit a signed statement indicating if any changes were made in operation of the emission control system during the period of data unavailability. Operations of the control system and Unit 3 and 4 during periods of data unavailability are to be compared with operations of the control system and affected facility before and following the period of data unavailability.

[40 CFR 60.51Da(f)]

(3) The Permittee shall submit a signed statement indicating whether:

(a) The required continuous monitoring system calibration, span, and drift checks or other periodic audits have or have not been performed as specified.

(b) The data used to show compliance was or was not obtained in accordance with approved methods and procedures of 40 CFR 60 and is representative of plant performance.

(c) The minimum data requirements have or have not been met; or, the minimum data requirements have not been met for errors that were unavoidable.

(d) Compliance with the standards has or has not been achieved during the reporting period.

[40 CFR 60.51Da(h)]

(4) For the purposes of the reports required under §60.7 and this permit, periods of excess emissions are defined as all 6-minute periods during which the average opacity exceeds the applicable opacity standards under §60.42Da(b) and III.C.1.a of this permit. Opacity levels in excess of the applicable opacity standard and the date of such excesses are to be submitted to the Department and the Administrator each calendar quarter.

[40 CFR 60.51Da(i)]

(5) The Permittee shall submit the written reports required under this section and 40 CFR 60 Subpart A to the Department and the Administrator semiannually for each six-month period. All semiannual reports shall be postmarked by the 30th day following the end of each six-month period.

[40 CFR 60.51Da(j)]

(6) The Permittee may submit electronic quarterly reports for opacity in lieu of submitting the written reports required under paragraph (2) of this section. The format of each quarterly electronic report shall be coordinated with the permitting authority (ADEQ). The electronic report(s) shall be submitted no later than 30 days after the end of the calendar quarter and shall be accompanied by a certification statement from the Permittee, indicating whether compliance with the applicable emission standards and minimum data requirements of 40 CFR 60 Subpart Da was achieved during the reporting period. Before submitting reports in the electronic format, the Permittee shall coordinate with ADEQ to obtain their agreement to submit reports in this alternative format.

[40 CFR 60.51Da(k)]

(7) The owner or operator shall prepare and submit to the Administrator for approval a unit-specific monitoring plan for each monitoring system, at least 45 days before commencing certification testing of the monitoring systems. The owner or operator shall comply with the requirements in your plan. The plan must address the requirements in paragraphs (s)(1) through (6) of 40 CFR 60.49Da.

[40 CFR 60.49Da(s)]

4. Testing

a. Opacity

(1) The Permittee shall perform initial and annual performance tests to determine compliance with the opacity limitations in Specific Condition III.C.1.a. of Attachment "B".

[40 CFR 60.8 and A.A.C.R18-2-306.A.3.c]

(2) All performance tests for opacity shall be performed in accordance with 40 CFR 60.8 and 60.11.

[40 CFR 60.8]

b. Particulate Matter

(1) The Permittee shall perform initial and annual performance tests to determine compliance with the particulate matter and PM10 emission limitations in Specific Conditions III.C.1.b(1), III.C.1.b(2), and III.C.1.b(4) of Attachment "B".

[40 CFR 60.8 and A.A.C.R18-306.A.3.c]

(2) The Permittee shall perform a particulate matter performance test within 60 days when the Unit 4 bag leak detection system alarm described in Specific Condition III.C.3.c.(3)(f) is engaged for more than 5 percent of the total operating time on a 30-day rolling average.

[40 CFR 60.48Da (o)(4)(vi) & 40 CFR 60.50Da(b)]

(3) All performance tests for particulate matter shall be performed in accordance with 40 CFR 60.8. EPA Reference Method 5 shall be used.

[40 CFR 60.8]

(4) All performance tests for PM_{10} shall be performed in accordance with the provisions of 40 CFR 60.8. EPA Reference Method 5 or 201 or 201 A shall be used for filterable PM_{10} and EPA Reference Method 202 shall be used for condensible PM_{10}. Testing for filterable and condensible PM_{10} shall be performed concurrently. Testing for PM_{10} may be performed concurrently with testing for particulate matter.

[40 CFR 60.8]

(5) The dry basis F factor (O_2) procedures in EPA Reference Method 19 shall be used to calculate the particulate matter and PM_{10} emission rates.

[40 CFR 60.50Da(b)(1) and A.A.C. R18-2-406A.4]

(6) As an alternative to the dry basis F factor (O_2) procedures in EPA Reference Method 19, the F_c CO_2 factors in EPA Reference Method 19 may be used to calculate the particulate matter and PM_{10} emission rates, subject to the stipulations of 40 CFR Part 60, Subpart D, § 60.46(d)(1).

[40 CFR 60.50Da(e)(2)]

(7) The sampling time and sample volume for each test run shall be at least 120 minutes and 60 dry standard cubic feet.

[40 CFR 60.50Da(b)(2)]

5. Permit Shield

Compliance with this Section shall be deemed compliance with 60.42Da(b), 60.42Da(a)(1), 60.42Da(c), 60.42Da(d), 60.48Da(c), 60.49Da(a), 60.50Da(e)(2), 60.50Da(b)(2), 60 .50Da(b)(1), 60.51Da(a), 60.51Da(f), 60.51Da(h), 60.51Da(i), 60.51Da(j), 60.51Da(k), and 60.49Da(s).

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

D. Sulfur Dioxide (SO_2)

1. Emission Limitations/Standards

a. On and after the date on which the initial performance test required to be conducted under 60.8 is completed, the Permittee shall not cause to be discharged into the atmosphere from Unit 3 stack, any gases which contain sulfur dioxide in excess of:

(1) 520 nanograms per Joule (1.20 lb per million Btu) heat input and 10 percent of the potential combustion concentration (90 percent reduction) derived from combustion of coal; or

(2) 30 percent of the potential combustion concentration (70 percent reduction), when emissions are less than 260 nanograms per Joule (0.60 lb per million Btu) heat input derived from combustion of coal.

[40 CFR §60.43Da(a)]

b. On and after the date on which the performance test required to be conducted under 60.8 is completed, the Permittee shall not cause to be discharged into the atmosphere from Unit 4 stack, any gases which contain sulfur dioxide in excess of:

(1) 180 ng/J (1.4 lb/MWh) gross energy output on a 30-day rolling average basis; or

(2) 5 percent of the potential combustion concentration (95 percent reduction) on a 30-day rolling average basis.

[40 CFR §60.43Da(i)(1)]

c. The sulfur dioxide emission standard in Specific Conditions III.D.1.a and b above shall apply at all times except during periods of startup or shutdown (in Conditions No. I.D.9, 14, and 16 of Attachment "B" of this permit), or periods when emergency conditions exist and the flue gas desulfurization system is malfunctioning.

[40 CFR §60.48Da(c)]

d. Compliance with the sulfur dioxide emission standard in Specific Conditions III.D.1.a and b shall be based upon a 30-day rolling average.

[40 CFR §60.48Da(e)]

2. Air Pollution Control Requirements

At all times when Unit 3 or Unit 4 is in operation, including periods of startup, shutdown, and malfunction as defined in Conditions No. I.D.9, 14, and 16 of Attachment "B" of this permit., the Permittee shall, to the extent practicable, maintain and operate the dry flue gas desulfurization system in a manner consistent with good air pollution control practice for minimizing sulfur dioxide emissions.

[40 CFR 60.11(d) and A.A.C. R18-2-331.A.3.e]

3. Monitoring/Recordkeeping/Reporting Requirements

a. Monitoring for SO_2

(1) The Permittee shall install, calibrate, maintain, and operate continuous monitoring systems, and record the output of the system, for measuring sulfur dioxide emissions from Unit 3 and Unit 4. The monitoring systems shall measure sulfur dioxide emissions at both the inlet and outlet of the sulfur dioxide control device.

[40 CFR 60.49Da(b), 40 CFR 75.10(a), A.A.C. R18-2-331.A.3.c]

(2) As an alternative to the continuous sulfur dioxide emission monitoring system at the sulfur dioxide control device inlet in Specific Condition III.D.3.a.(1) of Attachment "B", an "as-fired" fuel monitoring system (upstream of the coal pulverizers) meeting the requirements of EPA Reference Method 19 may be used to determine potential sulfur dioxide emissions.

[40 CFR 60.49Da(b)(3)]

(3) The continuous monitoring systems used to measure sulfur dioxide emissions at the outlet of the sulfur dioxide control devices shall meet the applicable siting requirements of 40 CFR Part 60, Appendix B, and 40 CFR Part 75, Appendix A.

b. Compliance Determination Requirements for NSPS SO_2 Emission Standard

For the purposes of demonstrating compliance with the sulfur dioxide emission limitation in Specific Condition III.D.1.a. of Attachment "B", the Permittee shall meet the following requirements:

(1) Emission data from the continuous flow monitoring system, diluent carbon dioxide or oxygen monitoring systems, and sulfur dioxide emission monitoring systems, required by Specific Conditions III.L.1, III.L.2, and III.D.3.a., respectively, of Attachment "B", shall be used to demonstrate compliance.

[40 CFR 60.50Da(c)(5)]

(2) For Unit 3, the Permittee shall obtain emission data from each of the continuous sulfur dioxide emission monitoring systems and each of the diluent carbon dioxide or oxygen monitoring systems for at least 18 hours in at least 22 out of each 30 successive operating days. For Unit 4, the Permittee shall obtain sulfur dioxide emission data and diluent carbon dioxide or oxygen data for at least 90 percent of all operating hours for each 30 successive boiler operating days. If this minimum data requirement cannot be met with a continuous monitoring system, the Permittee shall supplement the emission data in accordance with the following:

[40 CFR 60.49Da(f)]

(a) Data obtained from other monitoring systems approved by the Director, or

(b) For supplementary sulfur dioxide concentration data, data obtained from EPA Reference Method 6 or 6A or 6B or 6C, in accordance with the provisions of 40 CFR 60.49Da(h).

(c) For supplementary diluent carbon dioxide or oxygen concentration data, data obtained from EPA Reference Method 3 or 3A or 3B, in accordance with the provisions of 40 CFR 60.49Da(h).

(3) After the initial performance test required by Specific Condition III.D.4.a. of Attachment "B", compliance with the sulfur dioxide emission limitations and percentage reduction requirements under Specific Condition III.D.1.a. is based on the average emission rate for 30 successive operating days for Unit 3 and Unit 4. Compliance is determined by calculating the arithmetic average of all hourly sulfur dioxide emission rates for the 30 successive operating days, except for data obtained during startup, shutdown, or emergency conditions. Compliance with the percentage reduction requirement is determined based on the average inlet and outlet sulfur dioxide emission rates for the 30 successive operating days. A separate performance test is completed at the end of each operating day after the end of the initial performance test, and a new 30-day average sulfur dioxide emission rate and a new 30-day average percent reduction for sulfur dioxide are calculated to show compliance with the emission standard.

[40 CFR §§60.48Da(e), 60.48Da(g)]

c. NSPS Requirements for Continuous Monitoring Systems

The continuous monitoring system for sulfur dioxide emissions as required by Specific Condition III.D.3.a. shall meet the following requirements:

(a) Calibration requirements at 40 CFR 60.13(d)

(b) Operational requirements at 40 CFR 60.13(e)

(c) Performance Specifications at 40 CFR Part 60, Appendix B

(d) Quality Assurance Procedures at 40 CFR Part 60, Appendix F

(e) Notification and recordkeeping requirements at 40 CFR 60.7

d. Acid Rain Program Requirements for Continuous Monitoring Systems

The continuous monitoring systems for sulfur dioxide emissions as required by Specific Condition III.D.3.a. shall meet all applicable requirements at 40 CFR Part 75. This shall include, but shall not be limited to, the following requirements:

(a) 40 CFR Part 75, Appendix A, "Specification and Test Procedures".

(b) 40 CFR Part 75, Appendix B, "Quality Assurance and Quality Control Procedure".

(c) Equipment performance requirements at 40 CFR 75.10(b).

(d) Hourly operating requirements at 40 CFR 75.10(d).

(e) Data reduction requirements at 40 CFR 75.10(d)(1).

(f) Missing data substitution requirements at 40 CFR 75.10(d)(3) and 40 CFR Part 75, Subpart D.

(g) Certification and recertification requirements at 40 CFR 75.20.

e. The Permittee shall comply with all applicable recordkeeping and reporting requirements of 40 CFR Part 75, Subparts F and G, respectively.

f. NSPS Subpart Da Reporting Requirements

(1) For sulfur dioxide, the performance test data from the initial and subsequent performance test and from the performance evaluation of the continuous monitors are submitted to the Department and the Administrator.

[40 CFR 60.51Da(a)]

(2) For sulfur dioxide the following is reported to the Department and the Administrator for each 24-hour period.

(a) Calendar date

(b) The average sulfur dioxide emission rates (ng/J or lb/million Btu) for each 30 successive boiler operating days, ending with the last 30-day period in the quarter; reasons for non-compliance with the standard; and, description of corrective actions taken.

(c) Identification of the boiler operating days for which pollutant or diluent data have not been obtained by an approved method for at least 18 hours of operation of the facility; justification for not obtaining sufficient data; and description of corrective actions taken.

(d) Identification of the times when emissions data have been excluded from the calculation of average emission rates because of startup, shutdown, malfunction (as defined in Conditions No. I.D.9, 14, and 16 of Attachment "B" of this permit), or other reasons, and justification for excluding data for reasons other than startup, shutdown, malfunction, or emergency conditions.

(e) Identification of "F" factor used for calculations, method of determination, and type of fuel combusted.

(f) Identification of times when hourly averages have been obtained based on manual sampling methods.

(g) Identification of the times when the pollutant concentration exceeded full span of the continuous monitoring system.

(h) Description of any modifications to the continuous monitoring system which could affect the ability of the continuous monitoring system to comply with Performance Specifications 2 or 3.

[40 CFR 60.51Da(b)]

(3) If the minimum quantity of emission data as required by §60.49Da is not obtained for any 30 successive boiler operating days, the following information obtained under the requirements of §60.48Da(h) is reported to the Department and the Administrator for that 30 day period:

(a) The number of hourly averages available for outlet emission rates (n_o) and inlet emission rates (n_i)

(b) The standard deviation of hourly averages for outlet emission rates (s_o) and inlet emission rates (s_i) as applicable.

(c) The lower confidence limit for the mean outlet emission rate (E_o*) and the upper confidence limit for the mean inlet emission rate (E_i*) as applicable.

(d) The applicable combustion concentration.

(e) The ratio of the upper confidence limit for the mean outlet emission rate (E_o*) and the allowable emission rate (E_{std}) as applicable.

[40 CFR 60.51Da(c)]

(4) If the sulfur dioxide emission standard in Specific Condition III.D.1.a. is exceeded during emergency conditions because of

control system malfunction, the Permittee shall submit a signed statement:

(a) Indicating if emergency conditions existed and requirements under §60.48Da(d) were met during each period, and

(b) Listing the following information:

(i) Time periods the emergency condition existed;

(ii) Electrical output and demand on the Permittee's electric utility system and the affected facility.

(iii) Amount of power purchased from interconnected neighboring utility companies during the emergency period;

(iv) Percent reduction in emissions achieved;

(v) Atmospheric emission rate (ng/J) of the pollutant discharged; and

(vi) Actions taken to correct control system malfunction.

[40 CFR 60.51Da(d)]

(5) If fuel pretreatment credit toward the sulfur dioxide emission

Standard in Specific Condition III.D.1.a is claimed, the Permittee shall submit a signed statement:

(a) Indicating what percentage cleaning credit was taken for the calendar quarter, and whether the credit was determined in accordance with the provisions of §60.50Da and Method 19(appendix A of 40 CFR 60) ; and

(b) Listing the quantity, heat content, and date each pretreated fuel shipment was received during the previous quarter; the name and location of the fuel pretreatment facility; and the total quantity and total heat content of all fuels received at the affected facility during the previous quarter.

[40 CFR 60.51Da(e)]

(6) For any periods for which sulfur dioxide emissions data are not available, the Permittee shall submit a signed statement indicating if any changes were made in operation of the emission control system during the period of data unavailability. Operations of the control system and Unit 3 and 4 during periods of data unavailability are to be compared with operation of the control system and affected facility before and following the period of data unavailability.

[40 CFR 60.51Da(f)]

(7) The Permittee shall submit a signed statement indicating whether:

(a) The required continuous monitoring system calibration, span, and drift checks or other periodic audits have or have not been performed as specified.

(b) The data used to show compliance was or was not obtained in accordance with approved methods and procedures of 40 CFR 60 and is representative of plant performance.

(c) The minimum data requirements have or have not been met; or, the minimum data requirements have not been met for errors that were unavoidable.

(d) Compliance with the standards has or has not been achieved during the reporting period.

[40 CFR 60.51Da(h)]

(8) The Permittee shall submit the written reports required under this section and 40 CFR 60 Subpart A to the Department and the Administrator semiannually for each six-month period. All semiannual reports shall be postmarked by the 30th day following the end of each six-month period.

[40 CFR 60.51Da(j)]

(9) The Permittee may submit electronic quarterly reports for SO_2 in lieu of submitting the written reports required under paragraph (2) of this section. The format of each quarterly electronic

report shall be coordinated with the permitting authority (ADEQ). The electronic report(s) shall be submitted no later than 30 days after the end of the calendar quarter and shall be accompanied by a certification statement from the Permittee, indicating whether compliance with the applicable emission standards and minimum data requirements of 40 CFR 60 Subpart Da was achieved during the reporting period. Before submitting reports in the electronic format, the Permittee shall coordinate with ADEQ to obtain their agreement to submit reports in this alternative format.

[40 CFR 60.51Da(k)]

(10) The owner or operator shall prepare and submit to the Administrator for approval a unit-specific monitoring plan for each monitoring system, at least 45 days before commencing certification testing of the monitoring systems. The owner or operator shall comply with the requirements in your plan. The plan must address the requirements in paragraphs (s)(1) through (6) of 40 CFR 60.49Da.

[40 CFR 60.49Da(s)]

4. Testing

a. The Permittee shall perform initial performance tests to determine compliance with the sulfur dioxide emission limitation in Specific Condition III.D.1.a. of Attachment "B". These performance tests shall be performed in accordance with 40 CFR 60.8.

[40 CFR 60.8 and A.A.C. R18-2-306.A.3.a]

b. Data from the continuous monitoring systems for exhaust gas flow as required by Specific Condition III.L.1 of Attachment "B", diluent concentration as required by Specific Condition III.L.2, and sulfur dioxide emissions as required by Specific Condition III.D.3.a. shall be used during the performance tests to demonstrate compliance.

[40 CFR 60.50Da(c)(5)]

c. The appropriate procedures in EPA Reference Method 19 shall be used to determine the sulfur dioxide emission rate and the percent reduction achieved by the sulfur dioxide emission control system.

[40 CFR 60.50Da(c)(3) and (c)(4)]

d. As an alternative to the procedures in Specific Condition III.D.4.b. of Attachment "B", a combination of an "as-fired" fuel monitor and

emission rates measured after the sulfur dioxide emission control system, following the procedures in EPA Reference Method 19, may be used if the percent reduction is calculated using the average emission rate from the sulfur dioxide emission control system and the average sulfur dioxide input rate from the "as-fired" fuel analysis for 30 successive boiler operating days.

[40 CFR 60.50Da(c)(3)]

e. Compliance is based on the average emission rate for 30 successive operating days for each Unit 3 and Unit 4. Compliance is determined by calculating the arithmetic average of all hourly sulfur dioxide emission rates for the 30 successive operating days, except for data obtained during startup, shutdown, or emergency conditions. Compliance with the percentage reduction requirement is determined based on the average inlet and outlet sulfur dioxide emission rates for the 30 successive operating days.

[40 CFR 60.48Da(g)]

f. The percent of potential sulfur dioxide emissions (%Ps) shall be computed using the equation set forth at 40 CFR 60.48a(c)(1).

[40 CFR 60.50Da(c)(1)]

g. During each initial performance test, the Permittee shall obtain emission data from each of the continuous sulfur dioxide and carbon dioxide emission monitoring systems for at least 18 hours in at least 22 out of 30 successive operating days. If this minimum data requirement is not met with a continuous monitoring system, the Director may use the procedures in EPA Reference Method 19, Section 12.7, to determine compliance.

[40 CFR §§ 60.48Da(h), 60.49Da(f)]

5. Permit Shield

Compliance with this Section shall be deemed compliance with 60.43Da(a), 60.43Da(i)(1), 60.48Da(c). 60.48Da(e), 60.49Da(b), 60.49Da(b)(3), 60.50Da(c)(5), 60.49Da(f), 60.48Da(e), 60.48Da(g), 60.50Da(c)(3) and (c)(4), 60.48Da(g), 60.50Da(c)(1), 60.48Da(h), 60.49Da(f). 60.51Da(a), 60.51Da(b), 60.51Da(c), 60.51Da(d), 60.51Da(e),60.51Da(f), 60.51Da(h), 60.51Da(j), 60.51Da(k) and 60.49Da(s).

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

E. Nitrogen Oxides (NOx)

1. Emission Limitations/Standards

a. On and after the date on which the initial performance test required to be conducted under 60.8 is completed, the Permittee shall not cause to be discharged into the atmosphere from Unit 3 stack, any gases which contain nitrogen oxides (expressed as nitrogen dioxide) in excess of 200 nanograms per joule (1.6 pounds per megawatt-hour) gross energy output, based on a 30-day rolling average.

[40 CFR §60.44Da(d)(1)]

b. On and after the date on which the initial performance test required to be conducted under 60.8 is completed, the Permittee shall not cause to be discharged into the atmosphere from Unit 4 stack, any gases which contain nitrogen oxides (expressed as nitrogen dioxide) in excess of 130 nanograms per joule (1.0 pounds per megawatt-hour) gross energy output, based on a 30-day rolling average.

[40 CFR §60.44Da(e)(1)]

c. The nitrogen oxides emission standard in Specific Conditions III.E.1.a and b above shall apply at all times except during periods of startup, shutdown, or malfunction.

[40 CFR §60.48Da(c)]

2. Air Pollution Control Requirements

At all times when Unit 3 or Unit 4 is in operation, including periods of startup, shutdown, and malfunction as defined in Conditions No. I.D.7, 10, and 11 of Attachment "B" of this permit., the Permittee shall, to the extent practicable, maintain and operate the SCR system in a manner consistent with good air pollution control practice for minimizing nitrogen oxides emissions.

[A.A.C. R18-2-331 A.3.e]

3. Monitoring/Recordkeeping/Reporting Requirements

a. Monitoring for NOx

(1) The Permittee shall install, calibrate, maintain, and operate continuous monitoring systems, and record the output of the systems, for measuring nitrogen oxides emissions discharged to the atmosphere from Unit 3 and Unit 4.

[40 CFR 60.49Da(c), 40 CFR 75.10(a), A.A.C. R18-2-331.a.3.c]

(2) The continuous monitoring system used to meet the requirements of 40 CFR Part 75 may be used to meet the requirements of 40 CFR Part 60, Subpart Da, § 60.49Da(c)(1). The Permittee shall meet the requirements of 40 CFR 60.50Da. Data reported to meet the requirements of 40 CFR 60.50Da shall not include data substituted using the missing data procedures in Subpart D of 40 CFR Part 75, nor shall the data have been bias adjusted according to the procedures of 40 CFR Part 75.

[40 CFR 60.49Da(c)(2)]

b. Compliance Determination Requirements for NSPS NOx Emission Standard

For the purposes of demonstrating compliance with the nitrogen oxides emission limitation in Specific Condition III.E.1.a. of Attachment "B", the Permittee shall meet the following requirements:

(1) Emission data from the continuous flow monitoring systems, wattmeters, and continuous nitrogen oxides emission monitoring systems required by Specific Conditions III.L.1, III.L.4., and III.E.3.a., respectively, of Attachment "B", shall be used to demonstrate compliance.

[40 CFR 60.50Da(d)(2)]

(2) For Unit 3, the Permittee shall obtain emission data from each of the continuous nitrogen oxides emission monitoring systems for at least 18 hours in at least 22 out of each 30 successive operating days. For Unit 4, the Permittee shall obtain nitrogen oxides emission data for at least 90 percent of all operating hours for each 30 successive boiler operating days. If this minimum data requirement cannot be met with a continuous monitoring system, the Permittee shall supplement the emission data in accordance with the following:

[40 CFR 60.49Da(f)]

(a) Data obtained from other monitoring systems approved by the Director, or

(b) For supplementary nitrogen oxides concentration data, data obtained from EPA Reference Method 7 or 7A or 7C or 7E, in accordance with the provisions of 40 CFR 60.47Da(h).

(3) The nitrogen oxides emission rate shall be calculated by multiplying the average hourly nitrogen oxides output concentration by the average hourly flow rate and divided by the average hourly gross electrical output.

[40 CFR 60.48Da(i)]

(4) After the initial performance test required by Specific Condition III.E.4.a of Attachment "B," compliance with the nitrogen oxides emission limitation under Specific Condition III.E.1.a. of Attachment "B", is based on the average emission rate for 30 successive operating days for Unit 3 and Unit 4. Compliance is determined by calculating the arithmetic average of all hourly nitrogen oxides emission rates for the 30 successive operating days, except for data obtained during startup, shutdown, or malfunction (as defined in Conditions No. I.D.9, 14, and 16 of Attachment "B" of this permit). A separate performance test is completed at the end of each operating day after the end of the initial performance test, and a new 30-day average nitrogen oxides emission rate is calculated to show compliance with the emission standard.

[40 CFR 60.48Da(e), 60.48Da(g)]

c. NSPS Requirements for Continuous Monitoring Systems

The continuous monitoring systems for nitrogen oxides emissions as required by Specific Condition III.E.3.a. (except as provided by Specific Condition III.E.3.a.(2) shall meet the following requirements:

(1) Calibration requirements at 40 CFR 60.13(d)

(2) Operational requirements at 40 CFR 60.13(e)

(3) Performance Specifications at 40 CFR Part 60, Appendix B

(4) Quality Assurance Procedures at 40 CFR Part 60, Appendix F

(5) Notification and recordkeeping requirements at 40 CFR 60.7

d. Acid Rain Program Requirements for Continuous Monitoring Systems

The continuous monitoring systems for nitrogen oxides emissions as

required by Specific Condition III.E.3.a. shall meet all applicable requirements at 40 CFR Part 75. This shall include, but shall not be limited to, the following requirements:

(1) 40 CFR Part 75, Appendix A, "Specification and Test Procedures".

(2) 40 CFR Part 75, Appendix B, "Quality Assurance and Quality Control Procedure".

(3) Equipment performance requirements at 40 CFR 75.10(b).

(4) Hourly operating requirements at 40 CFR 75.10(d).

(5) Data reduction requirements at 40 CFR 75.10(d)(1).

(6) Missing data substitution requirements at 40 CFR 75.10(d)(3) and 40 CFR Part 75, Subpart D.

(7) Certification and recertification requirements at 40 CFR 75.20.

e. The Permittee shall comply with all applicable recordkeeping and reporting requirements of 40 CFR Part 75, Subparts F and G, respectively.

f. NSPS Reporting Requirements

(1) For nitrogen oxides, the performance test data from the initial and subsequent performance test and from the performance evaluation of the continuous monitors are submitted to the Department and the Administrator.

[40 CFR 60.51Da(a)]

(2) For nitrogen oxides the following is reported to the Department and the Administrator for each 24-hour period.

(a) Calendar date

(b) The average nitrogen oxide emission rates (ng/J or lb/million Btu) for each 30 successive boiler operating days, ending with the last 30-day period in the quarter; reasons for non-compliance with the standard; and, description of corrective actions taken.

(c) Identification of the boiler operating days for which pollutant or diluent data have not been obtained by an approved method for at least 18 hours of operation of the facility; justification for not obtaining sufficient data; and description of corrective actions taken.

(d) Identification of the times when emissions data have been excluded from the calculation of average emission rates because of startup, shutdown, malfunction, or other reasons, and justification for excluding data for reasons other than startup, shutdown, malfunction (as defined in Conditions No. I.D.9, 14, and 16 of Attachment "B" of this permit), or emergency conditions.

(e) Identification of "F" factor used for calculations, method of determination, and type of fuel combusted.

(f) Identification of times when hourly averages have been obtained based on manual sampling methods.

(g) Identification of the times when the pollutant concentration exceeded full span of the continuous monitoring system.

(h) Description of any modifications to the continuous monitoring system which could affect the ability of the continuous monitoring system to comply with Performance Specifications 2 or 3.

[40 CFR 60.51Da(b)]

(3) If the minimum quantity of emission data as required by §60.49Da is not obtained for any 30 successive boiler operating days, the following information obtained under the requirements of §60.48a(h) is reported to the Department and the Administrator for that 30 day period:

(a) The number of hourly averages available for outlet emission rates (n_o) and inlet emission rates (n_i)

(b) The standard deviation of hourly averages for outlet emission rates (s_o) and inlet emission rates (s_i) as applicable.

(c) The lower confidence limit for the mean outlet emission rate (E_o*) and the upper confidence limit for the mean inlet emission rate (E_i*) as applicable.

(d) The applicable combustion concentration.

(e) The ratio of the upper confidence limit for the mean outlet emission rate (E_o*) and the allowable emission rate (E_{std}) as applicable.

[40 CFR 60.51Da(c)]

(4) For any periods for which nitrogen oxides emissions data are not available, the Permittee shall submit a signed statement indicating if any changes were made in operation of the emission control system during the period of data unavailability. Operations of the control system and Unit 3 and 4 during periods of data unavailability are to be compared with operation of the control system and affected facility before and following the period of data unavailability.

[40 CFR 60.51Da(f)]

(5) The Permittee shall submit a signed statement indicating whether:

(a) The required continuous monitoring system calibration, span, and drift checks or other periodic audits have or have not been performed as specified.

(b) The data used to show compliance was or was not obtained in accordance with approved methods and procedures of 40 CFR 60 and is representative of plant performance.

(c) The minimum data requirements have or have not been met; or, the minimum data requirements have not been met for errors that were unavoidable.

(d) Compliance with the standards has or has not been achieved during the reporting period.

[40 CFR 60.51Da(h)]

(6) The Permittee shall submit the written reports required under this section and 40 CFR 60 Subpart A to the Department and the Administrator semiannually for each six-month period. All semiannual reports shall be postmarked by the 30th day following the end of each six-month period.

[40 CFR 60.51Da(j)]

(7) The Permittee may submit electronic quarterly reports for NOx in lieu of submitting the written reports required under paragraph (2) of this section. The format of each quarterly electronic report shall be coordinated with the permitting authority (ADEQ). The electronic report(s) shall be submitted no later than 30 days after the end of the calendar quarter and shall be accompanied by a certification statement from the Permittee, indicating whether compliance with the applicable emission standards and minimum data requirements of 40 CFR 60 Subpart Da was achieved during the reporting period. Before submitting reports in the electronic format, the Permittee shall coordinate with ADEQ to obtain their agreement to submit reports in this alternative format.

[40 CFR 60.51Da(k)]

(8) The owner or operator shall prepare and submit to the Administrator for approval a unit-specific monitoring plan for each monitoring system, at least 45 days before commencing certification testing of the monitoring systems. The owner or operator shall comply with the requirements in your plan. The plan must address the requirements in paragraphs (s)(1) through (6) of 40 CFR 60.49Da.

[40 CFR 60.49Da(s)]

4. Testing

a. The Permittee shall perform initial performance tests to determine compliance with the nitrogen oxides emission limitation in Specific

Condition III.E.1.a. of Attachment "B". These performance tests shall be performed in accordance with 40 CFR 60.8.

[40 CFR 60.8 and A.A.C. R18-2-306.A.3.A.]

b. Data from the continuous monitoring systems for exhaust gas flow as required by Specific Condition III.L.1. of Attachment "B", wattmeters as required by Specific Condition III.L.4., and nitrogen oxides emissions as required by Specific Condition III.E.3.a. shall be used during the performance tests to demonstrate compliance.

[40 CFR 60.50Da(d)(2)]

c. The nitrogen oxides emission rate shall be calculated by multiplying the average hourly nitrogen oxides output concentration by the average hourly flow rate and divided by the average hourly gross electrical output.

[40 CFR 60.48Da(i)]

d. Compliance is based on the average emission rate for 30 successive operating days for each Unit 3 and Unit 4. Compliance is determined by calculating the arithmetic average of all hourly nitrogen oxides emission rates for the 30 successive operating days, except for data obtained during startup, shutdown, or malfunction

[40 CFR 60.48Da(g)]

e. During each initial performance test, the Permittee shall obtain emission data from the continuous nitrogen oxides emission monitoring system for at least 18 hours in at least 22 out of 30 successive operating days. If this minimum data requirement is not met with a continuous monitoring system, the Director may use the procedures in EPA Reference Method 19, Section 12.7, to determine compliance.

[40 CFR 60.48Da(h), 60.49Da(f)]

5. Permit Shield

Compliance with this Section shall be deemed compliance with 40 CFR 60.44Da(d)(1), 60.44Da(e)(1), 60.48Da(c), 60.49Da(c), 60.49Da(c)(2), 60.50Da(d)(2), 60.49Da(f), 60.48Da(i), 60.48Da(e), 60.48Da(g), 60.48Da(i), 60.48Da(g), 60.48Da(h), 60.51Da(a), 60.51Da(b), 60.51Da(c),60.51Da(f), 60.51Da(h), 60.51Da(j), 60.51Da(k), and 60.49Da(s) .

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

F. Carbon Monoxide (CO)

1. Emission Limitations/Standard

a. On and after the date on which the initial performance test required to be conducted under 60.8 is completed, the Permittee shall not cause to be discharged into the atmosphere from the stack of Unit 3 or Unit 4 any gases which contain carbon monoxide in excess of 0.15 lb per million Btu heat input derived from combustion of fuel, based on a 30-day rolling average.

[A.A.C. R18-2-406.A.4]

b. The carbon monoxide emission standard in Specific Condition III.F.1.a. above shall apply at all times except during periods of startup, shutdown, or malfunction.

[A.A.C. R18-2-406.A.4]

2. Monitoring/Recordkeeping/Reporting Requirements

a. Monitoring for Carbon Monoxide

(1) The Permittee shall install, calibrate, maintain, and operate continuous monitoring systems, and record the output of the systems, for measuring carbon monoxide emissions discharged to the atmosphere from Unit 3 and Unit 4.

[A.A.C. R18-2-331.A.3.c and R18-2-306.A.3.c]

(2) The continuous monitoring systems for carbon monoxide shall meet the following requirements:

(a) Calibration requirements at 40 CFR 60.13(d).

(b) Operational requirements at 40 CFR 60.13(e).

(c) Performance Specifications at 40 CFR Part 60, Appendix B.

(d) Quality Assurance Procedures at 40 CFR Part 60, Appendix F.

[A.A.C. R18-2-331.A.3.c]

b. Compliance Determination Requirements for Carbon Monoxide Emission Standard

The Permittee shall use the following procedures to demonstrate compliance with the carbon monoxide emission limitation in Specific Condition III.F.1.a. of Attachment "B".

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

(1) The Permittee shall use data from the continuous flow monitoring system, diluent carbon dioxide or oxygen monitoring systems, and carbon monoxide emission monitoring systems as required by Specific Conditions III.L.1., III.L.2., and III.F.2.a., respectively, of Attachment "B".

(2) The requirements of this Specific Condition III.F.2.b. shall apply only to Unit 3 and Unit 4 and shall apply separately to Unit 3 and Unit 4.

(3) After the initial performance test required by Specific Condition III.F.3.a. of Attachment "B" compliance with the Carbon Monoxide emission limitation under Condition III.F.1.a of Attachment "B" is based on the average emission rate for 30 successive calendar days for Unit 3 and Unit 4. Compliance is determined by calculating the arithmetic average of all hourly carbon monoxide emission rates for the 30 successive calendar days, except for data obtained during startup, shutdown (as in Conditions No. I.D.14, and 16 of Attachment "B" of this permit), or emergency conditions. A separate performance test is completed at the end of each calendar day after the end of the initial performance test, and a new 30-day average carbon monoxide emission rate is calculated to show compliance with the emission standard.

(4) Each calendar day for which the 30-day rolling average carbon monoxide emission rate exceeds the carbon monoxide emission limitation in Specific Condition III.F.1.a shall constitute a period of excess emissions.

(5) For each continuous monitoring system for carbon monoxide, the Permittee shall submit a Quality Assurance/Quality Control Plan to the Department at least 30 days prior to the start-up of the monitoring system. When approved by the Department, this plan shall be implemented.

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

3. Testing

a. The Permittee shall perform initial performance tests to determine compliance with the carbon monoxide emission limitation in Specific Condition III.F.1.a. of Attachment "B".

[A.A.C. R18-2-406.A.4]

b. Data from the continuous monitoring systems for exhaust gas flow as required by Specific Condition III.L.1. of Attachment "B", diluent concentration as required by Specific Condition III.L.3, and carbon monoxide emissions as required by Specific Condition III.F.2.a shall be used during the performance tests to demonstrate compliance.

[A.A.C. R18-2-406.A.4]

c. The appropriate procedures in EPA Reference Method 19 shall be used to determine the carbon monoxide emission rate. As Method 19 does not provide conversion factors for carbon monoxide, a conversion factor of 7.27×10^{-8} shall be used to convert parts per million (ppm) to pounds per standard cubic foot (lb/scf).

[A.A.C. R18-2-406.A.4]

4. Permit Shield

Compliance with this Section shall be deemed compliance with 60.44a(d)(1), 60.46a(c), 60.47a(c), 60.47a(c)(2), 60.48a(d)(2), 60.47a(f), 60.46a(i), 60.46a(e), 60.46a(g), 60.48a(d)(2), 60.46a(i), 60.46a(g), 60.46a(h), and 60.47a(f).

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

G. Volatile Organic Compounds

1. Emission Limitations/Standards

a. The Permittee shall not cause to be discharged into the atmosphere from the stack of Unit 3 or Unit 4 any gases which contain volatile organic compounds, expressed as propane, in excess of 0.06 lb per ton of coal combusted. Compliance with this emission limit shall be determined using a three-hour averaging period.

[A.A.C. R18-2-406.A.4]

b. The volatile organic compounds emission standard in Specific Condition III.G.1.a. above shall apply at all times except during periods of startup, shutdown, or malfunction as defined in Conditions No. I.D.9, 14, and 16 of Attachment "B" of this permit.

[A.A.C. R18-2-406.A.4]

2. Testing

a. The Permittee shall perform initial and annual performance tests to determine compliance with the volatile organic compounds emission limitation in Specific Condition III.G.1.a of Attachment "B".

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

b. If the results of the initial performance test on a steam generating unit show that volatile organic compounds emissions are less than 50 percent of the emission limitation in Specific Condition III.G.1.a of Attachment "B", no additional performance tests for volatile organic compounds shall be required for that steam generating unit until renewal of this Class I Permit.

[A.A.C. R18-2-406.A.4]

c. All performance tests for volatile organic compounds shall be performed using EPA Reference Method 18 or 25A.

[A.A.C. R18-2-406.A.4]

H. Hydrogen Fluoride

1. Emission Limitations/Standards

a. The Permittee shall not cause to be discharged into the atmosphere from the stack of Unit 3 or Unit 4 any gases which contain hydrogen fluoride in excess of 0.00044 lb per million Btu heat input derived from combustion of fuel. Compliance with this emission limit shall be determined using a three-hour averaging period.

[A.A.C. R18-2-302.D, R18-2-406.A.4]

b. The hydrogen fluoride emission standard in Specific Condition III.H.1.a above shall apply at all times except during periods of startup, shutdown, or malfunction as defined in Conditions No. I.D.9, 14, and 16 of Attachment "B" of this permit.

[A.A.C. R18-2-302.D, R18-2-406.A.4]

2. Monitoring/Recordkeeping/Reporting

a. Compliance Assurance Monitoring Requirements for Hydrogen Fluoride Emissions

The Permittee shall use the following procedures to demonstrate compliance with the hydrogen fluoride emission limitation in Specific Condition III.H.1.a of Attachment "B":

[40 CFR 64.6(c)(1) and R18-2-306.A.3.b]

(1) The Permittee shall monitor sulfur dioxide emissions as an indicator of compliance with the hydrogen fluoride emission limitation. The continuous sulfur dioxide emissions monitoring system required under Specific Condition III.D.3 of Attachment "B" may be used to satisfy this monitoring requirement. The following table summarizes certain requirements that are applicable to the Permittee pursuant to 40 CFR Part 64 and A.A.C.R18-2-306.A.3.a.i.

[40 CFR 64.6(c)(1) and R18-2-306.A.3.b]

Unit 3 and Unit 4 Hydrogen Fluoride Limits: Dry Scrubbers and Fabric Filter Baghouses	
	Indicator: Sulfur Dioxide Emissions
Measurement Approach	Sulfur dioxide (SO_2) emissions as measured by the SO_2 CEMS are used as a surrogate for hydrogen fluoride (HF) emissions
Indicator Range	SO_2 emissions as measured by the SO_2 CEMS above the HF excursion level, to be determined during initial system verification testing
Performance Criteria - Data Representativeness	SO_2 CEMS must meet performance specifications and quality assurance requirements as set forth at 40 CFR Part 60, Appendices B and F, and 40 CFR Part 75, Appendices A and B. Relationship of SO_2 and HF emissions is established during the initial verification test.
Performance Criteria - Operation	SO_2 CEMS must meet performance specifications and quality assurance requirements as set forth at 40 CFR Part 60, Appendices B and F, and 40 CFR Part 75, Appendices A and B.
Performance Criteria - QA/QC Practices	SO_2 CEMS must meet performance specifications and quality assurance requirements as set forth at 40 CFR Part 60, Appendices B and F, and 40 CFR Part 75, Appendices A and B.
Performance Criteria - Monitoring Frequency	SO_2 CEMS operation is continuous.

Performance Criteria - Data Collection Procedure	SO_2 CEMS operation is continuous. SO_2 emission rate calculation is performed each hour, based on a rolling 3-hour average.
Performance Criteria - Averaging Period	SO_2 emission rate calculation is performed each hour, based on a rolling 3-hour average, consistent with the averaging period of the HF emission standard.

(2) The Permittee shall perform testing to establish the hydrogen fluoride excursion level, in terms of the three-hour average sulfur dioxide mass emission rate calculated in accordance with Specific Condition IV.B.2.a.(3) of Attachment "B."

[40 CFR 64.6(c)(2) and R18-2-306.A.3.b]

(3) Each one-hour period for which the three-hour average sulfur dioxide mass emission rate exceeds the hydrogen fluoride excursion level shall constitute an excursion.

[40 CFR 64.6(c)(2) and R18-2-306.A.3.b]

(4) The Permittee shall submit to the Department for its approval a protocol for conducting the testing required under Specific Condition III.H.2.a.(2) of Attachment "B". This protocol shall be submitted at least 30 days prior to the testing and shall include, at a minimum, the following elements:

[40 CFR 64.6(c)-(d) and A.A.C. R18-2-306.A.3.b]

(a) A proposed schedule for conducting the test.

(b) Procedures for ensuring that the test results will be representative of the relationship of sulfur dioxide emission rate and hydrogen fluoride emission rate.

(c) Procedures for determining the hydrogen fluoride excursion level.

3. Testing

a. The Permittee shall perform an initial performance test to determine compliance with the hydrogen fluoride emission limitation in Specific Condition III.H.1.a. of Attachment "B."

[A.A.C. R18-2-302.D, R18-2-406.A.4, and R18-2-312]

b. If the results of the initial performance test on a steam generating unit show that hydrogen fluoride emissions are less than 50 percent of the emission limitation in Specific Condition III.H.1.a. of Attachment "B", no additional performance tests for hydrogen fluoride shall be required for that steam generating unit until renewal of this Class I Permit. If the results of the initial performance test show that hydrogen fluoride emissions are greater than or equal to 50 percent of the emission limitation in Specific Condition III.H.1.a of Attachment "B", annual testing shall be required during this permit term.

[A.A.C. R18-2-302.D, R18-2-406.A.4, and R18-2-312]

c. All performance tests for hydrogen fluoride shall be performed using EPA Reference Method 26A.

[A.A.C. R18-2-302.D, R18-2-406.A.4, and R18-2-312]

I. Lead Emission Standard

1. Emission Limitations/Standards

The Permittee shall not cause to be discharged into the atmosphere from the stack of Unit 3 or Unit 4 any gases which contain lead in excess of 0.000016 lb per million Btu heat input derived from combustion of fuel. Compliance with this emission limit shall be determined using a three-hour averaging period.

[A.A.C. R18-2-306.02]

2. Testing

a. The Permittee shall perform initial performance tests on Unit 3 and Unit 4 to determine compliance with the lead emission limitation in Specific Condition III.I. 1. of Attachment "B".

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

b. If the results of the initial performance test on either Unit 3 or Unit 4 (whichever is the first steam generating unit to commence operation) show that lead emissions are less than 50 percent of the lead emission limitation in Condition III.I.1. of Attachment "B", no additional performance tests for lead shall be required for Unit 3 or Unit 4 until renewal of this Class I Permit. If the results of the initial performance test show that hydrogen fluoride emissions are greater than or equal to 50 percent of the emission limitation in Specific Condition III.I.1 of Attachment "B", annual testing shall be required during this permit term.

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

c. Each performance test for lead shall be performed using EPA Reference Method 12 or 29.

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

J. Sulfuric Acid Mist

1. Testing

a. The Permittee shall perform initial performance tests of Unit 3 and Unit 4. The primary purpose of these tests is to establish the sulfur compound emission ratio for each unit.

[A.A.C. R18-2-306.02]

b. All performance tests for sulfuric acid mist shall be performed using EPA Reference Method 8. Each test run shall be a minimum of one hour.

[A.A.C. R18-2-306.02]

c. Data from the continuous monitoring systems for exhaust gas flow as required by Specific Condition III.L.1. of Attachment "B", diluent concentration as required by Specific Condition III.L.3., and sulfur dioxide emissions as required by Specific Condition III.D.3.a. shall be used to determine the sulfur dioxide emission rate during each performance test run.

[A.A.C. R18-2-306.02]

d. The Permittee shall use the sulfur dioxide and sulfuric acid mist emission rates measured during each initial performance test to calculate the sulfur compound emission ratio for that steam generating unit.

[A.A.C. R18-2-306.02]

K. Mercury

1. Emission Limitations/Standards

a. On and after the date on which the initial performance test required to be conducted under 60.8 is completed, the Permittee shall not cause to be discharged into the atmosphere from the stack of Unit 3 and Unit 4 any gases which contain mercury in excess of 0.0000069 lb per million Btu heat input derived from combustion of fuel. Compliance with this

emission limit shall be determined using a 12-month averaging period.

[Condition No. III.A.10.a. of Significant Permit Revision No. 1001554 to Title V Permit No. 1000105, state enforceable only]

b. The mercury emission standard in Specific Condition III.K.1.a. above shall apply at all times except during periods of startup, shutdown, or malfunction as defined in Conditions No. I.D.9, 14, and 16 of Attachment "B" of this permit.

[Condition No. III.A.10.b. of Significant Permit Revision No. 1001554 to Title V Permit No. 1000105, state enforceable only]

c. NSPS Subpart Da limit

[40 CFR 60.45Da(a)]

Within 180 days after startup of Unit 4, The Permittee shall not cause to be discharged into the atmosphere from Unit 4, any gases which contain mercury (Hg) emissions in excess of each Hg emissions limit in paragraphs III.K.1.c(1) through (4) as follows. The Hg emissions limits are based on a 12-month rolling average using the procedures in §60.50Da(h) and should apply at all times except during periods of startup, shutdown, or malfunction as defined in Conditions No. I.D.9, 14, and 16 of Attachment "B" of this permit.

(1) When burning only bituminous coal, the Permittee shall not discharge into the atmosphere from Unit 4, any gases which contain Hg in excess of 21×10^{-6} pound per megawatt hour (lb/MWh) or 0.021 lb/gigawatt-hour (GWh) on an output basis. The International System of Units (SI) equivalent is 0.0026 nanograms per joule (ng/J).

[40 CFR 60.45Da(a)(1)]

(2) When burning only subbituminous coal, the Permittee shall not discharge into the atmosphere from Unit 4, any gases which contain Hg in excess of 78×10^{-6} lb/MWh or 0.078 lb/GWh on an output basis. The SI equivalent is 0.0098 ng/J.

[40 CFR 60.45Da(a)(2)(ii)]

(3) When burning only lignite, the Permittee shall not discharge into the atmosphere from Unit 4, any gases which contain Hg in excess of 145×10^{-6} lb/MWh or 0.145 lb/GWh on an output basis. The SI equivalent is 0.0183 ng/J.

[40 CFR 60.45Da(a)(3)]

(4) When burning a blend of coals from different coal ranks (i.e., bituminous coal, subbituminous coal, lignite), the Permittee shall not discharge into the atmosphere from Unit 4, any gases that

contain Hg in excess of the monthly unit-specific Hg emissions limit established according to paragraph III.K.1.c(4)(a) or (b), as applicable to Unit 4.

[40 CFR 60.45Da(a)(5)(i) and (ii]

(a) When burning a blend of coals from different coal ranks, the Permittee shall not discharge into the atmosphere from Unit 4, any gases that contain Hg in excess of the computed weighted Hg emissions limit based on the proportion of energy output (in British thermal units, Btu) contributed by each coal rank burned during the compliance period and its applicable Hg emissions limit in paragraphs III.K.1.c(1) through (3) above as determined using Equation 1 below. The Permittee shall meet the weighted Hg emissions limit calculated using Equation 1 by calculating the unit emission rate based on the total Hg loading of Unit 4 and the total Btu or megawatt hours contributed by all fuels burned during the compliance period.

$$EL_b = \frac{\sum_{i=1}^{n} EL_i \left(HH_i\right)}{\sum_{i=1}^{n} HH_i} \qquad \text{(Equation 1)}$$

Where:

EL_b = Total allowable Hg in lb/MWh that can be emitted to the atmosphere from any affected source being averaged under the blending provision

EL_i = Hg emissions limit for the subcategory i (coal rank) that applies to affected source, lb/MWh

HH_i = Electricity output from affected source during the production period related to use of the corresponding subcategory i (coal rank) that falls within the compliance period, gross MWh generated by the electric utility steam generating unit

n = Number of subcategories (coal ranks) being averaged for an affected source

(b) When burning a blend of coals from different coal ranks together with one or more non-regulated, supplementary fuels, the Permittee shall not discharge into the

atmosphere from Unit 4, any gases that contain Hg in excess of the computed weighted Hg emission limit based on the proportion of electricity output (in MWh) contributed by each coal rank burned during the compliance period and its applicable Hg emissions limit in paragraphs III.K.1.c(1) through (3) above as determined using Equation 1. The Permittee shall meet the weighted Hg emissions limit calculated using Equation 1 by calculating Unit 4 emission rate based on the total Hg loading of Unit 4 and the total megawatt hours contributed by both regulated and non-regulated fuels burned during the compliance period.

2. Compliance Provisions

a. NSPS Subpart Da limit

The Permittee shall calculate the Hg emission rate (lb/MWh) for each calendar month of the year, using hourly Hg concentrations measured according to the provisions of §60.49Da(p) in conjuction with hourly stack gas volumetric flow rates measured according to the provisions of §60.49Da(l) or (m) or Specific Condition III.L.1.a. or b., and hourly gross electrical outputs, determined according to the provisions in §60.49Da(k) or Specific Condition III.L.4. Compliance with the applicable mercury standard under Specific Condition III.K.1. c and §60.45Da(a)(2)(ii) is determined on a 12-month rolling average basis.

[40 CFR 60.48Da(l)]

b. Unit 3 Twelve Month Averaging Period Using CEMS

The Permittee shall calculate the Hg emission rate (lb/mmBtu) for each calendar month of the year, using hourly Hg concentrations measured according to the provisions of §60.49Da(p) in conjunction with hourly Heat Input derived from stack gas volumetric flow rates measured according to the provisions of §60.49Da(l) or (m) or Specific Condition III.L.1.a. or b., Compliance with the applicable mercury standard under Specific Condition III.K.1.a is determined on a 12-month average basis.

c. Unit 3 Twelve Month Averaging Period using Alternative method

Until such time as a Mercury CEM meeting the requirements of Condition III.K.3.a.(3) below is installed and certified, the Permittee shall demonstrate compliance with the limitation in Specific Condition K.1.a above as follows:

(1) The Permittee shall conduct a performance test in accordance with schedule specified in Specific Condition III.K.4.a;

(2) At the same time as the performance test, the Permittee shall conduct an Hg coal analysis to determine the inlet Hg rate in lbs/mmBtu;

(3) The Permittee shall use the outlet Hg rate determined through the performance test conducted in accordance with Specific Condition III.K.2.c(1) and the inlet Hg rate determined in Specific Condition III.K.2.c(2) in order to calculate the percent removal of mercury as follows:

$$\%HgR = 100 \times (1.0 - (HgO/HgI)$$

Where:

% HgR =	The annual overall mercury removal efficiency
HgO =	The amount of mercury emitted as determined through performance testing pursuant to Specific Condition III.K.2.c(1) (lb/mmBtu)
HgI =	The amount of mercury in the coal, as determined pursuant to Specific Condition III.K.2.c(2) (lb/mmBtu)

(4) Following the initial stack test, the Permittee shall conduct an Hg coal analysis at least once each month to determine a monthly inlet Hg rate in lbs/mmBtu.

(5) The Permittee shall calculate the average inlet Hg rate (lbs/mmBtu) for each calendar year by averaging the most recent twelve monthly inlet Hg rates.

(6) The Permittee shall calculate the average outlet Hg emission rate for each calendar year for Unit 3 (lbs/mmBtu) as follows:

$$HgE = HgI_{avg} - HgI_{avg} \times (HgR/100)$$

Where:

HgE = The average Mercury emissions rate (lbs/mmBtu)

HgI_{avg} = The average concentration of Mercury in the coal as determined pursuant to Specific Condition III.K.2.c(5) (lbs/mmBtu)

HgR = The percentage of Mercury removed as determined through performance testing conducted pursuant to Condition III.K.2.c(1)

3. Monitoring,Recordkeeping, and Reporting Requirements

a. Monitoring for Mercury

(1) Within 180 days of startup of Unit 4, The Permittee shall install and operate a continuous emissions monitoring system (CEMS) to measure and record the concentration of Hg in the exhaust gases from each stack according to the requirements in paragraphs (p)(1) through (p)(3) of 40 CFR 60.49Da and Specific Conditions III.K.3.a.(3)(a) through (c).

[40 CFR 60.49Da(p)(1)-(p)(3)][A.A.C.R18-2-331.a.3.c]

(2) At and after the time a CEM meeting the requirements of Specific Condition III.K.3.a.(3) is installed and certified on Unit 3, the Permittee shall operate a continuous emissions monitoring system (CEMS) to measure and record the concentration of Hg in the exhaust gases from each stack according to the requirements in paragraphs (p)(1) through (p)(3) of 40 CFR 60.49Da and Specific Conditions III.K.3.a.(3)(a) through (c).

(3) CEM Requirements

(a) The Permittee must install, operate, and maintain each CEMS according to Performance Specification 12A in appendix B of 40 CFR 60.

(b) The Permittee must conduct a performance evaluation of each CEMS according to the requirements of § 60.13 and Performance Specification 12A in appendix B of 40 CFR 60.

(c) The Permittee must operate each CEMS according to the requirements in paragraphs (p)(3)(i) through (iv) of §60.49a and Specific conditions III.K.3.a.(3)(c)(i) through (iv) below.

(i) As specified in §60.13(e)(2), each CEMS must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.

(ii) The Permittee must reduce CEMS data as specified in § 60.13(h).

(iii) The Permittee shall use all valid data points collected during the hour to calculate the hourly average Hg concentration.

(iv) The Permittee must record the results of each required certification and quality assurance test of the CEMS.

(4) As an alternative to the CEMs, the Permittee may use a sorbent trap monitoring system (as defined in 40 CFR 72.2) to monitor Hg concentration, according to the procedures described in 40 CFR 75.15 of this chapter and appendix K to 40 CFR 75.

[40 CFR 60.49Da(q)][A.A.C.R18-2-331.a.3.c]

(5) Mercury CEMs data collection must conform to paragraphs §60.49Da(p)(4)(i) through (iv) and Specific Conditions III.K.3.a.(5)(a) through (d) of this section.

[40 CFR 60.49Da(p)(4)]

(a) For each calendar month in which Unit 3 or 4 operates, valid hourly Hg concentration data, stack gas volumetric flow rate data, moisture data (if required), and electrical output data (i.e., valid data for all of these parameters) shall be obtained for at least 75 percent of the unit operating hours in the month.

(b) Data reported to meet the requirements of Subpart Da or these permit conditions shall not include hours of unit startup, shutdown, or malfunction.

(c) If valid data are obtained for less than 75 percent of the unit operating hours in a month, the Permittee must discard the data collected in that month and replace data with the mean of the individual monthly emission rate values determined in the last 12 months. In the 12-month rolling average calculation, this substitute Hg emission rate shall be weighted according to the number of unit operating hours in the month for which the data capture requirement of §60.49Da(p)(4)(i) and Specific Condition III.K.3.a.(3)(a) was not met.

(d) Notwithstanding the requirements of paragraph §60.49Da (p)(4)(iii) and Specific Condition III.K.3.a.(3)(c), if valid data are obtained for less than 75 percent of Unit 3 or 4's operating hours in another month in that same 12-month rolling average cycle, discard the data collected in that month and replace the data with the highest individual monthly emission rate determined in the last 12 months. In the 12-month rolling average calculation, this substitute Hg emission rate shall be weighted according to the number of unit operating hours in the month for which the data capture requirement of §60.49Da(p)(4)(i) and Specific Condition III.K.3.a.(3)(a) was not met.

(6) For Hg CEMs that measure Hg concentration on a dry basis or for sorbent trap monitoring systems, the emissions data must be corrected for the stack gas moisture content. A certified continuous monitoring systems that meets the requirements of § 75.11(b) is acceptable for this purpose. Alternatively, the appropriate default moisture value, as specified in §75.11(b) or §75.12(b) may be used.

[40 CFR 60.49Da(r)]

(7) The Permittee shall prepare and submit to the Department and the Administrator for approval a unit-specific monitoring plan for each monitoring system, at least 45 days before commencing certification testing of the monitoring systems. The Permittee shall comply with the requirements in your plan. The plan must address the requirements in paragraphs (7)(a) through (f)

[40 CFR 60.49Da(s)]

(a) Installation of the CEMS sampling probe or other interface at a measurement location relative to each

affected process unit such that the measurement is representative of the exhaust emissions (e.g., on or downstream of the last control device);

(b) Performance and equipment specifications for the sample interface, the pollutant concentration or parametric signal analyzer, and the data collection and reduction systems;

(c) Performance evaluation procedures and acceptance criteria (e.g., calibrations, relative accuracy test audits (RATA) , etc.);

(d) Ongoing operation and maintenance procedures in accordance with the general requirements of § 60.13(d) or part 75 (as applicable);

(e) Ongoing data quality assurance procedures in accordance with the general requirements of § 60.12 or part 75 (as applicable); and

(f) Ongoing record keeping and reporting procedures in accordance with the requirements for 40 CFR 60 Subpart Da or this permit.

(8) Following the initial performance test for Unit 4, the Permittee shall demonstrate compliance with the NSPS limit by calculating the weighted average of all monthly Hg emission rates (in lb/MWh) for each 12 successive calendar months, excluding startup, shutdown, or malfunction.

[40 CFR 60.50Da(h)(l)]

(9) For Unit 4, the Permittee shall provide notifications in accordance with §60.7(a) and shall maintain records of all information needed to demonstrate compliance including performance tests, monitoring data, fuel analyses, and calculations, consistent with the requirements of §60.7(f).

[40 CFR 60.52Da(a)]

b. Reporting Requirements for Unit 4

(1) For Hg emissions, the performance test data from the initial and subsequent performance test and from the performance evaluation of the continuous monitors are submitted to the Department and the Administrator.

[40 CFR 60.51Da(a)]

(2) For Hg, the following information shall be reported to the Department and the Administrator:

[40 CFR 60.51Da(g)]

(a) Company name and address;

(b) Date of report and beginning and ending dates of the reporting period;

(c) The applicable Hg emission limit (lb/MWh); and

(d) For each month in the reporting period:

(i) The number of unit operating hours

(ii) The number of unit operating hours with valid data for Hg conconcentration, stack gas flow rate, moisture (if required), and electrical output;

(iii) The monthly Hg emission rate (lb/MMh);

(iv) The number of hours of valid data excludedfrom the calculation of the monthly Hg emission rate, due to unit startup, shutdown and malfunction; and

(v) The 12-month rolling average Hg emission rate (lb/MWh); and

(e) The data assessment report (DAR) required by appendix F to 40 CFR 60, or an equivalent summary of QA test results if the QA of part 75 of this chapter are implemented.

(3) The Permittee shall submit a signed statement indicating whether:

(a) The required continuous monitoring system calibration, span, and drift checks or other periodic audits have or have not been performed as specified.

(b) The data used to show compliance was or was not obtained in accordance with approved methods and procedures of 40 CFR 60 and is representative of plant performance.

(c) The minimum data requirements have or have not been met; or, the minimum data requirements have not been met for errors that were unavoidable.

(d) Compliance with the standards has or has not been achieved during the reporting period.

[40 CFR 60.51Da(h)]

(4) The Permittee shall submit the written reports required under this section and 40 CFR 60 Subpart A to the Department and the Administrator semiannually for each six-month period. All semiannual reports shall be postmarked by the 30th day following the end of each six-month period.

[40 CFR 60.51Da(j)]

(5) The Permittee may submit electronic quarterly reports for Hg in lieu of submitting the written reports required under paragraph (2) of this section. The format of each quarterly electronic report shall be coordinated with the permitting authority (ADEQ). The electronic report(s) shall be submitted no later than 30 days after the end of the calendar quarter and shall be accompanied by a certification statement from the Permittee, indicating whether compliance with the applicable emission standards and minimum data requirements of 40 CFR 60 Subpart Da was achieved during the reporting period. Before submitting reports in the electronic format, the Permittee shall coordinate

with ADEQ to obtain their agreement to submit reports in this alternative format.

[40 CFR 60.51Da(k)]

4. Testing

a.. Testing requirements applicable to Mercury limit from Condition No. III.A.10.a. of Significant Permit Revision No. 1001554 to Title V Permit No. 1000105.

(1) Until such time that a CEM meeting the requirements of Specific Conditions III.K.3.(c) is installed and certified, the Permittee shall perform initial and annual performance tests on Unit 3 to determine compliance with the mercury emission limitation in Specific Condition III.K.1.a of Attachment "B". The results of these performance tests shall be used to calculate the percent Hg removal required pursuant to Specific Condition III.K.2.c.

[Condition No. III.D.10.a. of Significant Permit Revision No. 1001554 to Title V Permit No. 1000105 and A.A.C.R18-2-306.A.3.c, state enforceable only]

(2) Each performance test for mercury shall be performed using EPA Reference Method 29 or other accepted EPA reference Method as approved by the Director.

[Condition No. III.A.10.b. of Significant Permit Revision No. 1001554 to Title V Permit No. 1000105, state enforceable only]

(3). The Permittee shall develop and submit to the Director a site-specific test plan in accordance with the provisions of 40 CFR 63.7(c) at least 60 days prior to each scheduled performance test required by Specific Condition III.K.4.a. above.

[Condition No. III.A.10.c. of Significant Permit Revision No. 1001554 to Title V Permit No. 1000105, state enforceable only]

b. Testing requirements applicable to NSPS Mercury Provisions

(1) The Permittee shall determine compliance with the Hg limit in Specific Condition III.K.1.c of this attachment by conducting an initial performance test. The initial performance test shall be commenced no later than 180 days after initial startup of Unit 4. The required continuous monitoring systems must be certified prior to commencing the test. The performance test consists of collecting hourly Hg emission data (lb/MWh) with the continuous monitoring systems for 12 successive months of unit operation (excluding hours of unit startup, shutdown and malfunction as defined in Conditions No. I.D.9, 14, and 16 of Attachment "B" of this permit). The average Hg emission rate is

calculated for each month, and then the weighted, 12 month average Hg emission rate is calculated according to the following, as applicable:

[40 CFR 60.50Da(h)]

(a) If a CEMs is used to demonstrate compliance, follow the procedures in paragraphs (b)(1)(a)(i) through (b)(1)(a)(iii) of this section to determine the 12 month rolling average

(i) Calculate the total mass of Hg emissions over a month (M) in pounds (lb), using either Equation 2 in paragraph (b)(1)(a)(i)(A) of this section or Equation 3 in paragraph (b)(1)(a)(i)(B) of this section, in conjunction with Equation 4 in paragraph (b)(1)(a)(i)(C).

(A) If the Hg CEMS measures Hg concentration on a wet basis, use Equation 2 below to calculate the Hg mass emissions for each valid hour:

$$E_h = K C_h Q_h t_h \qquad \text{(Eq. 2)}$$

Where:

E_h = Hg mass emissions for the hour, (lb)

K = Units conversion constant, 6.24×10^{-11} lb-scm/μg-scf

C_h = Hourly Hg concentration, wet basis, (μg/scm)

Q_h = Hourly stack gas volumetric flow rate, (scfh)

t_h = Unit operating time, i.e., the fraction of the hour for which the unit operated. For example, t_h = 0.50 for a half-hour of unit operation and 1.00 for a full hour of operation.

(B) If the Hg CEMs measures the Hg concentration on a dry basis, use Equation 3 below to calculate the Hg mass emissions for each valid hour:

$$E_h = K\, C_h Q_h t_h (1-B_{ws}) \qquad \text{(Eq. 3)}$$

Where:

E_h = Hg mass emission for the hour, (b)

K = Units conversion constant, 6.24×10^{-11} lb-scm/μg-scf

C_h = Hourly Hg concentration, dry basis, (μg/dscm)

Q_h = Hourly stack gas volumetric flow rate, (scfh)

t_h = Unit operating time, i.e., the fraction of the hour for which the unit operated.

B_{ws} = Stack gas moisture content, expressed as a decimal fraction (e.g., for 8 percent H_2O, $B_{ws} = 0.08$)

(C) Use Equation 4, below, to calculate M, the total mass of Hg emitted for the month,by summing the hourly masses derived from Equation 2 or 3 (as applicable):

$$M = \sum_{h=1}^{n} E_h \qquad \text{(Eq. 4)}$$

Where:

M = Total Hg mass emissions for the month, (lb)

E_h = Hg mass emissions for hour "h", from Equation 2 or 3 of this section, (lb)

n = The number of unit operating hours in the month with valid CEM and electrical output data, excluding hours of unit startup, shutdown and malfunction.

(ii) Calculate the monthly Hg emission rate on an output basis (lb/MWh) using Equation 5A, and on an input basis using Equation 5B below.

$ER_1 = M / P$ (Eq.5A)

$ER_2 = M / HI$ (Eq. 5B)

Where:

ER_1 = Monthly Hg emission rate, (lb/MWh)

ER_2 = Monthly Hg emission rate (lb/mmBtu)

M = Total mass of Hg emissions for the month, from Equation 4, above, (lb)

P = Total electrical output for the month, for the hours used to calculate M, (MWh)

HI = Total heat input for the month, for the hours used to calculate M, (mmBtu)

(iii) Until 12 monthly Hg emissions have been accumulated, calculate and report only the monthly averages. Then, for each subsequent calendar month, use Equation 6 below to calculate the 12-month rolling average as a weighted average of the Hg emission rate for the current month and the Hg emission rates for the previous 11 months, with one exception. Calendar months in which the unit does not operate (zero unit operating hours) shall not be included in the 12-month rolling average.

$$E_{avg} = \frac{\sum_{i=1}^{12} (ER)_i n_i}{\sum_{i=1}^{12} n_i} \qquad \text{(Eq. 6)}$$

Where:

M = Total Hg mass emissions for the month, (lb)

E_{avg} = Weighted 12-month rolling average Hg emission rate, (lb/MWh) for Units employing CEMS, or 12-month average Hg emission rate (lb/mmBtu) for Unit 3 when a CEM meeting the requirements of Specific Condition III.K.3.a.(3) has not been installed.

$(ER)_i$ = Monthly Hg emission rate, for month "i", (lb/MWh) for Units employing CEMS, or monthly Hg emission rate, for month "i" (lb/mmBtu) for Unit 3 when a CEM meeting the requirements of Specific Condition III.K.3.a.(3) has not been installed.

n = The number of unit operating hours in month "i" with valid CEM and electrical output data for Units employing CEMS, or heat input data for Unit 3 when a CEM meeting the requirements of Specific Condition III.K.3.a.(3) has not been installed., excluding hours of unit startup, shutdown, and malfunction as defined in Conditions No. I.D.7, 10, and 11 of Attachment "B" of this permit..

(b) If a sorbent trap monitoring system is used in lieu of a Hg CEMs, as described in § 75.15 and in appendix K to part 75, calculate the monthly Hg emission rates using Equations 3 through 6 of this section, except that for a particular pair of sorbent traps, C_h in Equation 3 shall be the flow-proportional average Hg concentration measured over the data collection period.

(2) If for any month in the initial performance test, the minimum data capture requirement in §60.49a(p)(4)(i) or Specific Condition III.K.3.a.(3)(a) is not met, the Permittee shall report a substitute Hg emission rate for that month, as follows. For the first such month, the substitute monthly Hg emission rate shall be the arithmetic average of all valid hourly Hg emission rate

recorded to date. For any subsequent month(s) with insufficient data capture, the substitute monthly Hg emission rate shall be the highest valid hourly Hg emission rate recorded to date. When the 12-month average Hg emission rate for the initial performance test is calculated, for each month in which there was insufficient data capture, the substitute monthly Hg emission rate shall be weighted according to the number of unit operating hours in that month.

[40 CFR 60.50Da(h)(1)]

(3) Daily calibration drift (CD) tests and quarterly accuracy determinations shall be performed for Hg CEMS in accordance with Procedure 1 of appendix F of 40 CFR 60. For the CD assessments, you may use either elemental mercury or mercuric chloride (Hg^o or $HgCl_2$) standards. The four quarterly accuracy determinations shall consist of one RATA and three measurement error (ME) tests using $HgCl_2$ standards, as described in section 8.3 of Performance Specification 12-A in appendix B to 40 CFR 60 (note: Hg^o standards may be used if the Hg monitor does not have a converter). Alternatively, the Permittee may implement the applicable daily, weekly, quarterly, and annual quality assurance (QA) requirements for Hg CEMS in appendix B to part 75, in lieu of the QA procedures in appendices B and F to this part. Annual RATA of sorbent trap monitoring systems shall be performed in accordance with appendices A and B to part 75, and all other quality assurance requirements specified in appendix K to part 75 shall be met for sorbent trap monitoring systems.

[40 CFR 60.50Da(i)]

3. Permit Shield

Compliance with this Section shall be deemed compliance with 40 CFR 63.43(g)(1), 63.43(g)(2)(iv.), 60.45Da(a)(2)(ii), 60.48Da(l), 60.49Da(p)(1) – (p)(3), 60.49Da(r), 60.49Da(q), 60.49Da(s), 60.49Da(p)(4), 60.52Da(a), 60.51Da(a), 60.51Da(g), 60.51Da(h), 60.51Da(j), 60.51Da(k), 60.51Da(k), 60.51Da(h), and 60.50Da(h)(1).

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

L. Additional Monitoring, Recordkeeping, and Reporting Requirements

1. Monitoring of Flow

a. The Permittee shall install, certify, maintain, and operate continuous flow monitoring systems, and record the output of the systems, for measuring

the flow of exhaust gases discharged to the atmosphere from Unit 3 and Unit 4.

[40 CFR 60.49Da(l), 40 CFR 75.10(a) and A.A.C. R18-2-331.A.3.c]

b. Data from continuous flow monitoring systems certified according to the requirements of 40 CFR 75.20, meeting the applicable quality control and quality assurance requirements of 40 CFR 75.21, and validated according to 40 CFR 75.23, may be used to satisfy the requirements of 40 CFR 60.49Da(l).

[40 CFR 60.49Da(m)]

2. Monitoring for CO_2

The Permittee shall install, calibrate, maintain, and operate a continuous monitoring system, and record the output of the system, for measuring carbon dioxide emissions discharged to the atmosphere from Unit 3 and Unit 4.

[40 CFR 75.10(a) and A.A.C. R18-2-331.A.3.c]

3. Monitoring for Diluent Concentration

a. The Permittee shall install, calibrate, maintain, and operate continuous monitoring systems, and record the output of the systems, for measuring diluent carbon dioxide or oxygen concentration in the exhaust gas streams from Unit 3 and Unit 4. The monitoring systems shall measure carbon dioxide or oxygen concentration at both the inlet and outlet of the sulfur dioxide control device unless the Permittee elects to monitor for inlet SO2 using the alternative method described in III.D.3.a.(2).

[40 CFR 60.49Da(d) and A.A.C. R18-2-331.A.3.c]

b. The carbon dioxide continuous monitoring system required by Specific Condition III.L.2. of Attachment "B" may be used to satisfy the requirement for monitoring of diluent concentration at the outlet of the sulfur dioxide control device, provided that it meets the applicable siting requirements of 40 CFR Part 60, Appendix B.

[40 CFR 60.49Da(d)]

4. Monitoring of Electrical Output

The Permittee shall install, calibrate, maintain, and operate wattmeters, shall utilize the wattmeters to measure the gross electrical output in megawatt-hours from Unit 3 and Unit 4 on a continuous basis, and shall record the output of the wattmeters.

[40 CFR 60.49Da(k) and A.A.C. R18-2-331.A.3.c]

5. Measurement of Heat Input

The Permittee shall determine and record the heat input to Unit 3 and Unit 4 for every hour or part of an hour any fuel is combusted following the procedures in 40 CFR Part 75, Appendix F.

[40 CFR 60.49Da(d) and 40 CFR 75.10(a)]

6. NSPS Requirements for Continuous Monitoring Systems

The continuous monitoring systems for exhaust gas flow as required by Specific Condition III.L.1. (except as provided by Specific Condition III.L.1.b.), diluent concentration as required by Specific Condition III.L.3. shall meet the following requirements:

a. Calibration requirements at 40 CFR 60.13(d)

b. Operational requirements at 40 CFR 60.13(e)

c. Performance Specifications at 40 CFR Part 60, Appendix B

d. Quality Assurance Procedures at 40 CFR Part 60, Appendix F

7. Acid Rain Program Requirements for Continuous Monitoring Systems

The continuous monitoring systems for exhaust gas flow as required by Specific Condition III.L.1. and carbon dioxide emissions as required by Specific Condition III.L.2. shall meet all applicable requirements at 40 CFR Part 75. This shall include, but shall not be limited to, the following requirements:

a. 40 CFR Part 75, Appendix A, “Specification and Test Procedures.”

b. 40 CFR Part 75, Appendix B, “Quality Assurance and Quality Control Procedure.”

c. Equipment performance requirements at 40 CFR 75.10(b).

d. Hourly operating requirements at 40 CFR 75.10(d).

e. Data reduction requirements at 40 CFR 75.10(d)(1).

f. Missing data substitution requirements at 40 CFR 75.10(d)(3) and 40 CFR Part 75, Subpart D.

g. Certification and recertification requirements at 40 CFR 75.20.

8. The Permittee shall comply with all applicable recordkeeping and reporting requirements of 40 CFR Part 75, Subparts F and G, respectively.

9. Permit Shield

Compliance with this Section shall be deemed compliance with 60.49a(1), 60.49a(m), 60.49a(d), and 60.49a(k).

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

IV. Unit 1, Unit 2, Unit 3 and Unit 4 (P1, P2, P3, and P4)(Combined Limits)

A. Applicability

This Section applies to Units 1,2, 3, and 4 as described in Section I.B. "Definitions" of Attachment B of this permit and Attachment C of this permit.

B. Sulfur Dioxide (SO_2)

1. Emission Limitations/Standards

[A.A.C. R18-2-406.H, 40 CFR 70.8(c)(4)]

a. The Permittee shall not cause to be discharged into the atmosphere from the stacks of Unit 1, Unit 2, Unit 3, and Unit 4, in total, any gases which contain sulfur dioxide in excess of 8,448 lbs per hour. Compliance with this emission limit shall be determined on a rolling 3-hour average basis.

b. Total emissions of sulfur dioxide from electric generating units at SGS shall not exceed the following amounts:

(1) 7,550.0 tons per year commencing December 31, 2006. Prior to December 31, 2006, the limit shall apply, on Permittee's election to subject Units 1 and 2 to that limit. The limit shall expire when the three-unit cap becomes effective as outlined in (2) below.

(2) 9,205.0 tons per year, after Unit 3 or Unit 4 becomes operational. The limit shall expire when the four-unit cap becomes effective as outlined in (3) below.

(3) 10,800.0 tons per year, after both Unit 3 and Unit 4 become operational.

(4) If Unit 4 has not begun operation by December 31, 2009, the Units 1,2,3, and 4 emission cap (the "Four-Unit Cap") shall be 10,662.0 tons per year after both Unit 3 and Unit 4 become operational.

c. Compliance with the emission limit in paragraph b. above shall be determined on both a calendar-year sum and a 12-month rolling sum basis.

d. If different emission limits apply to a 12-month or calendar period pursuant to paragraph b. above, the limit for that period shall consist of the sum of each limit prorated to reflect the number of days that the limit was in effect during the period.

2. Monitoring/Recordkeeping/Reporting Requirements

a. The Permittee shall use the following procedures to demonstrate compliance with the sulfur dioxide emission limitation in Specific Condition IV.B.1.a. of Attachment "B":

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

(1) The Permittee shall use the data from the continuous sulfur dioxide emission monitoring systems for Unit 1 and Unit 2 as required by Specific Condition II.D.3. of Attachment "B", the continuous flow monitoring systems for Unit 1 and Unit 2 as required by 40 CFR Part 75, and the flow monitoring systems and continuous sulfur dioxide emission monitoring systems for Unit 3 and Unit 4 as required by Specific Conditions III.L.1. and III.D.3.a., respectively, of Attachment "B".

(2) For each one-hour period, the Permittee shall record the hourly mass emissions (in lbs) for each steam generating unit that operated during the hour.

(3) For each one-hour period, the Permittee shall calculate and record the three-hour average mass emission rate for each steam generating unit that operated during the hour. The three-hour average mass emission rate shall be calculated as the sum of the mass emissions for the subject hour, plus the mass emissions for the two preceding hours, divided by three. The three-hour average mass emission rate shall be expressed in lbs per hour.

(4) For each one-hour period, the Permittee shall calculate and record the combined three-hour average mass emission rate for Unit 1, Unit 2, Unit 3, and Unit 4. The combined three-hour average mass emission rate shall be calculated as the sum of the three-hour average mass emission rates for all steam generating units that operated during the three-hour period. The combined three-hour average mass emission rate shall be expressed in lbs per hour.

(5) Each one-hour period for which the combined three-hour average mass emission rate calculated in Specific Condition IV.B.2.a.(4) exceeds the sulfur dioxide emission limitation in Specific Condition IV.B.1.a. of Attachment "B" shall constitute a period of excess emissions.

b. The Permittee shall use the following procedures to demonstrate compliance with the sulfur dioxide emission limitations in Specific Conditions IV.B.1.b. of Attachment "B".

[A.A.C. R18-2-304.E.9]

(1) For each calendar month, the Permittee shall calculate and record the monthly mass emissions for each steam generating unit that operated during the calendar month. The monthly mass emissions shall be calculated as the sum of all hourly mass emissions recorded during the month pursuant to Specific Condition IV.B.2.a.(2) of Attachment "B" and shall be expressed in tons.

(2) For each calendar month, the Permittee shall calculate and record the combined monthly mass emissions for Unit 1, Unit 2, Unit 3, and Unit 4. The combined monthly mass emissions shall be calculated as the sum of the monthly mass emissions for all steam generating units that operated during the calendar month.

The combined monthly mass emissions shall be expressed in tons.

(3) For each calendar month, the Permittee shall calculate and record the combined annual mass emissions for Unit 1, Unit 2, Unit 3, and Unit 4. The combined annual mass emissions shall be calculated as the sum of the combined monthly mass emissions for the subject month, plus the combined monthly mass emissions for the eleven preceding months. The combined annual mass emissions shall be expressed in tons.

(4) The data recorded under Specific Condition III.B.2.b.(1)-(3) of Attachment "B" shall be available for inspection by the fifth working day of the month following the month for which the calculation is being made.

(5) For each continuous monitoring system for sulfur dioxide emissions, the Permittee shall submit a Quality Assurance/Quality Control Plan to the Department and the Administrator at least 30 days prior to the start-up of the monitoring system. Each Plan shall include procedures for dealing with data gaps using the procedures contained in 40 CFR Part 75, Subpart D. When approved by the Department, this plan shall be implemented.

(6) Combined mass emissions that exceed the rolling 12-month sulfur dioxide emission limitation in Specific Condition IV.B.1.b. of Attachment "B" shall constitute a violation for each day of the preceding month for each electric generating unit in operation on that day.

(7) Combined mass emissions that exceed the calendar-year sulfur dioxide emission limitation in Specific Condition IV.B.1.b. of Attachment "B" shall constitute a violation for each day of the preceding calendar year for each electric generating unit in operation on that day.

(8) A violation under paragraphs VI.B.2.b.(6) and (7) that occurs on the same day at the same unit shall count as a single violation.

C. Nitrogen Oxides (NOx)

1. Emission Limitations/Standards

[A.A.C. R18-2-406.H, 40 CFR 70.8(c)(4)]

a. Total emission of nitrogen oxides from electric generating units at SGS shall not exceed the following amounts:

(1) 6,300.0 tons per year commencing December 31, 2006. Prior to December 31, 2006 the limit shall apply, on Permittee's election to subject Units 1 and 2 to that limit. The limit shall expire when the three-unit cap becomes effective as outlined in (2) below.

(2) 7,947.0 tons per year, after Unit 3 or 4 becomes operational. The limit shall expire when the four-unit cap becomes effective as outlined in (3) below.

(3) 9,600.0 tons per year after both Unit 3 and Unit 4 become operational.

(4) If Unit 4 has not begun operation by December 31, 2009, the Units 1,2,3, and 4 emission cap (the "Four-Unit Cap") shall be 8,940.0 tons per year after both Unit 3 and Unit 4 become operational.

b. Compliance with the emission limit in paragraph a. above shall be determined on both a calendar-year sum and a 12-month rolling basis.

c. If different emission limits apply to a 12-month or calendar period pursuant to paragraph b. above, the limit for that period shall consist of the sum of each limit prorated to reflect the number of days that the limit was in effect during the period.

2. Monitoring/Recordkeeping/Reporting Requirements

The Permittee shall use the following procedures to demonstrate compliance with the nitrogen oxides emission limitation in Specific Condition IV.C.1. of Attachment "B":

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

a. The Permittee shall use the data from the continuous nitrogen oxides emission monitoring systems for Unit 1 and Unit 2 as required by Specific Condition II.E.2. of Attachment "B", the continuous flow monitoring systems for Unit 1 and Unit 2 as required by 40 CFR Part 75,

and the flow monitoring systems and continuous nitrogen oxides emission monitoring systems for Unit 3 and Unit 4 as required by Specific Conditions III.L.1. and III.E.3., respectively, of Attachment "B".

b. For each calendar month, the Permittee shall calculate and record the monthly mass emissions for each steam generating unit that operated during the calendar month. The monthly mass emissions shall be expressed in tons.

c. For each calendar month, the Permittee shall calculate and record the combined monthly mass emissions for Unit 1, Unit 2, Unit 3, and Unit 4. The combined monthly mass emissions shall be calculated as the sum of the monthly mass emissions for all steam generating units that operated during the calendar month. The combined monthly mass emissions shall be expressed in tons.

d. For each calendar month, the Permittee shall calculate and record the combined annual mass emissions for Unit 1, Unit 2, Unit 3, and Unit 4. The combined annual mass emissions shall be calculated as the sum of the combined monthly mass emissions for the subject month, plus the combined monthly mass emissions for the eleven preceding months. The combined annual mass emissions shall be expressed in tons.

e. The data recorded under Specific Conditions IV.C.2.b through IV.C.2.d of Attachment "B" shall be available for inspection by the fifth working day of the month following the month for which the calculation is being made.

f. For each continuous monitoring system for nitrogen oxides emissions, the Permittee shall submit a Quality Assurance/Quality Control Plan to the Department at least 30 days prior to the start-up of the monitoring system. Each Plan shall include procedures for dealing with data gaps using the procedures contained in 40 CFR Part 75, Subpart D. When approved by the Department, this plan shall be implemented.

g. Combined mass emissions that exceed the rolling 12-month nitrogen oxides emission limitation in Specific Condition IV.C.1. of Attachment "B" shall constitute a violation for each day of the preceding month for each electric generating unit in operation on that day.

h. Combined mass emissions that exceed the calendar-year nitrogen oxides emission limitation in Specific Condition IV.C.1. of Attachment "B"

shall constitute a violation for each day of the preceding calendar year for each electric generating unit in operation on that day.

i. A violation under paragraphs g and h that occurs on the same day at the same unit shall count as a single violation.

D. Sulfuric Acid Mist

1. Emission Limitations/Standards

Pursuant to R18-2-306.02, The Permittee shall not cause to be discharged into the atmosphere from the stacks of Unit 1, Unit 2, Unit 3, and Unit 4, in total, any gases which contain sulfuric acid mist in excess of 211.0 tons per year. Compliance with this emission cap shall be determined on a 12-month rolling sum basis. This emission cap shall not become effective until initial startup of either Unit 3 or Unit 4, whichever occurs first.

[A.A.C. R18-2-306.02]

2. Monitoring/Recordkeeping/Reporting Requirements

a. Compliance Determination Requirements for Sulfuric Acid Mist Emission Cap

The Permittee shall use the following procedures to demonstrate compliance with the sulfuric acid mist emission limitation in Specific Condition IV.D.1 of Attachment "B":

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

(1) The requirements of Specific Condition IV.D.2 shall apply to Unit 1, Unit 2, Unit 3, and Unit 4.

(2) For each calendar month, the Permittee shall calculate and record the monthly mass emissions of sulfuric acid mist for each steam generating unit that operated during the calendar month. The monthly mass emissions of sulfuric acid mist for each unit shall be calculated as the product of the sulfur dioxide monthly mass emissions for that unit as calculated under Specific Condition IV.B.2.b. of Attachment "B," and the sulfur compound emission ratio for that unit. The monthly mass emissions of sulfuric acid mist for each steam generating unit shall be expressed in tons.

(a) The sulfur compound emission ratio for Unit 1 and Unit 2 is 0.01127.

(b) The sulfur compound emission ratios for Unit 3 and Unit 4 shall be calculated in accordance with Specific Condition III.J.1.d. of Attachment "B".

(3) For each calendar month, the Permittee shall calculate and record the combined monthly mass emissions of sulfuric acid mist for Unit 1, Unit 2, Unit 3, and Unit 4. The combined monthly mass emissions of sulfuric acid shall be calculated as the sum of the monthly mass emissions of sulfuric acid mist for all steam generating units that operated during the calendar month. The combined monthly mass emissions of sulfuric acid mist shall be expressed in tons.

(4) For each calendar month, the Permittee shall calculate and record the combined annual mass emissions of sulfuric acid mist for Unit 1, Unit 2, Unit 3, and Unit 4. The combined annual mass emissions of sulfuric acid mist shall be calculated as the sum of the combined monthly mass emissions of sulfuric acid mist for the subject month, plus the combined monthly mass emissions of sulfuric acid mist for the eleven preceding months. The combined annual mass emissions of sulfuric acid mist shall be expressed in tons.

(5) The data recorded under Specific Conditions IV.D.2.a.(1) through IV.D.2.a.(4) of Attachment "B" shall be available for inspection by the fifth working day of the month following the month for which the calculation is being made.

(6) Each calendar month for which the combined annual mass emissions of sulfuric acid mist exceeds the sulfuric acid mist emission limitation in Specific Condition IV.D.1. of Attachment "B" shall constitute a period of excess emissions.

V. AUXILIARY BOILER (P5)

A. Applicability

This Section applies to the Auxiliary Boiler as described in Attachment C of this permit.

B. Operating Limitations

1. Fuel Limitations and Operational Limitations

a. The Permittee shall burn only No. 2 diesel fuel in the auxiliary boiler.

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

b. The Permittee shall not use high sulfur oil (fuel sulfur content ≥ 0.9% by weight) as a fuel unless the Permittee demonstrates to the satisfaction of the Director both 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 insure that the sulfur dioxide ambient air quality standards set forth in A.A.C. R18-2-202 will not be violated.

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

2. Monitoring/Recordkeeping/Reporting Requirements

a. The Permittee shall record the dates and hours of operation of the auxiliary boiler.

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

b. The Permittee shall submit the dates and hours of operation of the auxiliary boiler for the period of each compliance certification.

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

3. Permit Shield

Compliance with this Section shall be deemed compliance with A.A.C.R-18-724.G.

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

C. Particulate Matter (PM/PM_{10}) and Opacity

1. Emission Limitations/Standards

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

The Permittee shall not cause, allow or permit to be emitted into the atmosphere from the auxiliary boiler, smoke which exceeds 15 percent opacity.

b. Particulate Matter

The Permittee shall not cause, allow or permit the emission of particulate matter, caused by the combustion of fuel, from the auxiliary boiler in excess of the amount calculated by the following equation:

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

$E = 1.02\ Q^{0.769}$

Where:

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

Q = the heat input in million Btu per hour.

2. Monitoring/Recordkeeping/Reporting Requirements

a. Visible Emissions

(1) For every 120 hours of continuous operation, a certified EPA Reference Method 9 observer shall conduct a survey of visible emissions emanating from the stacks of the auxiliary boiler. If the opacity of the emissions observed appears to exceed the standard, the observer shall conduct a certified EPA Reference Method 9 observation. The Permittee shall keep records of the initial survey and any EPA Reference Method 9 observations performed. These records shall include the emission point observed, location of observer, name of observer, date and time of observation, and the results of the observation. If the observation shows a Method 9 opacity reading in excess of 15%, the Permittee shall initiate appropriate corrective action to reduce the opacity below 15%. The Permittee shall keep a record of the corrective action performed.

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

(2) All opacity readings will be observed in accordance with EPA Reference Method 9. The Permittee shall log in ink or in an electronic format and maintain a record of the opacity readings from above and the number of hours fuel oil is burned

continuously.

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

(3) The Permittee shall report all six-minute periods in which the opacity of any plume or effluent exceeds 15 percent from the auxiliary boiler.

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

b. Particulate Matter [A.A.C. R18-2-306.A.4]

The Permittee shall keep on record, along with the fuel firing rate, the contractual agreement with the liquid fuel vendor containing the specifications of the liquid fuel being fired for the following parameters:

(1) The higher heating value

(2) The ash content

3. Permit Shield

Compliance with this Section shall be deemed compliance with A.A.C. R-18-724.C.1 and 724.J.

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

D. Sulfur Dioxide (SO_2)

1. Emission Limitations/Standards

The Permittee shall not cause, allow, or permit the emission of more than 1.0 pounds of sulfur dioxide per million Btu heat input.

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

2. Monitoring/Recordkeeping/Reporting Requirements [A.A.C.R18-2-306.A.4]

a. The Permittee shall keep records of fuel supplier contractual agreement including the following information:

(1) The name of the oil supplier;

(2) The sulfur content and heating value of the oil from which the shipment came; and

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

b. The Permittee shall maintain records of all emissions calculations performed for any change in a.(2) above according to the following equation:

SO_2 (lb/MMBtu)

= {2.0 x [Weight percent of sulfur/100] x [Density (lb/gal)] [Heating value (Btu/gal)] x [1 MMBtu/1,000,000 Btu]}

3. Permit Shield

Compliance with this Section shall be deemed compliance with A.A.C.R-18-2-724.E.

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

VI. COOLING TOWERS 1 AND 2

A. Applicability

This Section applies to Cooling Towers 1 and 2 as described in Section I.D. "Definitions" of Attachment B of this permit and Attachment C of this permit.

B. Operating Limitations

1. Gaseous or Odorous Materials

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

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

b. 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]

2. Flow Rate Limitation

In addition to the limits set forth above, permittee shall comply with the following limit on startup of either Unit 3 or Unit 4

a. Permittee shall not cause, allow or permit the circulating water flow rate in Cooling Tower 1 or Cooling Tower 2 to exceed 176,000 gallons per minute, total for the thirteen cells in each tower.

[A.A.C. R18-2-406.A.4 and A.A.C.R18-2-306.A.2.]

3. Permit Shield

Compliance with this Section shall be deemed compliance with A.A.C.R-18-730.D

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

C. Particulate Matter (PM/PM_{10}) and Opacity

1. Emission Limitations/Standards

a. Particulate Matter

(1) The Permittee shall not discharge particulate matter into the atmosphere in any one hour from any cooling tower in total quantities in excess of the amounts calculated by the following equation:

[A.A.C. R18-2-730.A.1 and B.]

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

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.

(2) In addition to the limits set forth in VI.C.1.a.(1), permittee shall comply with the following limit on startup of either Unit 3 or Unit 4:

(a) Permittee shall not discharge into the atmosphere from Cooling Tower 1 or Cooling Tower 2 any gases which contain particulate matter in excess of 108.4 lbs per hour, total for the thirteen cells in each tower.

[A.A.C. R18-2-406.A.4]

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

The Permittee shall not cause, allow or permit to be emitted into the atmosphere from Cooling Towers 1 and 2 any visible emissions in excess of 40 percent opacity until April 23, 2006, after which, the opacity of any plume or effluent shall not be greater than 20 percent opacity measured in accordance with EPA Reference Method 9.

2. Air Pollution Control Requirements

<u>The Permittee shall comply with the following requirement on startup of either Unit 3 or Unit 4:</u>

The Permittee shall equip each of the cooling towers with drift eliminators designed for a total liquid drift not to exceed 0.005 percent of the circulating water flow rate. The Permittee shall not cause, allow or permit the cooling towers to be operated without the drift eliminators properly installed, maintained, and operated.

[A.A.C. R18-2-331.A.3.d-e, R18-2-406.A.4]

3. Monitoring/Recordkeeping/Reporting Requirements

a. Particulate Matter

The Permittee shall comply with the following requirements:

(1) The Permittee shall maintain readily available records of the design and vendor-guaranteed maximum total liquid drift of Cooling Tower 1 and Cooling Tower 2.

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

(2) The Permittee shall maintain readily available records of the design maximum pumping capacity of each of the water pumps serving Cooling Tower 1 and Cooling Tower 2.

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

(3) The Permittee shall measure and record twice per month the Total Dissolved Solids (TDS) of the circulating water used in Cooling Tower 1 and Cooling Tower 2. Solids measurement shall be performed using EPA Method 160.3 (in *Methods for the Chemical Analysis of Water and Wastes*. EPA-600/4-79-020. U.S. EPA, Environmental Monitoring and Systems Laboratory, Cincinnati, Ohio) or equivalent method as approved by the Director.

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

(4) The Permittee shall calculate twice per month the particulate matter emission rate from Cooling Tower 1 and Cooling Tower 2. Each cooling tower emission rate calculation shall be calculated using the vendor-guaranteed maximum total liquid drift for the cooling tower and drift eliminators, the design maximum pumping capacity for the cooling tower, and the measured TDS of the circulating water in the cooling tower. A calculated particulate matter emission rate exceeding the limitation in paragraph VI.C.1.a.(2) of Attachment "B" shall constitute a period of excess emissions.

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

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

(1) A certified Method 9 observer shall conduct a weekly visual survey of visible emissions from the cooling towers when it is in

operation. Permittee shall record the name of the observer, the date 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 in Condition VI.C.1.b. of Attachment "B", the observer shall, if possible, take a six-minute Method 9 observation of the plume.

(3) If the six-minute opacity of the plume exceeds the opacity standard in Condition VI.C.1.b. of Attachment "B", Permittee shall do the following:

(a) Adjust or repair the controls or equipment to reduce opacity to below the opacity standard in condition VI.C.1.b. of Attachment "B"; and

(b) Report it as an excess emission in accordance with Condition XII.A of Attachment "A" of this permit.

(4) If the six-minute opacity of the plume is less than the opacity standard in Condition VI.C.1.b. of Attachment "B", the observer shall make a record of the following:

(a) Date and time of the test; and

(b) The results of the Method 9 observation.

. Permit Shield

Compliance with this Section shall be deemed compliance with A.A.C.R-18-2-730.A.1. and R18-2-702.B.

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

VII. COOLING TOWERS 3 AND 4

A. Applicability

This Section applies to Cooling Towers 3 and 4 in Section I.D. "Definitions" of Attachment B of this permit and Attachment C of this permit.

B. Operating Limitations

1. Equipment Standards

Permittee shall not cause, allow or permit the total circulating water flow rate in Cooling Tower 3 or Cooling Tower 4 to exceed 200,000 gallons per minute.

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

2. Gaseous or Odorous Materials

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

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

b. 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]

3. Permit Shield

Compliance with this Section shall be deemed compliance with A.A.C.R-18-2-730.G and 730.D.

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

C. Particulate Matter (PM/PM_{10}) and Opacity

1. Emission Limitations/Standards

a. Particulate Matter

(1) Permittee shall not discharge into the atmosphere from Cooling Tower 3 or Cooling Tower 4 any gases which contain particulate matter in excess of 12.32 lbs per hour, total for each tower.

[A.A.C. R18-2-406.A.4]

(2) The Permittee shall not discharge particulate matter into the atmosphere in any one hour from any cooling tower in total quantities in excess of the amounts calculated by the following equation:

[A.A.C. R18-2-730.A.1 and B]

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

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.

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

The Permittee shall not cause, allow or permit to be emitted into the atmosphere from Cooling Towers 3 and 4 any visible emissions in excess of 40 percent opacity until April 23, 2006, after which, the opacity of any plume or effluent shall not be greater than 20 percent measured in accordance with EPA Reference Method 9.

2. Air Pollution Control Requirements

The Permittee shall equip each of the cooling towers with high-efficiency drift eliminators guaranteed by the manufacturer for a total liquid drift not to exceed 0.0005 percent of the circulating water flow rate. The Permittee shall not cause, allow or permit the cooling towers to be operated without the high-efficiency drift eliminators properly installed, maintained, and operated.

[A.A.C. R18-2-331.A.3.e., R18-2-406.A.4]

3. Monitoring/Recordkeeping/Reporting Requirements

a. Particulate Matter

(1) Permittee shall maintain readily available records of the design and vendor-guaranteed maximum total liquid drift of Cooling Tower 3 and Cooling Tower 4.

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

(2) Permittee shall maintain readily available records of the design maximum pumping capacity of each of the water pumps serving Cooling Tower 3 and Cooling Tower 4.

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

(3) Permittee shall measure and record twice per month the Total Dissolved Solids (TDS) of the circulating water used in Cooling Tower 3 and Cooling Tower 4. Solids measurement shall be performed using EPA Method 160.3 (in *Methods for the Chemical Analysis of Water and Wastes*. EPA-600/4-79-020. U.S. EPA, Environmental Monitoring and Systems Laboratory, Cincinnati, Ohio).

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

(4) The Permittee shall calculate twice per month the particulate matter emission rate from Cooling Tower 3 and Cooling Tower 4. Each cooling tower emission rate calculation shall be calculated using the vendor-guaranteed maximum total liquid drift for the cooling tower and drift eliminators, the design maximum pumping capacity for the cooling tower, and the measured TDS of the circulating water in the cooling tower. A calculated particulate matter emission rate exceeding the limitation in paragraph VII.C.1.a.(1). of Attachment "B" shall constitute a period of excess emissions.

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

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

(1) A certified Method 9 observer shall conduct a weekly visual survey of visible emissions from the cooling towers when they are in operation. Permittee shall record the name of the observer, the date 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 in Condition VII.C.1.b. of Attachment "B", the observer shall, if possible, take a six-minute Method 9 observation of the plume.

(3) If the six-minute opacity of the plume exceeds the opacity standard in Condition VII.C.1.b. of Attachment "B", Permittee shall do the following:

(a) Adjust or repair the controls or equipment to reduce opacity to below the opacity standard in Condition VII.C.1.b. of Attachment "B"; and

(b) Report it as an excess emission in accordance with Condition XII.A of Attachment "A" of this permit.

(4) If the six-minute opacity of the plume is less than the opacity standard in Condition VII.C.1.b. of Attachment "B", the observer shall make a record of the following:

(a) Date and time of the test; and

(b) The results of the Method 9 observation.

4. Permit Shield

Compliance with this Section shall be deemed compliance with A.A.C.R-18-2-730.A.1. and A.A.C.R18-2-702.B.

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

VIII. COAL PREPARATION PLANT

A. Applicability

This Section applies to the Coal Preparation Plant as described in Attachment C of this permit.

B. Particulate Matter (PM/PM_{10}) and Opacity

1. Emission Limitations/Standards

a. Opacity

(1) The Permittee shall not cause to be discharged into the atmosphere from any coal processing and conveying equipment, coal storage system (except for open storage piles), or coal transfer and loading system processing coal, gases which exhibit 20 percent opacity or greater.

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

(2) On and after the date on which the performance test required to be conducted under Specific Condition VIII.B.4.a(2) of Attachment "B" is completed, the Permittee shall not cause to be discharged into the atmosphere from any coal preparation plant fabric filter baghouse installed as part of the Unit 3 and modernization any gases which exhibit 10 percent opacity or greater. This emission standard shall not apply during periods of startup, shutdown, or malfunction.

[40 CFR 60.252(c),A.A.C. R18-2-331.A.3.f, and A.A.C.R18-2-406.A.4]

(3) On and after the date on which the performance test required to be conducted under Specific Condition VIII.B.4.a(2) of Attachment "B" is completed, the Permittee shall not cause to be discharged into the atmosphere from any coal preparation plant fabric filter baghouse any gases which exhibit 20 percent opacity or greater. This emission standard shall not apply during periods of startup, shutdown, or malfunction.

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

(4) The Permittee shall not cause to be discharged into the atmosphere from any coal storage pile emissions which exhibit 40 percent opacity or greater.

[A.A.C. R18-2-331.A.3.f, A.A.C. R18-2-406.A.4 , and A.A.C. R18-2-612]

b. Particulate Matter

On and after the date on which the performance test required to be conducted under Specific Condition VIII.B.4.b. of Attachment "B" is completed, the Permittee shall not cause to be discharged into the atmosphere from any coal preparation plant fabric filter baghouse installed as part of the Unit 3 and 4 modernization, any gases containing particulate matter in excess of 0.01 grains per dry standard cubic foot.

[A.A.C. R18-2-406.A.4]

2. Air Pollution Control Requirements

a. At all times when the system is in operation, including periods of startup, shutdown, and malfunction as defined in Conditions No. I.D.9, 14, and 16 of Attachment "B" of this permit., the Permittee shall, to the extent practicable, maintain and operate baghouses used to capture particulate matter emissions associated with coal preparation and mixing in a manner consistent with good air pollution control practices.

[40 CFR 60.11(d) and A.A.C. R18-2-331.A.3.e]

b. Particulate matter shall be controlled with either water spray, water spray with surfactant, enclosure with water spray, or enclosure with baghouses at the following locations:

(1) Rail unloading area;

(2) Discharge hoppers;

(3) Discharge point from the conveyor carrying coal from the feeder;

(4) Active storage pile;

(5) Reserve storage pile;

(6) Discharge from the reclaim hoppers;

(7) Crusher structure; and

(8) Coal storage silos.

[Condition X.A and Approval to Construct of December 21, 1977 and A.A.C. R18-2-331.A.3.e]

c. The Permittee shall operate and maintain at all times a covered conveyor belt transfer system.

[A.A.C. R18-2-306.A.2 and R18-2-331.A.3.e]

d. On and after the date on which the performance test required to be conducted under Specific Condition VIII.B.4.a.(2) of Attachment "B" is completed, the requirements of Specific Condition VIII.B.2.b. of Attachment "B" shall be superseded by the following requirements:

[A.A.C. R18-2-331.A.3.e., R18-2-406.A.4]

(1) The Permittee shall utilize water spray with surfactant as necessary to control particulate matter emissions at the emergency coal storage pile(s).

(2) The Permittee shall utilize enclosures and water spray with surfactant as necessary to control particulate matter emissions at the rail unloading area and the emergency reclaim hopper.

(3) The Permittee shall utilize enclosures and fabric filter baghouses to control particulate matter emissions at all coal handling locations other than the active coal storage pile(s) and the locations listed in Specific Conditions VIII.B.2.d.(1)-(2) above. The locations controlled with enclosures and fabric filter baghouses shall include the following:

(a) Transfer towers;

(b) Crusher towers;

(c) Discharge hoppers; and

(d) Coal storage silos.

3. Monitoring/Recordkeeping/Reporting Requirements

a. Opacity Monitoring [A.A.C. R18-2-306.A.3.c]

(1) A certified Method 9 observer shall conduct a weekly visual survey of visible emissions from the coal preparation plant when it is in operation. This weekly survey shall include observation of all exposed transfer points, enclosed transfer points, the coal storage system, the coal storage pile and the baghouses in the coal handling system. 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 applicable opacity standard in Specific Condition VIII.B.1.a. of Attachment "B", the observer shall if possible take a six-minute Method 9 observation of the plume.

(3) If the six-minute opacity of the plume exceeds the applicable opacity standard in Specific Condition VIII.B.1.a. of Attachment "B", the Permittee shall do the following:

(a) Adjust or repair the controls or equipment to reduce opacity to below the applicable opacity standard in Specific Condition VIII.B.1.a. of Attachment "B"; and

(b) 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 applicable opacity standard in Specific Condition VIII.B.1.a. of Attachment "B", the observer shall make a record of the following:

(a) Date and time of the test; and

(b) The results of the Method 9 observation.

4. Testing

a. Opacity

(1) Within 180 days after the issuance of this permit, the Permittee shall conduct a six minute Method 9 observation to determine compliance with the opacity standards in Conditions VIII.B.1.a(1), VIII.B.1.a(3), and VIII.B.1.a(4) of Attachment "B" of this permit.

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

(2) Within 180 days of startup of the modified coal preparation plant, the Permittee shall conduct a performance test to determine compliance with the opacity standards in Conditions VIII.B.1.a(1), (2), (3), and (4) of Attachment "B". The Permittee shall conduct the Method 9 performance testing as follows:

(a) The Permittee shall conduct a three hour Method 9 test in accordance with 40 CFR 60.11 to determine compliance with the opacity standards in Condition VIII.B.1.a(1), VIII.B.1.a(2), and VIII.B.1.a(3) of Attachment "B".

[40 CFR 60.11]

(b) The Permittee shall conduct a six minute Method 9 observation to determine compliance with Condition VIII.B.1.a(4).

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

b. Particulate Matter from baghouses associated with Unit 3 and 4 modernization

1. Within 180 days after startup of the modified coal preparation plant, the Permittee shall conduct an initial performance test to determine compliance with the particulate matter standard in Specific Condition VIII.B.1.b of Attachment "B". This

performance test shall be performed on at least three representative baghouses installed as part of the Units 3 and 4 modernizations.

[A.A.C. R18-2-406.A.4, R18-2-306.A.3.c]

2. For the baghouses not covered by Condition 1 above, if an opacity exceedance is detected during the course of the weekly visible emissions survey and the Permittee is unable to identify adjustments or repairs necessary to address the opacity violation within 72 hours, the Permittee shall conduct a performance test for those baghouses within 180 days to show compliance with the PM limit identified in Specific Condition VIII.B.1.b. of Attachment "B".

[A.A.C. R18-2-406.A.4, R18-2-306.A.3.c]

5. Permit Shield

Compliance with this Section shall be deemed compliance with 40 CFR 60.252(c).

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

IX. LIME HANDLING – UNITS 1 AND 2

A. Applicability

This Section applies to Lime Handling as described in Attachment "C" of this permit.

B. Particulate Matter (PM/PM_{10}) and Opacity

1. Emission Limitations/Standards

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

(1) The Permittee shall not cause, allow or permit to be emitted into the atmosphere from any lime handling operation any visible emissions in excess of 40 percent opacity until April 23, 2006, after which, the opacity of any plume or effluent shall not be greater than 20 percent measured in accordance with EPA Reference Method 9.

b. Particulate Matter [A.A.C. R18-2-730.A.1 and B]

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

(1) For process sources having a process weight rate of 60,000 pounds per hour (30 tons per hour) or less, the maximum allowable emissions shall be determined 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) For process sources having a process weight rate greater than 60,000 pounds per hour (30 tons per hour), the maximum allowable emissions shall be determined 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.

2. Air Pollution Control Requirements

At all times when the system is in operation, the Permittee shall maintain and operate the enclosure system and baghouses used to capture particulate matter emissions associated with lime handling system in a manner consistent with good air pollution control practices.

[A.A.C. R18-2-306.A.2 and R18-2-331.A.3.e]

3. Monitoring, Recordkeeping, and Reporting Requirements

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

(1) A certified Method 9 observer shall conduct a weekly visual survey of visible emissions from the lime handling system when it is in operation. This weekly observation shall include observation of all exposed transfer points and each baghouse exhaust. 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 in Condition IX.B.1.a.(1) of Attachment "B", the observer shall if possible take a six-minute Method 9 observation of the plume.

(3) If the six-minute opacity of the plume exceeds the opacity standard in Condition IX.B.1.a.(1) of Attachment "B" the Permittee shall do the following:

(a) Adjust or repair the controls or equipment to reduce opacity to below the opacity standard in Condition IX.B.1.a.(1) of Attachment "B" ; and

(b) 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 opacity standard in Condition IX.B.1.a.(1) of Attachment "B" , the observer shall make a record of the following:

(a) Date and time of the test; and

(b) The results of the Method 9 observation.

b. Particulate Matter

(1) The Permittee shall maintain and operate the baghouses in accordance with Best Management Practices. These specifications shall be on file and shall be readily available for inspection by the Department.

(2) The Permittee shall maintain records of emissions related maintenance performed on the baghouses.

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

4. Permit Shield

Compliance with this Section shall be deemed compliance with A.A.C.R-18-2-730.A.1 and B, 610, and 702.B.1.

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

X. LIME HANDLING - UNITS 3 AND 4

A. Applicability

This Section applies to Lime Handling – Units 3 and 4 as described in Attachment "C" of this permit.

B. Particulate Matter (PM/PM_{10}) and Opacity

1. Emission Limitations/Standards

a. Opacity

(1) The Permittee shall not cause to be discharged into the atmosphere from any lime handling operation any visible emissions in excess of 40 percent opacity until April 23, 2006, after which, the opacity of any plume or effluent shall not be greater than 20 percent measured in accordance with EPA Reference Method 9.

[A.A.C. R18-2-331.A.3.f., R18-2-406.A.4, R18-2-702.B.]

(2) The Permittee shall not cause to be discharged into the atmosphere from any lime handling system fabric filter baghouse any visible emissions in excess of 10 percent opacity measured in accordance with EPA Reference Method 9. This emission standard shall not apply during periods of startup, shutdown, or malfunction.

[A.A.C. R18-2-331A.3.f., R18-2-406.A.4, R18-2-702.B.1]

b. Particulate Matter

(1) The Permittee shall not cause to be discharged into the atmosphere from any lime handling system fabric filter baghouse any gases containing particulate matter in excess of 0.01 grains per dry standard cubic foot.

[A.A.C. R18-2-406.A.4]

(2) The Permittee shall not cause, allow or permit the discharge of particulate matter into the atmosphere in any one hour from any lime handling operation in total quantities in excess of the amounts calculated by the following equations:

[A.A.C. R18-2-730.A.1 and B]

(a) For process sources having a process weight rate of 60,000 pounds per hour (30 tons per hour) or less, the maximum allowable emissions shall be determined 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.

(b) For process sources having a process weight rate greater than 60,000 pounds per hour (30 tons per hour), the maximum allowable emissions shall be determined 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.

2. Air Pollution Control Requirements

a. The Permittee shall utilize enclosures and fabric filter baghouses to control particulate matter emissions at all lime handling locations.

[A.A.C. R18-2-331.A.3.e. and R18-2-406.A.4]

b. At all times when the lime handling system is in operation, including periods of startup, shutdown, and malfunction as defined in Conditions No. I.D.9, 14, and 16 of Attachment "B" of this permit., the Permittee shall maintain and operate the associated enclosures and fabric filter baghouses in a manner consistent with good air pollution control practices.

[A.A.C. R18-2-331.A.3.e and R18-2-406.A.4]

3. Monitoring, Recordkeeping, and Reporting Requirements

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

(1) A certified Method 9 observer shall conduct a weekly visual survey of visible emissions from the lime handling system when it is in operation. This weekly survey shall include observation of all exposed transfer points and fabric filter baghouses in the lime handling system. 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 a lime handling system fabric filter baghouse that on an instantaneous basis appears to exceed 10 percent opacity, the observer shall if possible take a six-minute Method 9 observation of the plume.

(3) If the six-minute opacity of the plume from the lime handling system baghouse exceeds 10 percent, the Permittee shall do the

following:

(a) Adjust or repair the controls or equipment to reduce opacity to below 10 percent; and

(b) 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 from the lime handling system baghouse is less than 10 percent, the observer shall make a record of the following:

(a) Date and time of the test; and

(b) The results of the Method 9 observation.

(5) If the observer sees a plume from a lime handling system emission point other than a fabric filter baghouse that on an instantaneous basis appears to exceed the opacity standard in Condition X.B.1.a.(1) of Attachment "B", the observer shall if possible take a six-minute Method 9 observation of the plume.

(6) If the six-minute opacity of the plume from the lime handling system emission point exceeds the opacity standard in Condition X.B.1.a.(1) of Attachment "B", the Permittee shall do the following: (a) Adjust or repair the controls or equipment to reduce opacity to below the opacity standard in Condition X.B.1.a.(1) of Attachment "B"; and

(b) Report it as an excess emission in accordance with Section XII.A of Attachment "A" of this permit.

(7) If the six-minute opacity of the plume from the lime handling system emission point is less than the opacity standard in Condition X.B.1.a.(1) of Attachment "B", the observer shall make a record of the following:

(a) Date and time of the test; and

(b) The results of the Method 9 observation.

b. Particulate Matter

The Permittee shall maintain records of emissions related maintenance performed on the lime handling system fabric filter baghouses.

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

4. Permit Shield

Compliance with this Section shall be deemed compliance with A.A.C.R-18-2-730.A.1 and B, and 702.B.1.

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

XI. FLY ASH HANDLING - UNITS 1 AND 2

A. Applicability

This Section applies to Fly Ash Handling-Units 1 and 2 as described in Attachment "C" of this permit.

B. Particulate Matter (PM/PM_{10}) and Opacity

1. Emission Limitations/Standards

a. Opacity

The Permittee shall not cause, allow or permit to be emitted any emissions into the atmosphere from the fly ash handling operation in excess of 40 percent opacity until April 23, 2006, after which, the opacity of any plume or effluent shall not be greater than 20 percent measured in accordance with EPA Reference Method 9.

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

b. Particulate Matter [A.A.C. R18-2-730.A.1 and B]

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

(1) For process sources having a process weight rate of 60,000 pounds per hour (30 tons per hour) or less, the maximum allowable emissions shall be determined 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) For process sources having a process weight rate greater than 60,000 pounds per hour (30 tons per hour), the maximum allowable emissions shall be determined 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.

2. Air Pollution Control Requirements

a. Fly ash shall be collected from the baghouses hoppers, and transported to the ash handling system.

[A.A.C. R18-2-331.A.3.e and R18-2-306.A.2]

b. The emissions from dry fly ash unloading shall be ducted through a Dust Filter Module. This module shall be installed, maintained, and operated in accordance with manufacturer's specifications. These specifications shall be on file and shall be readily available for inspection by the Department.

[A.A.C. R18-2-331.A.3.e and R18-2-306.A.2]

c. The emission from the vent of the fly ash storage silos shall be ducted to the flue gas system before entering the baghouses

[A.A.C. R18-2-331.A.3.e and R18-2-306.A.2]

d. The Permittee shall process transport, load/unload, store, and dispose of the Irvington Generating Station (IGS) fly ash in compliance with the following:

(1) The Permittee shall install, operate, and maintain valves and piping at Units 1 and 2 fly ash storage silos necessary to provide for a sealed transfer of the IGS fly ash to the silos.

[A.A.C. R18-2-331.A.3.e]

(2) Upon receiving the IGS fly ash at the SGS facility and thereafter, the Permittee shall not cause, permit, or allow the ash haul road to be used by vehicular or non-vehicular traffic without the use of an effective oil and chip surface with appropriate load-bearing base as required to control dust emissions from the ash haul road.

[A.A.C. R18-2-331.A.3.e]

(3) Upon receiving the IGS fly ash at the SGS facility and thereafter, the Permittee shall not cause, permit, or allow the ash haul road to be used by vehicular or non-vehicular traffic unless the ash haul road has been watered within the most recent 24 hours. This requirement does not apply in the event that the ash haul road has received measurable precipitation within the most recent 24 hours.

[A.A.C. R18-2-331.A.3.e]

3. Monitoring, Recordkeeping, and Reporting Requirements

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

(1) A certified Method 9 observer shall conduct a weekly visual survey of visible emissions from the fly ash handling system when it is in operation. This weekly observation shall include observation of all exposed transfer points. 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 in Condition XI.B.1.a. of Attachment “B” , the observer shall if possible take a six-minute Method 9 observation of the plume.

(3) If the six-minute opacity of the plume exceeds the opacity standard in Condition XI.B.1.a. of Attachment "B" , the Permittee shall do the following:

(a) Adjust or repair the controls or equipment to reduce opacity to below the opacity standard in Condition XI.B.1.a. of Attachment "B"; and

(b) 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 opacity standard in Condition XI.B.1.a. of Attachment "B" , the observer shall make a record of the following:

(a) Date and time of the test; and

(b) The results of the Method 9 observation.

b. Dust Filter Module

The Permittee shall maintain records of emissions related maintenance performed on the Dust Filter Module.

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

4. Permit Shield

Compliance with this Section shall be deemed compliance with A.A.C.R-18-2-730.A.1 and B, 612, and 702.B.1.

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

XII. FLY ASH HANDLING - UNITS 3 AND 4

A. Applicability

This Section applies to Fly Ash Handling – Units 3 and 4 as described in Attachment "C" of this permit.

B. Emission Limits and Standards

1. Opacity

a. The Permittee shall not cause to be discharged into the atmosphere from

any fly ash handling operation any visible emissions in excess of 40 percent opacity until April 23, 2006, after which, the opacity of any plume or effluent shall not be greater than 20 percent opacity measured in accordance with EPA Reference Method 9.

[A.A.C. R18-2-331.A.3.f., R18-2-406.A.4, R18-2-702.B.]

b. The Permittee shall not cause to be discharged into the atmosphere from any fly ash handling system fabric filter baghouse any visible emissions in excess of 10 percent opacity measured in accordance with EPA Reference Method 9. This emission standard shall not apply during periods of startup, shutdown, or malfunction.

[A.A.C. R18-2-331.A.3.f., R18-2-406.A.4, R18-2-702.B.]

2. Particulate Matter

a. The Permittee shall not cause to be discharged into the atmosphere from any fly ash handling system fabric filter baghouse any gases containing particulate matter in excess of 0.01 grains per dry standard cubic foot.

[A.A.C. R18-2-406.A.4]

b. The Permittee shall not cause, allow or permit the discharge of particulate matter into the atmosphere in any one hour from any fly ash handling operation in total quantities in excess of the amounts calculated by the following equations:

[A.A.C. R18-2-730.A.1 and B]

(1) For process sources having a process weight rate of 60,000 pounds per hour (30 tons per hour) or less, the maximum allowable emissions shall be determined 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.

For process sources having a process weight rate greater than 60,000 pounds per hour (30 tons per hour), the maximum allowable emissions shall be determined 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.

C. Air Pollution Control Equipment

1. The Permittee shall collect fly ash from the Unit 3 and Unit 4 fabric filter baghouse hoppers, and any other hoppers that may be installed for fly ash collection, and shall transport the fly ash to the fly ash handling system.

[A.A.C. R18-2-331.A.3.e and R18-2-406.A.4]

2. The Permittee shall utilize enclosures and fabric filter baghouses to control particulate matter emissions at all Unit 3 and Unit 4 fly ash handling locations other than the fly ash silo truck loading and the ash dump.

[A.A.C. R18-2-331.a.3.e and R18-2-406.A.4]

3. At all times when the fly ash handling system is in operation, including periods of startup, shutdown, and malfunction, the Permittee shall maintain and operate the enclosure systems and the fly ash handling system baghouses in a manner consistent with good air pollution control practices.

[A.A.C. R18-2-331.a.3.e and R18-2-406.A.4]

D. Monitoring, Recordkeeping, and Reporting Requirements

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

a. A certified Method 9 observer shall conduct a weekly visual survey of visible emissions from the fly ash handling system when it is in operation. This weekly survey shall include observation of all exposed transfer points and fabric filter baghouses in the fly ash handling system. 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.

b. If the observer sees a plume from a fly ash handling system fabric filter

baghouse that on an instantaneous basis appears to exceed 10 percent opacity, the observer shall if possible take a six-minute Method 9 observation of the plume.

c. If the six-minute opacity of the plume from the fly ash handling system baghouse exceeds 10 percent, the Permittee shall do the following:

(1) Adjust or repair the controls or equipment to reduce opacity to below 10 percent; and

(2) Report it as an excess emission in accordance with Condition XII.A of Attachment "A" of this permit.

d. If the six-minute opacity of the plume from the fly ash handling system baghouse is less than 10 percent, 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.

e. If the observer sees a plume from a fly ash handling system emission point other than a fabric filter baghouse that on an instantaneous basis appears to exceed the opacity standard in Condition XII.B.1.a. of Attachment "B" , the observer shall if possible take a six-minute Method 9 observation of the plume.

f. If the six-minute opacity of the plume from the fly ash handling system emission point exceeds the opacity standard in Condition XII.B.1.a. of Attachment "B" , the Permittee shall do the following:

(1) Adjust or repair the controls or equipment to reduce opacity to below the opacity standard in Condition XII.B.1.a. of Attachment "B" ; and

(2) Report it as an excess emission in accordance with Section XII.A of Attachment "A" of this permit.

g. If the six-minute opacity of the plume from the fly ash handling system emission point is less than the opacity standard in condition XII.B.1.a. of Attachment "B", 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.

2. Particulate Matter

The Permittee shall maintain records of emissions related maintenance performed on the fabric filter baghouses.

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

E. Permit Shield

Compliance with this Section shall be deemed compliance with A.A.C.R-18-2-730.A.1 and B and 702.B.1.

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

XIII. NON-POINT SOURCES

A. Emission Limits and Standards

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

a. The Permittee shall not cause, allow or permit visible emissions from open areas, roadways and streets, storage piles or material handling in excess of 40 percent opacity measured in accordance with the Arizona Testing Manual, Reference Method 9.

[A.A.C. R18-2-612]

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

(1) Use approved dust suppressants, adhesive soil stabilizer, paving, covering, detouring, or wetting agents on, or bar access to open areas during construction operations, repair operations, demolition activities, clearing operations, and leveling operations, or when any earth is moved or excavated;

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

(2) Use approved dust suppressants, adhesive soil stabilizer, or paving on, or bar access to driveways, parking areas, and vacant lots where motor vehicular activity occurs;

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

(3) Use approved dust suppressants, temporary paving, detouring or wetting agents when a roadway is repaired, constructed, or reconstructed;

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

(4) Use dust suppressants, spray bars, hoods, wetting agents, or cover the load adequately when transporting material likely to give rise to airborne dust;

[A.A.C. R18-2-605.B and 606]

(5) Use spray bars, hoods, wetting agents, dust suppressants, or cover when crushing, handling, or conveying material that is likely to give rise to airborne dust;

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

(6) Adequately cover, or use wetting agents, chemical stabilization, or dust suppressants when stacking, piling, or otherwise storing organic or inorganic dust producing material;

[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 and with the use of spray bars and wetting agents;

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

(8) Use wetting agents or dust suppressants before the cleaning of site, roadway, or alley. Earth or other material shall be removed from paved streets onto which earth or other material has been transported by trucking or earth moving equipment, erosion by water or by other means; or

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

(9) Any other method as proposed by the Permittee and approved by the Director.

2. Open Burning

Except as provided in A.A.C. R18-2-602.C(1), 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. Air Pollution Control Equipment

1. Effective Date

The date upon startup of either Unit 3 or Unit 4, or upon beginning of actual construction of modifications to the coal preparation plant, whichever occurs first

2. On and after the effective date, the Permittee shall not cause, permit, or allow the ash haul road to be used by vehicular or non-vehicular traffic without the use of an effective oil and chip surface with appropriate load-bearing base as required to control dust emissions from the ash haul road.

[A.A.C. R18-2-331.A.3.e, R18-2-406.A.4]

3. On and after the effective date, the Permittee shall not cause, permit, or allow the ash haul road to be used by vehicular or non-vehicular traffic unless the ash haul road has been watered within the most recent 24 hours. This requirement does not apply in the event that the ash haul road has received measurable precipitation within the most recent 24 hours.

[A.A.C. R18-2-331.A.3.e, R18-2-406.A.4]

C. Monitoring, Recordkeeping, and Reporting Requirements

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

The Permittee shall maintain records of dates and type of control measures adopted pursuant to Specific Condition XIII.A.1.b of Attachment "B".

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

2. Bi-Weekly Opacity Survey

a. Bi-Weekly Monitoring Requirements [A.A.C.R18-2-306.A.3.c]

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

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

(a) Location, date, and time of the observation; and

(b) The results of the Method 9 observation.

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

(a) Adjust or repair the controls or equipment to reduce opacity to below 40%; and

(b) Report it as an excess emission under Section XII.A of Attachment" A". [A.A.C.R18-2-306.A.3.c]

3. Open Burning

Compliance with the recordkeeping requirements for Specific Condition XIII.A.2 of Attachment "B" may be achieved by maintaining copies of all open burn permits in readily available files.

D. Permit Shield

Compliance with this Section shall be deemed compliance with A.A.C.R-18-2-602, 804.B, 607.B, 607.A, 606, 605.B, 604.B, 604.A, and 612.

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

XIV. ABRASIVE BLASTING

A. Emission Limits and Standards

1. 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:

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

a. wet blasting;

b. effective enclosures with necessary dust collecting equipment; or

c. any other method proposed by the Permittee and as approved by the Director.

2. The Permittee shall not cause, allow or permit visible emissions from sandblasting or other abrasive blasting operations in excess of 40 percent opacity

until April 23, 2006, after which, the opacity of any plume or effluent shall not be greater than 20 percent measured in accordance with EPA Reference Method 9.

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

B. Monitoring, Recordkeeping, and Reporting Requirements

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

1. The date the project conducted;
2. The duration of the project; and
3. Type of control measures employed.

C. Permit Shield

Compliance with this Section shall be deemed compliance with A.A.C.R-18-2-726 and 702.B.

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

XV. USE OF PAINTS

A. Emission Limits and Standards

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

1. 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]

2. The Permit shall not either:

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

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

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

3. For purposes of parts 2.and 5. of this Section, 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 paragraphs a. through c. of this subsection, or which exceeds any of the following percentage composition limitations, referred to the total volume of solvent:

a. A combination of the following types of compounds having an olefinic or cycle-olefinic type of unsaturation - hydrocarbons, alcohols, aldehydes, esters, ethers, or ketones: five percent.

b. A combination of aromatic compounds with eight or more carbon atoms to the molecule except ethylbenzene: eight percent.

c. A combination of ethylbenzene, ketones having branched hydrocarbon structures, trichloroethylene or toluene: 20 percent.

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

4. 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 or organic compounds described in subsection 3.a. through 3.c. 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]

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

[SIP Provision R9-3-527.C]

6. Visible emissions from spray painting operations shall not have an opacity of greater than 40 percent until April 23, 2006, after which, the opacity of any plume or effluent shall not be greater than 20 percent opacity, measured in accordance with EPA Reference Method 9.

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

B. Monitoring, Recordkeeping, and Reporting Requirements

1. Each time a spray painting project is conducted, the Permittee shall log in ink or in an electronic format, a record of the following:

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

a. The date the project was conducted;

b. The duration of the project;

c. Type of control measures employed; and

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

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

C. Permit Shield

Compliance with this Section shall be deemed compliance with A.A.C.R18-2-727 A-D and 702.B.

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

XVI. SOLVENT CLEANING / DEGREASING, DIPPING OPERATIONS

A. Emission Limits and Standards

The Permittee shall process, store, use, and transport materials including solvents or volatile compounds in such a manner and by such means that they will not evaporate, leak, escape, or be otherwise discharged into the atmosphere so as to cause or contribute to air pollution. Where means are available to reduce effectively the contribution to air pollution from evaporation, leakage, or discharge, the installation and usage of such control methods, devices, or equipment shall be mandatory.

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

B. Permit Shield

Compliance with this Section shall be deemed compliance with A.A.C.R-18-2-730.F.

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

XVII. MOBILE SOURCES

A. Emission Limits and Standards

1. Classification

The requirements of this condition 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. R18-2-101.84.

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

2. 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 percent. 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]

3. Roadway and Site Cleaning Machinery

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 percent. Visible emissions when starting cold equipment shall be exempt from this requirement for the first ten minutes.

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

B. Monitoring, Recordkeeping, and Reporting Requirements

The Permittee shall keep a record of all emissions related maintenance activities performed on all mobile sources (as defined at Special Condition XVII.A.1 of Attachment “B”) that are stationed at the facility.

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

C. Permit Shield

Compliance with this Section shall be deemed compliance with A.A.C.R-18-2-801, 802, and 804.A.

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

XVIII. DEMOLITION/RENOVATION

A. Emission Limits and Standards

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

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

B. Monitoring, Recordkeeping, and Reporting Requirements

The Permittee shall comply with all applicable monitoring, recordkeeping, and reporting requirements of 40 CFR Part 61 Subpart M (National Emissions Standards for Hazardous Air Pollutants - Asbestos). The required records include the "NESHAP Notification for Renovation and Demolition Activities" form and all supporting documents.

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

XIX. NONVEHICLE AIR CONDITIONER MAINTENANCE AND/OR SERVICES

A. Emission Limits and Standards

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

[40 CFR 82, Subpart F]

B. Monitoring, Recordkeeping, and Reporting Requirements

The Permittee shall comply with all applicable monitoring, recordkeeping, and reporting requirements of 40 CFR Part 82 Subpart F (Protection of Stratospheric Ozone - Recycling and Emissions Reduction).

[40 CFR 82, Subpart F]

XX. INTERNAL COMBUSTION ENGINES

A. Applicability

This Section applies to all internal combustion engines as described in Attachment "C" of this permit.

B. Operational Limitation

1. Fuel Limitation

Permittee shall only burn diesel fuel in the internal combustion engines located at the facility.
[A.A.C. R18-2-306.A.2]

2. Hours Limitation

The Permittee shall limit the hours of operation for each internal combustion engine to no more than 500 hours per year.

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

3. Monitoring,Recordkeeping, and Reporting

At the end of each month, a monthly subtotal and 12-month rolling total of hours of operation for each internal combustion engine to demonstrate compliance with the hours limitation above shall be calculated and recorded.

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

C. Particulate Matter and Opacity

1. Emissions Limitations/Standards

a. The Permittee shall not cause or allow to be discharged into the atmosphere from the internal combustion engines any gases in which exhibit greater than 40% opacity. [A.A.C. R18-2-719.E]

b. The Permittee shall not cause, allow or permit the emission of particulate matter, caused by combustion of fuel, from the internal combustion engines having a heat input rate of 4200 million Btu per hour or less, in excess of the amounts calculated by the following equation:

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

where:

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

Q = the heat input in million BTU per hour.

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

c. For the purposes of Condition XX.C.1.b above, the heat input shall be the aggregate heat content of all fuels whose products of combustion pass through a stack or other outlet. [A.A.C. R18-2-719.B]

2. Monitoring, Recordkeeping and Reporting Requirements

a. The Permittee shall monitor the lower heating value of the fuel being combusted in the internal combustion engines. The Permittee shall maintain records of the lower heating value of the fuel fired in the internal combustion engines. This may be accomplished by maintaining on record a copy of fuel supplier certifications that specify the lower heating value of the fuel.

[A.A.C. R18-2-306.A.3.c and A.A.C. R18-2-719.I]

b. For every 120 hours of continuous operation of the internal combustion engines, a certified EPA Reference Method 9 observer shall conduct a survey of visible emissions emanating from all internal combustion engines as described in Attachment "C" of this permit. If the opacity of the emissions observed appears to exceed the relevant opacity standard, the observer shall conduct a certified EPA Reference Method 9 observation. The Permittee shall keep records of the initial survey and any EPA Reference Method 9 observations performed. These records shall include the emission point observed, location of observer, name of observer, date and time of observation, and the results of the observation. If the observation shows a Method 9 opacity reading in excess of the relevant opacity standard, the Permittee shall initiate appropriate corrective action to reduce the opacity below the standard. The Permittee shall keep a record of the corrective action performed.

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

3. Permit Shield

Compliance with the conditions of this Section shall be deemed compliance with A.A.C. R18-2-719.B, A.A.C. R18-2-719.C.1, A.A.C. R18-2-719.E and A.A.C. R18-2-719.I. [A.A.C. R18-2-325]

D. Sulfur Dioxide

1. Emissions Limitations/Standards

a. The Permittee burn low sulfur fuel oil only. Low sulfur oil is defined as fuel oil containing less than 0.90% by weight of sulfur.

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

b. The Permittee shall not emit or cause to be emitted into the atmosphere any gases containing sulfur dioxide in excess of 1.0 pound per million Btu heat input when low sulfur fuel oil is fired.

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

2. Monitoring, Recordkeeping and Reporting Requirements

a. The Permittee shall monitor the sulfur content of the fuel being combusted in the internal combustion engines. The Permittee shall maintain records of the daily sulfur content and lower heating value of the fuel fired in the internal combustion engines. This may be accomplished by maintaining on record a copy of fuel supplier certifications that specify the sulfur content and lower heating value of the fuel.

[A.A.C. R18-2-306.A.3.c and A.A.C. R18-2-719.I]

b. The Permittee shall report to the Director any daily period during which the sulfur content of the fuel being fired in the machine exceeds 0.8%.

[A.A.C. R18-2-719.J and 306.A.3]

3. Permit Shield

Compliance with the conditions of this Section shall be deemed compliance with A.A.C. R18-2-719.I, A.A.C. R18-2-719.J, A.A.C. R18-2-719.H, and A.A.C. R18-2-719.F. [A.A.C. R18-2-325]

XXI. AMBIENT AIR MONITORING

A. The Permittee shall maintain and operate ambient monitoring equipment to verify compliance with the Ambient Air Quality Standards and the maximum allowable pollutant concentration increases.

[Condition No. XII of Approval to Construct of December 21, 1977]

B. The Permittee shall monitor and operate ambient monitoring equipment to collect PM_{10},

NOx, SO_2, wind speed, and wind direction data at the following locations:

Type of Monitor	Location
PM_{10}, NOx, SO_2, Wind Speed and Wind Direction	Coyote Hills, AZ
PM_{10}	Plant Site #4

Monitoring, quality assurance, quality control and data analysis for PM_{10}, NOx, SO_2, wind speed, and wind direction data shall be conducted in accordance with the following guidelines and regulations:

a. National Primary and Secondary Ambient Air Quality Standards, 40 CFR, Part 50 (including appendices);

b. Ambient Air Quality Surveillance, 40 CFR, Part 58, Appendices A and E;

c. Quality Assurance Handbook for Air Pollution Measurement System, Volumes II and IV, U.S. Environmental Protection Agency; and

d. ON-Site Meteorological Program Guidance for Regulatory Modeling Applications, EPA450/4-87-013, June 1987.

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

C. The PM_{10}, NOx, SO_2 and wind speed/direction monitors shall be operated according to the Best Management Practices.

D. The Permittee shall maintain a file of all PM_{10}, NOx, SO_2, wind speed, and wind direction measurements; quarterly reports; calibration records; and quality control/quality assurance activities for the PM_{10}, NOx, SO_2, and wind speed/direction monitors for a minimum of five years from the date of collection of such information or generation of reports.

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

E. The Permittee shall submit a quarterly report to summarize all PM_{10}, NOx, and SO_2 ambient monitoring data of each month. [A.A.C. R18-2-306.A.5.a]

F. Permit Shield

Compliance with this Section shall be deemed compliance with Condition No. XIX.A. of Attachment "B" of Significant Revision No. 1001554 to Permit No. 1000105.

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

ATTACHMENT "C": EQUIPMENT LIST

Air Quality Control Permit No. 32008

For

TUCSON ELECTRIC POWER COMPANY – Springerville Generating Station

Equipment	Description	Size	Serial Number	Model	DATE OF Commercial Operation/ Manufacture
Unit 1 Boiler	Tangentially fired, single drum, reheat, controlled circulation sub critical steam generating unit	380 MW, net	SGS-8-1-004	Combustion Engineering Inc.	1/30/78 (Commenced construction) 5/1/85 (Commercial operating)
Unit 2 Boiler	Tangentially fired, single drum, reheat, controlled circulation sub critical steam generating unit	380 MW, net	SGS-8-1-004	Combustion Engineering Inc.	1/30/78 (Commenced construction) 6/1/90 (Commercial operating)
Unit 3 Boiler	Steam generating unit wall fired, natural circulation, sub critical, single drum	400 MW, net, maximum continuous rating	To be determined (TBD)	Foster Wheeler	...
Unit 4 Boiler	Steam generating unit wall fired, natural circulation, sub critical, single drum	400 MW, net, maximum continuous rating	TBD.	TBD	...
Auxiliary Boiler	Oil fired with superheater for two unit cold start-up	113 MMBtu/hr	AS-5-2-001	Zurn Industries	01/30/78 (Commenced construction) 1984 (Commercial operating
Emergency diesel generator Units 1 and 2	Diesel generator with 650 gallon fuel oil tank	930 KW		Neil Detriot	5/1/85 (Commercial operating)
Emergency diesel generators Units 3 and 4					
Diesel Fire Pump for Emergency	4STG 15H-7000 F fire pump w/250 hp motor	2000 GPM @ 125 PSI		Fairbanks Morse	5/1/85 (Commercial operating)
Diesel Fire Pump	4STG 15H-7000 F fire pump w/250 hp motor	2000 GPM @ 125 PSI		Fairbanks Morse	5/1/85 (Commercial operating)

Equipment	Description	Size	Serial Number	Model	DATE OF Commercial Operation/ Manufacture
Cooling Tower 1	Steam unit cooling tower	Recirculation rate 176,000 gal/min	PGS-9-1		
Cooling Tower 2	Steam unit cooling tower	Recirculation rate 176,000 gal/min	PGS-9-1		
Cooling Tower 3	Steam unit cooling tower	Recirculation rate 200,000 gal/min	TBD	TBD	
Cooling Tower 4	Steam unit cooling tower	Recirculation rate 200,000 gal/min	TBD	TBD	
Coal Preparation Plant	Storage silos, unloading system, sampling system, crushers, conveyor, transfer points, transfer towers, and reclaim	8,200,000 tons/yr	Figure 1-1 Site Layout		
Lime Handling Units 1 & 2	Storage silos, lime unloading, lime feed bins	76,734 ton/yr	AS-6-1-001 AS-6-2-001 AS-6-3-001		
	One hopper and three completely enclosed belts	- 24" wide by 256'7 1/16" long -30" wide by 121'10 9/16" long -24" wide by 31'4 1/16" long	--	Sveldala Eastern Made	
Lime Handling Units 3 &4	Storage silos, lime unloading, lime feed bins	62,400 ton/yr	--	--	--
Ash Handling Units 1 & 2	--	--	--	--	--
Ash Handling Units 3 & 4	Storage silos, ash truck loading	836,182 ton/yr	--	--	--
DCL CFM Dust Filter Modlue	Pulse-jet cleaned, cartridge type in-line dust collector	Filtering Area: 329 sf.		CFM 330 DCL: distributed by Process & Power/Texas, Inc.	May, 2002 (Anticipated)
Nonpoint sources	--	--	--	--	--

Equipment	Description	Size	Serial Number	Model	DATE OF Commercial Operation/ Manufacture
Sand Blasting	--	--	--	--	--
Spray Painting	--	--	--	--	--
Mobile Sources	--	--	--	--	--
Demolition and Renovation	--	--	--	--	--
Air Conditioner Maintenance	--	--	--	--	--

Continuous Emission Monitors

Steam Unit	NOx Monitor	SO_2 Monitor	Diluent Monitor	Opacity Monitor	Flow Monitor
Unit 1	NOx- Installed/Certified PLC- Installed/Certified DAHS- Installed/Certified	SO_2- Installed/Certified PLC- Installed/Certified DAHS- Installed/Certified	CO_2 – Installed/Certified PLC- Installed/Certified DAHS- Installed/Certified	Opacity - Installed/Certified PLC- Installed/Certified DAHS- Installed/Certified	Flow – Installed/Certified PLC – Installed/Certified DAHS- Installed/Certified
Unit 2	NOx- Installed/Certified PLC- Installed/Certified DAHS- Installed/Certified	SO_2- Installed/Certified PLC- Installed/Certified DAHS- Installed/Certified	CO_2 – Installed/Certified PLC- Installed/Certified DAHS- Installed/Certified	Opacity - Installed/Certified PLC- Installed/Certified DAHS- Installed/Certified	Flow – Installed/Certified PLC – Installed/Certified DAHS- Installed/Certified
Unit 3	TBD	TBD	TBD	TBD	TBD
Unit 4	TBD	TBD	TBD	TBD	TBD

Air Pollution Control Equipment

Equipment	Description	Size	Serial Number	Model	DATE OF Commercial Operation/ Manufacture
Sulfur Dioxide Removal System (for Unit 1)	Dry flue gas desulfurization for Steam Unit 1	150 GPM each rotary atomizer (3), 11,500 RPM, 800 HP drive motor with a 2 HP oil pump motor per unit		Joy/Niro is now owned by B&W	1/30/78 (Commenced construction)
Sulfur Dioxide Removal System (for Unit 1)	Dry flue gas desulfurization for Steam Unit 1	TBD	TBD	TBD	TBD

Equipment	Description	Size	Serial Number	Model	DATE OF Commercial Operation/ Manufacture
Sulfur Dioxide Removal System (for Unit 2)	Dry flue gas desulfurization for Steam Unit 2	150 GPM each rotary atomizer (3), 11,500 RPM, 800 HP drive motor with a 2 HP oil pump motor per unit		Joy/Niro is now owned by B&W	1/30/78 (Commenced construction)
Sulfur Dioxide Removal System (for Unit 2)	Dry flue gas desulfurization for Steam Unit 2	TBD	TBD	TBD	TBD
Sulfur Dioxide Removal System for Unit 3	Dry flue gas desulfurization fpr Steam Unit 3	TBD	TBD	TBD	TBD
Sulfur Dioxide Removal System for Unit 4	Dry flue gas desulfurization	TBD	TBD	TBD	TBD
Particulate Matter Removal System on Unit 1	Baghouses	1,320,000 acfm at 160 °F (2)		Joy	1/30/78 (Commenced construction)
Particulate Matter Removal System on Unit 2	Baghouses	1,320,000 acfm at 160° F (2)		Joy	1/30/78 (Commenced construction)
Particulate Matter Removal System on Unit 3	Fabric filter baghouse	TBD	TBD	Alstom	TBD
Particulate Matter Removal System on Unit 4	Fabric filter baghouse	TBD	TBD	TBD	TBD
Coal Handling System	Unloading Transfer Tower Collector	12,000 cfm at 70°F	09285A	Johnson-March Model #PCT 12-10	01/30/78 (Commenced construction)
	Secondary Crusher Enclosure Dust Collector (DC-2)	27,950 cfm at 70°F	002858	Johnson-March Model #PCT 13-17	
	Sampler Enclosure Dust Collector	9,400 cfm at 70° F	09285C	Johnson-March Model #PCT 10-10	
	Silos Feed Tower Collector (DC-4)	27,950 cfm at 70°F	09285D	Johnson-March Model #PCT 10-13-17	

Equipment	Description	Size	Serial Number	Model	DATE OF Commercial Operation/ Manufacture
	Silo Feed Tower Collector (DC-4A)	27,950 cfm at 70°F	09285B	Johnson-March Model #PCT 10-13-17	
	Unit 1 & 2 – Dust Processing Center Dust Collector	2,325 cfm		Airtrol, Inc. 68BRST72	TBD
	Unit 3 - Transfer Tower # 1& 2 Dust Collector	24,000 cfm	9-FC-MK-001	Airtrol, Inc. 276RRWT144	TBD
	Unit 3 - Transfer Tower # 3 Dust Collector	18,750 cfm	9-FC-MK-006	Airtrol, Inc. 232RRWT144	TBD
	Unit 3 - Transfer Tower # 4 / Silo Dust Collector	35,075 cfm	9-FC-MK-016	Airtrol, Inc. 428RRWT144	TBD
	Unit 3 - Crusher Tower Dust Collector	34,975 cfm	9-FC-MK-012	Airtrol, Inc. 428RRWT144	TBD
	Unit 4 – Silo Dust Collector	TBD	TBD	TBD	TBD
	Unit 4 – Transfer Tower Dust Collector	TBD	TBD	TBD	TBD
	Unit 4 – Transfer Tower Dust Collector	TBD	TBD	TBD	TBD
	Unit 4 – Dust Processing Center Dust Collector	TBD	TBD	TBD	TBD
Lime Handling System – Units 1 & 2	Lime Silos Collector	--	345-78-4-3005-00	Fuller Co.	01/30/78 (Commenced construction
	Baghouses at Water Treatment Silos (4)	--	3710(1) 3710(2) 3710(3) 3710(4)	EVO Corp. Model #84WBO48C	
	Filter Baghouse	15,000 ACFM	--	--	1999
Lime Handling System – Units 3 &4	Lime Silos Collector	--	TBD	TBD	TBD
	Baghouses at Water Treatment Silos (4)	--	TBD	TBD	TBD

Equipment	Description	Size	Serial Number	Model	DATE OF Commercial Operation/ Manufacture
Drift Eliminator on Cooling Tower Unit 3	High-efficiency drift eliminator	TBD	TBD	TBD	TBD
Drift Eliminator on Cooling Tower Unit 4	High efficiency drift eliminator	TBD	TBD	TBD	TBD
Ash Handling System Units 3 & 4	Units 3 &4 Fly Ash Silo Dust Collectors A&B	TBD	TBD	TBD	

ATTACHMENT "D":PHASE II ACID RAIN PROVISIONS

Air Quality Control Permit No. 32008

For

TUCSON ELECTRIC POWER PLANT - Springerville Generating Station

1. 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".

2. SO_2 Allowance Allocations and NO_x Requirements for each affected unit

		2005	2006	2007	2008	2009	2010	2011
Unit 1	SO_2 allowances under Tables 2, 3, or 4 of 40 CFR part 73	6564	6564	6564	6564	6564	6099	6099
	NO_x limit	Pursuant to 40 CFR 76.8(d)(2), Arizona Department of Environmental Quality approves a NOx early election compliance plan for Unit 1. 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)(1) of 0.45 lb/MMBtu for tangentially 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)(1), of 0.40 lb/MMBtu until calendar year 2008.						

		2005	2006	2007	2008	2009	2010	2011
Unit 2	SO_2 allowances under Tables 2, 3, or 4 of 40 CFR part 73	5754	5754	5754	5754	5754	5765	5765
	NO_x limit	Pursuant to 40 CFR 76.8(d)(2), Arizona Department of Environmental Quality approves a NOx 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 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)(1) of 0.45 lb/MMBtu for tangentially 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)(1), of 0.40 lb/MMBtu until calendar year 2008.						

		2005	2006	2007	2008	2009	2010	2011
Unit TS3	SO_2 allowances under Tables 2, 3, or 4 of 40 CFR part 73	NA	NA	NA	NA	NA	NA	NA
	NO_x limit	Pursuant to 40 CFR 76.8(d)(2), Arizona Department of Environmental Quality approves a NOx early election compliance plan for Unit TS3. 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)(1) of 0.45 lb/MMBtu for tangentially 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)(1), of 0.40 lb/MMBtu until calendar year 2008.						

* 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 SO_2 allowance allocations identified in this permit (See 40 CFR 72.84).

3. Comments, Notes and Justifications

Tucson Electric has early-elected for NO_x requirements on Units 1 and 2.

4. 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 Cosimo De Masi on August 14, 1997.