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**ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY CLASS I PERMIT**

COMPANY NAME: Tucson Electric Power Company
FACILITY NAME: Springerville Generating Station
PERMIT NUMBER: 1001554
ORIS CODE: 8223
DATE ISSUED: April 29, 2002
EXPIRY DATE: July 26, 2004

SUMMARY

This is a significant revision to the operating permit issued to Tucson Electric Power Company (TEP), the Permittee, for operation of their Springerville Generating Station (SGS). This significant revision also authorizes construction of a major modification to the SGS. The SGS is located in Apache County, approximately 15 miles North of Springerville, Arizona. The area is a designated attainment area for all criteria pollutants. The Springerville Generating Station is classified as a Class I, Major Source.

An *Approval to Construct* for the existing SGS facility was issued to the facility on December 21, 1977, by the United States Environmental Protection Agency (U.S. EPA). This *Approval to Construct* constitutes a Prevention of Significant Deterioration (PSD) permit under the December 5, 1974 PSD regulations. The existing facility includes two pulverized coal-fired steam electric generating units, "Unit 1" and "Unit 2," each of which is rated to produce approximately 380 net megawatts. Each of these units also is 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). Both Unit 1 and Unit 2 typically operate 24 hours per day, seven days per week, and 365 days per year. Each of these units utilizes a baghouse to capture particulate matter emissions; spray dry absorbers to control sulfur dioxide emissions; and low-NO_x burners and overfire air ports to control nitrogen oxides emissions.

The proposed major modification to the SGS will include constructing two new pulverized coal-fired steam electric generating units, "Unit 3" and "Unit 4." 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-NO_x burners and selective catalytic reduction (SCR) units to control nitrogen oxides emissions. The proposed major modification is subject to PSD review for, and this permit constitutes a PSD permit for, increases in emissions of particulate matter, carbon monoxide, volatile organic compounds, and fluorides. The revision also includes "caps" on facility-wide emissions of sulfur dioxide, nitrogen oxides and sulfuric acid mist.

In addition to the two pulverized coal-fired steam electric generating units, the existing 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 proposed major modification, two new mechanical-draft wet cooling towers using high-efficiency drift eliminators for control of particulate matter emission, new lime storage and handling facilities using enclosures and fabric filters for control of particulate matter emissions, 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.

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 title 40 of the 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 U.S. EPA, except for those terms and conditions that are specifically designated as "State Requirements."

SGS is a "major source" as that term is defined at R18-2-101.64. The potential emission rates of one or more of the following pollutants are greater than the major source threshold of 100 tons per year: (1) particulate matter, (2) sulfur dioxide, (3) nitrogen oxides, (4) carbon monoxide, (5) volatile organic compounds, and (6) fluorides. 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. Applicable requirements for the operations at the Springerville Generating Station are listed in Attachment "C" of this permit.

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TABLE 1: Summary of Permit Requirements

This table summarizes certain requirements that are applicable to Springerville Generating Station operations. It is intended for reference use only. The enforceable terms and conditions of this permit are contained in Attachments A through F of this permit.

Emissions Unit	Pollutants Emitted	Control Measure	Emission Limits/Standards	Monitoring/Recordkeeping	Reporting ⁽¹⁾	Testing Frequency/Methods
P3: Unit 3 P4: Unit 4 Maximum Capacity: 400 net MW (maximum continuous rating) each Primary Fuel: Coal 40 CFR 60 Subpart Da 40 CFR 63 Subpart B 40 CFR 64 40 CFR 75 40 CFR 76 A.A.C. R18-2-406	PM / PM-10	Fabric filter baghouses	# 0.015 lb PM / million Btu, and # 0.055 lb PM-10 / million Btu, and # 15 percent opacity	Continuous opacity monitoring systems and bag leak detection systems	Part 60 requirements and reports of all required monitoring	Initial and annual performance tests / EPA Reference Methods 5, 9, 201 or 201A, and 202
	SO ₂	Spray dryer absorber (scrubber) systems	# 520 ng/J and \$90% control, or # 260 ng/J and \$70% control, and # 10,800 tons/yr (combined total for Units 1-4), and # 8,448 lb/hr (combined total for Units 1-4)	Continuous emission monitoring systems	Part 60 and Part 75 requirements and reports of all required monitoring	Initial performance test using CEMS
	NO _x	Low NOx burners and Selective Catalytic Reduction (SCR)	# 200 ng/J (output), and # 9,600 tons/yr (combined total for Units 1-4)	Continuous emission monitoring systems	Part 60 and Part 75 requirements and reports of all required monitoring	Initial performance test using CEMS
	CO	n/a		# 0.15 lb/million Btu	Continuous emission monitoring systems	Reports of all required monitoring

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	VOC	n/a	# 0.06 lb/ton coal	n/a	Reports of all required monitoring	Initial and annual performance tests / EPA Reference Method 18 or 25
	Lead	Fabric filter baghouses	# 0.000016 lb/million Btu	n/a	Reports of all required monitoring	Initial and annual performance tests / EPA Reference Method 12 or 29
	Hydrogen fluoride	Spray dryer absorber (scrubber) systems and fabric filter baghouses	# 0.00044 lb/million Btu	SO ₂ CEMS; use SO ₂ emissions as surrogate for HF emissions	Reports of all required monitoring	Initial performance test / EPA Reference Method 26A
	Sulfuric Acid Mist	Spray dryer absorber (scrubber) systems and fabric filter baghouses	# 211.0 tons/yr (combined total for Units 1-4)	SO ₂ CEMS; use SO ₂ emissions as surrogate for sulfuric acid mist emissions	Reports of all required monitoring	Initial performance test / EPA Reference Method 8
	Mercury	Spray dryer absorber (scrubber) systems and fabric filter baghouses	# 0.0000069 lb/million Btu	n/a	Reports of all required monitoring	Initial and annual performance tests / EPA Reference Method 29

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Emissions Unit	Pollutants Emitted	Control Measure	Emission Limits/Standards	Monitoring/Recordkeeping	Reporting ⁽¹⁾	Testing Frequency/Methods
<p><i>Coal Preparation</i> (primary operating scenario)</p> <p>Storage Bin, unloading system, sampling system, crusher, conveyor transfer points and unloading transfer tower</p> <p>[40 CFR 60 Subpart Y and EPA Approval to Construct /Modify of December 21, 1977]</p>	<p>PM (visible emissions)</p>	<p>Enclosures w/dust collectors & water spray at transfer points</p> <p>Covered conveyor belt transfer system</p>	<p>opacity ≤ 20%</p>	<p>Weekly visual emissions observation</p>	<p>Reports of all required monitoring</p>	<p>EPA Reference Method 9 when opacity is observed</p>
<p><i>Coal Preparation</i> (alternate operating scenario)</p> <p>Storage Bin, coal storage piles, unloading system, sampling system, crusher, conveyor transfer points and unloading transfer tower</p> <p>40 CFR 60 Subpart Y A.A.C. R18-2-406</p>	<p>PM</p>	<p>Enclosures w/dust collectors & water spray at transfer points</p> <p>Covered conveyor belt transfer system</p>	<p># 0.01 gr/dscf (baghouses)</p> <p># 10 percent opacity (baghouses)</p> <p># 20 percent opacity (sources other than baghouses and coal piles)</p> <p># 40 percent opacity (coal piles)</p>	<p>Weekly visual emissions observation</p>	<p>Reports of all required monitoring</p>	<p>EPA Reference Method 9 when opacity is observed</p>

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Emissions Unit	Pollutants Emitted	Control Measure	Emission Limits/Standards	Monitoring/Recordkeeping	Reporting⁽¹⁾	Testing Frequency/Methods
<i>Lime Handling (Units 3 & 4)</i> Storage silos, lime unloading and lime feed bins A.A.C. R18-2-406	PM	Enclosures w/dust collectors	# 0.01 gr/dscf (baghouses), and # 10 percent opacity (baghouses), and # 40 percent opacity (sources other than baghouses)	Weekly visual emissions observation	Reports of all required monitoring	EPA Reference Method 9 when opacity is observed
<i>Fly Ash Handling (Units 3 & 4)</i> A.A.C. R18-2-406	PM	Enclosures w/dust collectors	# 0.01 gr/dscf (baghouses), and # 10 percent opacity (baghouses), and # 40 percent opacity (sources other than baghouses)	Weekly visual emissions observation	Reports of all required monitoring	EPA Reference Method 9 when opacity is observed
<i>Cooling Towers 3 & 4</i> A.A.C. R18-2-406	PM	Drift eliminators	# 24.64 lb/hr	Maintain records of maximum pumping capacity and maximum total liquid drift Monthly calculation of PM emission rate	Reports of all required monitoring	Monthly measurement of total dissolved solids content of circulating water

Table 2: Summary of CAM Requirements

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.

It is intended for reference use only. The enforceable terms and conditions of this permit are contained in Attachments A through F of this permit.

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
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.

**AUTHORIZATION TO CONSTRUCT AND CONDITIONAL AUTHORIZATION TO OPERATE
MODIFICATIONS TO SGS** [40 CFR §70.8(c)(4)]

- I.** This permit revision is both an authorization to make modifications to SGS, including the construction of Unit 3 and Unit 4, under the approved State Implementation Plan, and a significant revision to the Class I operating permit for SGS (Permit No. 1000105).
- II.** 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 on Permittee’s election pursuant to Condition IV.C.2 below and until the Three-Unit or Four-Unit cap goes into effect.
 - 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.
- III.** Specific Conditions III.A.3.d, III.A.4.c, and III.A.9 of Attachment “B” establish the levels of the emission caps for sulfur dioxide and nitrogen oxides. Specific Conditions III.C.10 and III.C.13 of Attachment “B” establish the compliance demonstration requirements for the sulfur dioxide, nitrogen oxides, and sulfuric acid mist emission caps.
- IV.** 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 issuance of this permit revision.
 - B.** Within 30 months after issuance of this permit revision, 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.
- V.** If Permittee fails to satisfy Condition IV for at least one new unit, this permit revision shall lapse and the existing Class I permit for SGS (Permit No. 1000105) shall remain unaffected by the revision.

REVISION TO ATTACHMENT "A"

Attachment "A" is revised as follows:

To replace the existing Paragraph XII with the following:

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, as defined in A.A.C. R18-2-101.40, 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]

1. A deviation means any situation in which an emissions unit fails to meet a permit term or condition. A deviation is not always a violation. A deviation can be determined through observation or through review of data obtained from any testing, monitoring, or recordkeeping established in this permit. For a situation lasting more than 24 hours which constitutes a violation, each 24 hour period is considered a separate deviation. Included in the meaning are any of the following:
 - a. A situation where emissions exceeded an emission limitation or standard;
 - b. A situation where process or control device parameter values indicate that an emission limitation or standard has not been met;
 - c. A situation in which observations or data collected demonstrates noncompliance with an emission limitation or standard or any work practice or operating condition required by the permit.
2. 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 the Permittee first learned of the occurrence of the deviations.
3. All instances of deviations from permit requirements shall be clearly identified in the required semiannual monitoring report specified in Attachment "B" and shall be certified by the responsible official.

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

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 within 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.

To add a new Paragraph XXIII as follows:

XXIII. 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.

REVISION TO ATTACHMENT "B"

Attachment "B" is revised as follows:

New Paragraphs I.A through I.F are added as follows:

I. GENERAL REQUIREMENTS

A. 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 double underlined print.

B. 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.
[40 CFR 60.41a]
2. "Cooling Tower 1" and "Cooling Tower 2" are the existing mechanical-draft wet cooling towers at the Springerville Generating Station.
3. "Cooling Tower 3" and "Cooling Tower 4" are the proposed new mechanical-draft wet cooling towers at the Springerville Generating Station.
4. "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.
5. "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 60.41a]
6. "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 60, appendix A, Method 19]
7. "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, A.A.C. R18-2-101.65]

8. "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 60.41a.
[40 CFR 60.2]
9. "Potential combustion concentration" means the theoretical emissions that would result from combustion of a fuel without emission control systems.
[40 CFR 60.41a , A.A.C. R18-2-406.A.4]
10. "Shutdown" means the cessation of operation of a steam generating unit for any purpose.
[40 CFR 60.2]
11. "Startup" means the setting in operation of a steam generating unit for any purpose.
[40 CFR 60.2]
12. "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 60.41a.
13. "Unit 1" and "Unit 2"
Unit 1 and Unit 2 are the existing steam generating units at the Springerville Generating Station.
14. "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."

C. 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)]

D. 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)]

E. 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)]

- F.** 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 60, Appendix A, Method 9]

The existing Paragraph III.A is renumbered as Paragraph I.G and revised as follows:

- G.** At all times, beginning on the effective date of this permit, Permittee shall have on staff a person that is certified in EPA Reference Method 9 opacity observations.

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

The existing Paragraph III.C is renumbered as Paragraph I.H and revised as follows:

- H.** With the compliance certifications required by Section VII of Attachment “A,” Permittee shall submit summary reports of all monitoring activities required in Attachment “B” for the period as defined in Section VII of Attachment “A.”

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

The existing Paragraph I.A is renumbered as Paragraph II.A as follows:

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

A. Emission Limits and Standards

1. Opacity Standard

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 below.

[Approval to Construct of December 21, 1977, Condition XIII, 40 CFR §60.11.(c) and A.A.C. R18-2-331]

a. Startup

Startup commences with the first preparations to combust fuel in the boiler, except for hot startup, which includes all time and fuel combustion required to maintain the unit at hot standby. Startup activities include, but are not limited to, all operations and maintenance activities, fuel changes, temperature related holding periods and delays related to equipment or system requirements. Startup is completed when all of the following conditions are met: 1) the flue gas system temperatures have reached a sustained level of 290 °F at the inlet of the Spray Dryer Absorbers (SDAs) for placement of the SDAs in continuous operation and a sustained level of 190 °F at the inlet of the baghouse for placement of the baghouse in continuous operation. The operator may place either the SDA or the baghouse in operation before reaching the temperatures described above if he or she determines that it may be safe to do so. 2) the plant restrictive temperatures and air-flow requirements have been met and 3) the unit is capable of further load increases. Startup may be a single smooth sequence of events, or, alternatively may require several attempts, and is not necessarily of predictable duration. The startup operation may require placing the SDA or the baghouse in and out of service, as may be required if temperatures drop below safe levels, until all conditions of the startup operation are met and the operator determines that the unit is no longer in startup mode.

b. Shut Down

Shutdown commences when the unit load is to be lowered below the typical minimum load for the purposes of removing the unit from the system. Shutdown includes all activities necessary to safely remove the unit from service, including, but not limited to, all operations and maintenance activities, fuel changes, delays related to equipment and system requirements and load change delays. Shutdown is completed when all activities are completed to safely place the unit in cold or hot standby conditions.

c. Malfunction

Malfunction means any sudden and unavoidable failure of air pollution control

equipment, process equipment or a process to operate in a normal and usual manner, but does not include failures that are caused by poor maintenance, careless operation or any other upset condition or equipment breakdown which could have been prevented by the exercise of reasonable care.

2. Particulate Matter Emission Standard

The Permittee shall not cause to be discharged into the atmosphere from the stack 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 Specific Conditions II.A.1.a-c of Attachment "B."

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

3. Sulfur Dioxide Emission Standard

a. The Permittee shall not cause to be discharged into the atmosphere from the stack 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 Specific Conditions II.A.1.a-c of Attachment "B."

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

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

[40 CFR 60.43(c)]

4. Nitrogen Oxides Emission Standard

The Permittee shall not cause to be discharged into the atmosphere from the stack of Unit 1 and Unit 2 any gases which contain nitrogen oxides, expressed as NO₂, in excess of 0.697 pounds per million Btu derived from fossil fuel except for periods of startup, shutdown, and malfunction as defined in Specific Conditions II.A.1.a-c of Attachment "B."

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

5. Unless otherwise specified, the emission limits defined in Specific Conditions II.A.2, II.A.3, and II.A.4 of Attachment "B" shall be measured by manual testing on a one-hour average (the average of three one-hour tests).

6. Fuel Limitation in Unit 1 [A.R.S. §49-426.G.1 and A.A.C. R18-2-306.A.2]

a. The Permittee shall burn only the following as fuel in Unit 1:

- (1) Coal;
- (2) Co-firing of coal and fuel oil; or
- (3) Co-firing of coal and used oil, subject to the limitations of Special Conditions II.A.6.b and II.A.6.c of Attachment "B."

b. 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.

c. 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:

- (1) The flash point of the on-spec used oil does not fall below 100 degrees Fahrenheit.
- (2) The Permittee shall comply with all applicable requirements of A.R.S. §49-801 through §49-815 - Management of Used Oil.
- (3) 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

7. Fuel Limitation in Unit 2 [A.A.C. R18-2-306.A.2]

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

- a. Coal; or
- b. Co-firing of coal and fuel oil

8. 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]

The existing Paragraph II.A is renumbered as Paragraph II.B as follows:

B. Air Pollution Control Equipment

1. Particulate Matter

At all times when the equipment is in operation, including periods of startup, shutdown, and malfunction, 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]

2. Sulfur Dioxide

At all times when the system is in operation, including periods of startup, shutdown, and malfunction, 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]

The existing Paragraph III.B is renumbered as Paragraph II.C.1 as follows:

C. Monitoring, Recordkeeping, and 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]

The existing Paragraphs III.D.1 through III.D.4 are renumbered as Paragraphs II.C.2 through II.C.5 as follows:

2. Monitoring for Opacity, SO₂, NO_x, and CO₂
 - a. The Permittee shall calibrate, maintain, and operate continuous monitoring systems for measuring the opacity of emissions, sulfur dioxide emissions, nitrogen oxides emissions, and carbon dioxide. [40 CFR 60.45(a) and A.A.C. R18-2-331]
 - b. The continuous emission monitoring systems for SO₂, NO_x, and CO₂ 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. The continuous opacity monitoring system shall meet the following requirements:
 - (1) 40 CFR 60, Appendix B, Performance Specification 1, "Specification and Test Procedures for Opacity Continuous Emission Monitoring Systems in Stationary Sources"
 - (a) Apparatus
 - (b) Installation Specifications
 - (c) Design and Performance Specifications
 - (d) Design Specifications Verification Procedure
 - (e) Performance Specifications Verification Procedure
 - (f) Equations
 - (2) The following quality assurance requirements:

(a) Calibration Checks

The Permittee shall check the zero (or low-level value between 0 and 20% of span value) and span (50 to 100 % of span value) calibration drifts at least once daily in accordance with a written procedure.

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

(b) Zero and Span Drift Adjustments

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

[40 CFR 60.13(d)(1)]

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

[40 CFR 60.13(d)(1)]

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

[40 CFR 60.13(d)(1)]

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

[40 CFR 60.13(d)(1)]

(c) System Checks

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

[40 CFR 60.13(d)(2)]

(d) Minimum Frequency of Operation

Except during periods of system breakdowns, repairs, calibration checks, and zero and span adjustments, the continuous opacity monitoring system (COMS) shall be in continuous operation and shall complete a minimum of one cycle of sampling and

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

[40 CFR 60.13(e)(1)]

(e) Data Reduction and Missing Data [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.

3. Monitoring for Particulate Matter Emissions

a. The Permittee shall evaluate opacity measurements from the COMS on a 24-hr rolling average excluding periods of startup, shutdown, and malfunction. If the 24-hour rolling average opacity exceeds 12 percent, the Permittee shall initiate a investigation of the control equipment within 24 hours for possible corrective action. If corrective action is required, the Permittee shall proceed to implement such corrective action as soon as practicable in order to minimize possible exceedances of the opacity or the particulate standard established in this permit.

b. The Permittee shall log in ink or electronic format and maintain a record of 24-hour opacity measurements taken in accordance with paragraph (a) above and any investigative and corrective actions taken. A record of actions taken shall include recording the date and time of the event and the date and time corrective action if any is completed.

c. A 24-hour opacity rolling average above 12 percent does not in itself constitute a violation of either the opacity or the particulate standard, nor is it implied that an opacity measurement and a particulate mass emission correlation exist or may be inferred.

4. Excess Emissions

a. 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.4.b 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)]

(1) 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.

[40 CFR 60.45(g)(1)]

(2) 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.A.3 of Attachment "B."

[40 CFR 60.45(g)(2)]

(3) 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.A.4 of Attachment "B."

[40 CFR 60.45(g)(3)]

b. The summary quarterly report form submission required in paragraph III.D.4.a 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)]

- (1) 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.
- (2) 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.
- (3) 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.
- (4) 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.

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

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

5. 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.

[EPA Approval to Construct of December 21, 1977, Condition XI]

The existing Paragraphs VI.B.1 through VI.B.2 are renumbered as Paragraphs II.C.6.a through II.C.6.b and revised as follows:

6. Used oil [A.R.S. § 49-426.G.4]
- a. All analyses of used oil performed pursuant to Specific Condition II.D.6 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:
 - (1) Dates on which used oil was burned;
 - (2) Hours of used oil was burned; and
 - (3) The quantity of used oil burned.

The existing Paragraphs IV.B.1 through IV.B.5 are renumbered as Paragraphs II.D.1 through II.D.5 as follows:

D. Testing Requirements

1. Emission Rate Calculation
2. Particulate Matter [40 CFR 60.46(b)(2)]

Permittee shall perform an annual performance test to determine the particulate matter concentration using EPA Reference Method 5.
3. Sulfur Dioxide [40 CFR 60.46(b)(4)]

Permittee shall perform an annual performance test to determine the sulfur dioxide concentration using EPA Reference Method 6 or 6C.
4. Nitrogen Oxides [40 CFR 60.46(b)(5)]

Permittee shall perform an annual performance test to determine the nitrogen oxides concentration using EPA Reference Method 7 or 7E.
5. Opacity [40 CFR 60.46(b)(3)]

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

The existing Paragraph VI.C is renumbered as Paragraph II.D.6 and revised as follows:

6. 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 (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]

PARAGRAPH II.E DELETED.

New Paragraphs III.A through III.D are added as follows:

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

A. Emission Limits and Standards

1. Opacity Standard

- a. 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 rolling average.

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

- b. The opacity standard in Specific Condition III.A.1.a above shall apply at all times except during periods of startup, shutdown, or malfunction.

[40 CFR 60.42a(b) and A.A.C. R18-2-406.A.4]

2. Particulate Matter Emission 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 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.

[40 CFR 60.42a(a)(1) and A.A.C. R18-2-406.A.4]

- b. 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]

- c. The particulate matter emission limits in Specific Condition III.A.2.a and III.A.2.b above shall apply at all times except during periods of startup, shutdown, or malfunction.

[40 CFR §60.46a(c) and A.A.C. R18-2-406.A.4]

3. Sulfur Dioxide Emission Standard

- 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 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 §60.43a(a)]

- b. The sulfur dioxide emission standard in Specific Condition III.A.3.a above shall apply at all times except during periods of startup or shutdown, or periods when emergency conditions exist and the flue gas desulfurization system is malfunctioning.

[40 CFR §60.46a(c)]

- c. Compliance with the sulfur dioxide emission standard in Specific Condition III.A.3.a above shall be based upon a 30-day rolling average.

[40 CFR §60.46a(e)]

- d. Sulfur Dioxide Emission Caps

[A.A.C. R18-2-406.H, 40 CFR §70.8(c)(4)]

- (1) 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.
- (2) Total emissions of sulfur dioxide from electric generating units at SGS shall not exceed the following amounts:
- (a) 7,550.0 tons per year, on Permittee's election to subject Units 1 and 2 to that limit pursuant to Condition IV.C.2 of the Authorization to Construct and Conditional Authorization to Operate.
- (b) 9,205.0 tons per year, after Unit 3 or Unit 4 becomes operational.
- (c) 10,800.0 tons per year, after both Unit 3 and Unit 4 become operational.
- (3) Compliance with the emission limit in paragraph (2) shall be determined on both a calendar-year sum and a 12-month rolling sum basis.
- (4) If different emission limits apply to a twelve-month or calendar-year period pursuant to paragraph (2), 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.

4. Nitrogen Oxides Emission Standard

- 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 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 §60.44a(d)(1)]

b. The nitrogen oxides emission standard in Specific Condition III.A.4.a above shall apply at all times except during periods of startup, shutdown, or malfunction.

[40 CFR §60.46a(c)]

c. Nitrogen Oxides Emission Cap

[A.A.C. R18-2-406.H , 40 CFR §70.8(c)(4)]

(1) Total emissions of nitrogen oxides from electric generating units at SGS shall not exceed the following amounts:

(a) 6,300.0 tons per year, on Permittee's election to subject Units 1 and 2 to that limit pursuant to Condition IV.C.2 of the Authorization to Construct and Conditional Authorization to Operate.

(b) 7,947.0 tons per year, after Unit 3 or Unit 4 becomes operational.

(c) 9,600.0 tons per year after both Unit 3 and Unit 4 become operational.

(2) Compliance with the emission limit in paragraph (1) shall be determined on both a calendar-year sum and a 12-month rolling sum basis.

(3) If different emission limits apply to a twelve-month or calendar-year period pursuant to paragraph (2), 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.

5. Carbon Monoxide Emission Standard

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 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.A.5.a above shall apply at all times except during periods of startup, shutdown, or malfunction.

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

6. Volatile Organic Compounds Emission Standard

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.A.6.a above shall apply at all times except during periods of startup, shutdown, or malfunction.

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

7. Hydrogen Fluoride Emission Standard

- 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.A.7.a above shall apply at all times except during periods of startup, shutdown, or malfunction.

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

8. Lead Emission Standard

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]

9. Sulfuric Acid Mist Emission Standard

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]

10. Mercury Emission Standard

- a. 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 three-hour averaging period.

[40 CFR 63.43(g)(1), A.A.C. R18-2-302.D]

- b. The mercury emission standard in Specific Condition III.A.10.a above shall apply at all times except during periods of startup, shutdown, or malfunction

[40 CFR 63.6(f), A.A.C. R18-2-302.D]

11. 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.5]

12. 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]

B. Air Pollution Control Equipment

1. Particulate Matter

a. At all times when the equipment is in operation, including periods of startup, shutdown, and malfunction, 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]

b. The fabric filter baghouses shall not be bypassed, except during periods of startup or shutdown, while Unit 3 or Unit 4 is combusting fossil fuel.

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

2. Sulfur Dioxide

At all times when Unit 3 or Unit 4 is in operation, including periods of startup, shutdown, and malfunction, 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]

3. Nitrogen Oxides

At all times when Unit 3 or Unit 4 is in operation, including periods of startup, shutdown, and malfunction, 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]

C. Monitoring, Recordkeeping, and Reporting Requirements

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 60.47a(a), 40 CFR 75.10(a), A.A.C. R18-2-331, R18-2-406.A.4]

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

[40 CFR 60.13(h)]

- (1) The Permittee shall reduce all data from the COMS to 6-minute averages. Six-minute opacity averages shall be calculated from 36 or more data points equally spaced over each 6-minute period.
- (2) Data recorded during periods of system breakdowns, repairs, calibration checks, and zero and span adjustments shall not be included in the data averages computed under the previous paragraph. An arithmetic or integrated average of all data may be used.

2. Compliance Assurance Monitoring for Particulate Matter Emissions

- a. 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.

[40 CFR 64.6(c)(1) and A.A.C. R18-2-306.A.3.b, R18-2-331, and R18-2-406.A.4]

- b. 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), A.A.C. R18-2-306.A.3.b, and R18-2-406.A.4]

- c. Each bag leak detection system shall be equipped with an audible alarm.

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

- d. 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.2.g below.

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

- e. Each three-hour 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 part 64, § 64.7. For the purposes of this Specific Condition III.C.2.e, each three-hour block is a discrete one-eighth of a calendar day.

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

- f. The Permittee shall submit to the Department for its approval information relating to the specifications for each bag leak detection system as follows:

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

- (1) The proposed location of the sensor component(s) of the bag leak detection system;
- (2) The proposed composition of the sensor and insulator component(s) of the bag leak detection system; and
- (3) The proposed data recording mechanism to be used in conjunction with the bag leak detection system.

- g. The information required by Specific Condition III.C.2.f 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.

- h. 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), A.A.C. R18-2-306.A.3.b, and R18-2-406.A.4]

- (1) 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.
- (2) 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.

- i. The protocol required by Specific Condition III.C.2.h 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 this Specific Condition III.C.2.i, “performance test” shall mean the performance test required by 40 CFR part 60, subpart A, § 60.8.

- j. 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]

k. 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), A.A.C. R18-2-306.A.3.b, and R18-2-406.A.4]

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

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

m. 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), A.A.C. R18-2-306.A.3.b, and R18-2-406.A.4]

3. 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 60.47a(l), 40 CFR 75.10(a) and A.A.C. R18-2-331]

b. Data from continuous flow monitoring systems certified according to the requirements of 40 CFR part 75, § 75.20, meeting the applicable quality control and quality assurance requirements of § 75.21, and validated according to § 75.23, may be used to satisfy the requirements of 40 CFR part 60, § 60.47a(l).

[40 CFR 60.47a(m)]

4. Monitoring for CO₂

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]

5. 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.

[40 CFR 60.47a(d) and A.A.C. R18-2-331]

b. The carbon dioxide continuous monitoring system required by Specific Condition III.C.4 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 60.47a(d)]

6. 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 60.47a(k) and A.A.C. R18-2-331]

7. 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 60.47a(d) and 40 CFR 75.10(a)]

8. Monitoring for Sulfur Dioxide

a. 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 60.47a(b), 40 CFR 75.10(a), A.A.C. R18-2-331]

b. **As an alternative to the continuous sulfur dioxide emission monitoring system at the sulfur dioxide control device inlet in Specific Condition III.C.8.a 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 60.47a(b)(3)]

c. 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.

9. Compliance Determination Requirements for NSPS SO₂ Emission Standard

For the purposes of demonstrating compliance with the sulfur dioxide emission limitation in Specific Condition III.A.3.a of Attachment "B," the Permittee shall meet the following requirements:

a. 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.C.3, III.C.5, and III.C.8, respectively, of

Attachment “B,” shall be used to demonstrate compliance.

[40 CFR 60.48a(c)(5)]

- b. 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 3 and Unit 4. 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 60.47a(f)]

- (1) Data obtained from other monitoring systems approved by the Director, or
- (2) 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 60.47a(h).
- (3) 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 60.47a(h).

- c. After the initial performance test required by Specific Condition III.D.3.a of Attachment “B,” compliance 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 §§60.46a(e), 60.46a(g)]

10. Compliance Determination Requirements for SO₂ Emission Caps

- a. The Permittee shall use the following procedures to demonstrate compliance with the sulfur dioxide emission limitation in Specific Condition III.A.3.d.(1) of Attachment “B:”

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

- (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.C.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 sulfur dioxide emission monitoring

systems for Unit 3 and Unit 4 as required by Specific Conditions III.C.3 and III.C.8, 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 III.C.10.a.(4) exceeds the sulfur dioxide emission limitation in Specific Condition III.A.3.d.(1) 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 Condition III.A.3.d.(2) 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 III.C.10.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.C.10.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 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 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 III.A.3.d.(2) 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 III.A.3.d.(2) 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 (6) and (7) that occurs on the same day at the same unit shall count as a single violation.

11. Monitoring for Nitrogen Oxides

- a. 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 60.47a(c), 40 CFR 75.10(a), A.A.C. R18-2-331]
- b. 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, § 60.47a(c)(1). The Permittee shall meet the requirements of § 60.49a. Data reported to meet the requirements of § 60.49a 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 60.47a(c)(2)]

12. Compliance Determination Requirements for NSPS NO_x Emission Standard

For the purposes of demonstrating compliance with the nitrogen oxides emission limitation in Specific Condition III.A.4.a of Attachment "B," the Permittee shall meet the following

requirements:

- a. Emission data from the continuous flow monitoring systems, wattmeters, and continuous nitrogen oxides emission monitoring systems required by Specific Conditions III.C.3, III.C.6, and III.C.11, respectively, of Attachment “B,” shall be used to demonstrate compliance.

[40 CFR 60.48a(d)(2)]

- b. 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 3 and Unit 4. 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 60.47a(f)]

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

- (2) 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 60.47a(h).

- 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 60.46a(i)]

- d. After the initial performance test required by Specific Condition III.D.4.a of Attachment “B,” compliance 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. 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 §§60.46a(e), 60.46a(g)]

13. Compliance Determination Requirements for NOx Emission Cap

The Permittee shall use the following procedures to demonstrate compliance with the nitrogen oxides emission limitation in Specific Condition III.A.4.c of Attachment “B:”

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

- 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.C.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.C.3 and III.C.11, 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 Condition III.C.13.b through III.C.13.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 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 III.A.4.c 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 III.A.4.c 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.

14. Monitoring for Carbon Monoxide Emissions

- a. 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, R18-2-406.A.4]

b. The continuous monitoring systems for carbon monoxide 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

[A.A.C. R18-2-331, R18-2-406.A.4]

15. 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.A.5.a of Attachment "B:"

[A.A.C. R18-2-331, R18-2-406.A.4]

- a. 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 Condition III.C.3, III.C.5, and III.C.14, respectively, of Attachment "B."
- b. The requirements of this Specific Condition III.C.15 shall apply only to Unit 3 and Unit 4 and shall apply separately to Unit 3 and Unit 4.
- c. After the initial performance test required by Specific Condition III.D.3.a of Attachment "B," compliance 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, 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.
- d. Each calendar day for which the 30-day rolling average carbon monoxide emission rate exceeds the carbon monoxide emission limitation in Specific Condition III.A.5.a. shall constitute a period of excess emissions.
- e. 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. Each Plan shall include procedures for dealing with data gaps based on the procedures contained in 40 CFR 75, Subpart D. When approved by the Department, this plan shall be

implemented.

[A.A.C. R18-2-331, R18-2-406.A.4]

16. 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.A.7.a of Attachment "B:"
[40 CFR 64.6(c)(1) and A.A.C. R18-2-302.D, R18-2-306.A.3.b, and R18-2-406.A.4]

- a. 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.C.8 of Attachment "B" may be used to satisfy this monitoring requirement.
[40 CFR 64.6(c)(1) and A.A.C. R18-2-302.D, R18-2-306.A.3.b, and R18-2-406.A.4]
- b. 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 III.C.10.a.(3) of Attachment "B."
[40 CFR 64.6(c)(2) and A.A.C. R18-2-302.D, R18-2-306.A.3.b, and R18-2-406.A.4]
- c. 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 A.A.C. R18-2-302.D, R18-2-306.A.3.b, and R18-2-406.A.4]
- d. The Permittee shall submit to the Department for its approval a protocol for conducting the testing required under Specific Condition III.C.16.b 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), A.A.C. R18-2-306.A.3.b, and R18-2-406.A.4]
 - (1) A proposed schedule for conducting the test.
 - (2) Procedures for ensuring that the test results will be representative of the relationship of sulfur dioxide emission rate and hydrogen fluoride emission rate.
 - (3) Procedures for determining the hydrogen fluoride excursion level.

17. 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 III.A.9 of Attachment "B:"
[A.A.C. R18-2-306.02]

- a. The requirements of this Specific Condition III.C.17 shall apply to Unit 1, Unit 2, Unit 3, and Unit 4.

- b. 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 III.C.10.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.
 - (1) The sulfur compound emission ratio for Unit 1 and Unit 2 is 0.01127.
 - (2) The sulfur compound emission ratios for Unit 3 and Unit 4 shall be calculated in accordance with Specific Condition III.D.9.d of Attachment "B."
- c. 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.
- d. 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.
- e. The data recorded under Specific Conditions III.C.17.b through III.C.17.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. Each calendar month for which the combined annual mass emissions of sulfuric acid mist exceeds the sulfuric acid mist emission limitation in Specific Condition III.A.9 of Attachment "B" shall constitute a period of excess emissions.

18. NSPS Requirements for Continuous Monitoring Systems

The continuous monitoring systems for opacity as required by Specific Condition III.C.1 of Attachment "B," exhaust gas flow as required by Specific Condition III.C.3 (except as provided by Specific Condition III.C.3.b), diluent concentration as required by Specific Condition III.C.5, sulfur dioxide emissions as required by Specific Condition III.C.8, and nitrogen oxides emissions as required by Specific Condition III.C.11 (except as provided by Specific Condition III.C.11.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. **Quality Assurance Procedures at 40 CFR part 60, Appendix F**

19. Acid Rain Program Requirements for Continuous Monitoring Systems

The continuous monitoring systems for opacity as required by Specific Condition III.C.1 of Attachment “B,” exhaust gas flow as required by Specific Condition III.C.3, carbon dioxide emissions as required by Specific Condition III.C.4, sulfur dioxide emissions as required by Specific Condition III.C.8, and nitrogen oxides emissions as required by Specific Condition III.C.11 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.

20. The Permittee shall comply with all applicable recordkeeping and reporting requirements of 40 CFR part 75, subparts F and G, respectively.

D. Testing Requirements

1. Opacity

a. The Permittee shall perform initial and annual performance tests to determine compliance with the opacity limitations in Special Condition III.A.1 of Attachment “B.”

[40 CFR 60.8 and A.A.C. R18-2-406.A.4]

b. All performance tests for opacity shall be performed in accordance with 40 CFR §§ 60.8 and 60.11.

[40 CFR 60.8 and A.A.C. R18-2-406.A.4]

2. Particulate Matter

- a. The Permittee shall perform initial and annual performance tests to determine compliance with the particulate matter and PM-10 emission limitations in Specific Conditions III.A.2.b and III.A.2.c of Attachment "B."
[40 CFR 60.8 and A.A.C. R18-2-406.A.4]
- b. 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 and A.A.C. R18-2-406.A.4]
- c. 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.
[A.A.C. R18-2-406.A.4]
- d. The dry basis F factor (O₂) procedures in EPA Reference Method 19 shall be used to calculate the particulate matter and PM-10 emission rates.
[40 CFR 60.48a(b)(1) and A.A.C. R18-2-406A.4]
- e. As an alternative to the dry basis F factor (O₂) procedures in EPA Reference Method 19, the F_c CO₂ 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 60.48a(e)(2) and A.A.C. R18-2-406A.4]
- f. The sampling time and sample volume for each test run shall be at least 120 minutes and 60 dry standard cubic feet.
[40 CFR 60.48a(b)(2) and A.A.C. R18-2-406.A.4]

3. Sulfur Dioxide

- a. The Permittee shall perform initial performance tests to determine compliance with the sulfur dioxide emission limitation in Specific Condition III.A.3.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]
- b. Data from the continuous monitoring systems for exhaust gas flow as required by Specific Condition III.C.3 of Attachment "B," diluent concentration as required by Specific Condition III.C.5, and sulfur dioxide emissions as required by Specific Condition III.C.8 shall be used during the performance tests to demonstrate compliance.
[40 CFR 60.48a(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 60.48a(c)(3) and (c)(4)]

- d. As an alternative to the procedures in Specific Condition III.D.3.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 60.48a(c)(3)]

- e. Compliance 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.

[40 CFR 60.46a(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 60.48a(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 §§ 60.46a(h), 60.47a(f)]

4. Nitrogen Oxides

- a. The Permittee shall perform initial performance tests to determine compliance with the nitrogen oxides emission limitation in Specific Condition III.A.4.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]

- b. Data from the continuous monitoring systems for exhaust gas flow as required by Specific Condition III.C.3 of Attachment "B," wattmeters as required by Specific Condition III.C.6, and nitrogen oxides emissions as required by Specific Condition III.C.11 shall be used during the performance tests to demonstrate compliance.

[40 CFR 60.48a(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 60.46a(i)]
- d. Compliance 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
[40 CFR §§60.46a(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 §§ 60.46a(h), 60.47a(f)]

5. Carbon Monoxide

- a. The Permittee shall perform initial performance tests to determine compliance with the carbon monoxide emission limitation in Specific Condition III.A.5 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.C.3 of Attachment “B,” diluent concentration as required by Specific Condition III.C.5, and carbon monoxide emissions as required by Specific Condition III.C.14 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]

6. Volatile Organic Compounds

- a. The Permittee shall perform initial and annual performance tests to determine compliance with the volatile organic compounds emission limitation in Specific Condition III.A.6 of Attachment “B.”
[A.A.C. R18-2-406.A.4]
- 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.A.6 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]

7. Fluorides

- a. The Permittee shall perform an initial performance test to determine compliance with the hydrogen fluoride emission limitation in Specific Condition III.A.7.a of Attachment “B.” No additional performance testing shall be required until renewal of this Class I permit.

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

- 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.A.7.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.

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

- 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]

8. Lead

- a. The Permittee shall perform initial and annual performance tests on Unit 3 and Unit 4 to determine compliance with the lead emission limitation in Specific Condition III.A.8 of Attachment “B.”

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

- 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 Specific Condition III.A.8 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.

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

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

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

9. Sulfuric Acid Mist

- 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.C.3 of Attachment "B," diluent concentration as required by Specific Condition III.C.5, and sulfur dioxide emissions as required by Specific Condition III.C.8 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]

10. Mercury

- a. The Permittee shall perform initial and annual performance tests on Unit 3 and Unit 4 to determine compliance with the mercury emission limitation in Specific Condition III.A.10.a of Attachment "B."
[40 CFR 63.43(g)(2)(iv), A.A.C. R18-2-302.D]
- b. Each performance test for mercury shall be performed using EPA Reference Method 29.
[40 CFR 63.7(e), A.A.C. R18-2-302.D]
- c. 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.D10.a above.
[40 CFR 63.7(c), A.A.C. R18-2-302.D]

E. MACT General Provisions

The Permittee shall comply with all applicable requirements under 40 CFR Part 63, Subpart A. This includes, but is not limited to, the following requirements:
[40 CFR 63.43(g)(2)(iv), A.A.C. R18-2-302.D]

- 1. The Permittee shall develop and implement a written startup, shutdown, and malfunction plan that describes, 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.

[40 CFR 63.6(e)(3), A.A.C. R18-2-302.D]

2. For the purposes of Specific Condition III.E.1 of Attachment “B,” each of the fabric filter baghouses and dry flue gas desulfurization systems required by Specific Conditions III.B.1 and III.B.2, respectively, of Attachment “B” shall be considered air pollution control equipment.

The existing Paragraph I.B is renumbered as Paragraph IV.A as follows:

IV. AUXILIARY BOILER (P5)

A. Emission Limits and Standards

1. Opacity Standard [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.

2. Particulate Matter Standard

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.

3. Sulfur Dioxide Standard

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]

4. Fuel Limitation

- 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 \geq 0.9 percent 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]

The existing Paragraph III.E is renumbered as Paragraph IV.B as follows:

B. Monitoring, Recordkeeping, and Reporting Requirements

1. Visible Emissions [A.A.C. R18-2-306.A.3]

The Permittee shall monitor opacity according to the following schedule:

- a. When operating continuously for a time period greater than 48 hours but less than 168 hours, one opacity reading will be observed at the exit of the boiler's stack.
- b. When operating continuously for a time period greater than 168 hours, at least one opacity reading during each 168 hour period will be observed at the exit of the boiler's stack.

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.

2. 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:

- a. The higher heating value
- b. The ash content

3. Sulfur Dioxide [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:

$$\text{SO}_2 \text{ (lb/MMBtu)} \\ = \frac{2.0 \times [\text{Weight percent of sulfur}/100] \times [\text{Density (lb/gal)}]}{[\text{Heating value (Btu/gal)}] \times [1 \text{ MMBtu}/1,000,000 \text{ Btu}]}$$

4. The Permittee shall record the dates and hours of operation of the auxiliary boiler.

5. The Permittee shall submit the dates and hours of operation of the auxiliary boiler for the period of each compliance certification.
6. 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]

The existing Paragraph I.F is renumbered as Paragraph V.A as follows:

V. COOLING TOWERS 1 AND 2

A. Emission Limits and Standards

1. Particulate Matter

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]

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

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. 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]

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

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

A new Paragraph V.B. is added as follows:

B. Additional Emission Limit

1. Effective Date

In addition to the limits set forth in paragraph V.A of Attachment "B," permittee shall comply with the limits set forth in this paragraph on startup of either Unit 3 or Unit 4.

2. Emission Limits and Standards

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 216.8 lbs per hour, total for the thirteen cells in each tower.

[A.A.C. R18-2-406.A.5]

b. 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.5]

3. Air Pollution Control Equipment

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, R18-2-406.A.5]

4. Monitoring, Recordkeeping, and Reporting Requirements

a. 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. R18-2-406.A.5]

b. 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. R18-2-406.A.5]

c. The Permittee shall measure and record once 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. R18-2-406.A.5]

- d. The Permittee shall calculate once 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 V.B.2.a of Attachment "B" shall constitute a period of excess emissions.

[A.A.C. R18-2-406A.5]

New Paragraphs VI.A. through VI.C are added as follows:

VI. COOLING TOWERS 3 AND 4

A. Emission Limits and Standards

1. Equipment Standards

Permittee shall not cause, allow or permit the circulating water flow rate in Cooling Tower 3 or Cooling Tower 4 to exceed 200,000 gallons per minute, total for each tower.

[A.A.C. R18-2-406A.5]

2. Particulate Matter

a. Permittee shall not discharge into the atmosphere from Cooling Tower 3 or Cooling Tower 3 any gases which contain particulate matter in excess of 24.64 lbs per hour, total for each tower.

[A.A.C. R18-2-406.A.5]

b. 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]

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

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.

3. 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]

4. 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]

B. Air Pollution Control Equipment

1. 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, R18-2-406.A.4]

C. Monitoring, Recordkeeping, and Reporting Requirements

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. R18-2-406A.4]
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. R18-2-406A.5]
3. Permittee shall measure and record once 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. R18-2-406A.5]
4. The Permittee shall calculate once 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 VI.A.2.a of Attachment "B" shall constitute a period of excess emissions.
[A.A.C. R18-2-406A.5]

The existing Paragraph I.C is renumbered as Paragraph VII.A as follows:

VII. COAL PREPARATION PLANT

A. Emission Limits and Standards

On and after the date on which the performance test required to be conducted under Section VII.D of Attachment "B" is completed, 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]

The existing Paragraph II.B is renumbered as Paragraph VII.B as follows:

B. Air Pollution Control Equipment

1. At all times when the system is in operation, including periods of startup, shutdown, and malfunction, 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]
2. 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:
 - a. Rail unloading area;
 - b. Discharge hoppers;
 - c. Discharge point from the conveyor carrying coal from the feeder;
 - d. Active storage pile;
 - e. Reserve storage pile;
 - f. Discharge from the reclaim hoppers;
 - g. Crusher structure; and
 - h. Coal storage silos.[Approval to Construct of December 21, 1977, Condition X.a and A.A.C. R18-2-331]
3. 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]

The existing Paragraph III.F is renumbered as Paragraph VII.C as follows:

C. Monitoring, Recordkeeping, and Reporting Requirements

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, 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 20% 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 exceeds 20%, the Permittee shall do the following:
 - (1) Adjust or repair the controls or equipment to reduce opacity to below 20%; and
 - (2) Report it as an excess emission in accordance with Section XII.A of Attachment A of this permit.
4. If the six-minute opacity of the plume is less than 20%, 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.

A new Paragraph VII.D is added as follows:

D. Additional Emission Limits

1. Effective Date

The emission limits in this paragraph become effective upon startup of either Unit 3 or Unit 4, or upon the beginning of actual construction of modifications to the coal preparation plant, whichever occurs first.

2. Emission Limits and Standards

- a. On and after the date on which the performance test required to be conducted under Specific Condition VII.D.5 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 10 percent opacity or greater. This emission standard shall not apply during periods of startup, shutdown, or malfunction.

[40 CFR 60.252(c) and A.A.C. R18-2-331, R18-2-406.A.4]

- b. On and after the date on which the performance test required to be conducted under Specific Condition VII.D.5 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 containing particulate matter in excess of 0.01 grains per dry standard cubic foot.

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

- c. On and after the date on which the performance test required to be conducted under Specific Condition VII.D.5 of Attachment "B" is completed, the Permittee shall not cause to be discharged into the atmosphere from any coal storage pile gases which exhibit 40 percent opacity or greater. This emission standard shall not apply during periods of startup, shutdown, or malfunction.

[A.A.C. R18-2-331, R18-2-406.A.4]

3. Air Pollution Control Equipment

On and after the date on which the performance test required to be conducted under Specific Condition VII.D.5 of Attachment "B" is completed, the requirements of Specific Condition VII.B.2 of Attachment "B" shall be superseded by the requirements of this Specific Condition VII.D.3:

[A.A.C. R18-2-331, R18-2-406.A.4]

- a. The Permittee shall utilize water spray with surfactant to control particulate matter emissions at the emergency coal storage pile(s).
- b. The Permittee shall utilize enclosures and water spray with surfactant to control particulate matter emissions at the rail unloading area and the emergency reclaim hopper.

c. 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 VII.D.4.a-b above. The locations controlled with enclosures and fabric filter baghouses shall include the following:

- (1) Transfer towers;
- (2) Crusher towers;
- (3) Discharge hoppers; and
- (4) Coal storage silos.

4. Monitoring, Recordkeeping, and Reporting Requirements

a. 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 pile, and the fabric filter 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.

b. If the observer sees a plume from a coal preparation plant 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.
[A.A.C. R18-2-406.A.4]

c. If the six-minute opacity of the plume from the coal preparation plant fabric filter baghouse exceeds 10 percent, the Permittee shall do the following:
[A.A.C. R18-2-406.A.4]

- (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 Section XII.A of Attachment "A" of this permit.

d. If the six-minute opacity of the plume from the coal preparation plant fabric filter baghouse is less than 10 percent, the observer shall make a record of the following:
[A.A.C. R18-2-406.A.4]

- (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 coal storage pile that on an instantaneous basis appears to exceed 40 percent opacity, the observer shall if possible take a six-minute Method 9 observation of the plume.**
[A.A.C. R18-2-406.A.4]

f. If the six-minute opacity of the plume from the coal storage pile exceeds 40 percent, the Permittee shall report it as an excess emission in accordance with Section XII.A of Attachment "A" of this permit.

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

g. If the six-minute opacity of the plume from the coal storage pile emission point is less than 40 percent, the observer shall make a record of the following:

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

(1) Date and time of the test; and

(2) The results of the Method 9 observation.

5. Testing Requirements

a. Within 180 days after startup under this alternate operating scenario, the Permittee shall conduct a performance test to determine compliance with the opacity standards in Sections VII.A, VII.D.2.a, and VII.D.2.c of Attachment "B."

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

The existing Paragraph I.D is renumbered as Paragraph VIII.A as follows:

VIII. LIME HANDLING - UNITS 1 AND 2

A. Emission Limits and Standards

1. Opacity [A.A.C. R18-2-610 and 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 measured in accordance with EPA Reference Method 9.

2. 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:

- 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.

The existing Paragraph II.C is renumbered as Paragraph VIII.B as follows:

B. Air Pollution Control Equipment

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]

The existing Paragraph III.G is renumbered as Paragraph VIII.C as follows:

C. Monitoring, Recordkeeping, and Reporting Requirements

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

a. 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.

b. If the observer sees a plume from an emission point that on an instantaneous basis appears to exceed 40% 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 exceeds 40%, the Permittee shall do the following:

(1) Adjust or repair the controls or equipment to reduce opacity to below 40%; and

(2) Report it as an excess emission in accordance with Section XII.A of Attachment A of this permit.

d. If the six-minute opacity of the plume is less than 40%, 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

a. 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.

b. The Permittee shall maintain records of emissions related maintenance performed on the baghouses.

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

New Paragraphs IX.A through IX.C are added as follows:

IX. LIME HANDLING - UNITS 3 AND 4

A. Emission Limits and Standards

1. Opacity

- a. 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 measured in accordance with EPA Reference Method 9.

[A.A.C. R18-2-331, R18-2-406.A.4, R18-2-702.B.1]

- b. 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. R18-2-331, R18-2-406.A.4, R18-2-702.B.1]

2. Particulate Matter

- a. 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]

- 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:

[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.

- (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.

B. Air Pollution Control Equipment

- 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 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, 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 and R18-2-406.A.4]

C. Monitoring, Recordkeeping, and Reporting Requirements

1. Opacity

- a. 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.
[A.A.C. R18-2-406.A.4]
- b. 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.
[A.A.C. R18-2-406.A.4]
- c. If the six-minute opacity of the plume from the lime handling system baghouse exceeds 10 percent, the Permittee shall do the following:
[A.A.C. R18-2-406.A.4]
 - (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 Section XII.A of Attachment "A" of this permit.
 - d. 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.A.C. R18-2-406.A.4]
 - (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 lime handling system emission point other than a fabric filter baghouse that on an instantaneous basis appears to exceed 40 percent opacity, the observer shall if possible take a six-minute Method 9 observation of the plume.
[A.A.C. R18-2-406.A.4]
 - f. If the six-minute opacity of the plume from the lime handling system emission point exceeds 40 percent, the Permittee shall do the following:
[A.A.C. R18-2-406.A.4]
 - (1) Adjust or repair the controls or equipment to reduce opacity to below 40 percent; 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 lime handling system emission point is less than 40 percent, the observer shall make a record of the following:
[A.A.C. R18-2-406.A.4]
 - (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 lime handling system fabric filter baghouses.

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

The existing Paragraph I.E is renumbered as Paragraph X.A as follows:

X. FLY ASH HANDLING - UNITS 1 AND 2

A. Emission Limits and Standards

1. 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 measured in accordance with EPA Reference Method 9.

[A.A.C. R18-2-610 and 702.B.1]

2. 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:

- 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.

The existing Paragraph II.D is renumbered as Paragraph X.B as follows:

B. Air Pollution Control Equipment

1. Fly ash shall be collected from the economizer and baghouses hoppers, and transported to the ash handling system.
[A.A.C. R18-2-331 and R18-2-306.A.2]
2. The emissions 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 and R18-2-306.A.2]

The existing Paragraph III.H is renumbered as Paragraph X.C as follows:

C. Monitoring, Recordkeeping, and Reporting Requirements

Opacity

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

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 40% 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 exceeds 40%, 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 in accordance with Section XII.A of Attachment A of this permit.
4. If the six-minute opacity of the plume is less than 40%, 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.

New Paragraphs XI.A through XI.C are added as follows:

XI. FLY ASH HANDLING - UNITS 3 AND 4

A. 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 measured in accordance with EPA Reference Method 9.

[A.A.C. R18-2-331, R18-2-406.A.4, R18-2-702.B.1]

- 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, R18-2-406.A.4, R18-2-702.B.1]

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.

- (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.

B. 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 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.
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 and R18-2-406.A.4]

C. Monitoring, Recordkeeping, and Reporting Requirements

1. Opacity
 - 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.
[A.A.C. R18-2-406.A.4]
 - 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.
[A.A.C. R18-2-406.A.4]
 - 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:

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

- (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 Section 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:
- [A.A.C. R18-2-406.A.4]
- (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 40 percent opacity, the observer shall if possible take a six-minute Method 9 observation of the plume.
- [A.A.C. R18-2-406.A.4]
- f. If the six-minute opacity of the plume from the fly ash handling system emission point exceeds 40 percent, the Permittee shall do the following:
- [A.A.C. R18-2-406.A.4]
- (1) Adjust or repair the controls or equipment to reduce opacity to below 40 percent; 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 40 percent, the observer shall make a record of the following:
- [A.A.C. R18-2-406.A.4]
- (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. R18-2-406.A.4]

The existing Paragraph I.G is renumbered as Paragraph XII.A as follows:

XII. 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. R18-2-610]

- 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]

The existing Paragraph III.I is renumbered as Paragraph XII.B as follows:

B. 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 XII.A.1.b of Attachment “B.”

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

2. Open Burning

Compliance with the recordkeeping requirements for Specific Condition XII.A.2 of Attachment “B” may be achieved by maintaining copies of all open burn permits in readily available files.

A new Paragraph XII.C is added as follows:

C. Additional Emission Limits

1. Effective Date

The emission limits in this paragraph become effective upon startup of either Unit 3 or Unit 4, or upon the beginning of actual construction of modifications to the coal preparation plant, whichever occurs first.

2. Air Pollution Control Equipment

a. On and after the effective date of this paragraph, 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, R18-2-406.A.4]

b. On and after the effective date of this paragraph, 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, R18-2-406.A.4]

The existing Paragraph I.H.1 is renumbered as Paragraphs XIII.A.1 through XIII.A.2 as follows:

XIII. 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 measured in accordance with EPA Reference Method 9.

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

The existing Paragraph III.J.1 is renumbered as Paragraph XIII.B as follows:

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.4]

1. The date the project conducted;
2. The duration of the project; and
3. Type of control measures employed.

The existing Paragraph I.H.2 is renumbered as Paragraphs XIV.A.1 through XIV.A.6 as follows:

XIV. 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 Permittee 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 the purposes of part b. and e. of this condition, 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 (1) through (3) 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 c(1) through c(3) of this condition, 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, measured in accordance with EPA Reference Method 9.

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

The existing Paragraph III.J.2 is renumbered as Paragraph XIV.B as follows:

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.4]
 - 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 a. above.

The existing Paragraph I.H.6 is renumbered as Paragraph XV.A as follows:

XV. 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]

The existing Paragraph I.H.3 is renumbered as Paragraph XVI.A.1 through XVI.A.3 as follows:

XVI. 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]

The existing Paragraph III.J.3 is renumbered as Paragraph XVI.B as follows:

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.4]

The existing Paragraph I.H.4 is renumbered as Paragraph XVII.A as follows:

XVII. DEMOLITION/RENOVATION

A. Emission Limits and Standards

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

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

The existing Paragraph III.J.4 is renumbered as Paragraph XVII.B and revised as follows:

B. Monitoring, Recordkeeping, and Reporting Requirements

The Permittee shall comply with all applicable monitoring, recordkeeping, and reporting requirements of 40 CFR 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]

The existing Paragraph I.H.5 is renumbered as Paragraph XVIII.A as follows:

XVIII. NONVEHICLE AIR CONDITIONER MAINTENANCE AND/OR SERVICES

A. Emission Limits and Standards

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

[40 CFR 82, Subpart F]

The existing Paragraph III.J.5 is renumbered as Paragraph XVIII.B and revised as follows:

B. Monitoring, Recordkeeping, and Reporting Requirements

The Permittee shall comply with all applicable monitoring, recordkeeping, and reporting requirements of 40 CFR 82 Subpart F (Protection of Stratospheric Ozone - Recycling and Emissions Reduction).

[40 CFR 82, Subpart F]

The existing Paragraphs V.A through V.E are renumbered as Paragraphs XIX.A through XIX.E as follows:

XIX. 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. [Approval to Construct of December 21, 1977, Condition XII]
- B. The Permittee shall monitor and operate ambient monitoring equipment to collect PM₁₀, NO_x, SO₂, wind speed, and wind direction data at the following locations:

<u>Type of Monitor</u>	<u>Location</u>
PM ₁₀ , NO _x , SO ₂ , Wind Speed and Wind Direction	Coyote Hills, AZ
PM ₁₀ Wind Speed and Wind Direction	Plant Site #4

Monitoring, quality assurance, quality control and data analysis for PM₁₀, NO_x, SO₂, 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 PM₁₀, NO_x, SO₂ and wind speed/direction monitors shall be operated according to the Best Management Practices.
- D. The Permittee shall maintain a file of all PM₁₀, NO_x, SO₂, wind speed, and wind direction measurements; quarterly reports; calibration records; and quality control/quality assurance activities for the PM₁₀, NO_x, SO₂, 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 PM₁₀, NO_x, and SO₂ ambient monitoring data of each month. [A.A.C. R18-2-306.A.5.a]

REVISION TO ATTACHMENT "C"

Attachment "C" is revised as follows:

To revise one listing and add one new listing to the section for "Requirements Specifically Identified as Applicable:"

REQUIREMENTS SPECIFICALLY IDENTIFIED AS APPLICABLE

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ARIZONA ADMINISTRATIVE CODE (A.A.C.) TITLE 18, Chapter 2

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ARTICLE 9 **NEW SOURCE PERFORMANCE STANDARDS**

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- R18-2-901.2 40 CFR 60, Subpart D, Fossil-Fuel-Fired Steam Generators for which Construction is Commenced After August 17, 1971

- R18-2-901.3 40 CFR 60, Subpart Da, Electric Utility Steam Generating Units for which Construction is Commenced After September 18, 1978

REVISION TO ATTACHMENT "D"

Attachment "D" is revised as follows:

To add the following six rows to the process equipment list:

Equipment	Description	Size	Serial Number	Model	Date of Commercial Operation/ Manufacture
Unit 3 Boiler	... steam generating unit	400 MW, net, maximum continuous rating	...	...	...
Unit 4 Boiler	... steam generating unit	400 MW, net, maximum continuous rating	...	...	...
Cooling Tower 3	Steam unit mechanical-draft cooling tower	Recirculation rate - 200,000 gal/min	...	...	...
Cooling Tower 4	Steam unit mechanical-draft cooling tower	Recirculation rate - 200,000 gal/min	...	...	...
Lime Handling - Units 3 & 4	Storage silos, lime unloading and lime feed bins	62,400 ton/yr	...	...	...
Ash Handling - Units 3 & 4	Storage silos, ash truck loading	836,182 ton/yr	...	...	...

To add the following two rows to the continuous emission monitors list:

Steam Unit	NO _x Monitor	SO ₂ Monitor	CO Monitor	CO ₂ Monitor	Opacity Monitor	Flow Monitor
Unit 3
Unit 4

To add the following eight rows to the air pollution control equipment list:

Equipment	Description	Size	Serial Number	Model/ Manufacturer	Date of Construction/ Commencement
Sulfur Dioxide Removal System on Unit 3	Dry flue gas desulfurization	TBD	TBD	TBD	TBD
Sulfur Dioxide Removal System on Unit 4	Dry flue gas desulfurization	TBD	TBD	TBD	TBD
Particulate Matter Removal System on Unit 3	Fabric filter baghouse	TBD	TBD	TBD	TBD
Particulate Matter Removal System on Unit 4	Fabric filter baghouse	TBD	TBD	TBD	TBD
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
Coal Handling System - Units 3 & 4	Unloading Transfer Tower Collector	TBD	TBD	TBD	TBD

Equipment	Description	Size	Serial Number	Model/ Manufacturer	Date of Construction/ Commencement
	Secondary Crusher Enclosure Dust Collector (DC-2)	TBD	TBD	TBD	TBD
	Sampler Enclosure Dust Collector	TBD	TBD	TBD	TBD
	Silo Feed Tower Collector (DC-4)	TBD	TBD	TBD	TBD
	Silo Feed Tower Collector (DC-4A)	TBD	TBD	TBD	TBD
Lime Handling System - Units 3 & 4	Lime Silos Collector	TBD	TBD	TBD	TBD
	Baghouses at Water Treatment Silos (4)	TBD	TBD	TBD	

REVISION TO ATTACHMENT "E"

Attachment "E" is revised as follows:

To add the following 176 rows to the list of insignificant activities:

Insig. No.	POTENTIAL EMISSION POINTS CLASSIFIED AS "INSIGNIFICANT ACTIVITIES" PURSUANT TO A.A.C. R18-2-101.54
1	Unit 3 and Unit 4 condensate system vents, drains, and reliefs
2	Unit 3 and Unit 4 condensate pump vent pump A
3	Unit 3 and Unit 4 condensate pump vent pump B
4	Unit 3 and Unit 4 condensate pump vent pump C
5	Unit 3 and Unit 4 gland steam condenser vent
6	Unit 3 and Unit 4 air ejector condenser vent
7	Unit 3 and Unit 4 feedwater system vents, drains, and reliefs
8	Unit 3 and Unit 4 feedwater heater 7 vent
9	Unit 3 and Unit 4 feedwater heater 6 vent
10	Unit 3 and Unit 4 feedwater heater 5 vent
11	Unit 3 and Unit 4 deaerating heater vent
12	Unit 3 and Unit 4 boiler feed pump B vent
13	Unit 3 and Unit 4 boiler feed pump A seal leakoff vent
14	Unit 3 and Unit 4 boiler feed pump B vent
15	Unit 3 and Unit 4 boiler feed pump B seal leakoff vent
16	Unit 3 and Unit 4 feedwater heater 3 vent
17	Unit 3 and Unit 4 feedwater heater 2 vent
18	Unit 3 and Unit 4 feedwater heater 1 vent
19	Unit 3 and Unit 4 boiler steam drum vents
20	Unit 3 and Unit 4 blowdown tank vent
21	Unit 3 and Unit 4 boiler emergency relief
22	Unit 3 and Unit 4 main transformer
23	Unit 3 and Unit 4 main auxiliary transformer (2)
24	Unit 3 and Unit 4 excitation transformer
25	Unit 3 and Unit 4 generator grounding transformer
26	Unit 3 and Unit 4 hydrogen system vents
27	Unit 3 and Unit 4 stator cooling water vents
28	Unit 3 and Unit 4 circulating water system vents, drains and reliefs
29	Unit 3 and Unit 4 condenser vents
30	Unit 3 and Unit 4 condenser air removal vents
31	Unit 3 and Unit 4 auxiliary steam system vents, drains, and reliefs
32	Unit 3 and Unit 4 SDA lime system water vents, drains, and reliefs

Insig. No.	POTENTIAL EMISSION POINTS CLASSIFIED AS "INSIGNIFICANT ACTIVITIES" PURSUANT TO A.A.C. R18-2-101.54
33	Unit 3 and Unit 4 condensate tank vent
34	Unit 3 and Unit 4 cooling water storage tank vent
35	Unit 3 and Unit 4 cooling water system vent, drain, and relief
36	Unit 3 and Unit 4 water/steam sampling system vent, drain, and relief
37	Unit 3 and Unit 4 polish system vents, drain, and reliefs
38	Unit 3 and Unit 4 polisher acid day tank vent
39	Unit 3 and Unit 4 polisher caustic day tank vent
40	Unit 3 and Unit 4 polisher vessel A vent
41	Unit 3 and Unit 4 polisher vessel B vent
42	Unit 3 and Unit 4 polisher vessel C vent
43	Unit 3 and Unit 4 chemical feed system vents, drains, and reliefs
44	Unit 3 and Unit 4 ammonia tank vent
45	Unit 3 and Unit 4 hydrazine tank vent
46	Unit 3 and Unit 4 phosphate dissolving Hooper
47	Unit 3 and Unit 4 phosphate day tank
48	Unit 3 and Unit 4 continuous emissions monitors
49	Bottom ash dewatering bin A
50	Bottom ash dewatering bin B
51	Bottom ash settling tank
52	Bottom ash surge tank
53	Lube oil system vents, drains, and reliefs
54	Clean lube oil storage tank vent
55	Raw water system vents, drains, and reliefs
56	Service water system vents, drains, and reliefs
57	Water treatment system vents, drains, and reliefs
58	Water treatment lime suction tanks
59	Water treatment influent tank 1
60	Water treatment influent tank 2
61	Water treatment reactivator 1
62	Water treatment reactivator 2
63	Reactivator 1 effluent tank
64	Reactivator 2 effluent tank
65	Reactivator sludge thickner tank
66	Reactivator sludge thickner supernatant tank
67	Soda ash solution tanks
68	Coagulant aid drum
69	Coagulant aid solution tank
70	Backwash storage tank

Insig. No.	POTENTIAL EMISSION POINTS CLASSIFIED AS "INSIGNIFICANT ACTIVITIES" PURSUANT TO A.A.C. R18-2-101.54
71	ROSEP acid day tank
72	Filtered water cartridge filter
73	Vacuum Degasifier Vent
74	Reverse Osmosis Treated Water Tank Vent
75	ROSEP Chemical Cleaning Batch Tank
76	Demineralizer Canon Vessel (2) Vent
77	Demineralizer Anion Vessel (2) Vent
78	Demineralizer Mixed Bed Vessel (2) Tank
79	Demineralizer Acid Day Tank
80	Demineralizer Caustic Day Tank
81	Demineralizer Hot Water Tank
82	Common Condensate Tank Vent
83	Potable Water System Hypochlorite Tank
84	Potable Water Head Tank Vent
85	Potable Water System Vents, Drains and Reliefs
86	Polishing Demineralizer Acid Storage Tank Vent
87	Polishing Demineralizer Caustic Storage Tank Vent
88	Bulk Ammonia Storage Tank
89	Water Treatment Acid Storage Tank B Vent
90	Water Treatment Acid Storage Tank C Vent
91	Water Treatment Caustic Storage Tank A Vent
92	Water Treatment Caustic Storage Tank B Vent
93	Cooling Tower Acid Tank Vent
94	Cooling Tower Dispersant Tank Vent
95	Power Building HVAC System Vents, Drains and Reliefs
96	Service Air System Vents, Drains and Reliefs
97	Instrument Air System Vents, Drains and Reliefs
98	Yard Loop Header System Vents, Drains and Reliefs
99	Diesel Fire Pump
100	Nitrogen System (Unit 1 and 2) Vents, Drains and Reliefs
101	Hydrogen System (Unit 1 and 2) Vents, Drains and Reliefs
102	Polisher Resin Separation and Cation Regeneration Vessel Vent
103	Polisher Anion Regeneration Vessel Vent
104	Polisher Mixing and Storage Vessel Vent
105	Neutralizing System Vents, Drains and Reliefs
106	Neutralizing Tank A
107	Neutralizing Tank B
108	Oily Waste System Vents, Drains and Reliefs

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109	Oil Waste Surge Tank Vent Oil/Water Separator Vent
110	Oil Separator Discharge Tank waste Water Storage Tank
111	Sewer System Vents, Drains and Reliefs
112	Building Latrine Vents
113	Sewage Treatment Facility
114	Raw Water Storage Reservoir A
115	Raw Water Storage Reservoir B
116	Makeup Water Reservoir A
117	Makeup Water Reservoir B
118	Recoverable Pond A
119	Recoverable Pond B
120	Cooling Tower Blowdown Pond A
121	Cooling Tower Blowdown Pond B
122	Process Waste Water Pond
123	Sludge Pond A
124	Sludge Pond B
125	Sludge Pond C
126	Sludge Pond D
127	Storm Water Run Off Pond #1
128	Storm Water Run Off Pond #2
129	Storm Water Run Off Pond #3
130	Coal Pile Run Off Pond
131	Sewage Treatment Pond A
132	Sewage Treatment Pond B
133	Evaporation Pond #1
134	Evaporation Pond #2
135	Evaporation Pond #3
136	Evaporation Pond #4
137	Evaporation Pond #5
138	Evaporation Pond #6
139	General Station Maintenance Activities and Associated Equipment
140	Natural Gas, Propane, Butane, Liquefied Petroleum Gas, Acetylene Storage Tanks and Torches
141	Waste Oil Drum Storage Area
142	Waste Oil Storage Tank
143	Waste Storage Area
144	Building Housekeeping Activities
145	Site Housekeeping Activities Including Vacuum Truck and Spill Cleanup
146	Landscaping and Site Housekeeping Activities
147	Use of Pesticides, Fumigants and Herbicides

148	Groundskeeping Activities
149	Industrial Vacuum Cleaners
150	Use of Consumer Products (Products us at site in same manner as normal consumer use)
151	All Paved and Unpaved Roads Except Ash Haul Roads Located Outside Site Boundaries
152	Automobile, Station Wagon, Pickup Truck or Van Use at Site
153	Medical Activities (Activities directly used in the diagnosis and treatment of disease, injury or other medical conditions).
154	Manual Operated Equipment (Equipment used for buffing, polishing, carving, cutting, drilling, machining, routing, sanding, sawing, surface grinding or turning and associated venting hoods)
155	Individual Equipment Joints and Attachments (All flanges, piping and piping attachments, valves, pump seals, pressure relief valves, safety valves that connect or hold together systems or protect systems from over pressurization)
156	Battery Banks and Recharging Area
157	Plastic Pipe Welding
158	Steam Cleaning (Equipment used exclusively for portable stream cleaning)
159	Pump/Motor Lubricating Oil Reservoirs, Hydraulic Oil Reservoirs, Turbine Lubricating Oil Reservoirs
160	Adhesive Usage Nor Related to Production
161	Caulking Operation that are not part of production
162	Electric Motors
163	High Voltage Induced Corona
164	Safety devices (Fire extinguishers, fire suppressions systems, deluge systems)
165	Filter Draining
166	Soil gas Sampling
167	General Vehicle Maintenance
168	Carbon Dioxide System (Unit 1 and 2) vents, drains and reliefs
169	Carbon Dioxide System (Unit 1 and 2) vents, drains and reliefs
170	Aerosol Can Use
171	Cathodic Protection Systems
172	Cafeteria Activities
173	Circuit Breakers
174	Water Treatment Acid Storage Tank A Vent
175	Waste Water Storage Tank
176	Oil/Water Separator Vent