

**ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY**

**Air Quality Division**

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

**SIGNIFICANT PERMIT REVISION TO AIR QUALITY CONTROL PERMIT**

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

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

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

**Salt River Project**

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

3. MAILING ADDRESS **P. O. Box 52025 PAB 352**

**Phoenix, AZ 85072-2025**

4. ORIGINAL EQUIPMENT LOCATION/ADDRESS **6 miles northeast of St. Johns off US Hwy 666**

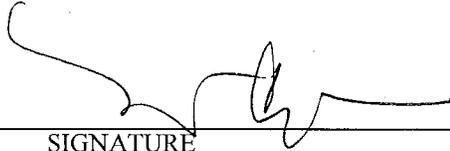
**St. Johns, Apache County, AZ 85936**

5. FACILITIES OR EQUIPMENT DESCRIPTION **Coronado Generating Station**

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

7. ADEQ SIGNIFICANT REVISION NUMBER **46236** PERMIT CLASS **I**

SIGNIFICANT REVISION ISSUED THIS **22nd** DAY OF **January**, 2009



SIGNATURE

*Nancy C. Wrona, Director, Air Quality Division*

TITLE



## SIGNIFICANT PERMIT REVISION DESCRIPTION

This significant permit revision for Salt River Project's (SRP) operating permit #30732, Coronado Generating Station (CGS), has been necessitated by the Consent Decree negotiated with the U.S. Environmental Protection Agency (EPA) for reducing emissions of nitrogen oxides (NO<sub>x</sub>) and sulfur dioxide (SO<sub>2</sub>). This significant permit revision for Coronado Generating Station (CGS) authorizes the company to implement the following changes to the facility:

- Addition of low nitrogen oxide burners (LNB) to Units 1 and 2 to reduce NO<sub>x</sub> emissions. Coupled with the burner additions will be the modification to the furnace combustion air system on each unit.
- Addition of a Selective Catalytic Reduction (SCR) system to Unit 2. The SCR will further reduce NO<sub>x</sub> emissions from Unit 2.
- Replacement of the existing Pullman Kellogg wet limestone flue gas desulfurization (FGD) systems on Units 1 and 2 with new wet limestone FGD systems to further reduce SO<sub>2</sub> emissions.
- Addition of continuous emission monitoring system (CEMS) for particulate matter (PM) to Units 1 and 2 to monitor PM stack emissions.
- Upgrade of the existing limestone handling system.
- Addition of second limestone storage pile with an approximate size of 17,000 tons.
- Potential upgrade of the existing bottom ash handling systems on Units 1 and 2 to convert them from wet sluice systems to either wet or dry bottom ash extractor systems.
- Modifications of unit process components to address additional auxiliary power needs associated with the new air pollution control systems.
- Replacement of the existing common stack for Units 1 and 2 with two new stacks.
- Addition of CEMS for carbon monoxide (CO) to Units 1 and 2 to monitor CO stack emissions.

With these changes, there will be a decrease in emissions of NO<sub>x</sub> by 5,754 tons per year (tpy) and SO<sub>2</sub> by 4,448 tpy. There will also be net emission increase of 17,849 tpy of CO, 323 tpy of particulate matter below 10 micron size (PM<sub>10</sub>), 42 tpy of PM, and 267 tpy of sulfuric acid mist. These increases are above the significant thresholds provided in A.A.C. R18-2-101(106). Consequently the proposed project is a "major modification" and therefore triggers PSD requirements for these pollutants.

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**ADDENDUM (SIGNIFICANT REVISION NO. 46236) TO  
AIR QUALITY PERMIT NO. 30732 FOR  
SALT RIVER PROJECT, CORONADO GENERATING STATION**

This addendum is an authorization for the Permittee to make modifications at the Coronado Generating Station as described in the permit summary. In addition to the terms and conditions of Permit No. 30732, the Permittee shall comply with the terms and conditions required in this addendum as follows:

**Attachment "B"  
SPECIFIC CONDITIONS**

*The following condition shall be added to the Operating Permit #30732 before Facility Wide Limitations:*

This permit is issued pursuant to the provisions of the Arizona Revised Statutes (ARS) and constitutes an Installation Permit for the purpose of the applicable State Implementation Plan.

[ARS § 49-404.c and -426]

*Condition II.A of Operating Permit #30732 shall be replaced by the following Condition II.A:*

**II. UNIT 1 AND UNIT 2 BOILERS**

**A. Applicability**

1. This section applies to the Unit 1 and Unit 2 boilers as described in Attachment "C" of this permit.
2. A Unit Operating Day for Unit 1 means any calendar day on which Unit 1 fires fossil fuel. A Unit Operating Day for Unit 2 means any calendar day on which Unit 2 fires fossil fuel. [EPA Consent Decree III.40]
3. Permit Shield [A.A.C. R18-2-325]

Compliance with this Section shall be deemed compliance with EPA Consent Decree III.40.

Condition II.B.3 of Operating Permit #30732 shall be replaced by the following Condition II.B.3:

## II. UNIT 1 AND UNIT 2 BOILERS

### B. Operating Limitations

#### 3. Continuous Emissions Monitoring System

- a. The Permittee shall calibrate, maintain, and operate continuous emission 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.A.3.c]  
[Material Permit Condition are defined by double underline and italics]

- b. The Permittee, within 180 calendar days following commencement of operation of each flue gas desulfurization (FGD) system on Unit 1 and Unit 2 required by Condition II.F.2.b, shall install, maintain, correlate, and operate continuous emission monitoring systems for measuring PM emissions on Unit 1 and Unit 2.  
[EPA Consent Decree VI.C.67 & 71 and A.A.C. R18-2-331.A.3.c]  
[Material Permit Condition are defined by double underline and italics]

Condition II.C.1.b of Operating Permit #30732 shall be replaced by the following Condition II.C.1.b:

## II. UNIT 1 AND UNIT 2 BOILERS

### C. Particulate Matter and Opacity

#### 1. Emission Limitations/Standards

##### b. Particulate Matter

- (1) The Permittee shall not cause to be discharged into the atmosphere from the stack of each unit any gases which contain particulate matter in excess of 43 nanograms per joule heat input (0.10 lb per million Btu) derived from fossil fuel. [40 CFR 60.42(a)(1)]
- (2) The Permittee, upon installation and operation of the new FGD system associated with Unit 1 as per Condition II.F.2.b, and continuing thereafter, shall not emit filterable particulate matter (PM) in excess of 0.030 lbs/MMBtu, as determined by performance tests.  
[EPA Consent Decree VI.B.64 and VI.D.74; and A.A.C. R18-2-406.A.4]

- (3) The Permittee, upon installation and operation of the new FGD system associated with Unit 2 as per Condition II.F.2.b, and continuing thereafter, shall not emit filterable PM and particulate matter below 10 micron size (PM<sub>10</sub>) in excess of 0.030 lbs/MMBtu, as determined by performance tests.[EPA Consent Decree VI.B.64 and VI.D.74; and A.A.C. R18-2-406.A.4]

The following Condition II.C.2 shall replace the existing Condition II.C.2 of Operating Permit #30732:

## II. UNIT 1 AND UNIT 2 BOILERS

### C. Particulate Matter and Opacity

#### 2. Air Pollution Control Requirements

- a. At all times, including periods of startup, shutdown, and malfunction, Permittee shall, to the extent practicable, maintain and operate each Hot Side Electrostatic Precipitator (HS-ESP) in a manner consistent with good air pollution control practices for minimizing particulate matter emissions.

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

[Material Permit Condition are defined by underline and italics]

- b. The Permittee shall operate each existing HS-ESP on Unit 1 and Unit 2 at all times when the Unit is in operation to maximize PM reductions, provided that such operation of the HS-ESP is consistent with the technological limitations, manufacturer's specifications, and good engineering and maintenance practices for the HS-ESP.

[EPA Consent Decree VI.A.63 and A.A.C. R18-2-331.A.3.e]

[Material Permit Condition are defined by underline and italics]

- c. The Permittee shall, except as required during correlation testing under 40 CFR Part 60, Appendix B, PS-11, and Quality Assurance Requirements under Appendix F, Procedure 2, at a minimum, to the extent reasonably practicable do the following:

- (1) Fully energize each section of the HS-ESP for each unit and repair any failed HS-ESP section at the next planned or unplanned unit outage of sufficient length;
- (2) Operate automatic control systems on each HS-ESP to maximize particulate matter collection efficiency;
- (3) Maintain power levels delivered to the HS-ESPs, consistent with manufacturer's specifications, the operational design of the unit, and good engineering practices;

- (4) Inspect for and repair during the next planned or unplanned unit outage of sufficient length any openings in HS-ESP casings, ductwork, and expansion joints to minimize air leakage; and
- (5) Optimize the plate-cleaning and discharge-electrode-cleaning systems for the HS-ESPs at each unit by varying the cycle time, cycle frequency, rapper-vibrator intensity, and number of strikes per cleaning event.

[EPA Consent Decree VI.A.63]

*The following Condition II.C.3.b(1)(a) shall replace the existing Condition II.C.3.b(1)(a) of Operating Permit #30732:*

## **II. UNIT 1 AND UNIT 2 BOILERS**

### **C. Particulate Matter and Opacity**

#### **3. Monitoring/Recordkeeping/Reporting Requirements**

##### **b. Compliance Assurance Monitoring (CAM) for PM**

##### **(1) Primary and Secondary Indicators**

##### **(a) Primary Indicator**

- (i) The opacity of exhaust gases shall be an indicator of particulate matter emissions.

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

- (ii) PM emission measurements from the PM CEMS shall be an indicator of PM emissions. PM emission measurements greater than 0.028 lb/MMBtu on a 24-hour rolling average, as measured with a PM CEMS, shall be considered an excursion and trigger an inspection, corrective action, and recordkeeping requirement in accordance with Condition II.C.3.b.

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

The following Conditions II.C.3.g shall be added to Condition II.C.3 of Operating Permit #30732:

## II. UNIT 1 AND UNIT 2 BOILERS

### C. Particulate Matter and Opacity

#### 3. Monitoring/Recordkeeping/Reporting Requirements

g. PM CEMS [Material Permit Condition are defined by double underline and italics]

##### (1) Installation & Certification

(a) No later than January 1, 2010, the Permittee shall submit a plan to ADEQ and EPA for the installation and correlation of PM continuous emissions monitoring system (CEMS) for Unit 1 and Unit 2.

[EPA Consent Decree VI.C.68 and A.A.C. R18-2-331.A.3.c]

(b) No later than 120 days prior to the deadline for commencing operation of the PM CEMS, the Permittee shall submit to ADEQ and EPA a proposed Quality Assurance/Quality Control (QA/QC) protocol that shall be followed for the PM CEMS.

[EPA Consent Decree VI.C.69 and A.A.C. R18-2-331.A.3.c]

(c) In developing the plan for installation and correlation of the PM CEMS and QA/QC protocol, the Permittee shall use the criteria set forth in 40 CFR Part 60, Appendix B, PS-11, and Appendix F, Procedure 2.

[EPA Consent Decree VI.C.70 and A.A.C. R18-2-331.A.3.c]

(d) Following ADEQ's and EPA's approval of the plan described in Conditions II.C.3.g(1)(a) and II.C.3.g(1)(b), the Permittee shall thereafter operate the PM CEMS in accordance with the approved plan and QA/QC protocol.

[EPA Consent Decree VI.C.70 and A.A.C. R18-2-331.A.3.c]

(e) Within 180 calendar days following commencement of operation of each FGD, the Permittee shall conduct performance specification tests and demonstrate compliance with the PM CEMS

installation and certification plan submitted to and approved by ADEQ and EPA in accordance with Conditions II.C.3.g(1)(a) and II.C.3.g(1)(b).

[EPA Consent Decree VI.C.71 and A.A.C. R18-2-331.A.3.c]

- (f) The PM CEMS shall comprise a continuous particle mass monitor measuring particulate matter concentration, directly or indirectly, on an hourly average basis and a diluents monitor used to convert the concentration to units expressed in lb/MMBtu. The PM CEMS installed at Unit 1 and Unit 2 must be appropriate for the anticipated stack conditions and capable of measuring PM concentrations on an hourly average basis. [EPA Consent Decree VI.C.67]
- (g) Except for periods of monitor malfunction, maintenance, or repair, SRP shall continuously operate the PM CEMS at all times when the Unit it serves is operating. [EPA Consent Decree VI.C.67]

(2) Demonstration Period

- (a) The Permittee shall operate the PM CEMS for at least two years. If, after 2 years of operation, the Permittee believes that it is infeasible to continue operation of the PM CEMS, the Permittee may submit a demonstration of infeasibility to ADEQ and EPA:
  - (i) As part of that demonstration, the Permittee shall submit an alternative PM monitoring plan for review and approval by ADEQ and EPA. If ADEQ and EPA disapprove the alternative monitoring plan, or if ADEQ and EPA rejects the Permittee's assertion that it is infeasible to continue operating the PM CEMS, such disagreement is subject to dispute resolution as specified in Section XV of the EPA Consent Decree (Civil Action No. 2:08-cv-1479-JAT). [EPA Consent Decree VI.C.72]
  - (ii) The alternative PM monitoring plan shall be submitted in the form of a permit revision to the facility's operating permit. [A.A.C. R18-2-306.A.2]

- (b) Operation of a PM CEMS shall be considered “infeasible” if, by way of example, the PM CEMS:
- (i) Cannot be kept in proper condition for sufficient periods of time to produce reliable, adequate, or useful data; or
  - (ii) The Permittee demonstrates that recurring, chronic, or unusual equipment adjustment or servicing needs in relation to other types of continuous emission monitors cannot be resolved through reasonable expenditures of resources; or
  - (iii) Chronic and difficult operational issues at Unit 1 or Unit 2 cannot be resolved through reasonable expenditure of resources; or
  - (iv) The data produced by the CEMS cannot be used to assess PM emissions from Unit 1 or Unit 2 or performance of that Unit’s control devices.

[EPA Consent Decree VI.C.73]

- (c) If ADEQ and EPA determines that the Permittee has demonstrated infeasibility pursuant to Condition II.C.3.g(2), the Permittee shall be entitled to discontinue operation of and remove the PM CEMS.

[EPA Consent Decree VI.C.73]

- (d) If, after 2 years of operation, the Permittee determines that it is feasible to continue operation of the PM CEMS, the Permittee shall submit a permit revision to the Director to permanently incorporate the PM CEMS in the permit.

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

(3) Recordkeeping

The Permittee shall maintain, in an electronic database, the hourly average emission values from all PM CEMS data in lb/MMBtu.

[EPA Consent Decree VI.C.67]

(4) Reporting

[EPA Consent Decree VI.C.71]

- (a) The Permittee shall report the data recorded by the PM CEMS, expressed in lb/MMBtu on a rolling

average 3-hour, 6-hour, 24-hour, 30-day, and 365-day basis in electronic format to the ADEQ and EPA in accordance with Condition VII of Attachment "A".

- (b) The Permittee shall identify in the report any PM concentrations measured by the PM CEMS that are greater than 125% of the highest PM concentration level used in the most recent correlation testing performed pursuant to PS-11.

*The following Condition II.C.4.c and II.C.4.d shall be added to the existing Condition II.C.4 of Operating Permit #30732*

## **II. UNIT 1 AND UNIT 2 BOILERS**

### **C. Particulate Matter and Opacity**

#### **4. Testing Requirements** [EPA Consent Decree VI.B.65 and A.A.C. R18-2-312]

- c. The Permittee shall conduct a performance test for PM within 180 days of installation and commencing operation of the FGD system for each unit and shall repeat this test annually thereafter. To determine compliance with the PM emission rate established in Conditions II.C.1.b(2) and II.C.1.b(3), the Permittee shall use the following reference methods and procedures (filterable portion only):
  - (1) 40 CFR Part 60, Appendix A-3, Method 5, Method 5B, or Method 5I.
  - (2) 40 CFR Part 60, Appendix A-6, Method 17; or
  - (3) Alternative stack tests or methods requested by the Permittee and approved by ADEQ and EPA.
- d. Each test shall consist of three separate runs performed under representative operating conditions not including periods of startup, shutdown, or malfunction.
  - (1) The sampling time for each run shall be at least 120 minutes and the volume of each run shall be 1.70 dry standard cubic meters (60 standard dry cubic feet).
  - (2) The Permittee shall calculate the PM emission rate from the stack test results in accordance with 40 CFR 60.8 (f).

- (3) The Permittee shall submit the results of each PM stack test to EPA and ADEQ within forty-five (45) days of completion of each test.

*Condition II.C.5 of the Operating Permit #30732 shall be revised to read as follows:*

**II. UNIT 1 AND UNIT 2 BOILERS**

C. Particulate Matter and Opacity

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

Compliance with this Section shall be deemed compliance with 40 CFR 60.42(a)(1), 40 CFR 60.42(a)(2), 40, CFR, 60.45(a), 40 CFR 60.45(g)(1), 40 CFR 60.46(b)(2), 40 CFR 60.46(b)(3), 40 CFR 60.46(d)(2), 40 CFR 64.3, 40 CFR 64.4, 40 CFR 64.5, 40 CFR 64.6, 40 CFR 64.7, 40 CFR 64.9, and EPA Consent Decree VI.A.63, VI.B.64, VI.B.65, VI.C.67, VI.C.68, VI.C.69, VI.C.70, VI.C.71, VI.C.72, VI.C.73, and VI.D.74.

*The following Conditions II.D.1.e, II.D.1.f, and II.D.1.g shall be added to Condition II.D.1 of Operating Permit #30732:*

**II. UNIT 1 AND UNIT 2 BOILERS**

D. Nitrogen Oxides (NO<sub>x</sub>)

1. Emission Limitations/Standards

- e. The Permittee shall not, beginning on the earlier of 90 Unit Operating Days or 180 calendar days after the LNB are installed and continuing thereafter, allow the 30-day rolling average NO<sub>x</sub> emission rate to exceed 0.320 lb/MMBtu. [EPA Consent Decree IV.A.41]
- f. The Permittee shall not, beginning on June 1, 2014, and continuing thereafter, allow the 30-day rolling average NO<sub>x</sub> emission rate from Unit 2 to exceed 0.080 lb/MMBtu. [EPA Consent Decree IV.A.42]
- g. The Permittee shall not, beginning on June 1, 2014, and continuing thereafter, allow the 365-day plant-wide rolling NO<sub>x</sub> emission rate for Unit 1 and Unit 2 to exceed 7,300 tons per year.  
[EPA Consent Decree IV.A.44]

Condition II.D.2 shall replace the existing Condition II.D.2 of Operating Permit #30732:

## II. UNIT 1 AND UNIT 2 BOILERS

### D. Nitrogen Oxides (NO<sub>x</sub>)

#### 2. Air Pollution Control Requirements

- a. At all times, including periods of startup, shutdown, and malfunction, Permittee shall, to the extent practicable, maintain and operate the Riley Stoker turbo fired boilers to control the nitrogen oxide emissions as guaranteed by Riley Stoker.

[Operating Permit #1000106, Attachment B, Condition IV.A.3]

[A.A.C. R18-2-306.A.2; A.A.C. R18-2-331.A.3.e]

[Material Permit Condition are defined by underline and italics]

- b. At all times, including periods of startup, shutdown, and malfunction, Permittee shall, to the extent practicable, maintain and operate the Riley Stoker turbo fired boilers in a manner consistent with good air pollution control practices for minimizing emissions.

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

[Material Permit Condition are defined by underline and italics]

- c. The Permittee shall install low-NO<sub>x</sub> burners on one unit no later than June 1, 2009, and on the other unit no later than June 1, 2011. The Permittee shall operate the low-NO<sub>x</sub> burners in accordance with manufacturer's specifications and good engineering practices to minimize emissions.

[EPA Consent Decree IV.A.41 and A.A.C. R18-2-331.A.3.d & e]

[Material Permit Condition are defined by double underline and italics]

- d. The Permittee shall install a Selective Catalytic Reduction (SCR) system on Unit 2 no later than June 1, 2014. At all times during the operation of Unit 2, the Permittee shall operate the SCR in accordance with manufacturer's specifications and good engineering practices to minimize emissions.

[EPA Consent Decree IV.A.42 and A.A.C. R18-2-331.A.3.d & e]

[Material Permit Condition are defined by double underline and italics]

- e. The Permittee shall continuously operate each NO<sub>x</sub> control at all times the unit it serves is in operation consistent with technological limitations, manufacturer's specifications, and good engineering and maintenance practices for minimizing emissions to the extent practicable.

[EPA Consent Decree IV.A.43 and A.A.C. R18-2-331.A.3.e]

[Material Permit Condition are defined by double underline and italics]

The following Condition II.D.3.c, II.D.3.d, II.D.3.e, and II.D.3.f shall be added to Condition II.D.3 of Operating Permit #30732:

## II. UNIT 1 AND UNIT 2 BOILERS

### D. Nitrogen Oxides (NO<sub>x</sub>)

#### 3. Monitoring/Recordkeeping/Reporting Requirements

##### c. Monitoring of NO<sub>x</sub> Emission Rate [EPA Consent Decree IV.A.45]

The Permittee shall determine the 30-day rolling average NO<sub>x</sub> emission rate for Unit 1 and Unit 2 using CEMS in accordance with the procedures of 40 CFR Part 75, with the following exceptions:

- (1) NO<sub>x</sub> emissions data need not be bias adjusted.
- (2) For any CEMS with a span less than 100 parts per million (ppm), the calibration drift and out-of-control criteria in Procedure 1, Section 4.3 of 40 CFR Part 60 Appendix F shall apply in lieu of the low emitter specifications in 40 CFR Part 75, Appendix B, Section 2.1.
- (3) For any CEMS with a span less than or equal to 30 ppm, the exemption from the 40 CFR Part 75 linearity check will not apply and either the 40 CFR Part 75 linearity check or the cylinder gas audit described in Procedure 1, Section 5.1.2 of 40 CFR Part 60, Appendix F must be performed on a quarterly basis.
- (4) After installing and commencing operation on the SCR system, for Unit 2, an annual relative accuracy test audit shall meet, at a minimum, a relative accuracy of less than 20 percent or an accuracy of less than 0.016 lb/MMBtu (expressed as the difference between the monitor mean and the reference value mean).

##### d. Determining the 30-Day Rolling Average NO<sub>x</sub> Emission Rate [EPA Consent Decree III.5]

- (1) The Permittee shall calculate the 30-day rolling average NO<sub>x</sub> emission rate in accordance with the following procedure:
  - (a) Sum the total pounds of NO<sub>x</sub> emitted from each Unit during the current Unit Operating Day and the

previous 29 Unit Operating Days.

- (b) Sum the total heat input to the unit in million British thermal units (MMBtu) during the current Unit Operating Day and the previous 29 Unit Operating Days.
- (c) Divide the total number of pounds of NO<sub>x</sub> emitted during the 30 Unit Operating Days by the total heat input during the 30 Unit Operating Days.

- (2) A new 30-day rolling average NO<sub>x</sub> emission rate shall be calculated for each new Unit Operating Day. Each 30-day rolling average NO<sub>x</sub> emission rate will include all emissions that occur during all periods within any Unit Operating Day, including emissions from startup, shutdown, and malfunction.

e. Determining the 365-Day Plant-Wide Rolling NO<sub>x</sub> Emission Rate

- (1) The 365-day plant-wide rolling NO<sub>x</sub> emission rate shall be determined using CEMS, in accordance with the procedures specified in 40 CFR Part 75.

[EPA Consent Decree IV.B.46]

- (2) The 365-day plant-wide rolling NO<sub>x</sub> emission rate means the total number of tons of NO<sub>x</sub> emitted from Units 1 and 2 during a 365-day period beginning on June 1, 2014, and continuing each day thereafter, and shall include all emissions during startup, shutdown, and malfunction, unless the malfunction is determined to be a Force Majeure event as defined in Section XIV of the EPA Consent Decree (Civil Action No. 2:08-cv-1479-JAT).

[EPA Consent Decree III.6]

f. Reporting Requirements

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

The Permittee shall maintain records of the NO<sub>x</sub> emission rate. These records shall be submitted along with the Compliance certifications required in Condition VII of the Attachment "A". These reports shall be made available, upon request, to Department inspectors in a reasonable time.

Existing Condition II.D.4 of Operating Permit #30732 shall read as follows:

**II. UNIT 1 AND UNIT 2 BOILERS**

D. Nitrogen Oxides (NO<sub>x</sub>)

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

Compliance with this Section shall be deemed compliance with 40 CFR 60.43(c), 40 CFR 60.44(a)(2), 40 CFR 60.44(a)(3), 40 CFR 60.44(b), 40 CFR 60.45(a), 40 CFR 60.45(g)(3), 40 CFR 75 Appendix "A" and "B", 40 CFR 75.10(d)(1), and EPA Consent Decree III.5, III.6, IV.A.41, IV.A.42, IV.A.43, IV.A.44, IV.A.45, and IV.B.46.

The following Condition II.F.1.d and II.F.1.e shall be added to Operating Permit #30732:

**II. UNIT 1 AND UNIT 2 BOILERS**

F. Sulfur Dioxide (SO<sub>2</sub>)

1. Emission Limitations/Standards

d. Beginning on January 1, 2012, for Unit 2, and continuing thereafter, the Permittee shall achieve and maintain a 30-day rolling average SO<sub>2</sub> removal efficiency of at least 95.0 percent or a 30-day rolling average SO<sub>2</sub> emission rate no greater than 0.080 lb/MMBtu. [EPA Consent Decree V.B.48]

e. Beginning on January 1, 2013, for Unit 1, and continuing thereafter, the Permittee shall achieve and maintain a 30-day rolling average SO<sub>2</sub> removal efficiency of at least 95.0 percent or a 30-day rolling average SO<sub>2</sub> emission rate no greater than 0.080 lb/MMBtu. [EPA Consent Decree V.B.49]

The following Condition II.F.2 shall replace the existing Condition II.F.2 of Operating Permit #30732:

**II. UNIT 1 AND UNIT 2 BOILERS**

F. Sulfur Dioxide (SO<sub>2</sub>)

2. Air Pollution Control Requirements

[Material Permit Condition are defined by double underline and italics]

a. Prior to the installation of FGD systems on Unit 1 and Unit 2, the Permittee shall at all times, including periods of startup, shutdown, and malfunction, to the extent practicable, maintain, and operate

the Pullman Kellogg SO<sub>2</sub> scrubber in a manner consistent with good air pollution control practices for minimizing SO<sub>2</sub> emissions.

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

- b. No later than January 1, 2012, for Unit 2 and no later than January 1, 2013, for Unit 1, the Permittee shall install, maintain, and continuously operate the FGD system on each unit at all times that the unit it serves is in operation, consistent with the technological limitations, manufacturer's specifications, and good engineering and maintenance practices for the FGDs for minimizing emissions to the extent practicable.

[EPA Consent Decree V.B.48, 49, & 50, A.A.C. R18-2-306.A.2 and 331.A.3.d & e]

The following Condition II.F.3 shall replace the existing Condition II.F.3 of Operating Permit #30732:

## II. UNIT 1 AND UNIT 2 BOILERS

### F. Sulfur Dioxide (SO<sub>2</sub>)

#### 3. Monitoring/Recordkeeping/Reporting Requirements

- a. The CEMS for SO<sub>2</sub> 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) The Permittee shall comply with the data reduction requirements of 40 CFR Part 75.10(d)(1).

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

- (5) 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 exceeds the applicable standard in Conditions II.F.1.a and II.F.1.b of this Attachment.

b. Monitoring of SO<sub>2</sub> Emission Rate [EPA Consent Decree V.D.58]

The Permittee shall determine the 30-day rolling average SO<sub>2</sub> emission rate and the 30-day rolling average SO<sub>2</sub> removal efficiency for Unit 1 and Unit 2 using CEMS in accordance with the procedures of 40 CFR Part 75, with the following exceptions:

- (1) SO<sub>2</sub> emissions data need not be bias adjusted.
- (2) For any CEMS with a span less than 100 ppm, the calibration drift and out-of-control criteria in Procedure 1, Section 4.3 of 40 CFR Part 60 Appendix F shall apply in lieu of the low emitter specifications in 40 CFR Part 75, Appendix B, Section 2.1.
- (3) For any CEMS with a span less than or equal to 30 ppm, the exemption from the 40 CFR Part 75 linearity check will not apply and either the 40 CFR Part 75 linearity check or the cylinder gas audit described in Procedure 1, Section 5.1.2 of 40 CFR Part 60, Appendix F shall be performed on a quarterly basis.
- (4) An annual relative accuracy test audit shall meet, at a minimum, a relative accuracy of less than 20 percent or an accuracy of less than 0.016 lb/MMBtu (expressed as the difference between the monitor mean and the reference value mean).
- (5) In lieu of installing an inlet flow monitor, the inlet pounds of SO<sub>2</sub> will be calculated as described in Condition II.F.3.c.(1)(b).

c. Determining the 30-Day Rolling Average SO<sub>2</sub> Removal Efficiency [EPA Consent Decree III.7]

- (1) The Permittee shall calculate the 30-day rolling average SO<sub>2</sub> removal efficiency in accordance with the following procedure:
  - (a) Sum the total pounds of SO<sub>2</sub> emitted as measured at

the outlet of the FGD system for the unit during the current Unit Operating Day and the previous 29 Unit Operating Days as measured at the outlet of the FGD system for that unit.

- (b) Sum the total pounds of SO<sub>2</sub> delivered to the inlet of the FGD system for the unit during the current Unit Operating Day and the previous 29 Unit Operating Days as measured at the inlet to the FGD system for that unit (this shall be calculated by measuring the ratio of the lb/MMBtu SO<sub>2</sub> inlet to the lb/MMBtu SO<sub>2</sub> outlet and multiplying the outlet pounds of SO<sub>2</sub> by that ratio).
  - (c) Subtract the outlet SO<sub>2</sub> emissions calculated in Condition II.F.3.c(1)(a) from the inlet SO<sub>2</sub> emissions calculated in Condition II.F.3.c(1)(b).
  - (d) Divide the remainder calculated in Condition II.F.3.c(1)(c) by the inlet SO<sub>2</sub> emissions calculated in Condition II.F.3.c(1)(b).
  - (e) Multiply the quotient calculated in Condition II.F.3.c(1)(d) by 100 to express as a percentage of removal efficiency.
- (2) A new 30-day rolling average SO<sub>2</sub> removal efficiency shall be calculated for each new Unit Operating Day and shall include all emissions that occur during all periods within each Unit Operating Day, including emissions from startup, shutdown, and malfunction.

d. Determining the 30-Day Rolling Average SO<sub>2</sub> Emission Rate

[EPA Consent Decree III.8]

- (1) The Permittee shall calculate the 30-day rolling average SO<sub>2</sub> emission rate in accordance with the following procedure:
  - (a) Sum the total pounds of SO<sub>2</sub> emitted from each Unit during the current Unit Operating Day and the previous 29 Unit Operating Days.
  - (b) Sum the total heat input to each Unit in MMBtu during the current Unit Operating Day and the previous 29 Unit Operating Days.

(c) Divide the total number of pounds SO<sub>2</sub> emitted during the 30 Unit Operating Days by the total heat input during the 30 Unit Operating Days.

(2) A new 30-day rolling average SO<sub>2</sub> emission rate shall be calculated for each Unit Operating Day. Each 30-day rolling average SO<sub>2</sub> emission rate shall include all emissions that occur during all periods within any Unit Operating Day, including emissions from startup, shutdown, and malfunction.

e. Reporting Requirements

The Permittee shall maintain records of the SO<sub>2</sub> removal efficiency and SO<sub>2</sub> emission rate. These records shall be submitted along with the Compliance certifications required in Condition VII of the Attachment "A". These reports shall be made available, upon request, to Department inspectors in a reasonable time.

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

*Existing Condition II.F.4 of Operating Permit #30732 shall read as follows:*

**II. UNIT 1 AND UNIT 2 BOILERS**

F. Sulfur Dioxide (SO<sub>2</sub>)

4. Permit Shield

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

Compliance with this Section shall be deemed compliance with 40 CFR 60.43(a)(1), 40 CFR 60.43(c), 40 CFR 60.45(a), 40 CFR 60.45(g)(2), 40 CFR 75 Subpart F and G, 40 CFR 75 Appendix "A" and "B", 40 CFR 75.10(d)(1), A.A.C. R18-2-903.1 and EPA Consent Decree III.7, III.8, V.B.48, V.B.49, V.B.50, and V.D.58.

*The following new Condition II.G for Carbon Monoxide (CO) shall be added to Operating Permit #30732:*

**II. UNIT 1 AND UNIT 2 BOILERS**

G. Carbon Monoxide (CO)

1. Emission Limitations/Standards

a. The Permittee shall not cause to be discharged into the atmosphere from the stack of each unit any gases which contain CO in excess of 0.50 lb/MMBtu on a 30-day rolling average, excluding periods of start-up, shutdown, and malfunction. [A.A.C. R18-2-406.A.4]

- b. The Permittee shall not cause to be discharged into the atmosphere from the stack of each unit any gases which contain CO in excess of 3.6 lb/MMBtu on a 1-hour average. [A.A.C. R18-2-406.A.5]
- c. By December 31, 2010, the Permittee shall provide a demonstration, which shall include a report, of whether a lower CO emissions limit can be consistently and reasonably achieved, based on an evaluation of the effect of the Low-NO<sub>x</sub> burners on the combustion characteristics of the first unit being retrofitted considering the corresponding NO<sub>x</sub> emission limit that must be achieved. The report shall provide, at a minimum, all supporting documentation identifying the combustion characteristics that impact CO emissions and evaluate the potential for reducing the CO emission limit to a level that can be consistently and reasonably met. [A.A.C. R18-2-406.A.4]
- d. If a lower CO emissions limit as outlined in Condition II.G.1.c can be consistently and reasonably achieved, the Permittee shall submit a permit revision application within 30 days of submitting the determination. [A.A.C. R18-2-406.A.4]

2. Monitoring/Recordkeeping/Reporting Requirements

- a. *Beginning on the earlier of 90 Unit Operating Days or 180 calendar days after the low-NO<sub>x</sub> burners are installed and commence operating on each unit, the Permittee shall calibrate, maintain, and operate continuous emission monitoring systems (CEMS) for measuring emissions of CO.* [A.A.C. R18-2-331.A.3.c]  
[Material Permit Condition are defined by double underline and italics]
- b. The CEMS for CO shall meet the following requirements: [A.A.C.R18-2-306.A.3.c]
  - (1) 40 CFR Part 60, Appendix B, Performance Specifications, Performance Specification 4, Specifications and Test Procedures for Carbon Monoxide Continuous Monitoring Systems in Stationary Sources.
  - (2) 40 CFR Part 60, Appendix F, Quality Assurance Procedures.
  - (3) The Permittee shall check the zero (or low-level value between 0 and 20 percent of span value) and span (50 to 100 percent of span value) calibration drifts at least once daily in accordance with a written procedure. The zero and span shall, at a minimum, be adjusted whenever the 24-hour zero drift or 24-hour span drift exceeds two times the

limits of the applicable performance specifications in 40 CFR Part 60 Appendix B. The system must allow the amount of excess zero and span drift to be recorded and quantified, whenever specified.

- (4) Except for system breakdowns, repairs, calibration checks, and zero and span adjustments required under Condition II.G.2.b.(3), the Permittee shall operate the CO CEMS continuously and shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.

c. Carbon Monoxide Excess Emissions

- (1) Emissions in excess of the limits in Conditions II.G.1.a and II.G.1.b indicated by the CO CEMS shall be considered violations of the applicable emission limit for the purposes of this permit. [A.A.C.R18-2-312.H.3]
- (2) The Permittee shall submit excess emissions and monitoring systems performance reports to the Director semiannually. All reports shall be submitted along with the compliance certifications required by Condition VII of Attachment "A". Written reports of excess emissions shall include the following information: [A.A.C.R18-2-306.A.4]
  - (a) The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h), any conversion factor(s) used, the date and time of commencement and completion of each time period of excess emissions, and the process operating time during the reporting period.
  - (b) Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of Unit 1 and Unit 2, the nature and cause of any malfunction (if known), and the corrective action taken or preventive measures adopted.
  - (c) The date and time identifying each period during which the CO CEMS was inoperative, except for zero and span checks, and the nature of the system repairs or adjustments.
  - (d) When no excess emissions have occurred or the CO CEMS have not been inoperative, repaired, or

adjusted, such information shall be stated in the report.

- (3) The summary report form shall contain the information and be in the format shown in Figure 1 of 40 CFR 60.7(d) unless otherwise specified by the Director. One summary report form shall be submitted for CO emissions monitored at Unit 1 and Unit 2. [A.A.C.R18-2-306.A.4]

- (a) If the total duration of excess emissions for the reporting period is less than 1 percent of the total operating time for the reporting period and CO CEMS downtime for the reporting period is less than 5 percent of the total operating time for the reporting period, only the summary report form shall be submitted and the excess emissions report described in 40 CFR 60.7(c) need not be submitted unless requested by the Department.
- (b) If the total duration of excess emissions for the reporting period is 1 percent or greater of the total operating time for the reporting period or the total CO CEMS downtime for the reporting period is 5 percent or greater of the total operating time for the reporting period, the summary report form and the excess emission report described in 40 CFR 60.7 (c) shall both be submitted.

*The following new Condition II.H for Sulfuric Acid (H<sub>2</sub>SO<sub>4</sub>) mist shall be added to Operating Permit #30732:*

## **II. UNIT 1 AND UNIT 2 BOILERS**

### **H. Sulfuric Acid (H<sub>2</sub>SO<sub>4</sub>) Mist**

1. The Permittee shall not, beginning on June 1, 2014, and continuing thereafter, cause to be discharged into the atmosphere from Unit 2 any gases which contain H<sub>2</sub>SO<sub>4</sub> in excess of 0.012 lb/MMBtu, excluding periods of start-up, shutdown, and malfunction.
2. Within 180 days of commencement of operation of the SCR on Unit 2, the Permittee shall complete performance tests, conducted using EPA Conditional Test Method 13 (CTM-13) or an alternate test method, to determine if the H<sub>2</sub>SO<sub>4</sub> emissions from Unit 2 are consistently less than or equal to 0.006 lb/MMBtu. If the Permittee requests an alternate test method, the Permittee must submit this request at least 60 days prior to commencing the test program. If the Permittee does not receive a

response within 30 days of submitting such a request, the proposed alternative test method shall be considered to be approved by the Director and the Administrator. The Permittee must notify the Director and the Administrator at least 30 days prior to commencing the test program and shall submit the test report to the Director and the Administrator within 60 days of completing the test program.

3. If the test report demonstrates that Unit 2 can consistently achieve an emission rate of 0.006 lb/MMBtu, including a compliance margin, then this will become the enforceable H<sub>2</sub>SO<sub>4</sub> emission limit. This limit shall be effective on the date that the test report required in Condition II.H.2 is submitted to the Director and the Administrator. Subsequent H<sub>2</sub>SO<sub>4</sub> performance tests shall be conducted annually thereafter.

4. H<sub>2</sub>SO<sub>4</sub> Minimization Analysis

a. If the test results from Condition II.H.2 demonstrate that Unit 2 emissions of H<sub>2</sub>SO<sub>4</sub> exceed 0.006 lb/MMBtu, the Permittee shall prepare an H<sub>2</sub>SO<sub>4</sub> minimization analysis that evaluates further options, including but not limited to reagent/sorbent injection, to reduce emissions to 0.005 lb/MMBtu or less while maintaining PM emissions within 80 percent of the limit set forth in Condition II.C.1.b. The minimization analysis will not be required to include an assessment or require the use of any additional PM control equipment. The Permittee shall:

- (1) Submit the incremental minimization analysis within 30 days of submitting the test report required by Condition II.H.2;
- (2) Identify all available control technologies for reducing H<sub>2</sub>SO<sub>4</sub> emissions;
- (3) Include an analysis of the filterable PM control effectiveness of the scrubber based on data available through stack test, PM CEMS, and the PM CEMS/PM correlation and RATA testing;
- (4) Include an evaluation of the energy, environmental, economic, and other impacts associated with each alternative technology and the benefit of reduced emissions that the technology would bring. For the purposes of this evaluation, it is presumed that hydrated lime injection is economically reasonable.

- (5) Include a proposed emission limit and control technology configuration based on the above evaluation. Any new control technology required by the minimization analysis would be installed as soon as practicable, but no later than 2 years after the Director issues an installation permit unless the Director agrees to a longer implementation schedule.
- b. The Director will assess and determine an appropriate H<sub>2</sub>SO<sub>4</sub> emission limit based on the test results collected during the testing program required by Condition II.H.2 and the minimization analysis. The assessment will take into consideration the statistical variability of the test results, the different coal supplies utilized at the facility during the test period, and will include a reasonable margin of safety for compliance with both the PM and the H<sub>2</sub>SO<sub>4</sub> emission limits.
- c. The new limit will become effective upon issuance of a final significant revision to the Permittee's operating permit, which incorporates the new H<sub>2</sub>SO<sub>4</sub> emission limit. [A.A.C. R18-2-406.A.4]

*The following new Condition II.I shall be added to Operating Permit #30732:*

## **II. UNIT 1 AND UNIT 2 BOILERS**

### **I. Surrender of SO<sub>2</sub> Allowances**

1. For the purposes of this section, "surrender" means, with regard to SO<sub>2</sub> Allowances, permanently surrendering so that such SO<sub>2</sub> Allowances can never be used to meet any compliance requirement under the Clean Air Act or the Arizona SIP. [EPA Consent Decree V.C.51]
2. Except as provided in II.I.9, the Permittee shall not sell, trade, or transfer any SO<sub>2</sub> Allowances allocated to CGS that would otherwise be available for sale, trade, or transfer as a result of the actions taken by the Permittee to comply with the requirements of this Permit. [EPA Consent Decree V.C.52]
3. Beginning with calendar year 2012, the Permittee shall surrender to EPA, or transfer to a non-profit third party selected by the Permittee for purposes of surrender, all SO<sub>2</sub> Allowances that have been allocated to CGS in excess of the amount needed to meet its own federal and/or state Clean Air Act regulatory requirements at CGS and Springerville Unit 4, which is located at the Springerville Generating Station. [EPA Consent Decree V.C.53]

4. If the Permittee commences operation of one or more new coal-fired units that it owns in whole or in part in the Western Electricity Coordinating Council Region no earlier than five years and no later than fourteen years from the date the Consent Decree (Civil Action No. 2:08-cv-1479-JAT) is entered by the Court, then the Permittee may also use SO<sub>2</sub> Allowances, as limited by this condition, allocated to CGS to meet the federal and/or state Clean Air Act regulatory requirements for certain SO<sub>2</sub> emissions from such new coal-fired unit(s).

a. The Permittee may only use such SO<sub>2</sub> Allowances pursuant to this condition if such new coal-fired unit(s) is equipped with the Best Available Control Technology (if the new coal-fired unit(s) will be emitting any of the pollutants set forth at 40 CFR 52.21(b)(50) and the new coal-fired unit(s) will be located in an attainment area for those pollutants) and/or the Lowest Achievable Emission Rate (if the new coal-fired unit(s) will be emitting any of the pollutants set forth at 40 CFR 51.165(a)(xxxvii) and the new coal-fired unit(s) will be located in a nonattainment area for those pollutants).

b. The Permittee may only use SO<sub>2</sub> Allowances for the SO<sub>2</sub> emissions associated with a total of 400 megawatts that it owns at such new coal-fired unit(s), whether at one new coal-fired unit (e.g., the Permittee owns a total of at least 400 MW at one new coal-fired unit) or in the aggregate at multiple new coal-fired units (e.g., the Permittee owns 100 MW at four new coal-fired units for an aggregate total of 400 MW).

c. To determine the number of SO<sub>2</sub> Allowances the Permittee may use pursuant to this condition, the Permittee may use no more than the number of SO<sub>2</sub> Allowances that cover the same percentage of total SO<sub>2</sub> emissions from such new coal-fired unit(s) as the percentage of the Permittee's ownership in such new coal-fired unit(s), on a MW basis. Thus, for example, if the Permittee owns 400 MW of a new 800 MW coal-fired unit that otherwise meets the requirements of this condition, the Permittee may use excess SO<sub>2</sub> Allowances allocated to CGS to cover no more than fifty percent of the total SO<sub>2</sub> emissions from such new coal-fired unit. This reduction in the amount of SO<sub>2</sub> Allowances surrendered by or on behalf of the Permittee would start with the year this new unit(s) commences operation.

[EPA Consent Decree V.C.54]

5. The Permittee shall make its surrender of SO<sub>2</sub> Allowances, annually, within forty-five days of its receipt from EPA of the Annual Deduction Reports for SO<sub>2</sub>. Any surrender need not include the specific SO<sub>2</sub> Allowances that were allocated to CGS, so long as the Permittee surrenders SO<sub>2</sub> Allowances that are from the same year and that are equal

to the number required to be surrendered under Condition II.I.

[EPA Consent Decree V.C.55]

6. If any SO<sub>2</sub> Allowances are transferred directly to a non-profit third party for surrender to EPA, the Permittee shall include a description of such transfer in the next report submitted to EPA pursuant to Section XI (Periodic Reporting) of the Consent Decree (Civil Action No. 2:08-cv-1479-JAT). Such report shall:

a. Provide the identity of the non-profit third-party recipient(s) of the SO<sub>2</sub> Allowances and a listing of the serial numbers of the transferred SO<sub>2</sub> Allowances; and

b. Include a certification by the non-profit third-party recipient(s) stating that the recipient(s) will not sell, trade, or otherwise exchange any of the SO<sub>2</sub> Allowances and will not use any of the SO<sub>2</sub> Allowances to meet any obligation imposed by any environmental law.

[EPA Consent Decree V.C.56]

7. No later than the third periodic report due after the transfer of any SO<sub>2</sub> Allowances, the Permittee shall include a statement that the non-profit third-party recipient(s) surrendered the SO<sub>2</sub> Allowances for permanent surrender to EPA in accordance with the provisions of II.I.8 within 1 year after the Permittee transferred the SO<sub>2</sub> Allowances to them. The Permittee shall not have complied with the SO<sub>2</sub> Allowance surrender requirements of Condition II.I until all non-profit third-party recipient(s) shall have actually surrendered the transferred SO<sub>2</sub> Allowances to EPA.

[EPA Consent Decree V.C.56]

8. For all SO<sub>2</sub> Allowances surrendered to EPA, the Permittee or the non-profit third-party recipient(s) (as the case may be) shall first submit an SO<sub>2</sub> Allowance transfer request form to EPA's Office of Air and Radiation's Clean Air Markets Division directing the transfer of such SO<sub>2</sub> Allowances to the EPA Enforcement Surrender Account or to any other EPA account that EPA may direct in writing. As part of submitting these transfer requests, the Permittee or the non-profit third-party recipient(s) shall irrevocably authorize the transfer of these SO<sub>2</sub> Allowances and identify – by name of account and any applicable serial or other identification numbers or station names – the source and location of the SO<sub>2</sub> Allowances being surrendered.

[EPA Consent Decree V.C.57]

9. Provided that the Permittee is in compliance with the SO<sub>2</sub> emission limitations established in Conditions II.F.1.d and II.F.1.e, nothing shall preclude the Permittee from using, selling, or transferring Super-Compliance SO<sub>2</sub> Allowances that may arise as a result of achieving and maintaining SO<sub>2</sub> emission rates or removal efficiencies at Unit 1 and Unit 2 below the emission limits required in Conditions II.F.1.d and II.F.1.e, so

long as the Permittee timely reports the generation of such Super-Compliant SO<sub>2</sub> Allowances in accordance with Section XI (Periodic Reporting) of the Consent Decree (Civil Action No. 2:08-cv-1479-JAT).

[EPA Consent Decree V.E.59]

10. The Permittee shall not use SO<sub>2</sub> Allowances to comply with any requirement of the Permit, including by claiming compliance with any emission limitation required by the Permit by using, tendering, or otherwise applying SO<sub>2</sub> Allowances to offset any excess emissions (i.e., emissions above the limits specified in Conditions II.F.1.d and II.F.1.e).

[EPA Consent Decree V.E.60]

11. Nothing in this Section shall prevent the Permittee from purchasing or otherwise obtaining SO<sub>2</sub> Allowances from another source for purposes of complying with state or federal Clean Air Act requirements to the extent otherwise allowed by law.

[EPA Consent Decree V.E.61]

12. Permit Shield

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

Compliance with this Section shall be deemed compliance with EPA Consent Decree V.C.51, V.C.52, V.C.53, V.C.54, V.C.55, V.C.56, V.C.57, V.E.59, V.E.60, and V.E.61.

*The following Condition V.B.1 shall replace the existing Condition V.B.1 of Operating Permit #30732:*

## **V. COAL HANDLING**

### **B. Opacity**

1. Emission Limitations/Standards

The Permittee shall not cause to be discharged into the atmosphere from any coal processing and conveying equipment including breakers and crushers, coal storage systems, and coal transfer and loading systems, any emissions greater than 20 percent opacity.

[A.A.C. R18-2-702.B.3]

*The following Condition VI.B.1 shall replace the existing Condition VI.B.1 of Operating Permit #30732:*

## **VI. LIMESTONE HANDLING**

### **B. Opacity**

1. Emission Limitations/Standards

[A.A.C. R18-2-702.B.3]

The Permittee shall not cause to be discharged into the atmosphere from

the limestone handling plant any emissions greater than 20 percent opacity.

*The following new Condition VI.D shall be added to Operating Permit #30732:*

## VI. LIMESTONE HANDLING

### D. NEW SOURCE PERFORMANCE STANDARDS (NSPS)

Upgraded Belt Conveyors (BC-101, BC101A), New Belt Conveyors A and B, New Transfer Tower (TT-1), New Limestone Storage Silo, and New Ball Mill subject to the new source performance standards (NSPS) in the Limestone Handling Plant shall comply with the following:

#### 1. Particulate Matter and Opacity

##### a. Emission Limitations/Standards

##### (1) Particulate Matter

- (a) The Permittee shall not cause to be discharged into the atmosphere from any transfer point on belt conveyors or from any other affected facility any stack emissions that contain PM in excess of 0.05 grams per dry standard cubic meter (0.022 gr/dscf).

[40 CFR 60.672(a)(1)]

- (b) The Permittee shall not cause to be discharged into the atmosphere from DC-12, DC-13, DC-14, and DC-15 any stack emissions that contain filterable PM/PM<sub>10</sub> in excess of 0.005 grains per actual cubic feet.

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

##### (2) Opacity

[Material Permit Condition are defined by double underline and italics]

- (a) *The Permittee shall not cause to be discharged into the atmosphere from any transfer point on belt conveyors or from any other affected facility any stack emissions that exhibit opacity greater than 7 percent opacity.*

[40 CFR 60.672(a)(2) and A.A.C. R18-2-331.A.3.f]

- (b) *On and after the sixtieth day after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup as required under 40 CFR*

§60.11, the Permittee shall not cause to be discharged into the atmosphere from any transfer point on belt conveyors or from any other affected facility any fugitive emissions which exhibit greater than 10 percent opacity.

[40 CFR 60.672(b) and A.A.C. R 18-2-331.A.3.f]

b. Air Pollution Control Equipment

At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, install, maintain and operate DC-12, DC-13, DC-14, and DC-15 in a manner consistent with good air pollution control practice for minimizing PM emissions.

[40 CFR 60.11(d), A.A.C. R 18-2-306.01.A & -331.A.3.d & e]

[Material Permit Condition are defined by double underline and italics]

c. Monitoring, Recordkeeping, and Reporting Requirements

The Permittee shall conduct opacity monitoring in accordance with Condition I.E of the Operating Permit #30732 for all equipment covered by this Section.

d. Notification Requirements [40 CFR 60.7.a(1) and 40 CFR 60.7.a(3)]

The Permittee shall furnish to the Director and the EPA written notification or, if acceptable electronic notification, as follows:

- (1) A notification of the date construction of an affected facility is commenced postmarked no later than 30 days after such date.
- (2) A notification of the actual date of initial startup of an affected facility postmarked within 15 days after such date.

e. Testing Requirements

Within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility, the Permittee shall conduct an initial performance test for PM/PM<sub>10</sub> and opacity for DC-12, DC-13, DC-14, and DC-15. The performance test shall be used to demonstrate compliance with the limit in Condition VI.D.1.a and VI.D.1.b above. Subsequent tests shall be conducted annually on one representative stack. Each stack shall be tested at least once every four years. [40 CFR 60.8.a and A.A.C. R18-2-312]

*The following Condition VII.B.1 shall replace the existing Condition VII.B.1 of Operating Permit #30732.*

**VII. FLY ASH HANDLING**

**B. Opacity**

1. Emission Limitations/Standards

The Permittee shall not cause to be discharged into the atmosphere from the Fly Ash Handling System any emissions greater than 20 percent opacity. [A.A.C. R18-2-702.B.3]

*The following Condition VIII.B.1 shall replace the existing Condition VIII.B.1 of Operating Permit #30732:*

**VIII. COOLING TOWERS 1 AND 2**

**B. Opacity**

1. Emission Limitations/Standards

The Permittee shall not cause to be discharged into the atmosphere from the cooling towers any emissions greater than 20 percent opacity. [A.A.C. R18-2-702.B.3]

*The following new Condition XII shall be added to Operating Permit #30732.*

**XII. DRY BOTTOM ASH HANDLING**

**A. Applicability**

This Section applies to the Dry Bottom Ash Handling Facility identified as an Alternative Operating Scenario (AOS) as described in Attachment "C" of this permit.

**B. Opacity**

1. Emission Limitations/Standards

The Permittee shall not cause to be discharged into the atmosphere from the AOS Dry Bottom Ash Handling System any emissions greater than 20 percent opacity. [A.A.C. R18-2-702.B.3]

2. Monitoring/Recordkeeping/Reporting

The Permittee shall conduct opacity monitoring in accordance with

Condition I.E of this Attachment. A certified Method 9 observer shall conduct a weekly visual survey of visible emissions from the AOS dry bottom ash handling system when it is in operation. This weekly observation shall include observation of the vent bag filters, the filter separators, and the pin mixers. [A.A.C. R18-2-306.A.3.b]

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

Compliance with this Section shall be deemed compliance with A.A.C. R18-2-702.B.

### C. Particulate Matter

1. The Permittee shall not cause to be discharged into the atmosphere from VBF-20, VBF-21, VBF-28, VBF-29, FS-23, and FS-31 any stack emissions that contain filterable PM/PM<sub>10</sub> in excess of 0.005 grains per actual cubic feet. [A.A.C. R18-2-406.A.4]

2. Air Pollution Controls

*The Permittee shall, while operating in the alternative operating scenario, install, maintain, and operate the vent bag filters, filter separators, and wet suppression systems on the dry bottom ash handling system emission points in accordance with manufacturer's specifications and in a manner consistent with good air pollution control practices.*

[A.A.C. R18-2-306.A.2 and 331.A.3.d & e]

[Material Permit Condition are defined by underline and italics]

3. Monitoring/Recordkeeping/Reporting

- a. The manufacturer's specifications shall be on file and shall be readily available for inspection by the Department. [A.A.C. R18-2-306.A.2]

- b. The Permittee shall maintain records of emissions related maintenance performed on the vent bag filters, filter separators, or wet suppression system. [A.A.C. R18-2-306.A.3.c]

4. Testing Requirements

Within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility, the Permittee shall conduct an initial performance test for PM/PM<sub>10</sub> for VBF-20, VBF-21, VBF-28, VBF-29, FS-23, and FS-31. The performance test shall be used to demonstrate compliance with the limit in Condition VII.C.3.a above. Subsequent tests shall be conducted annually on one representative stack. Each stack shall be tested at least once every six years. [A.A.C. R18-2-312]

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**ATTACHMENT "C"**

**EQUIPMENT LIST**

**Addendum (Significant Permit Revision #46236) to Operating Permit #30732 for  
Salt River Project-Coronado Generating Station**

The following shall be added to the equipment list in Attachment "C" of Operating Permit No. 30732.

**Attachment "C": EQUIPMENT LIST**

**SIGNIFICANT REVISION NO. 46236  
TO AIR QUALITY PERMIT NO. 30732**

**For**

**Salt River Project, Coronado Generation Station**

<b>EQUIPMENT TYPE</b>	<b>MAX. CAPACITY</b>	<b>Quantity</b>	<b>MODEL</b>	<b>SERIAL #/ EQUIPMENT #</b>	<b>INSTALLATION /MFG DATE</b>
<i>Steam Generation</i>					
Low NO <sub>x</sub> -Burner	4,719 MMBtu/hr (total)	24 per boiler (Units 1&2)	Babcock Power	TBD	TBD
Selective Catalytic Reduction System	TBD	1 on Unit 2	TBD	TBD	TBD
Flue Gas Desulfurization System	TBD	2	TBD	TBD	TBD
<i>Dry Bottom Ash Handling System (AOS)</i>					
Dry Bottom Ash Conveyor Unit 1	10 tph	1	TBD	TBD	TBD
Dry Economizer Ash Conveyor Unit 1	2 tph	1	TBD	TBD	TBD
Ash Crusher and Surge Bin Unit 1	12 tph	1	TBD	TBD	TBD
Ash Storage Silo Unit 1	TBD	1	TBD	TBD	TBD
Pin Mixer Unit 1	150 tph	1	TBD	TBD	TBD

<b>EQUIPMENT TYPE</b>	<b>MAX. CAPACITY</b>	<b>Quantity</b>	<b>MODEL</b>	<b>SERIAL #/ EQUIPMENT #</b>	<b>INSTALLATION /MFG DATE</b>
Dry Bottom Ash Conveyor Unit 2	10 tph	1	TBD	TBD	TBD
Dry Economizer Ash Conveyor Unit 2	2 tph	1	TBD	TBD	TBD
Ash Crusher and Surge Bin Unit 2	12 tph	1	TBD	TBD	TBD
Ash Storage Silo Unit 2	TBD	1	TBD	TBD	TBD
Pin Mixer Unit 2	150 tph	1	TBD	TBD	TBD
Ash Surge Bin, Bin Vent Filter Unit 1	1,000 ACFM	1	TBD	TBD	TBD
Ash Storage Silo Bin Vent Filter Unit 1	1,000 ACFM	1	TBD	TBD	TBD
Ash Blower Building Mechanical Exhausters Filter Separator Unit 1	2,000 ACFM	1	TBD	TBD	TBD
Ash Surge Bin, Bin Vent Filter Unit 2	1,000 ACFM	1	TBD	TBD	TBD
Ash Storage Silo Bin Vent Filter Unit 2	1,000 ACFM	1	TBD	TBD	TBD
Ash Blower Building Mechanical Exhausters Filter Separator Unit 2	2,000 ACFM	1	TBD	TBD	TBD
<i>Limestone Handling System</i>					
Limestone Belt Conveyor B	200 tph	1	TBD	TBD	TBD
Limestone Ball Mill	18 tph	1	TBD	TBD	TBD

EQUIPMENT TYPE	MAX. CAPACITY	Quantity	MODEL	SERIAL #/ EQUIPMENT #	INSTALLATION /MFG DATE
Limestone Storage Silo	300 tons	1	Hogan Mfg.	CJSABINLSS	7/24/1974
(Existing unit to be replaced with same capacity silo.)	300 tons	1	TBD	TBD	TBD
Limestone Storage Silo	250 tons	1	TBD	TBD	TBD
New Limestone Storage Silo Bin Vent Filter	1,000 ACFM	1	TBD	TBD	TBD
Limestone Transfer Tower TT-1 Dust Collector	1,500 ACFM	1	TBD	TBD	TBD

***Continuous Monitoring Equipment for Units 1 and 2***

Steam Unit	PM Monitor	CO Monitor	NO <sub>x</sub> Monitor	SO <sub>2</sub> Monitor	CO <sub>2</sub> Monitor	Opacity Monitor	Flow Monitor
Unit 1	Sick-Maihak FWE200	TBD	TECO 42C	TECO 43C	TECO 41C	EMS 1304	EMRC DP-60/75 Mark 2
Unit 2	Sick-Maihak FWE200	TBD	TECO 42C	TECO 43C	TECO 41C	EMS 1304	EMRC DP-60/75 Mark 2

