

PERMIT

CLASS I AIR QUALITY PERMIT

DRAFT PERMIT No. 89460 (As Revised by Significant Permit Revision No. 1000706)

PERMITTEE:	Salt River Project
FACILITY:	Coronado Generating Station
PLACE ID:	4477
DATE ISSUED:	December 1, 2021 (As Revised on Date Pending)
EXPIRY DATE:	November 30, 2026

SUMMARY

This Class I air quality permit is issued to Salt River Project (SRP), the Permittee, for the continued operation of the Coronado Generating Station. The facility is located in Apache County, 6 miles northeast of St. Johns, Arizona off of U.S. Highway 191. This permit renews and supersedes Permit No. 64169.

The Coronado Generating Station consists of two coal-fired electric utility steam generating units. The two units have a combined electrical output capacity of 912 megawatts (MW). Electrostatic precipitators and wet flue gas desulfurization systems are operated to control particulate matter emissions and sulfur dioxide emissions, respectively. Low-nitrogen oxides (NO_x) burners and overfire air are used to control NO_x emissions on both Units 1 and 2. Selective catalytic reduction (SCR) on Unit 2 provides additional control for NO_x.

An auxiliary boiler is used to provide auxiliary steam during startup if the main boiler steam or turbine extraction steam is unavailable. Other operations at the plant include a main power building, coal mixing facilities, coal and ash handling facilities, an ash disposal area, limestone handling equipment, cement kiln dust handling equipment, powdered activated carbon (PAC) handling equipment, process water treatment facilities, a forty-three mile railroad spur, water storage reservoirs, a 330 acre evaporation pond for non-recoverable waters, mechanically induced draft cooling towers, water cannon evaporative spray systems (WCESS), 500 kV and 69 kV switchyards, and water supply from satellite well fields. The power plant commenced construction on July 25, 1974.

The facility is classified as a major source pursuant to Arizona Administrative Code (A.A.C.) R18-2-101.75 because its potential to emit (PTE) is greater than major source thresholds for the following pollutants: particulate matter with an aerodynamic diameter less than 10 micrometers (μ m) (PM₁₀), particulate matter with an aerodynamic diameter less than 2.5 μ m (PM_{2.5}), NO_x, carbon monoxide (CO), sulfur dioxide (SO₂), volatile organic compounds (VOCs), combined hazardous air pollutants (HAPs), and the individual HAPs of lead (Pb), hydrochloric acid (HCl), and hydrofluoric acid (HF). The facility is also an affected source under Title IV of the Clean Air Act, and falls under the coal-fired utilities source category under Title V of the Clean Air Act. Therefore, a Class I permit is required under A.A.C. R18-2-302.B.1.

This permit is issued in accordance with Arizona Revised Statutes (A.R.S.) § 49-426. It contains requirements from Title 18, Chapter 2 of the A.A.C. and Title 40 of the Code of Federal Regulations (CFR). 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 CFR, except as otherwise defined in this permit.

Significant Permit Revision No. 100706

Significant Permit Revision (SPR) No. 100706 involves substantive changes to existing monitoring, recordkeeping, and reporting requirements by removing conditions inappropriately identified as subject to

PERMIT



2-day permit deviation reporting requirements in accordance with A.A.C. R18-2-306.A.5.b.ii. This SPR also streamlines the reporting requirements of 40 CFR 63 Subpart UUUUU "National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units" as compliance reporting frequency shifts from semiannual to quarterly reporting.

This page is left blank intentionally.



Table of Contents

ATTA	CHMENT "A" : GENERAL PROVISIONS	6
I.	PERMIT EXPIRATION AND RENEWAL	6
II.	COMPLIANCE WITH PERMIT CONDITIONS	6
III.	PERMIT REVISION, REOPENING, REVOCATION AND REISSUANCE, OR TERMINA	ATION
	FOR CAUSE	6
IV.	POSTING OF PERMIT	7
V.	FEE PAYMENT	
VI.	EMISSIONS INVENTORY QUESTIONNAIRE	7
VII.	COMPLIANCE CERTIFICATION	
VIII.	CERTIFICATION OF TRUTH, ACCURACY AND COMPLETENESS	
IX.	INSPECTION AND ENTRY	
Х.	ACCIDENTAL RELEASE PROGRAM	
XI.	EXCESS EMISSIONS, PERMIT DEVIATIONS, AND EMERGENCY REPORTING	
XII.	RECORDKEEPING REQUIREMENTS	
XIII.	REPORTING REQUIREMENTS	
XIV.	DUTY TO PROVIDE INFORMATION	
XV.	PERMIT AMENDMENT OR REVISION	
XVI.	FACILITY CHANGE WITHOUT A PERMIT REVISION	
XVII.	TESTING REQUIREMENTS	
XVIII.	PROPERTY RIGHTS	
XIX.	SEVERABILITY CLAUSE	
XX.	PERMIT SHIELD	
XXI.	PROTECTION OF STRATOSPHERIC OZONE	
XXII.	APPLICABILITY OF NSPS/NESHAP GENERAL PROVISIONS	
	CHMENT "B" : SPECIFIC CONDITIONS	
I.	FACILITY-WIDE REQUIREMENTS	
II.	UNIT 1 AND UNIT 2 BOILERS	
III.	AUXILIARY BOILER	
IV.	INTERNAL COMBUSTION ENGINES (ICE)	
V.	COAL HANDLING	
VI.	LIMESTONE HANDLING.	
VII.	FLY ASH HANDLING, COAL ADDITIVE SODA ASH HANDLING, CEMENT KILN	
x / T T T	HANDLING, AND POWDERED ACTIVATED CARBON HANDLING.	
VIII.	COOLING TOWERS 1 AND 2	
foIX.	WATER CANNON EVAPORATIVE SPRAY SYSTEMS (WCESS)	
X.	FUGITIVE DUST REQUIREMENTS	
XI.	OTHER PERIODIC ACTIVITIES	
	CHMENT "C" : EQUIPMENT LIST	
ATTA	CHMENT "D" : PHASE II ACID RAIN PROVISIONS	119
I.	STATEMENT OF BASIS	
II.	SO2 ALLOWANCES! ALLOCATIONS AND NOx REQUIREMENTS FOR EACH AFFE	ECTED
	UNIT	
III.	COMMENTS, NOTES, AND JUSTIFICATIONS	119



IV.	PERMIT APPLICATION	.119
ATTA	CHMENT "E" : BART ALTERNATIVES	.120
I.	GENERAL	.120
II.	COMPLIANCE OPTIONS – BART ALTERNATIVES	.120



ATTACHMENT "A": GENERAL PROVISIONS

I. PERMIT EXPIRATION AND RENEWAL

A. This permit is valid for a period of five (5) years from the date of issuance.

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

B. The Permittee shall submit an application for renewal of this permit at least six (6) months, but not more than eighteen (18) months, prior to the date of permit expiration.

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

II. COMPLIANCE WITH PERMIT CONDITIONS

A. The Permittee shall comply with all conditions of this permit including all applicable requirements of the Arizona Revised Statutes (A.R.S.) Title 49, Chapter 3, and the air quality rules under Title 18, Chapter 2 of the Arizona Administrative Code. Any permit noncompliance is grounds for enforcement action; for permit termination, revocation and reissuance, revision; or for denial of a permit renewal application. In addition, noncompliance with any federally enforceable requirement constitutes a violation of the Clean Air Act.

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

B. It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

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

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

A. The permit may be revised, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a permit revision, revocation and reissuance, termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.

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

- **B.** The permit shall be reopened and revised under any of the following circumstances:
 - 1. Additional applicable requirements under the Clean Air Act become applicable to the Class I source. Such a reopening shall only occur if there are three or more years remaining in the permit term. The reopening shall be completed no later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of it terms and conditions has been extended pursuant to A.A.C. R18-2-322.B. Any permit revision required pursuant to this subparagraph shall comply with the provisions in A.A.C. R18-2-322 for permit renewal and shall reset the five-year permit term; [A.A.C. R18-2-321.A.1.a]



2. Additional requirements, including excess emissions requirements, become applicable to an affected source under the acid rain program. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into the Class I permit;

[A.A.C. R18-2-321.A.1.b]

3. The Director or the Administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit; and

[A.A.C. R18-2-321.A.1.c]

4. The Director or the Administrator determines that the permit needs to be revised or revoked to assure compliance with the applicable requirements.

[A.A.C. R18-2-321.A.1.d]

C. Proceedings to reopen and issue a permit, including appeal of any final action relating to a permit reopening, shall follow the same procedures as apply to initial permit issuance and shall, except for reopenings under Condition III.B.1 above, affect only those parts of the permit for which cause to reopen exists. Such reopening shall be made as expeditiously as practicable. Permit reopenings for reasons other than those stated in Condition III.B.1 above shall not result in a resetting of the five-year permit term.

[A.A.C. R18-2-321.A.2]

IV. POSTING OF PERMIT

A. The Permittee shall post this permit or a certificate of permit issuance at the facility in such a manner as to be clearly visible and accessible. All equipment covered by this permit shall be clearly marked with one of the following:

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

- 1. Current permit number; or
- 2. Serial number or other equipment identification number (equipment ID number) that is also listed in the permit to identify that piece of equipment.
- **B.** A copy of the complete permit shall be kept on site.

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

V. FEE PAYMENT

The Permittee shall pay fees to the Director pursuant to ARS § 49-426(E) and A.A.C. R18-2-326. [A.A.C. R18-2-306.A.9 and -326]

VI. EMISSIONS INVENTORY QUESTIONNAIRE

A. The Permittee shall complete and submit to the Director an emissions inventory questionnaire no later than June 1 of each year.

[A.A.C. R18-2-327.A.1.a]



B. The emissions inventory questionnaire shall be on an electronic or paper form provided by the Director and shall include the information required by A.A.C. R18-2-327.A.3 for the previous calendar year.

[A.A.C. R18-2-327.A.3]

VII. COMPLIANCE CERTIFICATION

A. The Permittee shall submit a compliance certification to the Director semiannually, which describes the compliance status of the source with respect to each permit condition. The first certification shall be submitted no later than May 15th, and shall report the compliance status of the source during the period between October 1st of the previous year and March 31st of the current year. The second certification shall be submitted no later than November 15th, and shall report the compliance status of the source during the period between April 1st and September 30th of the current year.

[A.A.C. R18-2-309.2.a]

- **B.** The compliance certifications shall include the following:
 - 1. Identification of each term or condition of the permit that is the basis of the certification;

[A.A.C. R18-2-309.2.c.i]

- 2. Identification of the methods or other means used by the Permittee for determining the compliance status with each term and condition during the certification period, [A.A.C. R18-2-309.2c.ii]
- 3. Status of compliance with the terms and conditions of the permit for the period covered by the certification, including whether compliance during the period was continuous or intermittent. The certifications shall identify each deviation (including any deviations reported pursuant to Condition XI.B of this Attachment) during the period covered by the certification and take it into account for consideration in the compliance certification;

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

4. For emission units subject to 40 CFR Part 64, the certification shall also identify as possible exceptions to compliance any period during which compliance is required and in which an excursion or exceedance defined under 40 CFR Part 64 occurred;

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

5. Other facts the Director may require to determine the compliance status of the source.

[A.A.C. R18-2-309.2.c.iv]

- C. A copy of all compliance certifications shall also be submitted to the EPA Administrator. [A.A.C. R18-2-309.2.d]
- **D.** If any outstanding compliance schedule exists, a progress report shall be submitted with the semi-annual compliance certifications required in Condition VII.A above. The progress reports shall contain the information required by A.A.C R18-2-309.5.d.



VIII. CERTIFICATION OF TRUTH, ACCURACY AND COMPLETENESS

[A.A.C. R18-2-309.5.d]

VIII. CERTIFICATION OF TRUTH, ACCURACY AND COMPLETENESS

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

[A.A.C. R18-2-309.3]

IX. INSPECTION AND ENTRY

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

- A. Enter upon the Permittee's premises where a source is located, emissions-related activity is conducted, or where records are required to be kept under the conditions of the permit; [A.A.C. R18-2-309.4.a]
- **B.** Have access to and copy, at reasonable times, any records that are required to be kept under the conditions of the permit;

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

C. Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit;

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

D. Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the permit or other applicable requirements; and

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

E. Record any inspection by use of written, electronic, magnetic and photographic media. [A.A.C. R18-2-309.4.e]

X. ACCIDENTAL RELEASE PROGRAM

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

[40 CFR Part 68]

XI. EXCESS EMISSIONS, PERMIT DEVIATIONS, AND EMERGENCY REPORTING

A. Excess Emissions Reporting

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

1. Excess emissions shall be reported as follows:



- a. The Permittee shall report to the Director any emissions in excess of the limits established by this permit. Such report shall be in two parts as specified below:
 - (1) Notification by telephone or facsimile within 24 hours of the time when the Permittee first learned of the occurrence of excess emissions including all available information from Condition XI.A.1.b below.
 - (2) Detailed written notification by submission of an excess emissions report within 72 hours of the notification pursuant to Condition XI.A.1.a(1) above.

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

- b. The report shall contain the following information:
 - (1) Identity of each stack or other emission point where the excess emissions occurred;

[A.A.C. R18-2-310.01.B.1]

(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;

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

- (3) Time and duration, or expected duration, of the excess emissions; [A.A.C. R18-2-310.01.B.3]
- (4) Identity of the equipment from which the excess emissions emanated;

[A.A.C. R18-2-310.01.B.4]

(5) Nature and cause of such emissions;

[A.A.C. R18-2-310.01.B.5]

(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;

[A.A.C. R18-2-310.01.B.6]

(7) Steps that were or are being taken to limit the excess emissions; and

[A.A.C. R18-2-310.01.B.7]

(8) If the excess emissions resulted from startup or malfunction, the report shall contain a list of the steps taken to comply with any permit procedures governing source operation during periods of startup or malfunction.

[A.A.C. R18-2-310.01.B.8]



2. In the case of continuous or recurring excess emissions, the notification requirements 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 XI.A.1 above. [A.A.C. R18-2-310.01.C]

B. Permit Deviations Reporting

The Permittee shall promptly report deviations from permit requirements, including those attributable to upset conditions as defined in the permit, the probable cause of such deviations, and any corrective actions or preventive measures taken. Where the applicable requirement contains a definition of prompt or otherwise specifies a timeframe for reporting deviations, that definition or timeframe shall govern. Where the applicable requirement does not address the timeframe for reporting deviations, the Permittee shall submit reports of deviations according to the following schedule:

1. Notice that complies with Condition XI.A.1 above is prompt for deviations that constitute excess emissions;

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

2. Notice that is submitted within two working days of discovery of the deviation is prompt for deviations of permit conditions identified by Condition I.E.1 of Attachment "B";

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

3. Except as provided in Conditions XI.B.1 and 2 above, prompt notification of all other types of deviations shall be every 6-months, concurrent with the semi-annual compliance certifications required in Section VII, and can be submitted via myDEQ, the Arizona Department of Environmental Quality's online portal.

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

- **C.** Emergency Provision
 - 1. An "emergency" means any situation arising from sudden and reasonably 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.

[A.A.C. R18-2-306.E.1]

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

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



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

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

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

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

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

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

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

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

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.

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

4. In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.

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

5. This provision is in addition to any emergency or upset provision contained in any applicable requirement.

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

D. Compliance Schedule

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.

[ARS § 49-426.I.3]

- E. Affirmative Defenses for Excess Emissions Due to Malfunctions, Startup, and Shutdown
 - 1. Applicability

A.A.C. R18-2-310 establishes affirmative defenses for certain emissions in excess of an emission standard or limitation and applies to all emission standards or limitations except for standards or limitations:

a. Promulgated pursuant to Sections 111 or 112 of the Act;



[A.A.C. R18-2-310.A.1]

- b. Promulgated pursuant to Titles IV or VI of the Clean Air Act; [A.A.C. R18-2-310.A.2]
- c. Contained in any Prevention of Significant Deterioration (PSD) or New Source Review (NSR) permit issued by the U.S. EPA; [A.A.C. R18-2-310.A.3]
- d. Contained in A.A.C. R18-2-715.F; or

[A.A.C. R18-2-310.A.4]

- e. Included in a permit to meet the requirements of A.A.C. R18-2-406.A.5. [A.A.C. R18-2-310.A.5]
- 2. Affirmative Defense for Malfunctions

Emissions in excess of an applicable emission limitation due to malfunction shall constitute a violation. When emissions in excess of an applicable emission limitation are due to a malfunction, the Permittee has an affirmative defense to a civil or administrative enforcement proceeding based on that violation, other than a judicial action seeking injunctive relief, if the Permittee has complied with the reporting requirements of A.A.C. R18-2-310.01 and has demonstrated all of the following:

[A.A.C. R18-2-310.B]

a. The excess emissions resulted from a sudden and unavoidable breakdown of process equipment or air pollution control equipment beyond the reasonable control of the Permittee;

[A.A.C. R18-2-310.B.1]

b. The air pollution control equipment, process equipment, or processes were at all times maintained and operated in a manner consistent with good practice for minimizing emissions;

[A.A.C. R18-2-310.B.2]

c. If repairs were required, the repairs were made in an expeditious fashion when the applicable emission limitations were being exceeded. Off-shift labor and overtime were utilized where practicable to ensure that the repairs were made as expeditiously as possible. If off-shift labor and overtime were not utilized, the Permittee satisfactorily demonstrated that the measures were impracticable;

[A.A.C. R18-2-310.B.3]

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

[A.A.C. R18-2-310.B.4]



e. All reasonable steps were taken to minimize the impact of the excess emissions on ambient air quality;

[A.A.C. R18-2-310.B.5]

f. The excess emissions were not part of a recurring pattern indicative of inadequate design, operation, or maintenance;

[A.A.C. R18-2-310.B.6]

g. During the period of excess emissions there were no exceedances of the relevant ambient air quality standards established in Title 18, Chapter 2, Article 2 of the Arizona Administrative Code that could be attributed to the emitting source;

[A.A.C. R18-2-310.B.7]

h. The excess emissions did not stem from any activity or event that could have been foreseen and avoided, or planned, and could not have been avoided by better operations and maintenance practices;

[A.A.C. R18-2-310.B.8]

i. All emissions monitoring systems were kept in operation if at all practicable; and

[A.A.C. R18-2-310.B.9]

j. The Permittee's actions in response to the excess emissions were documented by contemporaneous records.

[A.A.C. R18-2-310.B.10]

- 3. Affirmative Defense for Startup and Shutdown
 - a. Except as provided in Condition XI.E.3.b below, and unless otherwise provided for in the applicable requirement, emissions in excess of an applicable emission limitation due to startup and shutdown shall constitute a violation. When emissions in excess of an applicable emission limitation are due to startup and shutdown, the Permittee has an affirmative defense to a civil or administrative enforcement proceeding based on that violation, other than a judicial action seeking injunctive relief, if the Permittee has complied with the reporting requirements of A.A.C. R18-2-310.01 and has demonstrated all of the following:

[A.A.C. R18-2-310.C.1]

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

[A.A.C. R18-2-310.C.1.a]

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

[A.A.C. R18-2-310.C.1.b]



(3) The air pollution control equipment, process equipment, or processes were at all times maintained and operated in a manner consistent with good practice for minimizing emissions;

[A.A.C. R18-2-310.C.1.c]

- (4) The amount and duration of the excess emissions (including any bypass operation) were minimized to the maximum extent practicable during periods of such emissions; [A.A.C. R18-2-310.C.1.d]
- (5) All reasonable steps were taken to minimize the impact of the excess emissions on ambient air quality;

[A.A.C. R18-2-310.C.1.e]

During the period of excess emissions there were no exceedances of the relevant ambient air quality standards established in Title 18, Chapter 2, Article 2 of the Arizona Administrative Code that could be attributed to the emitting source;

[A.A.C. R18-2-310.C.1.f]

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

[A.A.C. R18-2-310.C.1.g]

(8) Contemporaneous records documented the Permittee's actions in response to the excess emissions.

[A.A.C. R18-2-310.C.1.h]

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

[A.A.C. R18-2-310.C.2]

4. Affirmative Defense for Malfunctions during Scheduled Maintenance

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

[A.A.C. R18-2-310.D]

5. Demonstration of Reasonable and Practicable Measures

For an affirmative defense under Condition XI.E.2 or XI.E.3, the Permittee shall demonstrate, through submission of the data and information required by this Condition XI.E and Condition XI.A.1 above, that all reasonable and practicable measures within the Permittee's control were implemented to prevent the occurrence of the excess emissions.

[A.A.C. R18-2-310.E]

XII. RECORDKEEPING REQUIREMENTS



A.		The Permittee shall keep records of all required monitoring information including, but not limited to, the following:	
			[A.A.C. R18-2-306.A.4.a]
	1.	The date, place as defined in the permit, and time of sample	ing or measurements; [A.A.C. R18-2-306.A.4.a.i]
	2.	The date(s) any analyses were performed;	[A.A.C. R18-2-306.A.4.a.ii]
	3.	The name of the company or entity that performed the anal	lyses; A.A.C. R18-2-306.A.4.a.iii]
4. A description of the an		A description of the analytical techniques or methods used	; [A.A.C. R18-2-306.A.4.a.iv]
	5.	The results of analyses; and	[A.A.C. R18-2-306.A.4.a.v]
	6.	The operating conditions as existing at the time of samplin	g or measurement. A.A.C. R18-2-306.A.4.a.vi]

B. The Permittee shall retain records of all required monitoring data and support information for a period of at least five (5) years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings or other data recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.

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

XIII. REPORTING REQUIREMENTS

The Permittee shall submit the following reports:

A. Compliance certifications in accordance with Section VII above.

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

B. Excess emission; permit deviation, and emergency reports in accordance with Section XI above.

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

C. Other reports required by any condition of Attachment "B".

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

XIV. DUTY TO PROVIDE INFORMATION

A. The Permittee shall furnish to the Director, within a reasonable time, any information that the Director may request in writing to determine whether cause exists for revising, revoking and reissuing, or terminating the permit, or to determine compliance with the permit. Upon request, the Permittee shall also furnish to the Director copies of records required to be kept by the permit. For information claimed to be confidential, the Permittee shall furnish



an additional copy of such records directly to the Administrator along with a claim of confidentiality.

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

B. If the Permittee has failed to submit any relevant facts or has submitted incorrect information in the permit application, the Permittee shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrected information.

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

XV. PERMIT AMENDMENT OR REVISION

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

А.	Administrative Permit Amendment;	[A.A.C. R18-2-318]
В.	Minor Permit Revision; and	[A.A.C. R18-2-319]
C.	Significant Permit Revision	[A.A.C. R18-2-320]

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

XVI. FACILITY CHANGE WITHOUT A PERMIT REVISION

- **A.** The Permittee may make changes that contravene an express permit term without a permit revision if all of the following apply:
 - 1. The changes are not modifications under any provision of Title I of the Act or under ARS § 49-401.01(24);

[A.A.C. R18-2-317.A.1]

2. The changes do not exceed the emissions allowable under the permit whether expressed therein as a rate of emissions or in terms of total emissions;

[A.A.C. R18-2-317.A.2]

3. The changes do not violate any applicable requirements or trigger any additional applicable requirements;

[A.A.C. R18-2-317.A.3]

4. The changes satisfy all requirements for a minor permit revision under A.A.C. R18-2-319.A;

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



5. The changes do not contravene federally enforceable permit terms and conditions that are monitoring (including test methods), record keeping, reporting, or compliance certification requirements; and

[A.A.C. R18-2-317.A.5]

6. The changes do not constitute a minor NSR modification.

[A.A.C. R18-2-317.A.6]

B. The substitution of an item of process or pollution control equipment for an identical or substantially similar item of process or pollution control equipment shall qualify as a change that does not require a permit revision, if it meets all of the requirements of Conditions XVI.A, C, and D of this Attachment.

[A.A.C. R18-2-317.B]

C. For each change under Conditions XVI.A and XVI.B above, a written notice by certified mail or hand delivery shall be received by the Director and the Administrator a minimum of 7 working days in advance of the change. Notifications of changes associated with emergency conditions, such as malfunctions necessitating the replacement of equipment, may be provided less than 7 working days in advance of the change, but must be provided as far in advance of the change, as possible or, if advance notification is not practicable, as soon after the change as possible.

[A.A.C. R18-2-317.D]

D. Each notification shall include:

any prior notice under this Section XVI.

E.

F.

1. When the proposed change will occur; [A.A.C. R18-2-317.E.1] 2. A description of the change; [A.A.C. R18-2-317.E.2] 3. Any change in emissions of regulated air pollutants; and [A.A.C. R18-2-317.E.3] Any permit term or condition that is no longer applicable as a result of the change. 4. [A.A.C. R18-2-317.E.7] The permit shield described in A.A.C. R18-2-325 shall not apply to any change made under this Section XVI. [A.A.C. R18-2-317.F] Except as otherwise provided for in the permit, making a change from one alternative operating scenario to another as provided under A.A.C. R18-2-306.A.11 shall not require

[A.A.C. R18-2-317.G]

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

[A.A.C. R18-2-317.H]



XVII. TESTING REQUIREMENTS

- A. Except as provided in Condition XVII.F below, the Permittee shall conduct performance tests as specified in the permit and at such other times as may be required by the Director. [A.A.C. R18-2-312.A]
- **B.** Operational Conditions during Performance Testing

Performance tests shall be conducted under such conditions as the Director shall specify to the plant operator based on representative performance of the source. The Permittee shall make available to the Director such records as may be necessary to determine the conditions of the performance tests. Operations during periods of start-up, shutdown, and malfunction (as defined in A.A.C. R18-2-101) shall not constitute representative conditions of performance tests unless otherwise specified in the applicable standard.

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

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

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

D. Test Plan

At least 14 working days prior to performing a test, the Permittee shall submit a test plan to the Director, which must include the following, in addition to all other applicable requirements, as identified in the Arizona Testing Manual:

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

- 1. Test duration;
- 2. Test location(s);
- 3. Test method(s); and
- 4. Source operation and other parameters that may affect test results.
- **E.** Stack Sampling Facilities

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

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

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



F. Interpretation of Final Results

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

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

G. Report of Final Test Results

A written report of the results of performance tests conducted pursuant to 40 CFR 63, shall be submitted to the Director within 60 days after the test is performed. A written report of the results of all other performance tests shall be submitted within 4 weeks after the completion of the testing as specified in the Arizona Testing Manual. All performance testing reports shall be submitted in accordance with the Arizona Testing Manual and A.A.C. R18-2-312.A.

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

H. Extension of Performance Test Deadline

For performance testing required under Condition XVII.A above, the Permittee may request an extension to a performance test deadline due to a force majeure event as follows: [A.A.C. R18-2-312.J]

1. If a force majeure event is about to occur, occurs, or has occurred for which the Permittee intends to assert a claim of force majeure, the Permittee shall notify the Director in writing as soon as practicable following the date the Permittee first knew, or through due diligence should have known that the event may cause or caused a delay in testing beyond the regulatory deadline. The notification must occur before the performance test deadline unless the initial force majeure or a subsequent force majeure event delays the notice, and in such cases, the notification shall be given as soon as practicable.

[A.A.C. R18-2-312.J.1]

2. The Permittee shall provide to the Director a written description of the force majeure event and a rationale for attributing the delay in testing beyond the regulatory deadline to the force majeure; describe the measures taken or to be taken



to minimize the delay; and identify a date by which the Permittee proposes to conduct the performance test. The performance test shall be conducted as soon as practicable after the force majeure event occurs.

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

3. The decision as to whether or not to grant an extension to the performance test deadline is solely within the discretion of the Director. The Director shall notify the Permittee in writing of approval or disapproval of the request for an extension as soon as practicable.

[A.A.C. R18-2-312.J.3]

4. Until an extension of the performance test deadline has been approved by the Director under Conditions XVII.H.1, 2, and 3 above, the Permittee remains subject to the requirements of Section XVII.

[A.A.C. R18-2-312.J.4]

5. For purposes of this Section XVII, a "force majeure event" means an event that will be or has been caused by circumstances beyond the control of the Permittee, its contractors, or any entity controlled by the Permittee that prevents it from complying with the regulatory requirement to conduct performance tests within the specified timeframe despite the Permittee's best efforts to fulfill the obligation. Examples of such events are acts of nature, acts of war or terrorism, or equipment failure or safety hazard beyond the control of the Permittee.

[A.A.C. R18-2-312.J.5]

XVIII. PROPERTY RIGHTS

This permit does not convey any property rights of any sort, or any exclusive privilege. [A.A.C. R18-2-306.A.8.d]

XIX. SEVERABILITY CLAUSE

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

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

XX. PERMIT SHIELD

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

[A.A.C. R18-2-317.F, - 320, and -325]

XXI. PROTECTION OF STRATOSPHERIC OZONE

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

[40 CFR Part 82]



XXII. APPLICABILITY OF NSPS/NESHAP GENERAL PROVISIONS

For all equipment subject to a New Source Performance Standard or a National Emission Standard for Hazardous Air Pollutants, the Permittee shall comply with all applicable requirements contained in Subpart A of Title 40, Chapter 60 and Chapter 63 of the Code of Federal Regulations.

[40 CFR Part 60 Subpart A and Part 63 Subpart A]

XXIII. ACID RAIN

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

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

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

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

C. No limit shall be placed on the number of allowances held by the source. The source may not, however, use allowances as defense to noncompliance with any other applicable requirement.

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

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

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

E. All of the following are prohibited:

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

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



ATTACHMENT "B": SPECIFIC CONDITIONS

I. FACILITY-WIDE REQUIREMENTS

A. Opacity

- 1. Instantaneous Surveys and Six-Minute Observations
 - a. Instantaneous Surveys

Any instantaneous survey required by this permit shall be determined by either option listed in Conditions I.A.1.a(1) and (2):

[A.A.C. R18-2-311.b]

- (1) Alternative Method ALT-082 (Digital Camera Operating Technique)
 - (a) The Permittee, or Permittee representative, shall be certified in the use of Alternative Method ALT-082.
 - (b) The results of all instantaneous surveys and six-minute observations shall be obtained within 30 minutes.
- (2) EPA Reference Method 9 Certified Observer.

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

b. Six-Minute Observations

Any six-minute observation required by this permit shall be determined by either option listed in Conditions I.A.1.b(1) and (2):

[A.A.C. R18-2-311.b]

- (1) Alternative Method ALT-082 (Digital Camera Operating Technique)
 - (a) The Permittee, or Permittee representative, shall be certified in the use of Alternative Method ALT-082.
 - (b) The results of all instantaneous surveys and six-minute observations shall be obtained within 30 minutes.
- (2) EPA Reference Method 9.
- c. The Permittee shall have on site or on call a person certified in EPA Reference Method 9 unless all six-minute Method 9 observations required by this permit are conducted as a six-minute Alternative Method ALT-082 (Digital Camera Operating Technique) and all instantaneous visual surveys required by this permit are conducted as an instantaneous ALT-082 camera survey. Any six-minute Method 9 observation required by



this permit can be conducted as a six-minute Alternative Method ALT-082 and any instantaneous visual survey required by this permit can be conducted as an instantaneous ALT-082 camera survey.

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

2. Monitoring, Recordkeeping, and Reporting Requirements

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

- a. At the frequency specified in the following sections of this permit, the Permittee shall conduct an instantaneous survey of visible emissions from both process stack sources, when in operation, and fugitive dust sources.
- b. If the visible emissions on an instantaneous basis appears less than or equal to the applicable opacity standard, then the Permittee shall keep a record of the name of the observer, the date on which the instantaneous survey was made, and the results of the instantaneous survey.
- c. If the visible emissions on an instantaneous basis appears greater than the applicable opacity standard, then the Permittee shall immediately conduct a six-minute observation of the visible emissions.
 - (1) If the six-minute observation of the visible emissions is less than or equal to the applicable opacity standard, then the Permittee shall record the name of the observer, the date on which the sixminute observation was made, and the results of the six-minute observation.
 - (2) If the six-minute observation of the visible emissions is greater than the applicable opacity standard, then the Permittee shall do the following:
 - (a) Adjust or repair the controls or equipment to reduce opacity to less than or equal to the opacity standard;
 - (b) Record the name of the observer, the date on which the six-minute observation was made, the results of the six-minute observation, and all corrective action taken; and
 - (c) Report the event as an excess emission for opacity in accordance with Condition XI.A of Attachment "A".
 - (d) Conduct another six-minute observation to document the effectiveness of the adjustments or repairs completed.
- **B.** The Permittee shall record any change in fuel type including:

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

1. Type of fuel change;



- 2. Date of the fuel change; and
- 3. Time of the fuel change.
- **C.** The Permittee shall maintain a log of all adjustments, replacements, and maintenance performed on all air pollution control equipment.

[Permit #30732, Attachment "B", Condition I.D]

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

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

- **E.** Reporting Requirements
 - 1. Deviations from the following permit conditions shall be promptly reported in accordance with Condition XI.B.2 of Attachment "A":

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

- a. Condition II.D.3.e for PM CEMS of Attachment "B";
- b. Condition II.G.1 for NO_X and SO₂ CEMS of Attachment "E";
- c. Condition II.F.1.a for CO₂ CEMS of Attachment "B"; and
- d. Conditions for the Operation of Pollution Control Devices:
 - (1) Conditions II.D.2.a, b, and c of Attachment "B";
 - (2) Condition II.E.2 of Attachment "B";
 - (3) Condition II.G.2 of Attachment "B";
 - (4) Condition V.C.2.a of Attachment "B";
 - (5) Condition VI.B.2 of Attachment "B";
 - (6) Condition VII.C.2 of Attachment "B";
 - (7) Condition X.B.2 of Attachment "B"; and
 - (8) Conditions II.E.1, 2, 3, 4, and 5 of Attachment "E".

II. UNIT 1 AND UNIT 2 BOILERS

A. Applicability



This section applies to the Unit 1 Boiler and Unit 2 Boiler listed in the Equipment List, Attachment "C" of this permit.

- **B.** Definitions
 - 1. Unit Operating Day 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.

[Consent Decree (Civil Action No. 2:08-cv-1479-JAT) Paragraph 40]

2. *Startup* – Startup means the setting into operation of Coronado Generating Station (CGS) Unit 1 or Unit 2 for any purpose.

[40 CFR 60.2]

3. *Shutdown* – Shutdown means the cessation of operation of Coronado Generating Station (CGS) Unit 1 or Unit 2 for any purpose.

[40 CFR 60.2]

4. *Malfunction* – Malfunction means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.

[40 CFR 60.2]

- **C.** Operational Limitations
 - 1. Fuel Limitation

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

The Permittee shall only burn the following in Unit 1 and Unit 2:

- a. Coal;
- b. No. 2 fuel oil or used oil;
- c. Co-firing of coal and No. 2 fuel oil or coal and used oil, and
- d. Unprocessed wood (biomass)
- 2. The Permittee shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by this section recorded in a permanent form suitable for inspection. The file shall be retained for at least two years following the date of such measurements, maintenance, reports and records.

[40 CFR 60.7(f)]



3. Excess Emissions and Monitoring System Performance Reports

[40 CFR 60.45(g) & 60.7(c)]

The Permittee shall submit excess emissions and monitoring system performance (MSP) reports to the Department and EPA Region IX semi-annually for each sixmonth period in the calendar year. All semiannual reports shall be postmarked by the 30th day following the end of each six-month period. Periods of excess emissions as defined in the applicable sections and monitoring systems (MS) downtime shall be reported. Each excess emissions and MSP report shall include the following:

- 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 the affected facility. The nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted.
- c. The date and time identifying each period during which the continuous monitoring system 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 continuous monitoring systems have not been inoperative, repaired, or adjusted, such information shall be stated in the report.
- 4. In addition to Condition II.C.3, the Permittee shall report emissions exceeding an emission limitation or standard as deviations in accordance with Condition XI, Attachment "A" of this permit.

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

5. Emission Rates for Performance Testing

When conducting the required performance tests, the Permittee shall determine compliance with the PM, SO_2 , and NO_X emissions standards as follows:

a. Emission Rates using O₂ as Diluent Gas

The emission rate (E) of PM, SO_2 , and NO_X shall be computed for each run using the following equation:

$$E = CF_d \frac{(20.9)}{(20.9 - \%O_2)}$$

Where:



II. UNIT 1 AND UNIT 2 BOILERS

- E = Emission rate of pollutant, ng/J (lb/million Btu);
- C = Concentration of pollutant, ng/dscm (lb/dscf);
- $%O_2 = Oxygen$ concentration, percent dry basis; and
- $F_d =$ Factor as determined from EPA Reference Method 19. [40 CFR 60.46(b)(1)]
- b. Emission Rates using CO₂ as Diluent Gas

As an alternate to the reference method, the emission rate (E) of PM, SO_2 , and NO_X , may be determined by using the F_c factor in the following equation:

$$E = CF_c \frac{100}{\% CO_2}$$

Where:

E = Emission rate of pollutant, ng/J (lb/million Btu);

C = Concentration of pollutant, ng/dscm (lb/dscf);

%CO₂ = Carbon dioxide concentration, percent dry basis; and

- $F_{c} = Factor as determined from EPA Reference Method 19.$ [40 CFR 60.46(d)(1)(i)]
- c. If the equation in Condition II.C.5.b is used to calculate E and either E is from 0.97 to 1.00 of the emission standard or the relative accuracy of a CEMS is from 17 to 20 percent, then the Permittee shall follow the procedures in 40 CFR 60.46(d)(1)(ii).

[40 CFR 60.46(d)(1)(ii)]

6. Permit Shield

Compliance with Section II.C shall be deemed compliance with 40 CFR 60.45(g) and 60.46(b)(1), (d)(1)(i), & (d)(1)(i).

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

D. Particulate Matter and Opacity

- 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 particulate matter in excess of 43 nanograms per joule heat input (0.10 lb per million Btu) derived from fossil fuel or fossil fuel and unprocessed wood (biomass).



[40 CFR 60.42(a)(1)]

b. <u>The Permittee shall not emit filterable particulate matter (PM) in excess</u> of 0.030 lbs./MMBtu, as determined by performance tests.

[Consent Decree (Civil Action No. 2:08-cv-1479-JAT) Paragraphs 64 and 74 and A.A.C. R18-2-331.A.3.a and 406.A.4] [Material Permit Conditions are defined by underline and italics]

> c. <u>The Permittee shall not emit filterable particulate matter (PM) and</u> particulate matter below 10 micron size (PM_{10}) in excess of 0.030

[Consent Decree (Civil Action No. 2:08-cv-1479-JAT) Paragraphs 64 and 74 and A.A.C. R18-2-331.A.3.a and 406.A.4] [Material Permit Conditions are defined by underline and italics]

> d. <u>The opacity of emissions from the stack of each unit shall not be greater</u> <u>than 20 percent except for one six-minute period per hour of not more than</u> <u>27 percent opacity</u>. Periods of startup, shutdown, or malfunction, as defined in Conditions II.B.2, 3, and 4, respectively, are excluded from the opacity standard. Opacity readings of portions of plumes which contain condensed, uncombined water vapor shall not be used for the purposes of determining compliance with opacity standards.

> > [40 CFR 60.42(a)(2), 60.11(c), 60.11(e)(1), and A.A.C. R18-2-331.A.3.f] [Material Permit Conditions are defined by underline and italics]

e. Excess opacity emissions for Unit 1 and Unit 2 are defined as any sixminute period during which the average opacity of emissions exceeds 20 percent opacity, except that one six-minute average per hour of up to 27 percent opacity need not be reported.

[40 CFR 60.45(g)(1)]

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

[40 CFR 60.11(d) and A.A.C. R18-2-331.A.3.e] [Material Permit Conditions are defined by underline and italics]

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

[Consent Decree (Civil Action No. 2:08-cv-1479-JAT) Paragraph 63 and A.A.C. R18-2-331.A.3.e] [Material Permit Conditions are defined by underline and italics]

c. Except as required during correlation testing under 40 CFR Part 60, Appendix B, PS-11, and Quality Assurance Requirements under Appendix



F, Procedure 2, the Permittee shall at a minimum perform the following on the HS-ESP to the extent reasonably practicable:

[Consent Decree (Civil Action No. 2:08-cv-1479-JAT) Paragraph 63]

- (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.
- 3. Monitoring & Recordkeeping Requirements
 - a. <u>The Permittee shall</u> maintain, correlate, and <u>operate a continuous emission</u> <u>monitoring system for measuring PM emissions on Unit 1 and Unit 2.</u>

[Consent Decree (Civil Action No. 2:08-cv-1479-JAT) Paragraphs 67 and 71 and A.A.C. R18-2-331 .A.3.c] [Material Permit Conditions are defined by underline and italics]

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

[Consent Decree (Civil Action No. 2:08-cv-1479-JAT) Paragraph 70 and A.A.C. R18-2-331.A.3.c] [Material Permit Conditions are defined by underline and italics]

c. <u>The Permittee shall operate the PM CEMS in accordance with the QA/QC</u> protocol approved by ADEQ and EPA.

[Consent Decree (Civil Action No. 2:08-cv-1479-JAT) Paragraph 70 and A.A.C. R18-2-331.A.3.c] [Material Permit Conditions are defined by underline and italics]

d. The PM CEMS shall comprise a continuous particle mass monitor measuring particulate matter concentration, directly or indirectly, on an hourly average basis and a diluent monitor used to convert the concentration to units expressed in pounds per million British thermal units (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.

[Consent Decree (Civil Action No. 2:08-cv-1479-JAT) Paragraph 67]



e. Except for periods of monitor malfunction, maintenance, or repair, the Permittee shall continuously operate the PM CEMS at all times when the Unit it serves is operating.

[Consent Decree (Civil Action No. 2:08-cv-1479-JAT) Paragraph 67]

- f. The Permittee shall maintain, in an electronic database, the hourly average emission values of all PM CEMS data in lb/MMBtu. [Consent Decree (Civil Action No. 2:08-cv-1479-JAT) Paragraph 67]
- g. <u>The Permittee shall calibrate</u>, maintain, and operate <u>continuous opacity</u> <u>monitoring system (COMS) for measuring the opacity of emissions.</u> [40 CFR 60.45(a) and A.A.C. R18-2-331.A.3.c] [Material Permit Conditions are defined by underline and italics]

h. COMS Requirements

(1) The COMS shall meet the following requirements:

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

- (a) Apparatus
- (b) Installation Specifications
- (c) Design and Performance Procedure
- (d) Design Specification Verification Procedure
- (e) Performance Specification Verification Procedure
- (f) Equations

[40 CFR 60.13(a)]

- (2) The following are the quality assurance requirements to be met:
 - (a) Calibration Checks

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

[40 CFR 60.13(d)(1) and Appendix B, PS-1, 5.2]

(b) Zero and Span Drift Adjustments

[40 CFR 60.13(d)(1)]

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



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

The Permittee shall use procedures that at a minimum include an automated method for producing a simulated zero opacity condition and an upscale (span) opacity condition using a certified neutral density filter or other related technique to produce a known obscuration of the light beam. Such procedures shall provide a system check of all active analyzer internal optics with power or curvature, all active electronic circuitry including the light source and photodetector assembly, and electronic or electro-mechanical systems and hardware and or software used during normal measurement operation.

[40 CFR 60.13(d)(2)]

(4) 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)]

- (5) Data Reduction and Missing Data
 - (a) The Permittee shall reduce all data from the COMS to 6minute averages. Six-minute opacity averages shall be calculated from 36 or more data points equally spaced over each 6-minute period.

[40 CFR 60.13(h)(1)]

(b) 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.

[40 CFR 60.13(h)(2)(vi and ix)]

- i. Compliance Assurance Monitoring (CAM) & Periodic Monitoring for Particulate Matter
 - (1) The Permittee shall comply with the following indicators: [40 CFR 64.6(c)(1)(i)]
 - (a) Emission measurements from the PM CEMS shall be the sole indicator of PM emissions.
 - (b) If PM CEMS emission measurements are greater than 0.028 lb/MMBtu on a 24-hour rolling average, excluding periods of startup, shutdown, and malfunction, this shall be considered an excursion and trigger an inspection, corrective action, and recordkeeping requirement in accordance with Conditions II.D.3.i(4) & (6) of this Attachment.
 - (2) The Permittee shall maintain the monitoring equipment, including but not limited to maintaining necessary parts for routine repair of the monitoring equipment.

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

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

[40 CFR 64.6(c)(3) and 64.7(c)]

- (4) Response to Excursions or Exceedances
 - (a) Upon detecting an excursion or exceedance, the Permittee shall restore operation of the boiler (including the control



device and associated capture system) to their normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown, or malfunction, and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return operations to within the indicator range, designated condition, or below applicable emission limitation or standard, as applicable. [40 CFR 64.6(c)(3) and 64.7(d)(1)]

(b) Determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include but is not limited to, monitoring results, review of operation, and maintenance procedures and records, and inspection of the control device, associated capture system, and process.

[40 CFR 64.6(c)(3) and 64.7(d)(2)]

(5) After approval of the monitoring under this section, if the Permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, Permittee shall promptly notify the Department, and if necessary, submit a proposed modification to this permit to address the necessary monitoring changes. Such a modification may include, but is not limited to, re-establishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters.

[40 CFR 64.6(c)(3) and 64.7(e)]

(6) Excursions shall be reported as required by Condition VII.B.4 of Attachment "A" of this permit. The report shall include, at a minimum, the following:

[A.A.C. R18-2-309(2)(c)(iii), 40 CFR 64.9(a)(2)(i), and (ii)]

(a) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursion or



exceedances, as applicable, and the corrective actions taken; and

- (b) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitoring downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable).
- j. The Permittee shall maintain a record of the applicable monitoring parameters defined in Condition II.D.3. Records of all excursions and corrective actions taken including the date and time of the event shall be maintained.

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

4. Reporting Requirements

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 within sixty (60) days after the end of each half of the calendar year (January through June and July through December) in accordance with Consent Decree (Civil Action No. 2:08-cv-1479-JAT) Paragraphs 71 and 91. This report is not required to be submitted along with the compliance certifications required in Condition VII of Attachment "A".

[Consent Decree (Civil Action No. 2:08-cv-1479-JAT) Paragraphs 71 and 91]

b. The Permittee shall identify in the report required in Condition II.D.4.a 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.

[Consent Decree (Civil Action No. 2:08-cv-1479-JAT) Paragraph 71]

- 5. Performance Testing
 - a. The Permittee shall perform annual performance tests on each boiler Unit to determine compliance with the particulate matter concentration in II.D.1.a using EPA Reference Method 5B.

[40 CFR 60.46(b)(2)]

b. The Permittee may use Method 17 if the stack gas temperature at the sampling location does not exceed an average temperature of 160°C (320 °F). The procedures of sections 8.1 and 11.1 of Method 5B may be used with Method 17 when used after wet FGD systems and the effluent gas is not saturated or laden with water droplets.

[40 CFR 60.46(d)(2)]



c. The Permittee shall conduct annual performance tests to determine compliance with the PM emissions rate established in Conditions II.D.1.b and c using the following reference methods and procedures (filterable portion only):

[Consent Decree (Civil Action No. 2:08-cv-1479-JAT) Paragraph 65]

- (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. Test Procedures

[Consent Decree (Civil Action No. 2:08-cv-1479-JAT) Paragraph 65]

- (1) Each test shall consist of three separate runs performed under representative operating conditions not including periods of startup, shutdown, or malfunction.
- (2) 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).
- (3) The Permittee shall calculate the PM emission rate from the stack test results in accordance with 40 CFR 60.8(f).
- e. 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. [Consent Decree (Civil Action No. 2:08-cv-1479-JAT) Paragraph 65]
- 6. Permit Shield

Compliance with Section II.D shall be deemed compliance with 40 CFR 60.42(a)(1), (a)(2), 60.45(a), (g)(1), 60.46(b)(2), (d)(2), 64.6, 64.7, and 64.9, A.A.C. R18-2-406.A.4, and Consent Decree (Civil Action No. 2:08-cv-1479-JAT) Paragraphs 63, 64, 65, 67, 70, 71, 74, and 91.

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

E. Nitrogen Oxides (NO_x)

- 1. Emission Limitations/Standards
 - a. Coal or Coal and Unprocessed Wood (Biomass)
 - (1) The Permittee shall not cause to be discharged into the atmosphere from the stack of each Unit any gases which contain nitrogen oxides, expressed as NO₂ in excess of 300 nanograms per joule



heat input (0.70 lb per million Btu) derived from coal or coal and unprocessed wood (biomass).

[40 CFR 60.44(a)(3)]

- (2) The Permittee shall not allow the 30-day rolling average NO_x emission rate from Unit 1 to exceed 0.320 lb/MMBtu. [Consent Decree (Civil Action No. 2:08-cv-1479-JAT) Paragraph 41]
- (3) The Permittee shall not allow the 30-day rolling average NO_X emission rate from Unit 2 to exceed 0.080 lb/MMBtu. [Consent Decree (Civil Action No. 2:08-cv-1479-JAT) Paragraph 42]
- (4) The Permittee shall not allow the 365-day plant-wide rolling total NO_X emissions of Unit 1 and Unit 2 to exceed 7,300 tons. [Consent Decree (Civil Action No. 2:08-cv-1479-JAT) Paragraph 44]
- b. Fuel Oil, Used Oil, or Fuel Oil or Used Oil and Unprocessed Wood (Biomass)

The Permittee shall not cause to be discharged into the atmosphere from the stack of each unit any gases which contain nitrogen oxides, expressed as NO_2 in excess of 129 nanograms per joule heat input (0.30 lb per million Btu) derived from fuel oil, used oil, or fuel oil or used oil and unprocessed wood (biomass).

[40 CFR 60.44(a)(2)]

- c. Combination Fuels
 - (1) When different fossil fuels are burned simultaneously in any combination, the applicable standard (in ng/J) is determined by proration using the following formula:

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

Where:

- PS_{NOx} = Prorated standard for NO_x when burning different fuels simultaneously, in nanograms per joule heat input derived from all fossil fuels fired or from all fossil fuels and wood residue fired;
- w = Percentage of total heat input derived from lignite;
- x = Percentage of total heat input derived from gaseous fossil fuel;
- y = Percentage of total heat input derived from liquid fossil fuel; and



II. UNIT 1 AND UNIT 2 BOILERS

z = Percentage of total heat input derived from solid fossil fuel (except lignite)

[40 CFR 60.44(b)]

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

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

d. Excess Emissions

(1) Excess emissions for Unit 1 and Unit 2 are defined as any threehour period during which the average emissions (arithmetic average of three contiguous one-hour periods) exceed the applicable standards in Condition II.E.1.a.(1) and (b).

40 CFR 60.45(g)(3)(i)]

(2) Excess emissions for Unit 1 and Unit 2 are defined as any 30-day rolling average that exceeds the applicable standards in Conditions II.E.1.a.(2) and (3).

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

(3) Excess emissions for Units 1 and 2 are defined as any 365-day rolling total that exceeds the applicable limit specified in Condition II.E.1.a.(4).

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

2. Air Pollution Control Requirements

<u>The Permittee shall continuously operate each NO_x control at all times the unit it</u> <u>serves is in operation consistent with technological imitations, manufacturer's</u> <u>specifications, and good engineering and maintenance practices for minimizing</u> emissions to the extent practicable.

[Consent Decree (Civil Action No. 2:08-cv-1479-JAT) Paragraphs 42 and 43 and A.A.C. R18-2-331.A.3.e] [Material Permit Conditions are defined by underline and italics]

- 3. Monitoring & Recordkeeping Requirements
 - a. Continuous Emissions Monitoring System (CEMS)

<u>The Permittee shall calibrate</u>, maintain, and operate a <u>continuous</u> <u>emissions monitoring system for measuring nitrogen oxides emissions</u>. [40 CFR 60.45(a) and A.A.C. R18-2-331.A.3.c] [Material Permit Conditions are defined by underline and italics]

- b. The CEMS for NO_X, shall meet the following requirements: [40 CFR 75 Appendix "A" and "B", 40 CFR 75.10(d)(1)]
 - (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

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

c. Monitoring of NO_x Emission Rate

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

[Consent Decree (Civil Action No. 2:08-cv-1479-JAT) Paragraph 45]

- (1) NO_X emissions data need not be bias adjusted
- (2) For 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 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) For Unit 2, an annual relative accuracy test (RATA) 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_x Emission Rate [Consent Decree (Civil Action No. 2:08-cv-1479-JAT) Paragraph 5]
 - (1)The Permittee shall calculate the 30-day rolling average NO_x emission rate expressed in pounds per million British thermal units (lb/MMBtu) for each Unit in accordance with the following procedure:
 - Sum the total pounds of NO_x emitted from the Unit during (a) the current Unit Operating Day and the previous twentynine (29) Unit Operating Days.
 - (b) Sum the total heat input to the Unit in MMBtu during the current Unit Operating Day and the previous twenty-nine (29) Unit Operating Days.
 - (c) Divide the total number of pounds of NO_x emitted during the thirty (30) Unit Operating Days by the total heat input during the thirty (30) Unit Operating Days.
 - (2)A new 30-day rolling average NO_x emission rate shall be calculated for each new Unit Operating Day. Each 30-day rolling average NO_x emission rate will include all emissions that occur during all periods within any Unit Operating Day, including emissions from startup, shutdown, and malfunction.
- Determining the 365-Day Plant-Wide Rolling Total NO_x Emissions e.
 - (1)The 365-day plant-wide rolling total NO_x emissions shall be determined using CEMS, in accordance with the procedures specified in 40 CFR Part 75. [Consent Decree (Civil Action No. 2:08-cv-1479-JAT) Paragraph 46]
 - (2)The 365-day plant-wide rolling total NO_x emissions means the total number of tons of NO_x emitted from Units 1 and 2 during a 365-day period, 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).

[Consent Decree (Civil Action No. 2:08-cv-1479-JAT) Paragraph 6]

4. **Reporting Requirements**

> The Permittee shall maintain records of the 30-day rolling average NO_x emission rate and the 365-day plant-wide rolling total NO_x emissions. A summary report of these records shall be submitted to EPA within sixty (60) days after the end of each half of the calendar year (January through June and July through December) in accordance with Consent Decree (Civil Action No. 2:08-cv-1479-JAT) Paragraph 91. This report is not required to be submitted along with the compliance



certifications required in Condition VII of Attachment "A". Detailed reports shall be made available, upon request, to Department inspectors in a reasonable time. [Consent Decree (Civil Action No. 2:08-cv-1479-JAT) Paragraph 91 and A.A.C. R18-2-306.A.5.a]

5. Permit Shield

Compliance with Section II.E shall be deemed compliance with 40 CFR 60.44(a)(2), (a)(3), (b), 60.45(a), (g)(3)(i), 40 CFR 75 Appendix "A" and "B", 40 CFR 75.10(d)(1), and Consent Decree (Civil Action No. 2:08-cv-1479-JAT) Paragraphs 5, 6, 41, 42, 43, 44, 45, 46, and 91.

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

- **F.** Carbon Dioxide (CO₂)
 - 1. Monitoring, Recordkeeping & Reporting Requirements
 - a. Continuous Emissions Monitoring System (CEMS)

<u>The Permittee shall calibrate</u>, maintain, and operate a <u>continuous</u> <u>emissions monitoring system for measuring carbon dioxide (CO₂.) gas.</u> [40 CFR 60.45(a) and A.A.C. R18-2-331.A.3.c] [Material Permit Conditions are defined by underline and italics]

b. The continuous emission monitoring systems for CO₂ shall meet the following requirements:

[40 CFR 75 Appendix "A" and "B", 40 CFR 75.10(d)(1)]

- (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



II. UNIT 1 AND UNIT 2 BOILERS

(3) Data Reduction

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

2. Permit Shield

Compliance with Section II.F shall be deemed compliance with 40 CFR 60.45(a), 40 CFR 75 Appendix "A" and "B", and 40 CFR 75.10(d)(1).

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

- **G.** Sulfur Dioxide (SO₂)
 - 1. Emission Limitations/Standards
 - a. Coal or Coal and Unprocessed Wood (Biomass)
 - (1) The Permittee shall not cause to be discharged into the atmosphere from the stack of each unit any gases which contain sulfur dioxide in excess of 340 nanograms per joule heat input (0.80 pounds per million Btu) derived from coal or coal and unprocessed wood (biomass).

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

- (2) For Unit 1, the Permittee shall maintain a 30-day rolling average SO₂ removal efficiency of at least 95.0 percent or a 30-day rolling average SO₂ emission rate no greater than 0.080 lb/MMBtu. [Consent Decree (Civil Action No. 2:08-cv-1479-JAT) Paragraph 49]
- (3) For Unit 2, the Permittee shall maintain a 30-day rolling average SO₂ removal efficiency of at least 95.0 percent or a 30-day rolling average SO₂ emission rate no greater than 0.080 lb/MMBtu. [Consent Decree (Civil Action No. 2:08-cv-1479-JAT) Paragraph 48]
- b. Fuel Oil, Used Oil, or Fuel Oil or Used Oil and Unprocessed Wood (Biomass)

The Permittee shall not cause to be discharged into the atmosphere from the stack of each unit any gases which contain sulfur dioxide in excess of 340 nanograms per joule heat input (0.80 pounds per million Btu) derived from fuel oil, used oil, or fuel oil or used oil and unprocessed wood (biomass).

[40 CFR 60.43(a)(1)]

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

[40 CFR 60.43(c)]

d. Excess Emissions



(1)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.G.1(a)(1) and (b).

[40 CFR 60.45(g)(2)(i) and A.A.C. R18-2-306.A.2]

(2)Excess emissions for Unit 1 and Unit 2 are defined as any 30-day rolling average emissions of sulfur dioxide as measured by a continuous monitoring system exceeds the applicable standard in Condition II.G.1.a.(2) and (3).

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

2. Air Pollution Control Requirement

> The Permittee shall 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.

[Consent Decree (Civil Action No. 2:08-cv-1479-JAT) Paragraphs 50; A.A.C. R18-2-306.A.2, and 331.A.3.e] [Material Permit Conditions are defined by underline and italics]

- 3. Monitoring, Recordkeeping, & Reporting Requirements
 - The Permittee shall calibrate, maintain, and operate continuous emissions a. monitoring system (CEMS) for measuring sulfur dioxide emissions. [40 CFR 60.45(a) and A.A.C. R18-2-331.A.3.c] [Material Permit Conditions are defined by underline and italics]
 - b. The CEMS for SO₂ shall meet the following requirements: [40 CFR 75 Appendix "A" and "B", 40 CFR 75.10(d)(1), and 40 CFR 75 Subparts F and G]
 - (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
 - Calculations (g)



- (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.
- c. Monitoring of SO₂ Emission Rate [Consent Decree (Civil Action No. 2:08-cv-1479-JAT) Paragraph 58]

The Permittee shall determine the 30-day rolling average SO_2 emission rate and the 30-day rolling average SO_2 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_2 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).
- In lieu of installing an inlet flow monitor, the inlet pounds of SO₂
 will be calculated as described in Condition II.G.3.d(1)(b).
- d. Determining the 30-Day Rolling Average SO₂ Removal Efficiency [Consent Decree (Civil Action No. 2:08-cv-1479-JAT) Paragraph 7]
 - (1) The 30-day rolling average SO₂ removal efficiency is defined as the percent reduction in the mass of SO₂ achieved by a Unit's FGD system over a thirty (30) Unit Operating Day period. If necessary,



the Permittee shall calculate the 30-day rolling average SO₂ removal efficiency in accordance with the following procedure:

- Sum the total pounds of SO₂ emitted as measured at the outlet of the FGD system for the Unit during the current Unit Operating Day and the previous twenty-nine (29) Unit Operating Days as measured at the outlet of the FGD system for that unit.
- (b) Sum the total pounds of SO_2 delivered to the inlet of the FGD system for the Unit during the current Unit Operating Day and the previous twenty-nine (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_2 inlet to the lb/MMBtu SO_2 outlet and multiplying the outlet pounds of SO_2 by that ratio).
- (c) Subtract the outlet SO_2 emissions calculated in Condition II.G.3.d(1)(a) from the inlet SO_2 emissions calculated in Condition II.G.3.d(1)(b).
- (d) Divide the remainder calculated in Condition II.G.3.d.(1)(c) by the inlet SO_2 emissions calculated in Condition II.G.3.d(1)(b).
- (e) Multiply the quotient calculated in Condition II.G.3.d(1)(d) by 100 to express as a percentage of removal efficiency.
- (2) A new 30-day rolling average SO₂ 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.
- e. Determining the 30-Day Rolling Average SO₂ Emission Rate [Consent Decree (Civil Action No. 2:08-cv-1479-JAT) Paragraph 8]
 - (1) The Permittee shall calculate the 30-day rolling average SO₂ emission rate expressed in lb/MMbtu for each Unit in accordance with the following procedure:
 - (a) Sum the total pounds of SO₂ emitted from the Unit during the current Unit Operating Day and the previous 29 Unit Operating Days.



- (b) Sum the total heat input to the Unit in MMBtu during the current Unit Operating Day and the previous twenty-nine (29) Unit Operating Days.
- (c) Divide the total number of pounds SO₂ emitted during the thirty (30) Unit Operating Days by the total heat input during the thirty (30) Unit Operating Days.
- (2) A new 30-day rolling average SO_2 emission rate shall be calculated for each new Unit Operating Day. Each 30-day rolling average SO_2 emission rate shall include all emissions that occur during all periods within any Unit Operating Day, including emissions from startup, shutdown, and malfunction.
- f. Reporting Requirements

The Permittee shall maintain records of the SO_2 removal efficiency or the SO_2 emission rate. These records shall be submitted to EPA within sixty (60) days after the end of each half of the calendar year (January through June and July through December) in accordance with Consent Decree (Civil Action No. 2:08-cv-1479-JAT) Paragraph 91. This report is not required to be submitted along with the compliance certifications required in Condition VII of Attachment "A". These reports shall be made available, upon request, to the Department.

[Consent Decree (Civil Action No. 2:08-cv-1479-JAT) Paragraph 91 and A.A.C. R18-2-306.A.5]

4. Permit Shield

Compliance with Section II.G shall be deemed compliance with 40 CFR 60.43(a)(1), (c), 60.45(a), 60.45(g)(2)(i), 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 Consent Decree (Civil Action No. 2:08-cv-1479-JAT) Paragraphs 7, 8, 48, 49, 50, 58, and 91.

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

- **H.** 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]



- 2. Monitoring, Recordkeeping, & Reporting Requirements
 - a. <u>The Permittee shall calibrate</u>, maintain, and operate <u>continuous emission</u> <u>monitoring systems (CEMS) for measuring emissions of CO.</u> [A.A.C. R18-2-306.A.3.d and 331.A.3.c] [Material Permit Conditions are defined by underline and italics]
 - b. The CEMS for CO shall meet the following requirements: [A.A.C. R18-2-306.A.3.c]
 - 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.H.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) Excess emissions for Unit 1 and Unit 2 are defined as any 30 day period, excluding periods of start-up, shutdown and malfunction during which the average emissions of CO as measured by a continuous monitoring system exceeds the applicable standard in Conditions II.H.1 of this Attachment.

[A.A.C.R18-2-312.H.3]

(2) Excess emissions for Unit I and Unit 2 are defined as any one hour period during which the average emissions of CO as measured by a continuous monitoring system exceeds the applicable standard in Conditions II.H.1.

[A.A.C.R18-2-312.H.3]



- (3) 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.5]
 - The magnitude of excess emissions computed in (a) 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.
- The summary report form shall contain the information and be in (4) 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.5]

- If the total duration of excess emissions for the reporting (a) period is less than 1 percent of the total operating time for the reporting period and the 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.

3. Permit Shield

Compliance with Section II.H shall be deemed compliance with A.A.C. R18-2-406.A.4 & 5.

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

I. Sulfuric Acid (H₂SO₄) Mist

1. The Permittee shall not cause to be discharged into the atmosphere from Unit 2 any gases which contain H_2SO_4 in excess of 0.006 lb/MMBtu, excluding periods of start-up, shutdown, and malfunction.

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

2. The Permittee shall perform annual performance tests using EPA Conditional Test Method 13 (CTM-13) or an alternate test method. 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.

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

3. Permit Shield

Compliance with Section II.I shall be deemed compliance with A.A.C. R18-2-406.A.4.

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

- **J.** Surrender of SO₂ Allowances
 - 1. For the purposes of Section II.J, "surrender" means, with regard to SO₂ Allowances, permanently surrendering so that such SO₂ Allowances can never be used to meet any compliance requirement under the Clean Air Act or the Arizona SIP.

[Consent Decree (Civil Action No. 2:08-cv-1479-JAT) Paragraph 51]

2. Except as provided in Condition II.J.9, the Permittee shall not sell, trade, or transfer any SO_2 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.

[Consent Decree (Civil Action No. 2:08-cv-1479-JAT) Paragraph 52]

3. The Permittee shall surrender to EPA, or transfer to a non-profit third party selected by the Permittee for purposes of surrender, all SO₂ 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.

[Consent Decree (Civil Action No. 2:08-cv-1479-JAT) Paragraph 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 SO₂ Allowances, as limited by this condition, allocated to CGS to meet the federal and/or state Clean Air Act regulatory requirements for certain SO₂ emissions from such new coal-fired unit(s).

[Consent Decree (Civil Action No. 2:08-cv-1479-JAT) Paragraph 54]

- a. The Permittee may only use such SO_2 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 SO₂ Allowances for the SO₂ emissions associated with a total of 400 megawatts (MW) 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_2 Allowances the Permittee may use pursuant to this condition, the Permittee may use no more than the number of SO_2 Allowances that cover the same percentage of total SO_2 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_2 Allowances allocated to CGS to cover no more than fifty percent of the total SO_2 emissions from such new coal-fired unit. This reduction in the amount of SO_2 Allowances surrendered by or on behalf of the Permittee would start with the year this new unit(s) commences operation.
- 5. The Permittee shall make its surrender of SO₂ Allowances annually, within fortyfive days of its receipt from EPA of the Annual Deduction Reports for SO₂. Any surrender need not include the specific SO₂ Allowances that were allocated to CGS, so long as the Permittee surrenders SO₂ Allowances that are from the same



year and that are equal to the number required to be surrendered under Condition II.J.

[Consent Decree (Civil Action No. 2:08-cv-1479-JAT) Paragraph 55]

- 6. If any SO₂ 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 compliance certification submitted to ADEQ and EPA pursuant to Condition VII of Attachment "A". Such report shall:
 - a. Provide the identity of the non-profit third-party recipient(s) of the SO_2 Allowances and a listing of the serial numbers of the transferred SO_2 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 SO₂ Allowances and will not use any of the SO₂ Allowances to meet any obligation imposed by any environmental law.

[Consent Decree (Civil Action No. 2:08-cv-1479-JAT) Paragraph 56]

7. No later than the third compliance certification due after the transfer of any SO₂ Allowances, the Permittee shall include a statement that the non-profit third-party recipient(s) surrendered the SO₂ Allowances for permanent surrender to EPA in accordance with the provisions of II.J.8 within 1 year after the Permittee transferred the SO₂ Allowances to them. The Permittee shall not have complied with the SO₂ Allowance surrender requirements of Condition II.J until all nonprofit third-party recipient(s) shall have actually surrendered the transferred SO₂ Allowances to EPA.

[Consent Decree (Civil Action No. 2:08-cv-1479-JAT) Paragraph 56]

8. For all SO₂ Allowances surrendered to EPA, the Permittee or the non-profit thirdparty recipient(s) (as the case may be) shall first submit an SO₂ Allowance transfer request form to EPA's Office of Air and Radiation's Clean Air Markets Division directing the transfer of such SO₂ 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 SO₂ Allowances and identify – by name of account and any applicable serial or other identification numbers or station names – the source and location of the SO₂ Allowances being surrendered.

[Consent Decree (Civil Action No. 2:08-cv-1479-JAT) Paragraph 57]

9. Provided that the Permittee is in compliance with the SO₂ emission limitations established in Conditions II.G.1.a.(2) and (3), nothing shall preclude the Permittee from using, selling, or transferring Super-Compliance SO₂ Allowances that may arise as a result of achieving and maintaining SO₂ emission rates or removal efficiencies at Unit 1 and Unit 2 below the emission limits required in Conditions II.G.1.a.(2) and (3), so long as the Permittee timely reports the generation of such Super-Compliant SO₂ Allowances in the compliance certifications submitted to ADEQ and EPA pursuant to Condition VII of Attachment "A".



[Consent Decree (Civil Action No. 2:08-cv-1479-JAT) Paragraph 59]

10. The Permittee shall not use SO_2 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_2 allowances to offset any excess emissions (i.e., emissions above the limits specified in Conditions II.G.1.a.(2) and (3)).

[Consent Decree (Civil Action No. 2:08-cv-1479-JAT) Paragraph 60]

- 11. Nothing in this Section shall prevent the Permittee from purchasing or otherwise obtaining SO₂ Allowances from another source for purposes of complying with state or federal Clean Air Act requirements to the extent otherwise allowed by law. [Consent Decree (Civil Action No. 2:08-cv-1479-JAT) Paragraph 61]
- 12. The requirements stated in Conditions II.J.2 to 10 pertaining to surrender of SO_2 allowances shall be permanent injunctions not subject to any termination provisions of the Consent Decree.

[Consent Decree (Civil Action No. 2:08-cv-1479-JAT) Paragraph 62]

13. Permit Shield

Compliance with Section II.J shall be deemed compliance with Consent Decree (Civil Action No. 2:08-cv-1479-JAT) Paragraphs 51, 52, 53, 54, 55, 56, 57, 59, 60, 61, and 62.

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

- K. Mercury and Air Toxics Standards (MATS) 40 CFR Part 63 Subpart UUUUU
 - 1. Applicability

The requirements of 40 CFR Part 63, Subpart UUUUU are applicable to generating Unit 1 and Unit 2.

2. Definitions

For purposes of the MATS Rule,

- a. *Startup means* The first-ever firing of fuel in a boiler for the purpose of producing electricity, or the firing of fuel in a boiler after a shutdown event for any purpose. Startup ends when any of the steam from the boiler is used to generate electricity for sale over the grid or for any other purpose (including on-site use). Any fraction of an hour in which startup occurs constitutes a full hour of startup
- b. *Shutdown means* The period in which cessation of operation of an EGU is initiated for any purpose. Shutdown begins when the EGU no longer generates electricity or makes useful thermal energy (such as heat or steam) for industrial, commercial, heating, or cooling purposes or when no coal, liquid oil, syngas, or solid oil-derived fuel is being fired in the



EGU, whichever is earlier. Shutdown ends when the EGU no longer generates electricity or makes useful thermal energy (such as steam or heat) for industrial, commercial, heating, or cooling purposes, and no fuel is being fired in the EGU. Any fraction of an hour in which shutdown occurs constitutes a full hour of shutdown.

[40 CFR 63.10042]

3. General Requirements

a. The Permittee shall operate and maintain Units 1 and 2, including associated air pollution control and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions.

[40 CFR 63.10000(b)]

- b. Startup and Shutdown Requirements
 - (1) During startup and shutdown, the Permittee shall follow the requirements of Table 3 to 40 CFR 63 Subpart UUUUU.

[40 CFR 63.10000(a), 10005(j), 63.10021(h), 63.10022(a)(4), Table 3 of 40 CFR 63 Subpart UUUUU]

(2) During periods of startup or shutdown of Unit 1 and Unit 2, the Permittee shall use distillate oil (clean fuel).

[40 CFR 63.10011(f)(1) & (2), A.A.C. R18-2-306.A.2]

(3) During startup and shutdown, the Permittee shall operate all continuous monitoring systems (CMS), collect data, calculate pollutant emission rates, and record data. The Permittee may use diluent cap and default gross output values as described in Condition II.K.7.a(7).

[Table 3 of 40 CFR 63 Subpart UUUUU, and 63.10021(h)(1) & (2)]

(4) Once a unit is converted to firing coal, the Permittee shall engage all of the applicable control technologies except SCR.

[Table 3 of 40 CFR 63 Subpart UUUUU]

(5) The Permittee shall start the SCR systems, if present, appropriately to comply with relevant standards applicable during normal operation.

[Table 3 of 40 CFR 63 Subpart UUUUU]

- (6) During shutdown, the Permittee shall operate all applicable control technologies while firing coal. [Table 3 of 40 CFR 63 Subpart UUUUU]
- (7) The Permittee shall comply with all applicable emissions limits established by 40 CFR 63 Subpart UUUUU at all times except for periods of startup and shutdown.

[Table 3 of 40 CFR 63 Subpart UUUUU]



c. Permit Shield

Compliance with Section II.K.3 shall be deemed compliance with 40 CFR 63.10000(a) & (b), 63.10005(j), 63.10011(f)(1) & (2), 63.10021(h), (h)(1), & (h)(2), 63.10022(a)(4), and Table 3 to 40 CFR 63 Subpart UUUUU. [A.A.C. R18-2-325]

- 4. Boiler Tune-ups
 - a. Periodic Tune-up

The Permittee shall conduct periodic performance tune-ups for Unit 1 and Unit 2, which include inspection of burners and combustion controls, at least once every 48 calendar months after the previous performance tune-up. If the Unit is offline when a deadline to perform the tune-up passes, the Permittee shall perform the tune-up work practice requirements within 30 days after the re-start of the Unit. Tune-ups shall be performed as specified in Condition II.K.4.b.

[40 CFR 63.10006(i)(2), 63.10021(e), and Table 3 of 40 CFR 63 Subpart UUUUU]

b. Tune-up Procedures

In order to complete a tune-up, the Permittee shall:

(1) As applicable, inspect the burner and combustion controls of Unit 1 and Unit 2, and clean or replace any components of the burner or combustion controls as necessary upon initiation of the work practice program and at least once every required inspection period. Repair of a burner or combustion control component requiring special order parts may be scheduled as follows:

[40 CFR 63.10021(e)(1)]

(a) Burner or combustion control component parts needing replacement that affect the ability to optimize NO_X and CO must be installed within 3 calendar months after the burner inspection.

[40 CFR 63.10021(e)(1)(i)]

- (b) Burner or combustion control component parts that do not affect the ability to optimize NO_X and CO may be installed on a schedule determined by the operator. [40 CFR 63.10021(e)(1)(ii)]
- (2) As applicable, inspect the flame pattern and make any adjustments to the burner or combustion controls necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available, or in accordance with best combustion engineering practice for that burner type; [40 CFR 63.10021(e)(2)]



(3) As applicable, observe the damper operations as a function of mill and/or cyclone loadings, cyclone and pulverizer coal feeder loadings, or other pulverizer and coal mill performance parameters, making adjustments and effecting repair to dampers, controls, mills, pulverizers, cyclones, and sensors;

[40 CFR 63.10021(e)(3)]

(4) As applicable, evaluate windbox pressures and air proportions, making adjustments and effecting repair to dampers, actuators, controls, and sensors;

[40 CFR 63.10021(e)(4)]

(5) Inspect the system controlling the air-to-fuel ratio and ensure that it is correctly calibrated and functioning properly. Such inspection may include calibrating excess O_2 probes and/or sensors, adjusting overfire air systems, changing software parameters, and calibrating associated actuators and dampers to ensure that the systems are operated as designed. Any component out of calibration, in or near failure, or in a state that is likely to negate combustion optimization efforts prior to the next tune-up, should be corrected or repaired as necessary;

[40 CFR 63.10021(e)(5)]

(6) Optimize combustion to minimize generation of CO and NO_x. This optimization should be consistent with the manufacturer's specifications, if available, or best combustion engineering practice for the applicable burner type. NO_x optimization includes burners, overfire air controls, concentric firing system improvements, neural network or combustion efficiency software, control systems calibrations, adjusting combustion zone temperature profiles, and add-on controls such as SCR and SNCR; CO optimization includes burners, overfire air controls, concentric firing system improvements, neural network or combustion efficiency software, and add-on controls such as SCR and SNCR; concentric firing system improvements, neural network or combustion efficiency software, control systems calibrations, and adjusting combustion zone temperature profiles;

[40 CFR 63.10021(e)(6)]

(7) While operating at full load or the predominantly operated load, measure the concentration in the effluent stream of CO and NO_X in ppm, by volume, and oxygen in volume percent, before and after the tune-up adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). The Permittee may use portable CO, NO_X , and O_2 monitors for this measurement. EGU's employing neural network optimization systems need only provide a single pre- and post-tune-up value rather than continual values before and after each optimization adjustment made by the system;

[40 CFR 63.10021(e)(7)]



II. UNIT 1 AND UNIT 2 BOILERS

- c. Recordkeeping and Reporting Requirements
 - (1) The Permittee shall maintain on-site and submit, if requested by the Administrator, an annual report containing the information in Condition II.K.4.b including:

[40 CFR 63.10021(e)(8)]

(a) The concentrations of CO and NO_X in the effluent stream in ppm by volume, and oxygen in volume percent, measured before and after an adjustment of combustion systems;

[40 CFR 63.10021(e)(8)(i)]

(b) A description of any corrective actions taken as a part of the combustion adjustment; and

[40 CFR 63.10021(e)(8)(ii)]

(c) The type(s) and amount(s) of fuel used over the 12 calendar months prior to an adjustment, but only if the unit was physically and legally capable of using more than one type of fuel during that period.

[40 CFR 63.10021(e)(8)(iii)]

- (2) The Permittee shall report the tune-up date electronically in the quarterly compliance report, in accordance with Condition II.K.9.n and Section 10.2 of Appendix E to 40 CFR 63 Subpart UUUUU. The tune-up report date is the date when tune-up requirements in Conditions II.K.4.b(6) and (7) are completed. [40 CFR 63.10021(e)(9)]
- d. Permit Shield

Compliance with Section II.K.4 shall be deemed compliance with 40 CFR 63.10006(i)(2), 63.10021(e), and Table 3 to 40 CFR 63 Subpart UUUUU. [A.A.C. R18-2-325]

- 5. Site Specific Monitoring Plan
 - a. For demonstrating compliance with any applicable emissions limit through use of a continuous monitoring system (CMS), where a CMS includes a continuous parameter monitoring system (CPMS) as well as a continuous emissions monitoring system (CEMS), the Permittee shall develop a site-specific monitoring plan and submit this site-specific monitoring plan, if requested, at least 60 days before the initial performance evaluation (where applicable) of the CMS. This requirement to develop and submit a site-specific monitoring plan does not apply to affected sources with existing monitoring plans that apply to CEMS prepared under Appendix B to 40 CFR Part 60 or Part 75, and that meet the requirements of 40 CFR 63.10010. Using the process described in 40 CFR 63.8(f)(4), the Permittee may request approval of monitoring system



quality assurance and quality control procedures alternative to those specified in this paragraph of this Condition and, if approved, include those in the site-specific monitoring plan. The monitoring plan must address the provisions in Conditions II.K.5.a(1) through (4) as follows: [40 CFR 63.10000(d)(1)]

(1)The site-specific monitoring plan shall include the information specified in Conditions II.K.5.a(4)(a) through (g). Alternatively, the requirements of Conditions II.K.5.a(4)(a) through (g) are considered to be met for a particular CEMS or sorbent trap monitoring system if:

[40 CFR 63.10000(d)(2)]

(a) The CEMS or sorbent trap monitoring system is installed, certified, maintained, operated, and quality-assured either according to 40 CFR Part 75, or Appendix A of 40 CFR Part 63, Subpart UUUUU; and

[40 CFR 63.10000(d)(2)(i)]

(b) The recordkeeping and reporting requirements of 40 CFR Part 75, or Appendix A of 40 CFR Part 63, Subpart UUUUU that pertain to the CEMS are met.

[40 CFR 63.10000(d)(2)(ii)]

(2)If requested by the Director, the Permittee shall submit the monitoring plan (or relevant portion of the plan) at least 60 days before the initial performance evaluation of a particular CEMS, except where the CEMS has already undergone a performance evaluation that meets the requirements of 40 CFR 63.10010 (e.g., if the CEMS was previously certified under another program).

[40 CFR 63.10000(d)(3)]

(3) The Permittee shall operate and maintain the CEMS according to the site-specific monitoring plan.

[40 CFR 63.10000(d)(4)]

(4) The Permittee, for the provisions of the site-specific monitoring plan, shall address the following items:

[40 CFR 63.10000(d)(5)]

Installation of the CEMS or sorbent trap monitoring (a) system sampling probe or other interface at a measurement location relative to each affected process unit such that the measurement is representative of control of the exhaust emissions (e.g., on or downstream of the last control device). See 40 CFR 63.10010(a) for further details.

[40 CFR 63.10000(d)(5)(i)]



II. UNIT 1 AND UNIT 2 BOILERS

- (b) Performance and equipment specifications for the sample interface, the pollutant concentration or parametric signal analyzer, and the data collection and reduction systems. [40 CFR 63.10000(d)(5)(ii)]
- (c) Schedule for conducting initial and periodic performance evaluations.

[40 CFR 63.10000(d)(5)(iii)]

(d) Performance evaluation procedures and acceptance criteria (e.g., calibrations), including the quality control program in accordance with the general requirements of 40 CFR 63.8(d).

[40 CFR 63.10000(d)(5)(iv)]

(e) On-going operation and maintenance procedures, in accordance with the general requirements of 40 CFR 63.8(c)(1)(ii), (c)(3), and (c)(4)(ii).

[40 CFR 63.10000(d)(5)(v)]

(f) Conditions that define a CEMS that is out of control consistent with 40 CFR 63.8(c)(7)(i) where appropriate, and for responding to out of control periods consistent with 40 CFR 63.8(c)(7)(ii) and (c)(8).

[40 CFR 63.10000(d)(5)(vi)]

(g) On-going recordkeeping and reporting procedures, in accordance with the general requirements of 40 CFR 63.10(c), (e)(1), and (e)(2)(i), or as specifically required under 40 CFR 63 Subpart UUUUU.

[40 CFR 63.10000(d)(5)(vii)]

b. Permit Shield

Compliance with Section II.K.5 shall be deemed compliance with 40 CFR 63. 10000(d).

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

- 6. Emission Limitations/Standards
 - a. The Permittee shall not cause to be discharged into the atmosphere, except for during periods of startup and shutdown as defined in Condition II.K.2, from the Unit 1 or Unit 2 stack:

[Table 2 to 40 CFR 63 Subpart UUUUU, 40 CFR 63.9991(a), 63.10000(a)]

- (1) Filterable particulate matter (PM) in excess of 0.030 lb/MMBtu or 0.30 lb/MWh,
- (2) Sulfur Dioxide (SO₂) in excess of 0.20 lb/MMBtu or 1.50 lb/MWh.



- (3) Mercury in excess of 1.2 lb/Tbtu or 0.013 lb/GWh
- b. Permit Shield

Compliance with Section II.K.6 shall be deemed compliance with 40 CFR 63.9991(a), 63.10000(a), and Table 2 to 40 CFR 63 Subpart UUUUU. [A.A.C. R18-2-325]

7. Compliance Demonstration

a. General Requirements

- Except as otherwise provided in 40 CFR 63.10007, the Permittee shall conduct all required performance tests according to 40 CFR 63.7(d), (e), (f) and (h). The Permittee shall also develop a site-specific plan according to the requirements in 40 CFR 63.7(c). [40 CFR 63.10007(a)]
- (2) If the Permittee uses CEMS to determine compliance with a 30boiler operating day rolling average emission limit, the Permittee shall collect quality-assured CEMS data for all unit operating conditions, including startup and shutdown (see Table 3 to 40 CFR 63 Subpart UUUUU), except as otherwise provided in Condition II.K.7.b(4). Emission rates determined during startup periods and shutdown periods (as defined in Condition II.K.2) are not to be included in the compliance determinations, except as otherwise provided in 40 CFR 63.10000(c)(1)(vi)(B) and 40 CFR 63.10005(a)(2)(iii).

[40 CFR 63.10007(a)(1)

- (3) The Permittee shall conduct each performance test (including traditional 3-run stack tests, 30-boiler operating day tests based on CEMS or sorbent trap monitoring system data) according to the requirements of Table 5 of 40 CFR 63 Subpart UUUUU. [40 CFR 63.10007(b) and (e) and Table 5 of 40 CFR 63 Subpart UUUUU]
 - Install, certify, operate, and maintain the PM CEMS using Performance Specification 11 at Appendix B to 40 CFR Part 60 and Procedure 2 at Appendix F to 40 CFR Part 60.
 - (b) Install, certify, operate and maintain SO₂ CEMS using 40 CFR Part 75 and 40 CFR 63.10010(a) and (f).
 - (c) Install, certify, operate and maintain Hg CEMS or sorbent trap monitoring systems using Sections 3.2.1 and 5.1 or Sections 3.2.2 and 5.2, respectively, of Appendix A of 40 CFR Part 63, Subpart UUUUU.



II. UNIT 1 AND UNIT 2 BOILERS

- (d) Install, certify, operate and maintain the diluent gas, flow rate, and/or moisture monitoring systems using 40 CFR Part 75 and 40 CFR 63.10010(a), (b), (c) and (d).
- (e) Convert hourly emissions concentrations to 30-boiler operating day rolling average lb/MMBtu or lb/MWh emissions rates using Method 19 F-factor methodology at Appendix A-7 to 40 CFR Part 60, or calculate using mass emissions rate and electrical output data (see 40 CFR 10007(e)(2) and (3)).
- (4) If the Permittee uses an oxygen (O₂) or carbon dioxide (CO₂) CEMS to convert measured pollutant concentrations to the units of the applicable emissions limit, the O₂ or CO₂ concentrations shall be monitored at a location that represents emissions to the atmosphere, *i.e.*, at the outlet of the EGU, downstream of all emission control devices. The Permittee shall install, certify, maintain, and operate the CEMS according to 40 CFR Part 75. The Permittee shall use only quality assured O₂ or CO₂ data in the emissions calculations and shall not use 40 CFR Part 75 substitute data values.

[40 CFR 63.10010(b)]

(5) If the Permittee is required to use a stack gas flow rate monitor to convert pollutant concentrations to units of an electrical outputbased emission standard in Condition II.K.6, it shall be installed, certified, operated, maintained, and quality-assured according to 40 CFR Part 75. The Permittee shall use only unadjusted, qualityassured flow rate data in the emissions calculations, and shall not apply bias adjustment factors to the flow rate data or use substitute flow rate data in the calculations.

[40 CFR 63.10010(c)]

- (6) If the Permittee is required to make corrections for stack gas moisture content when converting pollutant concentrations to the units of an emission standard in Condition II.K.6, the Permittee shall install, certify, operate, and maintain a moisture monitoring system in accordance with 40 CFR Part 75. Alternatively, for coalfired units, the Permittee may use appropriate fuel-specific default moisture values from 40 CFR 75.11(b) to estimate the moisture content of the stack gas or the Permittee may petition the Administrator under 40 CFR §75.66 of this chapter for use of a default moisture value for non-coal-fired units. If the Permittee installs and operates a moisture monitoring system, the Permittee shall not use substitute moisture data in the emissions calculations. [40 CFR 63.10010(d)]
- (7) If the Permittee elects to use CEMS to continuously monitor SO₂, PM, or Hg emissions (or, if applicable, sorbent trap monitoring



systems to continuously collect Hg emissions data), the following default values are available for use in the emission rate calculations during startup and shutdown periods. For the purposes of 40 CFR Part 63, Subpart UUUUU, these default values are not considered to be substitute data.

[40 CFR 63.10007(f)]

(a) Diluent cap values: If using CEMS (or if applicable, sorbent trap monitoring systems) to comply with a heat input-based emission rate limit, the Permittee may use a 5% diluent cap value for CO_2 and a 14% diluent cap for O_2 for a startup or shutdown hour in which the measured CO_2 concentration is below the cap value or the measured O_2 concentration is above the cap value.

[40 CFR 63.10007(f)(1)]

Default gross output: If using CEMS to continuously (b) monitor PM, SO₂, or Hg emissions (or, if applicable, sorbent trap monitoring systems to continuously collect Hg emissions data), the following default value is available for use in the emission rate calculations during startup and shutdown periods (as defined in Condition II.K.2). For the purposes of 40 CFR Part 63, Subpart UUUUU, this default value is not considered to be substitute data. For a startup or shutdown hour in which there is heat input to an affected Unit but zero gross output, the Permittee shall calculate the pollutant emission rate using a value equivalent to 5% of the maximum sustainable gross output, expressed in MW, as defined in Section 6.5.2.1(a)(1) of Appendix A to 40 CFR Part 75. This default gross output is either the nameplate capacity of the Unit or the highest gross output observed in at least four representative quarters of the Unit's operation.

[40 CFR 63.10007(f)(2)]

(8) Upon request, the Permittee shall make available to the EPA Administrator such records as may be necessary to determine whether the performance tests have been done according to the requirements of 40 CFR 63.10007.

[40 CFR 63.10007(g)]

- (9) Emissions Averaging
 - (a) The Permittee may demonstrate compliance by emissions averaging among Units 1 and 2 if the averaged emissions (30 group boiler operating days rolling daily) of filterable PM, SO₂, and Hg are equal to or less than the limits in Condition II.K.6 using a combination of data from CEMS



and, for pollutants other than Hg, emissions testing, and according to the procedures in Conditions II.K.7.a(9) through (11).

[40 CFR 63.10009(a)(2) and (c)]

(b) 30-group boiler operating days is defined as a period during which at least one unit in the emissions averaging group has operated on each of the 30 days.

[40 CFR 63.10009(a)(2)]

(c) The Permittee shall calculate the weighted average emissions rate for the group as follows, using the data from all units in the group, including any that operate fewer than 30 days during the preceding 30-group boiler operating days:

[40 CFR 63.10009(a)(2)]

(i) The Permittee may choose to have the EGU emissions averaging group meet either the heat input basis (MMBtu or TBtu) or gross electrical output basis (MWh or GWh).

[40 CFR 63.10009(a)(2)(i)]

- (ii) The Permittee may not mix bases within the EGU emission averaging group.
 [40 CFR 63.10009(a)(2)(ii)]
- (iii) The Permittee shall use the equations in 40 CFR
 63.10009(b)(l) and (2) for emissions averaging.
 [40 CFR 63.10009(b)]
- (d) The weighted-average emissions rate shall be in compliance with the limits in Condition II.K.6 at all times following the date that the Permittee begins emissions averaging.

[40 CFR 63.10009(e)]

- (10) Emissions Averaging Group Eligibility Demonstration
 - (a) The Permittee shall demonstrate the ability for the EGUs included in the emissions averaging group to demonstrate initial compliance using maximum rated heat input or gross output over a 30-boiler operating day period of each EGU and the results of the initial performance tests. For this demonstration and prior to preparing the emissions averaging plan, the Permittee shall conduct emissions monitoring for 30 days of boiler operating to calculate maximum weighted average emissions rates. The Permittee shall use Equation 1a of 40 CFR 63.10009(b) to



demonstrate that the maximum weighted average emissions rates of filterable PM, SO₂, and Hg from the units participating in the emissions averaging option do not exceed the emission limits in Condition II.K.6. [40 CFR 63.10009(f) and (f)(1)]

(b) The Permittee shall determine the weighted average emissions rate in units of the applicable emission limit on a 30 group boiler operating day rolling average basis. The first averaging period begins on the 30th group boiler operating days after the date that the Permittee begins averaging. The Permittee shall use the equation 2a in 40 CFR 63.10009(b) to calculate the weighted average emissions rate using the actual heat input or gross output for each existing unit participating in the emissions averaging option.

[40 CFR 63.10009(g) and (g)(1)]

(c) The Permittee shall use the data from the CEMS to determine the 30 group boiler operating day rolling average emissions rate.

[40 CFR 63.10009(h)]

(11) Emissions Averaging Plan

If electing to average emissions, the Permittee shall develop an implementation plan for emissions averaging. The Permittee shall include the following information in the implementation plan for all emissions units included in the emissions averaging:

[40 CFR 63.10009(j) and (j)(1)]

(a) The identification of all units in the emissions averaging group, including for each the control technology installed, or the date on which emissions measurements used to support the emissions averaging plan are completed, or the date that emissions averaging began, whichever is earlier; and the date on which the Permittee is requesting emissions averaging to commence;

[40 CFR 63.10009(j)(1)(i)]

(b) The process weighting parameter (heat input, gross output, or steam generated) that will be monitored for each averaging group;

[40 CFR 63.10009(j)(1)(ii)]

(c) The specific control technology or pollution prevention measure to be used for each emission EGU in the averaging group and the date of its installation or application. If the pollution prevention measure reduces



or eliminates emissions from multiple EGUs, the Permittee shall identify each EGU;

[40 CFR 63.10009(j)(1)(iii)]

- (d) The means of measurement of filterable PM, Hg, and SO₂ in accordance with 40 CFR 63.10007 and to be used in the emissions averaging calculations; and [40 CFR 63.10009(j)(1)(iv)]
- (e) A demonstration that emissions averaging can produce compliance with each of the applicable limits in Condition II.K.6 in accordance with 40 CFR 63.10009(b)(1).

[40 CFR 63.10009(j)(1)(v)]

b. Continuous Compliance

(1) The Permittee shall demonstrate continuous compliance with each applicable work practice, monitoring plan, and emission limit standard established in Tables 2 and 3 to 40 CFR 63 Subpart UUUUU according to the monitoring specified in Table 7 to 40 CFR 63 Subpart UUUUU and Conditions II.K.4, II.K.7.b(2), II.K.9.c, and II.K.9.d.

[40 CFR 63.10021(a)]

(2) Except as otherwise provide in 40 CFR 63.10020(c), the Permittee demonstrate continuous compliance by using all quality-assured hourly data recorded by the CEMS (or sorbent trap monitoring system) and the other required monitoring systems (e.g., flow rate, CO₂, O₂ or moisture systems) to calculate the arithmetic average emissions rate in units of the standard on a continuous 30-boiler operating day rolling average basis, updated at the end of each new boiler operating day. The 30-boiler operating day rolling average shall be calculated using the following equation:

[40 CFR 63.10021(b)]

30 Boiler Operation Day Average =
$$\frac{\sum_{i=1}^{n} Her_i}{n}$$

Where:

Her_i = The hourly emissions rate for hour i

- n = The number of hourly emissions rate values collected over 30-boiler operating days
- (3) If the Permittee elects to use emissions averaging under Conditions II.K.7.a(9) through (11), then, each 30-day rolling average period, the Permittee shall demonstrate continuous



compliance with the average weighted emissions limit for the existing units participating in the emissions averaging option as determined in Conditions II.K.7.a(10)(a) and (b). Any instance where the Permittee fails to comply with this requirement is a deviation.

[40 CFR 63.10022(a)(1) and (b)]

(4) The Permittee shall operate the monitoring systems and collect data at all required intervals at all times that the affected EGU is operating, except for required monitoring system quality assurance or quality control activities, including, as applicable, calibration checks and required zero and span adjustments, and any scheduled maintenance as defined in the site-specific monitoring plan. The Permittee shall affect monitoring system repairs in response to monitoring system malfunctions and to return the monitoring system to operation as expeditiously as practicable.

[40 CFR 63.10020(b)]

(5) The Permittee may not use data recorded during EGU startup or shutdown in calculations used to report emissions, except as otherwise provided in 40 CFR 63.10000(c)(1)(vi)(B) and 63.10005(a)(2)(iii). In addition, data recorded during monitoring system malfunctions or monitoring system out-of-control periods, repairs associated with monitoring system malfunctions or monitoring system out-of-control periods, or required monitoring system quality assurance or control activities may not be used in calculations used to report emissions or operating levels. The Permittee shall use all of the quality-assured data collected during all other periods in assessing the operation of the control device and associated control system.

[40 CFR 63.10020(c)]

- (6) SO₂
 - (a) For demonstrating continuous compliance with the SO₂ emissions limits of Condition II.K.6.a(2), the Permittee shall certify, operate, and maintain the SO₂ CEMS according to 40 CFR Part 75.

[40 CFR 63.10010(f)(1)]

(b) For on-going QA, the SO₂ CEMS shall meet the applicable daily, quarterly, and semiannual or annual requirements in Sections 2.1 through 2.3 of Appendix B to 40 CFR Part 75, with the following addition: the Permittee shall perform the linearity checks required in Section 2.2 of Appendix B to 40 CFR Part 75 if the SO₂ CEMS has a span value of 30 ppm or less.

[40 CFR 63.10010(f)(2)]



II. UNIT 1 AND UNIT 2 BOILERS

- (c) The Permittee shall calculate and record a 30-boiler operating day rolling average SO₂ emission rate in the units of the standard, updated after each new boiler operating day. Each 30-boiler operating day rolling average emission rate is the average of all of the valid SO₂ emission rates in the 30-boiler operating day period. [40 CFR 63.10010(f)(3)]
- (d) The Permittee shall use only unadjusted, quality-assured SO_2 concentration values in the emissions calculations, shall not apply bias adjustment factors to the 40 CFR Part 75 SO_2 data and shall not use 40 CFR Part 75 substitute data values. For startup or shutdown hours (as defined in Condition II.K.2) the default gross output and the diluent cap are available for use in the hourly SO_2 emission rate calculations, as described in 40 CFR 63.10007(f). The Permittee shall use a flag to identify each startup or shutdown hour and report a special code of the diluent cap or default gross output is used to calculate the SO_2 emission rate for any of these hours.

[40 CFR 63.10010(f)(4)]

(7) PM

- (a) The Permittee shall collect, record, report, and maintain data obtained during periods of startup or shutdown from the monitoring systems necessary for demonstrating compliance with the work practice standards for PM. [40 CFR 63.10000(1)]
- (b) The Permittee shall operate, maintain, and quality-assure the data from the PM CEMS according to Section 5 of Appendix C to 40 CFR 63 Subpart UUUUU. [40 CFR 63.10010(i)(2)]
- (c) The Permittee shall reduce the data from the PM CEMS to hourly averages in accordance with Section 6.1 of Appendix C to 40 CFR 63, Subpart UUUUU. [40 CFR 63.10010(i)(3)]
- (d) The Permittee shall collect data using the PM CEMS at all times Units 1 and 2 are operating and at the intervals specified in 40 CFR 63.10010(a), except for required monitoring system quality assurance or quality control activities and any scheduled maintenance as defined in the site-specific monitoring plan.

[40 CFR 63.10010(i)(4)]



(e) The Permittee shall use all the data collected during all boiler operating hours in assessing compliance with the operating limit except:

[40 CFR 63.10010(i)(5)]

 Any data collected during periods of monitoring system malfunctions and repairs associated with monitoring system malfunctions. The Permittee shall report any monitoring system malfunctions as deviations in the compliance reports under Condition II.K.9.g or n;

[40 CFR 63.10010(i)(5)(i)]

(ii) Any data recorded during periods when the monitoring system is out-of-control (as specified in Appendix C to 40 CFR 63, Subpart UUUUU), repairs associated with periods when the monitoring system is out of control, or required monitoring system quality assurance or control activities conducted during out-of-control periods. The Permittee shall report any such periods as deviations in the compliance reports under Condition II.K.9.g or n;

[40 CFR 63.10010(i)(5)(ii)]

- (iii) Any data recorded during required monitoring system quality assurance, quality control, or maintenance activities that temporarily interrupt the measurement of emissions (e.g. calibrations, certain audits, routine probe maintenance); and [40 CFR 63.10010(i)(5)(iii)
- (iv) Any data recorded during periods of startup and shutdown.

[40 CFR 63.10010(i)(5)(iv)]

(f) The Permittee shall keep records and report data from the PM CEMS in accordance with Section 7 of Appendix C to 40 CFR 63 Subpart UUUUU.

[40 CFR 63.10010(i)(6)

- (g) The Permittee shall record and make available upon request the dates and duration of periods when the PM CEMS is out-of-control to completion of the corrective actions necessary to return the PM CEMS to operation consistent with the site-specific monitoring plan. [40 CFR 63.10010(i)(7)]
- (h) The Permittee shall calculate each 30-boiler operating day rolling average PM emission rate in units of the applicable



emissions limit in II.K.6.a(1), in accordance with Section 6.2.4 of Appendix C to 40 CFR 63, Subpart UUUUU. [40 CFR 63.10010(i)(8)]

(8) Hg

(a) The Permittee shall operate, maintain, and quality-assure the data from the CEMS or sorbent trap monitoring systems in accordance with Appendix A of 40 CFR Part 63 Subpart UUUUU.

[40 CFR 63.10010(g) and 63.10000(c)(1)(vi)]

(i) If using sorbent trap monitoring, the Permittee may choose to use separate sorbent trap monitoring systems: one sorbent trap monitoring system to demonstrate compliance with the numeric mercury emissions limit during periods other than startup or shutdown and the other sorbent trap monitoring system to report average mercury concentration during startup periods or shutdown periods.

[40 CFR 63.10000(c)(1)(vi)(A)]

(ii) The Permittee may choose to use one sorbent trap monitoring system to demonstrate compliance with the mercury emissions limit at all times (including startup periods and shutdown periods) and to report average mercury concentration. The Permittee must follow the startup and shutdown requirements in Condition II.K.7.b(7)(a) and as given in Table 3 to 40 CFR 63 Subpart UUUUU for each EGU.

[40 CFR 63.10000(c)(1)(vi)(B)]

(b) The Permittee shall calculate and record a 30-boiler operating day rolling average Hg emission rate, in units of the standard, updated after each new boiler operating day. Each 30-boiler operating day rolling average emission rate, calculated according to Section 6.2 of Appendix A to 40 CFR 63 Subpart UUUUU, is the average of all of the valid hourly Hg emission rates in the preceding 30- boiler operating days. Section 7.1.4.3 of Appendix A to 40 CFR 63 Subpart UUUUU explains how to reduce sorbent trap monitoring system data to an hourly basis.

[40 CFR 63.10010(g)]



(9) The Permittee shall, as part of demonstration of continuous compliance, perform periodic tune-ups of EGU(s), according to Condition II.K.4 .

[40 CFR 63.10000(e) and 63.10006(i)]

c. Permit Shield

Compliance with Section II.K.7 shall be deemed compliance with 40 CFR 63.10000(c)(1)(vi), (e), & (l), 63.10006(i), 63.10007(a), (a)(1), (b), (e), (f), & (g), 63.10009(a)(2), (b), (c), (e), (f), (f)(1), (g), (g)(1), (h), (j), & (j)(1), 63.10010(b), (c), (d), (f), (g), & (i), 63.10020(b) & (c), 63.10021(a) & (b), 63.10022(a)(1) & (b), and Table 5 to 40 CFR 63 Subpart UUUUU. [A.A.C. R18-2-325]

- 8. Notifications
 - a. The Permittee shall submit all of the applicable notifications in 40 CFR 63.7(b) and (c), 40 CFR 63.8(e), (f)(4) and (6), and 40 CFR 63.9(b) through (h) by the dates specified.

[40 CFR 63.10030(a)]

b. When required to conduct a performance test, the Permittee shall submit a Notification of Intent to conduct a performance test at least 30 days before a test is scheduled to begin.

[40 CFR 63.10030(d)]

c. Permit Shield

Compliance with Section II.K.8 shall be deemed compliance with 40 CFR 63.10030(a) & (d).

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

9. Reporting Requirements

a. Periods of monitoring system malfunctions or monitoring system out-ofcontrol periods, repairs associated with monitoring system malfunctions or monitoring system out-of-control periods, and required monitoring system quality assurance or quality control activities excluding zero and span checks shall be reported by the Permittee as time the monitor was inoperative (downtime) under 40 CFR 63.10(c). Failure to collect required quality-assured data during monitoring system malfunctions, monitoring system out-of-control periods, or repairs associated with monitoring system malfunctions or monitoring system out-of-control periods is a deviation from the monitoring requirements.

[40 CFR 63.10020(d)]

b. The Permittee shall submit reports on boiler tune-ups in accordance with Condition II.K.4.c.

[40 CFR 63.10021(e)(8) and (9)]



c.

The Permittee shall submit the applicable reports and notifications required under Conditions II.K.9.e through o to the Administrator electronically, using EPA's Emissions Collection and Monitoring Plan System (ECMPS) Client Tool. If the final date of any time period (or any deadline) for any of these submissions falls on a weekend or a Federal holiday, the time period shall be extended to the next business day. Moreover, if the EPA Host System supporting the ECMPS Client Tool is offline and unavailable for submission of reports for any part of a day when a report would otherwise be due, the deadline for reporting is automatically extended until the first business day on which the system becomes available following the outage. Use of the ECMPS Client Tool to submit a report or notification required under 40 CFR 63 Subpart UUUUU satisfies any requirement under 40 CFR 63 Subpart A to submit that same report or notification (or the information contained in it) to the appropriate EPA Regional office or state agency whose delegation request has been approved.

[40 CFR 63.10021(f)]

d. The Permittee shall report each instance in which the facility did not meet an applicable emissions limit or operating limit in Tables 2 and 3 to 40 CFR 63 Subpart UUUUU or failed to conduct a tune-up as required in Condition II.K.4. These instances are deviations from the requirements of 40 CFR 63 Subpart UUUUU and shall be reported according to Conditions II.K.9.e through o.

[40 CFR 63.10021(g)]

e. The Permittee shall submit to the Director the following reports, as applicable.

[40 CFR 63.10031(a)]

- (1) If the Permittee is required to (or elects to) monitor Hg emissions continuously, the Permittee shall meet the electronic reporting requirements of Appendix A of 40 CFR 63 Subpart UUUUU. [40 CFR 63.10031(a)(1)]
- (2) If the Permittee elects to monitor filterable PM emissions continuously, the Permittee shall meet the electronic reporting requirements of Appendix C to 40 CFR 63 Subpart UUUUU. Electronic reporting of hourly PM emissions data using the ECMPS Client Tool shall begin with the later of the first operating hour on or after January 1, 2024; or the first operating hour after completion of the initial PM CEMS correlation test. Where applicable, these reports are due no later than 30 days after the end of each calendar quarter.

[40 CFR 63.10031(a)(3)]

If the Permittee elects to monitor SO₂ emission rate continuously as a surrogate for HCl, the Permittee shall use the ECMPS Client Tool to submit the following information to EPA (except where it



is already required to be reported or has been previously provided under the Acid Rain Program or another emissions reduction program that requires the use of 40 CFR Part 75):

[40 CFR 63.10031(a)(5)]

(a) Monitoring plan information for the SO₂ CEMS and for any additional monitoring systems that are required to convert SO₂ concentrations to units of the emission standard, in accordance with 40 CFR 75.62 and 40 CFR 75.64(a)(4);

[40 CFR 63.10031(a)(5)(i)]

(b) Certification, recertification, quality-assurance, and diagnostic test results for the SO₂ CEMS and for any additional monitoring systems that are required to convert SO₂ concentrations to units of the emission standard, in accordance with 40 CFR 75.64(a)(5); and

[40 CFR 63.10031(a)(5)(ii)]

(c) Quarterly electronic emissions reports. The Permittee shall submit an electronic quarterly report within 30 days after the end of each calendar quarter, starting with a report for the calendar quarter in which the initial 30 boiler operating day performance test begins. Each report shall include the following information:

[40 CFR 63.10031(a)(5)(iii)]

(i) The applicable operating data specified in 40 CFR 75.57(b);

[40 CFR 63.10031(a)(5)(iii)(A)]

(ii) An hourly data stream for the unadjusted SO_2 concentration (in ppm, rounded to one decimal place), and separate unadjusted hourly data streams for the other parameters needed to convert the SO_2 concentrations to units of the standard. (Note: If a default moisture value is used in the emission rate calculations, an hourly data stream is not required for moisture; rather, the default value shall be reported in the electronic monitoring plan);

[40 CFR 63.10031(a)(5)(iii)(B)]

(iii) An hourly SO₂ emission rate data stream, in units of the standard (i.e., lb/MMBtu or lb/MWh, as applicable), calculated according to 40 CFR 63.10007(e) and (f)(1), rounded to the same precision as the emission standard (i.e., with one leading non-zero digit and one decimal place),



expressed in scientific notation. Use the following rounding convention: if the digit immediately following the first decimal place is 5 or greater, round the first decimal place upward (increase it by one); if the digit immediately following the first decimal place is 4 or less, leave the first decimal place unchanged;

[40 CFR 63.10031(a)(5)(iii)(C)]

(iv) The results of all required daily quality-assurance tests of the SO₂ monitor and the additional monitors used to convert SO₂ concentration to units of the standard, as specified in Appendix B to 40 CFR Part 75; and

[40 CFR 63.10031(a)(5)(iii)(D)]

(v) A compliance certification, which includes a statement, based on reasonable inquiry of those persons with primary responsibility for ensuring that all SO₂ emissions from the affected EGUs under 40 CFR 63 Subpart UUUUU have been correctly and fully monitored, by a responsible official with that official's name, title, and signature, certifying that, to the best of his or her knowledge, the report is true, accurate, and complete. The Permittee shall submit such a compliance certification statement in support of each quarterly report.

[40 CFR 63.10031(a)(5)(iii)(E)]

f. The Permittee shall submit quarterly compliance reports in accordance with Condition II.K.9.n, starting with a report covering the first calendar quarter of 2024.

[40 CFR 63.10031(b)(6)]

g. The Permittee shall submit the quarterly compliance report containing the following:

[40 CFR 63.10031(c)]

(1) The information required by the summary report located in 40 CFR 63.10(e)(3)(vi).

[40 CFR 63.10031(c)(1)]

(2) The total fuel use by each affected source subject to an emission limit, for each calendar month within the reporting period, including, but not limited to, a description of the fuel, whether the fuel has received a non-waste determination by EPA or the Permittee's basis for concluding that the fuel is not a waste, and the total fuel usage amount with units of measure.

[40 CFR 63.10031(c)(2)]



II. UNIT 1 AND UNIT 2 BOILERS

(3) Indicate whether the Permittee burned new types of fuel during the reporting period. If the Permittee did burn new types of fuel, the Permittee shall include the date of the performance test where that fuel was in use.

[40 CFR 63.10031(c)(3)]

(4) Include the date of the most recent tune-up for each EGU. The date of the tune-up is the date the tune-up provisions specified in 40 CFR 63.10021(e)(6) and (7) were completed.

[40 CFR 63.10031(c)(4)]

(5) A certification.

[40 CFR 63.10031(c)(8)]

(6) If there are any deviations from any emission limits, work practice standard, or operating limit, the Permittee shall also submit a brief description of the deviation, the duration, emissions point identification, and the cause of the deviation.

[40 CFR 63.10031(c)(9)]

(7) If there were any process or control equipment malfunction(s) during the reporting period, the Permittee shall include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period which caused or may have caused any applicable emission limitation to be exceeded.

[40 CFR 63.10031(c)(10)]

h. The Permittee shall include the applicable data elements in Section 13 of Appendix E to 40 CFR 63 Subpart UUUUU for any "deviation" (as defined in 40 CFR 63.10042 and elsewhere in 40 CFR 63 Subpart UUUUU) that occurred during the calendar quarter in the quarterly compliance reports described in Condition II.K.9.n. If there were no deviations, the Permittee shall include a statement to that effect in the quarterly compliance report.

[40 CFR 63.10031(d)]

i. The Permittee shall report all deviations as defined in 40 CFR 63 Subpart UUUUU in the semiannual monitoring report required by Condition VII.A of Attachment "A". If the Permittee submits two quarterly compliance reports covering the appropriate calendar half pursuant to Condition II.K.9.n, along with, or as part of, the semiannual monitoring report required by Condition VII.A of Attachment "A", and the compliance report(s) includes all required information concerning deviations from any emission limit, operating limit, or work practice requirement in 40 CFR 63 Subpart UUUUU, submission of the compliance report(s) satisfies any obligation to report the same deviations in the semiannual monitoring report. Submission of the compliance report(s) does not otherwise affect



any obligation, the Permittee may have to report deviations from permit requirements to the permit authority.

[40 CFR 63.10031(e)]

j. For each SO₂ or Hg RATA completed, the Permittee shall submit the applicable reference method information in sections 17 through 31 of Appendix E to 40 CFR 63 Subpart UUUUU prior to or concurrent with the relevant quarterly emissions report. For correlation tests, RRAs, and RCAs of PM CEMS that are completed, submit the Appendix E reference method information together with the summarized electronic test results, in accordance with Section 7.2.4 of Appendix C to 40 CFR 63 Subpart UUUUU.

[40 CFR 63.10031(f)(1)]

k. If, for a particular EGU, the Permittee has elected to demonstrate compliance using a PM CEMS, the Permittee shall submit quarterly PDF reports in accordance with Condition II.K.9.m, which include all of the 30-boiler operating day rolling average emission rates derived from the CEMS data. The quarterly reports are due within 60 days after the reporting periods ending on March 31st, June 30th, September 30th, and December 31st. Beginning with the first calendar quarter of 2024, the compliance averages shall be incorporated into the quarterly compliance reports described in Condition II.K.9.n. In addition to the compliance averages for PM CEMS, the quarterly compliance reports described in Condition II.K.9.n shall also include the 30-boiler operating day rolling average emission rates for Hg and SO₂, if the Permittee has elected to (or is required to) continuously monitor these pollutants. Further, if the EGU is in an averaging plan, the quarterly compliance reports shall identify all of the EGUs in the plan and shall include all of the 30-group boiler operating day rolling weighted average emission rates (WAERs) for the averaging group.

[40 CFR 63.10031(f)(2)]

- 1. The Permittee shall submit quarterly compliance reports required under Conditions II.K.9.f through h. Quarterly compliance reports shall be submitted in XML format, in accordance with Condition II.K.9.n. [40 CFR 63.10031(f)(4)]
- m. All reports and notifications described in Conditions II.K.9.j through 1 shall be submitted to the EPA in the specified format and at the specified frequency using the ECMPS Client Tool. Each PDF version of a CEMS RATA report, PM CEMS correlation test report, RRA report, and RCA report must include sufficient information to assess compliance and to demonstrate that the reference method testing was done properly. The data elements in 40 CFR 63.10031(f)(6)(i) thru (xii) must be entered into the ECMPS Client Tool at the time of submission of each PDF file.

[40 CFR 63.10031(f)(6)]



n. The Permittee shall use the ECMPS Client Tool to submit quarterly electronic compliance reports. Each quarterly compliance report shall include the applicable data elements in sections 2 through 13 of Appendix E to 40 CFR 63 Subpart UUUUU. The compliance reports and associated Appendix E information shall be submitted no later than 60 days after the end of each calendar quarter.

[40 CFR 63.10031(g)]

o. If the Permittee elects to use a certified PM CEMS to monitor PM emissions continuously to demonstrate compliance with 40 CFR 63 Subpart UUUUU and began recording valid data from the PM CEMS prior to November 9, 2020, the Permittee shall use the ECMPS Client Tool to submit a detailed report of the PS 11 correlation test (see Appendix B to 40 CFR Part 60) in a PDF file no later than 60 days after that date. For a correlation test completed on or after January 1, 2024, the Permittee shall submit the PDF report according to Section 7.2.4 of Appendix C to 40 CFR 63 Subpart UUUUU. The applicable data elements in 40 CFR 63.10031(f)(6)(i) through (xii) shall be entered into ECMPS with the PDF report.

[40 CFR 63.10031(j)]

p. Permit Shield

Compliance with Subsection II.K.9 shall be deemed compliance with 40 CFR 63.10011(g)(3), 63.10020(d), 63.10021(e)(8), (e)(9), (f), & (g), 63.10031(a), (a)(1), (a)(3), (a)(5), (b)(6), (c), (c)(1), (c)(2), (c)(3), (c)(4), (c)(8), (c)(9), (c)(10), (d), (e), (f)(1), (f)(2), (f)(4), (f)(6), (g), & (j), and Table 8 of 40 CFR 63 Subpart UUUUU.

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

10. Recordkeeping Requirements

a. The Permittee shall maintain records on boiler tune-ups in accordance with Condition II.K.4.c.

[40 CFR 63.10021(e)(8)]

b. The Permittee shall keep records according to Conditions II.K.10.b(1) and (2). If the Permittee is required to (or elects to) continuously monitor Hg and/or PM emissions, the Permittee shall keep the records required under Appendix A and/or Appendix C of 40 CFR 63 Subpart UUUUU. The Permittee shall also keep records of all data elements and other information in Appendix E to 40 CFR Part 63 that apply to the Permittee's compliance strategy.

[40 CFR 63.10032(a)]

(1) In accordance with 40 CFR 63.10(b)(2)(xiv), a copy of each notification or report that the Permittee submits to comply with this Subsection.(K) The Permittee shall also keep records of all supporting documentation for the initial Notifications of



Compliance Status, semiannual compliance reports, or quarterly compliance reports that the Permittee submits

[40 CFR 63.10032(a)(1)]

(2) Records of performance stack tests, fuel analyses, or other compliance demonstrations and performance evaluations, as required in 40 CFR 63.10(b)(2)(viii).

[40 CFR 63.10032(a)(2)]

- c. For each CEMS, the Permittee shall keep the following records: [40 CFR 63.10032(b)]
 - (1) Records described in 40 CFR 63.10(b)(2)(vi) through (xi). [40 CFR 63.10032(b)(1)]
 - (2) Previous (*i.e.*, superseded) versions of the performance evaluation plan as required in 40 CFR 63.8(d)(3).

[40 CFR 63.10032(b)(2)]

(3) Request for alternatives to relative accuracy test for CEMS as required in 40 CFR 63.8(f)(6)(i).

[40 CFR 63.10032(b)(3)]

- (4) Records of the date and time that each deviation started and stopped and whether the deviation occurred during a period of startup, shutdown, or malfunction or during another period. [40 CFR 63.10032(b)(4)]
- d. The Permittee shall keep the following records required in Table 7 to 40 CFR 63 Subpart UUUUU to show continuous compliance with each applicable emission limit in Condition II.K.6 and each operating limit: [40 CFR 63.10032(c), Table 7 to 40 CFR Part 63, Subpart UUUUU]
 - (1) Records of all monitoring data and calculated averages for applicable emission limits;
 - (2) Records of periodic performance tune-ups of EGUs required under Condition II.K.4; and
 - (3) Records of work practice standards required to be implemented in accordance with Table 3 to 40 CFR 63 Subpart UUUUU.
- e. For each EGU subject to an emission limit, the Permittee shall keep the following records:
 - The Permittee shall keep records of monthly fuel use by each EGU, including the type(s) of fuel and amount(s) used.

[40 CFR 63.10032(d)(1)]



(2) If the Permittee combusts non-hazardous secondary materials that have been determined not to be solid waste pursuant to 40 CFR 241.3(b)(1), the Permittee must keep a record which documents how the secondary material meets each of the legitimacy criteria. If the Permittee combusts a fuel that has been processed from a discarded non-hazardous secondary material pursuant to 40 CFR 241.3(b)(2), the Permittee shall keep records as to how the operations that produced the fuel satisfies the definition of processing in 40 CFR 241.2. If the fuel received a non-waste determination pursuant to the petition process submitted under 40 CFR 241.3(c), the Permittee shall keep a record which documents how the fuel satisfies the requirements of the petition process.

[40 CFR 63.10032(d)(2)]

f. If the Permittee elects to average emissions consistent with Conditions II.K.7.a(9) through (11), the Permittee shall additionally keep a copy of the emissions averaging implementation plan required in Conditions II.K.7.a(9) through (11), all calculations required under Condition II.K.7.a(10)(b), including daily records of heat input or steam generation, as applicable, and monitoring records consistent with Condition II.K.7.b(3).

[40 CFR 63.10032(e)]

g. The Permittee shall keep records of the occurrence and duration of each startup or shutdown.

[40 CFR 63.10032(f)(1)]

h. The Permittee shall keep records of the occurrence and duration of each malfunction of an operation (i.e., process equipment) or the air pollution control and monitoring equipment.

[40 CFR 63.10032(g)]

i. The Permittee shall keep records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR 63.10000(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

[40 CFR 63. 10032(h)]

j. The Permittee shall keep records of the type(s) and amount(s) of fuel used during each startup or shutdown.

[40 CFR 63.10032(i)]

k. All records shall be in a form suitable and readily available for expeditious review, according to 40 CFR 63.10(b)(1).

[40 CFR 63.10033(a)]

1. As specified in 40 CFR 63.10(b)(1), the Permittee shall keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.



DRAFT PERMIT No. 89460 (As Revised by Significant Permit Revision No. 1000706) Page 78 of 128

[40 CFR 63.10033(b)]

m. The Permittee shall keep each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report or record, according to 40 CFR 63.10(b)(1); thereafter, these records may be kept off site for the remaining 3 years.

[40 CFR 63.10033(c)]

n. Permit Shield

Compliance with Section II.K.10 shall be deemed compliance with 40 CFR 63.10021(e)(8), 63.10032(a), (b), (c), (d)(1), (d)(2), (e), (f)(1), (g), (h), & (i), 63.10033(a), (b), & (c), and Table 7 to 40 CFR 63 Subpart UUUUU.

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

L. Biomass Burning

The Permittee shall maintain monthly records of the amount of biomass burned, and the dates and times biomass is burned.

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

III. AUXILIARY BOILER

A. Applicability

This section applies to the Auxiliary Boiler as described in the Equipment List, Attachment "C" of this permit.

- **B.** Fuel and Operational Requirements
 - 1. The Permittee shall burn only Number 2 fuel oil and used oil in the auxiliary boiler. [A.A.C. R18-2-306.A.2]
 - 2. The Permittee shall not fire high sulfur oil (fuel sulfur content 0.9% by weight) as a fuel unless the Permittee demonstrates to the satisfaction of the Director that sufficient quantities of low sulfur oil are not available for use by the source and that it has adequate facilities and contingency plans to ensure that the sulfur dioxide ambient air quality standards set forth in A.A.C. R18-2-202 will not be violated. In cases where the Permittee is authorized to use high sulfur oil, it shall submit to the Department monthly reports detailing its efforts to obtain low sulfur oil. [A.A.C. R18-2-724.G]
 - 3. <u>The Permittee shall not operate the auxiliary boiler at an annual capacity factor</u> <u>greater than 10%</u>. The annual capacity factor shall be defined as the ratio between the actual heat input to the auxiliary boiler from the fuels burning during a calendar year, and the potential heat input to the auxiliary boiler had it been operating for 8,760 hours during a year at the maximum steady state design heat input capacity. [A.A.C. R18-2-306.01.A and 331.A.3.a]

[Material Permit Conditions are defined by underline and italics]



4. Monitoring, Reporting, and Recordkeeping

a. The Permittee shall maintain records of the daily fuel usage for the auxiliary boiler.

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

- b. At the end of each calendar year, the Permittee shall calculate and record the heat input in million Btu per year and the annual capacity factor. [A.A.C. R18-2-306.A.3.c]
- c. The Permittee shall keep on record the liquid fuel specifications containing the following information for each shipment of fuel oil. Alternatively, the Permittee may keep records of the on-site fuel oil sampling analysis:

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

- (1) The name of the fuel oil supplier.
- (2) The heating value of the fuel oil;
- (3) The density of the fuel oil;
- (4) The ash content of the fuel oil;
- (5) The sulfur content of the fuel oil from which the shipment came;
- (6) The method used to determine the ash content of the fuel oil; and
- (7) The method used to determine the sulfur content of the fuel oil.
- 5. Permit Shield

Compliance with Section III.B shall be deemed compliance with A.A.C. R18-2-724.G.

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

- C. Particulate Matter and Opacity
 - 1. Emission Limitations/Standards
 - a. Particulate Matter & Opacity

The Permittee shall not cause, allow or permit the emission of particulate matter, caused by combustion of fuel, from the auxiliary boiler in excess of the amount calculated by the following equation:

 $E = 1.02 Q^{0.769}$

Where:



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

Q = the heat input in million Btu per hour.

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

b. For the purposes of Condition III.C.1.a, the heat input shall be the aggregate heat content of all fuels whose products of combustion pass through a stack or other outlet.

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

c. The Permittee shall not cause, allow or permit to be emitted into the atmosphere from the auxiliary boiler, any plume or effluent which exceeds 15 percent opacity.

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

2. Monitoring, Recordkeeping & Reporting

Each week, the Permittee shall monitor visible emissions from the auxiliary boiler while in operation in accordance with Condition I.A.

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

3. Permit Shield

Compliance with Section III.C shall be deemed compliance with A.A.C. R18-2-724.B, C.1 and J.

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

D. Sulfur Dioxide

- 1. Emission Limitations/Standards
 - a. The Permittee shall not cause, allow, or permit emission of more than 1.0 pounds of sulfur dioxide per million Btu heat input.

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

b. For the purposes of Condition III.D.1.a, the heat input shall be the aggregate heat content of all fuels whose products of combustion pass through a stack or other outlet.

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

2. Permit Shield

Compliance with Section III.D shall be deemed compliance with A.A.C. R18-2-724.B and E.

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

E. National Emissions Standards for Hazardous Air Pollutants (NESHAP) - Requirements for Existing Limited-Use Boiler under 40 CFR 63 Subpart DDDDD



1. Applicability

This section is applicable to the auxiliary boiler identified in Attachment "C". [40 CFR 63.7499(o)]

2. Definition of Limited-Use Boiler

> Limited-use boiler means any boiler that burns any amount of solid, liquid, or gaseous fuels and has a federally enforceable annual capacity factor of no more than 10 percent.

> > [40 CFR 63.7575]

- 3. Work Practice Standards
 - At all times, the Permittee shall operate and maintain the auxiliary boiler, a. including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions.

[40 CFR 63.7500(a)(3)

b. The Permittee shall complete a tune-up once in five years on the auxiliary boiler to demonstrate continuous compliance. Subsequent tune-ups shall commence no more than 61 months after the initial tune-up. The tune-up shall be conducted as follows:

[40 CFR 63.7500(c), 63.7515(d), and 63.7540(a)(12)]

(1)As applicable, inspect the burner, and clean or replace components of the burner as necessary. The Permittee may perform the burner inspection any time prior to the tune-up or delay the burner inspection until the next scheduled unit shutdown, but the burner shall be inspected at least once every 72 months.

[40 CFR 63.7540(a)(10)(i) and (a)(12)]

(2)Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available.

[40 CFR 63.7540(a)(10)(ii)]

(3) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (the Permittee may delay the inspection until the next scheduled unit shutdown).;

[40 CFR 63.7540(a)(10)(iii)]

(4) Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any NO_X requirement to which the unit is subject;

[40 CFR 63.7540(a)(10)(iv)]



(5) Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer; and

[40 CFR 63.7540(a)(10)(v)]

(6) Maintain on-site and submit, if requested by the Director, a tuneup report containing the following information:

[40 CFR 63.7540(a)(10)(vi)]

(a) The concentrations of CO in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater;

[40 CFR 63.7540(a)(10)(vi)(A)]

(b) A description of any corrective actions taken as a part of the tune-up; and

[40 CFR 63.7540(a)(10)(vi)(B)]

(c) Types and amount of fuel used over the 12 months prior to the tune up, but only if the unit was physically and legally capable of using more than one type of fuel during that period.

[40 CFR 63.7540(a)(10)(vi)(C)]

c. Permit Shield

Compliance with Section III.E.3 shall be deemed compliance with 40 CFR Part 63.7500(a)(3) and (c), 7515(d), and 7540(a)(10) and (12).

[A.A.C.R 18-2-325]

- 4. Recordkeeping Requirements
 - a. The Permittee shall keep records of fuel use for the days the auxiliary boiler was operating, and a copy of each report required to be submitted under this Subsection (E).

[40 CFR 63.7525(k) and 63.7555(a)(3)]

b. The Permittee shall keep records in a form suitable and readily available for expeditious review in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 CFR 63.10(b)(1).

[40 CFR 63.7560(a), (b), and (c)]

c. Permit Shield



Compliance with the Section III.E.4 shall be deemed compliance with 40 CFR Part 63.7522(k) and 63.7555(a), and 63.7560(a), (b), and (c). [A.A.C. R18-2-325]

- 5. Reporting Requirements
 - a. The Permittee shall submit a 5-year compliance report that covers the period beginning January 1, 2021 and ending on December 31, 2025. Subsequent 5-year compliance reports will cover the applicable 5-year period from January 1 to December 31. Compliance reports must be postmarked or submitted to the Director no later than January 31. The report shall contain the following information:

[40 CFR 63.7550(a), (b), (c), and (c)(1), and Table 9 of 40 CFR 63 Subpart DDDDD]

(1) Company and Facility name and address;

[40 CFR 63.7550(c)(5)(i)]

[40 CFR 63.7550(c)(5)(ii)]

- (2) Process unit information;
- (3) Date of report and beginning and ending dates of the reporting period;

[40 CFR 63.7550(c)(5)(iii)]

- (4) The total operating hours during the reporting period; and [40 CFR 63.7550(c)(5)(iv)]
- (5) Include the date of the most recent tune-up including the date of the most recent burner inspection if it was not done on a 5-year period and was delayed until the next scheduled or unscheduled unit shutdown.

[40 CFR 63.7550(c)(5)(xiv)]

(6) Statement by a responsible official with that official's name, title and signature, certifying the truth, accuracy, and completeness of the content of the report.

[40 CFR 63.7550(c)(5)(xvii)]

The Permittee shall submit the 5-year compliance report electronically to b. the EPA via the CEDRI, which can be accessed through EPA's CDX. The Permittee shall use the appropriate electronic report in CEDRI for 40 CFR 63 Subpart DDDDD. Instead of using the electronic report in CEDRI, the Permittee may submit an alternate electronic file consistent with the XML schema listed on the CEDRI Web site (http://www.epa.gov/ttn/chief/cedri/index.html), once the XML schema is available. If the reporting form specific to 40 CFR 63, Subpart DDDDD is not available in CEDRI at the time that the report is due, the Permittee shall submit the report to the Administrator at the appropriate address listed in §63.13. The Permittee shall begin submitting reports via CEDRI no later than 90 days after the form becomes available in CEDRI.



[40 CFR 63.7550(h)(3)]

c. Permit Shield

Compliance with Section III.E.5 shall be deemed compliance with 40 CFR Part 63.7550(a), (b), (c), and (h)(3), and Table 9 to 40 CFR 63 Subpart DDDDD.

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

IV. INTERNAL COMBUSTION ENGINES (ICE)

A. Applicability

This section applies to the Emergency ICEs identified in the Equipment List, Attachment "C" of this permit.

- **B.** Operational Limitations
 - 1. The Permittee shall only burn diesel fuel in the emergency ICEs located at the facility.

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

2. The Permittee shall record the hours of operation of the emergency ICEs and at the end of each month calculate and record a 12-month rolling total.

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

- C. Emergency Engines Subject to Standards of Performance for Existing Stationary Rotating Machinery Under A.A.C. R18-2-719
 - 1. Applicability

This Subsection (C) is applicable to ICEs marked as "A.A.C. R18-2-719" under the "A.A.C./NSPS/NESHAP" column in the Equipment List, Attachment "C" of this permit.

- 2. Particulate Matter and Opacity
 - a. Emissions Limitations/Standards
 - (1) The Permittee shall not cause, allow or permit to be discharged into the atmosphere from the ICEs smoke for any period greater than 10 consecutive seconds which exceeds 40% opacity. Visible emissions when starting cold equipment shall be exempt from this requirement for the first 10 minutes.

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

(2) The Permittee shall not cause, allow or permit the emission of particulate matter, caused by combustion of fuel, from the ICEs having a heat input rate of 4200 million Btu per hour or less, in excess of the amounts calculated by the following equation:



$E = 1.02 * Q^{0.769}$

where:

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

Q = the heat input in million BTU per hour.

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

(3) For the purposes of Condition IV.C.2.a(2), the heat input shall be the aggregate heat content of all fuels whose products of combustion pass through a stack or other outlet. Compliance tests shall be conducted during operation at the normal rated capacity of each unit. The total heat input of all operating generators and internal combustion engines on a plant or premises shall be used for determining the maximum allowable amount of particulate matter which may be emitted.

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

b. Monitoring, Recordkeeping and Reporting Requirements

(1) The Permittee shall monitor the lower heating value of the fuel being combusted in the ICEs. The Permittee shall maintain records of the lower heating value of the fuel fired in the ICEs. This may be accomplished by maintaining on record a copy of fuel supplier certifications that specify the lower heating value of the fuel.

[A.A.C. R18-2-306.A.3.c and -719.I]

- (2) Each week, the Permittee shall monitor visible emissions from each ICE, if in operation, in accordance with Condition I.A. [A.A.C. R18-2-306.A.3.c]
- c. Permit Shield

Compliance with Section IV.C.2 shall be deemed compliance with A.A.C. R18-2-719.B, C.1, E, and I.

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

3. Sulfur Dioxide

a. Emissions Limitations/Standards

The Permittee shall not burn high sulfur fuel and shall limit the emission of sulfur dioxide to 1.0 pound per million Btu heat input.

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

b. Monitoring, Recordkeeping and Reporting Requirements



(1) The Permittee shall monitor the sulfur content of the fuel being combusted in the ICEs. The Permittee shall maintain records of the daily sulfur content and lower heating value of the fuel fired in the ICEs. This may be accomplished by maintaining on record a copy of fuel supplier certifications that specify the sulfur content and lower heating value of the fuel.

[A.A.C. R18-2-306.A.3.c and -719.I]

(2) The Permittee shall report to the Director any daily period during which the sulfur content of the fuel being fired in the machine exceeds 0.8%.

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

c. Permit Shield

Compliance with Section IV.C.3 shall be deemed compliance with A.A.C. R18-2-719.F, I, J, and H.

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

- **D.** Emergency Engines Subject to National Emissions Standards for Hazardous Air Pollutants (NESHAP) Requirements for Stationary Reciprocating Internal Combustion Engines (ICEs) Under 40 CFR 63 Subpart ZZZZ
 - 1. Applicability

This Subsection (D) is applicable to ICEs marked "NESHAP Subpart ZZZZ" under the "A.A.C./NSPS/NESHAP" column in the Equipment List, Attachment "C" of this permit.

- 2. Compliance Requirements
 - a. For new emergency reciprocating ICEs subject to 40 CFR 60 Subpart IIII in Condition IV.E below, the Permittee shall comply with the requirements of 40 CFR 63 Subpart ZZZZ by meeting the requirements of 40 CFR 60 Subpart IIII.

[40 CFR 63.6590(c) and (c)(6)]

b. The existing emergency stationary reciprocating ICEs with a site rating of more than 500 brake hp do not have to meet the requirements of 40 CFR 63 Subpart ZZZZ, 40 CFR 63 Subpart A, including initial notification requirements, and this Subsection (D).

[40 CFR 63.6590(b)(3) and (b)(3)(iii)]

- 3. Operating Requirements
 - a. The Permittee shall be in compliance with all applicable emission limitations, operating limitations, and other requirements in 40 CFR 63 Subpart ZZZZ at all times.

[40 CFR 63.6605(a)]



- b. The Permittee shall operate and maintain the emergency ICE and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require the Permittee to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator and the Director which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. [40 CFR 63.6605(b)]
- c. The Permittee shall minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup in Table 2c to 40 CFR Part 63 Subpart ZZZZ apply.

[40 CFR 63.6602; Table 2c of 40 CFR 63 Subpart ZZZZ; and 40 CFR 6625(h)]

- In order to be considered an emergency ICE, the Permittee shall operate each ICE according to the requirements in Conditions IV.D.3.d(1) and (2). If the engine is not operated according to Conditions IV.D.3.d(1) and (2), the engine will not be considered an emergency engine under 40 CFR 63 Subpart ZZZZ and shall meet all requirements for non-emergency engines. [40 CFR 63.6640(f)]
 - (1)The Permittee may operate the emergency engine for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State, or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of the engine is limited to no more than 100 hours per calendar year. Any operation for non-emergency situations as allowed by Condition IV.D.3.d(2) counts towards the 100 hours calendar year. The Permittee may petition the Administrator and the Director for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the Permittee maintains records indicating that the Federal, State, or local standards require maintenance and testing beyond 100 hours per year. Copies of records shall be made available to ADEQ upon request.

[40 CFR 63.6640(f)(2) and (2)(i)]

(2) The Permittee may operate the emergency engine for up to 50 hours per calendar year in non-emergency situations, but those 50 hours are counted towards the 100 hours per calendar year in Condition IV.D.3.d(1). The 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid



or otherwise supply power as part of a financial arrangement with another entity.

[40 CFR 63.6640(f)(3)]

e. <u>The Permittee shall install a non-resettable hour meter on the emergency</u> <u>engine.</u>

> [40 CFR 63.6625(f) and A.A.C. R18-2-331.A.3.a] [Material Permit Conditions are indicated by underline and italics]

f. The Permittee shall change the oil and filter every 500 hours of operation or annually, whichever comes first. If the Permittee prefers to extend the oil change requirement, an oil analysis program as described in 40 CFR 63.6625(i) shall be completed.

[40 CFR 63.6602; Table 2c of 40 CFR 63 Subpart ZZZZ; and 63.6625(i)]

- g. The Permittee shall inspect the air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary. [40 CFR 63.6602; Table 2c of 40 CFR 63 Subpart ZZZZ]
- h. The Permittee shall inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary. [40 CFR 63.6602; Table 2c of 40 CFR 63 Subpart ZZZZ]
- i. The Permittee shall operate and maintain the emergency engine according to the manufacturer's emission-related written instructions or develop a maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.

[40 CFR 63.6625(e); Table 6 of 40 CFR Subpart ZZZZ, 63.6640(a)]

- 4. Recordkeeping Requirements
 - a. The Permittee shall keep records of the hours of operation of each emergency engine that is recorded through the non-resettable hour meter. Records shall include the date, start and stop times, how many hours are spent for emergency and non-emergency operation, and what classified the operation as emergency.

[40 CFR 63.6655(f) and A.A.C. R18-2-306.A.3.c]

b. If the Permittee elects to implement the oil analysis program described in 40 CFR 63.6625(i), the Permittee shall keep records of the parameters that are analyzed, the results of the oil analysis, and the oil changes for the engine.

[40 CFR 63.6625(i)]

c. The Permittee shall keep records of the maintenance conducted on the emergency engine that demonstrate operation and maintenance in accordance with the maintenance plan.

[40 CFR 63.6655(e)]



d. The Permittee shall keep records in a form suitable and readily available for expeditious review in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 CFR 63.10(b)(1).

[40 CFR 63.6660(a), (b), and (c)]

5. Permit Shield

Compliance with Section IV.D shall be deemed compliance with 40 CFR Part 63.6590(c); 63.6602; 63.6605(a) & (b); 63.6625(e) (f), (h), & (i); 63.6640(a) & (f); 63.6655(e) & (f); 63.6660(a), (b), & (c); and Table 2c of 40 CFR Subpart ZZZZ. [A.A.C. R18-2-325]

- E. Emergency Engines Subject to New Source Performance Standards (NSPS) Requirements for Stationary CI ICE Under 40 CFR 60 Subpart IIII
 - 1. Applicability

This Subsection (E) is applicable to the ICEs marked as "NSPS Subpart IIII" under the "A.A.C./NSPS/NESHAP" column in the Equipment List, Attachment "C" of this permit.

2. Fuel Requirement

The Permittee shall burn only diesel fuel in the emergency engine. [A.A.C. R18-2--306.A.2]

- 3. General Requirements
 - a. Operating Requirements
 - (1) The Permittee shall operate and maintain the engine that achieves the emission standards as required in Condition IV.E.3.b over its entire life according to the manufacturer's written instructions or procedures developed by the Permittee that are approved by the engine manufacturer, except as permitted in Condition IV.E.3.a(5). A copy of the instructions or procedures shall be kept onsite and made available to ADEQ upon request.

[40 CFR 60.4206, 4211(a)(1), and A.A.C. R18-2-306.A.3]

(2) The Permittee shall only change those emission-related settings that are permitted by the manufacturer, except as permitted in Condition IV.E.3.a(5).

[40 CFR 60.4211(a)(2)]

(3) The Permittee shall meet the requirements of 40 CFR part 1068, as they apply to the Permittee.

[40 CFR 60.4211(a)(3)]



(4) The Permittee shall comply by purchasing an engine certified to the emission standards in Condition IV.E.3.b. The engine must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in Condition IV.E.3.a(5).

[40 CFR 60.4211(c)]

(5) If the Permittee does not install, configure, operate, and maintain the engine according to the manufacturer's emission-related written instructions, or changes emission-related settings in a way that is not permitted by the manufacturer, the Permittee must demonstrate compliance as follows:

[40 CFR 60.4211(g), (g)(2), and 60.4212)]

- (a) Keep a maintenance plan and records of conducted maintenance;
- (b) To the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions; and
- (c) Conduct an initial performance test according to 40 CFR 60.4212 to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after the Permittee changes emission-related settings in a way that is not permitted by the manufacturer.
- (6) Fuel Requirements

The engine shall use diesel fuel that meets the following requirements of 40 CFR 1090.305:

[40 CFR 60.4207(b)]

- (a) Sulfur content: 15 ppm maximum; and
- (b) A minimum cetane index of 40 or a maximum aromatic content of 35 volume percent.
- (7) Additional Emergency Engine Requirements
 - (a) <u>The Permittee shall install a non-resettable hour meter</u> prior to startup of the engine.

^{[40} CFR 60.4209(a), A.A.C. R18-2-306.A.3.c, and -331.A.3.c] [Material permit conditions are indicated by underline and italics]



(b) In order for the engine to be considered an emergency stationary ICE, the Permittee shall only operate the emergency engine for emergency purposes, maintenance and testing, and operation in non-emergency situations for 50 hours per year as described in Conditions IV.E.3.a(7)(b)(i) and (ii). If the Permittee does not operate the engine according to the requirements in Conditions IV.E.3.a(7)(b)(i) and (ii), the engine will not be considered an emergency engine and must meet all requirements for non-emergency engines.

[40 CFR 60.4211(f)]

(i) The Permittee may operate the emergency engine for the purpose of maintenance checks and readiness testing for a maximum of 100 hours per calendar year, provided that the tests are recommended by Federal, State, or local government, the manufacturer, the vendor, or the insurance company associated with the engine. The Permittee may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the Permittee maintains records indicating that Federal, State, or local standards require maintenance and testing of the engine beyond 100 hours per calendar year. Copies of such records shall be provided to ADEQ upon request. Any operation for nonemergency situations as allowed by Condition IV.E.3.a(7)(b)(ii) counts as part of the 100 hours per calendar year allowed by this condition.

[40 CFR 60.4211(f)(2)]

(ii) The Permittee may operate the emergency engine for up to 50 hours per calendar year in nonemergency situations, but those 50 hours are counted towards the 100 hours per calendar year provided for maintenance and testing provided in Condition IV.E.3.a(7)(b)(i). The 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or nonemergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

[40 CFR 60.4211(f)(3) and A.A.C. R18-2-306.A.2]

Emission Limitations and Standards

[40 CFR 60.4205(c)]

b.



V. COAL HANDLING

(1) Non-Methane Hydrocarbons + Nitrogen Oxides $(NMHC + NO_x)$

The Permittee shall limit the emissions of NMHC + NO_x to below 3.0 g/hp-hr from the emergency engine.

(2) Particulate Matter (PM)

The Permittee shall limit the emission of PM to below 0.15 g/hp-hr from the emergency engine.

- c. Monitoring and Recordkeeping Requirements
 - (1) The Permittee shall maintain a copy of engine certifications or other documentation demonstrating that the engine complies with the applicable standards in this Permit, and shall make the documentation available to ADEQ upon request. [A.A.C. R18-2-306.A.4]

[A.A.C. K18-2-300.A.4]

(2) The Permittee shall keep records of fuel supplier specifications. The specifications shall contain information regarding the name of fuel supplier, sulfur content, and cetane index or aromatic content in the fuel. These records shall be made available to ADEQ upon request.

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

(3) The Permittee shall maintain monthly records of engine operation that are recorded through the non-resettable hour meter. The records shall include the purpose of operation and the duration of time the engine was operated. The record shall identify whenever the operation of the engine was for emergency purposes.

[40 CFR 60.4214(b) and A.A.C. R18-2-306.A.4]

4. Permit Shield

Compliance with Section IV.E shall be deemed compliance with 40 CFR 60.4205(c), 60.4206, 60.4207(b), 60.4209(a), 60.4211(a), 60.4211(c). 60.4211(f), 60.4211(g), 60.4212, and 60.4214(b).

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

V. COAL HANDLING

A. Applicability

This section applies to the Coal Handling System and the Coal Mixing System as listed in Equipment List, Attachment "C".

- **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]

2. Monitoring, Recordkeeping & Reporting

Every week, the Permittee shall monitor visible emissions from all exposed transfer points, enclosed transfer points, the coal storage pile, and baghouses in accordance with Condition I.A

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

3. Permit Shield

Compliance with Section V.B shall be deemed compliance with A.A.C. R18-2-702.B.3.

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

- **C.** Particulate Matter
 - 1. Emission Limitations/Standards
 - a. The Permittee shall not cause, allow or permit the discharge of particulate matter into the atmosphere in any one hour from any coal handling operation in total quantities in excess of the amounts calculated by the following equation:

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

Where:

E = the maximum allowable particulate emissions rate in poundsmass per hour.

P = the process weight rate in tons-mass per hour.

[A.A.C. R18-2-716.B.2]

b. The total process weight rate from all similar units employing a similar type process shall be used in determining the maximum allowable emission of particulate matter.

[A.A.C. R18-2-716.D]

- 2. Air Pollution Controls
 - a. When the coal handling and mixing system is operational, <u>the Permittee</u> <u>shall</u> maintain<u>and operate the appropriate dust collectors and dust</u> <u>extractors used to capture particulate matter emissions associated with</u> <u>coal handling in accordance with manufacturer's specification and in a</u>



VI. LIMESTONE HANDLING

manner consistent with good air pollution control practices. Wet dust suppression shall be maintained and operated at the rotary car dumper during train unloading at conveyor transfer points in the yard area and at the stacking-reclaiming area.

> [A.A.C. R18-2-306.A.2 and 331.A.3.e] [Material Permit Conditions are defined by underline and italics]

- b. The Permittee shall control fugitive emissions from the coal handling and coal mixing systems in accordance with A.A.C. R18-2-604 through 607. [A.A.C. R18-2-716.E]
- 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.3.c]

b. The Permittee shall maintain records of emissions-related maintenance performed on the dust collectors and dust extractors.

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

4. Permit Shield

Compliance with Section V.C shall be deemed compliance with A.A.C R18-2-716.B, D, and E.

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

VI. LIMESTONE HANDLING

A. Applicability

This Section applies to the Upgraded Belt Conveyors (BC-101, BC-101A), New Belt Conveyors (BC-101B and B), Limestone Ball Mill, Upgraded Transfer Tower (TT-1), New Transfer Tower (TT-2), Dry Dust Collectors (DC-12 and DC-13), New Limestone Storage Bins A, B, and C, and Bin Vent Dust Collectors (DC-14, DC-15, and DC-16) in the Limestone Handling Plant.

- **B.** Particulate Matter and Opacity
 - 1. Emission Limitations/Standards
 - a. Particulate Matter
 - (1) 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 (DC-12 and DC-13) that contain PM in excess of 0.032 grams per dry standard cubic meter (0.014 gr/dscf). Bin vent filters (DC-14, DC-15, and DC-16) are exempt from this PM stack limit since these individually control emissions from the associated storage bin.



[40 CFR 60.672(a) & 60.672(f), Table 2 to 40 CFR 60 Subpart OOO]

(2) The Permittee shall not cause to be discharged into the atmosphere from DC-12, DC-13, DC-14, DC-15, and DC-16 any stack emissions that contain filterable PM/PM_{10} in excess of 0.005 grains per actual cubic feet.

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

b. Opacity

(1) <u>The Permittee shall not cause to be discharged into the</u> <u>atmosphere from any storage bin any stack emissions that exhibit</u> <u>opacity greater than 7 percent opacity.</u>

[40 CFR 60.672(a), 60.672(f), Table 2 to 40 CFR 60 Subpart OOO, and A.A.C. R18-2-331.A.3.f] [Material Permit Conditions is defined by underline and italics]

(2) <u>The Permittee shall not cause to be discharged into the</u> <u>atmosphere from any grinding mills, transfer points on belt</u> <u>conveyors, storage bins, or any other affected facility any fugitive</u> <u>emissions which exhibit opacity greater than 7 percent.</u>

[40 CFR 60.672(b), Table 3 to 40 CFR 60 Subpart OOO, and A.A.C. R18-2-331.A.3.f] [Material Permit Conditions is defined by underline and italics]

2. 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 Drv Dust Collectors [DC-12 on Transfer Tower (TT-1) and DC-13 on Transfer Tower (TT-2)] and Bin Vent Filters (DC-14, DC-15, and DC-16) on Limestone Storage Bins (A, B, and C) in a manner consistent with good air pollution control practice for minimizing PM emissions.

> [40 CFR 60.11(d), A.A.C. R18-2-406.A.4 and -331.A.3.d & e] [Material Permit Conditions are defined by underline and italics]

- 3. Monitoring Requirements
 - a. The Permittee shall conduct quarterly 30-minute visible emissions inspections using EPA Method 22 (40 CFR Part 60, Appendix A-7) on the Transfer Tower Dust Collectors (DC-12 and DC-13) and Bin Vent Dust Collectors (DC-14, DC-15, and DC-16). The Method 22 (40 CFR Part 60, Appendix A-7) test shall be conducted while the dust collectors are operating. The test is successful if no visible emissions are observed. If any visible emissions are observed, the Permittee must initiate corrective action within 24 hours to return the dust collector to normal operation. The Permittee must record each Method 22 (40 CFR Part 60, Appendix A-7) test, including the date and any corrective actions taken, in the logbook required under Condition VI.B.4.a.

[40 CFR 60.674(c)]



b. The Permittee shall conduct a performance test once every 5 years from the previous performance test for fugitive emissions from affected facilities without water sprays. The performance test shall be conducted using Method 9 of Appendix A-4 of 40 CFR Part 60 and the procedures in 40 CFR 60.11, with the following additions:

[40 CFR 60.675(c)(1) and Table 3 to 40 CFR 60 Subpart OOO]

- (1) The minimum distance between the observer and the emission source shall be 4.57 meters (15 feet).
- The observer shall, when possible, select a position that minimizes interference from other fugitive emission sources (*e.g.*, road dust). The required observer position relative to the sun (Method 9 of Appendix A-4 of 40 CFR Part 60, Section 2.1) must be followed.
- c. When determining compliance with the fugitive emissions limit in Condition VI.B.1.b(2), the duration of the Method 9 (40 CFR Part 60, Appendix A-4) observations shall be 30 minutes (five 6-minute averages). Compliance with the fugitive emission limit in Condition VI.B.1.b(2) shall be based on the average of the five 6-minute averages.

[40 CFR 60.675(c)(3)]

- 4. Recordkeeping and Reporting Requirements
 - a. The Permittee shall record each periodic inspection required under Condition VI.B.3.a, including dates and any corrective actions taken, in a logbook (in written or electronic format). The Permittee shall keep the logbook onsite and make hard or electronic copies available to the Administrator upon request

[40 CFR 60.676(b)(1)]

b. The Permittee shall submit written reports of the results of all performance tests conducted to demonstrate compliance with the emission limits in Condition VI.B.1.a(1) and VI.B.1.b, including reports of opacity observations made using Method 9 to demonstrate compliance with Condition VI.B.1.b(2).

[40 CFR 60.676(f)]

5. Permit Shield

Compliance with Section VI.B shall be deemed compliance with 40 CFR 60.672(a), (b), (f), 60.674(c), 60.675(c)(2), 60.676(b)(1), (f), and A.A.C R18-2-406.A.4.

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

VII. FLY ASH HANDLING, COAL ADDITIVE SODA ASH HANDLING, CEMENT KILN DUST HANDLING, AND POWDERED ACTIVATED CARBON HANDLING

A. Applicability



This section applies to the Fly Ash Handling System, Coal Additive Soda Ash Handling System, Cement Kiln Dust Handling System, and Powdered Activated Carbon Handling System ("Systems") listed in Equipment List, Attachment "C".

B. Opacity

1. Emission Limitations/Standards

The Permittee shall not cause to be discharged into the atmosphere from the Systems any emissions greater than 20 percent opacity.

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

2. Monitoring, Recordkeeping, & Reporting

Each week, the Permittee shall monitor visible emissions from all exposed transfer points, enclosed transfer points, the baghouses, and the mixer unloader in accordance with Condition I.A.

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

3. Permit Shield

Compliance with Section VII.B the condition of this Part shall be deemed compliance with A.A.C. R18-2-702.B.3.

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

C. Particulate Matter

- 1. Emission Limitation/Standards
 - a. The Permittee shall not cause, allow or permit the discharge of particulate matter into the atmosphere in any one hour from any Systems (with process rate of 60,000 lbs/hr or less) operation in total quantities in excess of the amounts calculated by the following equation:

 $E = 4.1 * P^{0.67}$

Where:

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

P = the process weight rate in tons-mass per hour.

[A.A.C. R18-2-730.A.l.a]

b. The Permittee shall not cause, allow or permit the discharge of particulate matter into the atmosphere in any one hour from any Systems (with process rate greater than 60,000 lbs/hr) operation in total quantities in excess of the amounts calculated by the following equation:

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



Where:

- E = the maximum allowable particulate emissions rate in pounds-mass per hour.
- P = the process weight rate in tons-mass per hour.

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

c. The total process weight from all similar units employing a similar type process shall be used in determining the maximum allowable emission of particulate matter.

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

2. Air Pollution Controls

At all times when these Systems are operational, the Permittee shall maintain and operate the associated baghouses, water spray header, pug mill, and the mixer unloader used to minimize particulate matter emissions 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.e] [Material Permit Conditions 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.3.c]

b. The Permittee shall maintain records of emissions-related maintenance performed on the baghouses and mixer unloader.

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

4. Permit Shield

Compliance with Section VII.C shall be deemed compliance with A.A.C. R18-2-730.A.1 and B.

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

- **D.** Odorous Materials
 - 1. 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]
 - 2. Where a stack, vent or other outlet is at such a level that fumes, gas mist, odor, smoke, vapor or any combination thereof constituting air pollution is 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 to



a degree that will adequately dilute, reduce or eliminate the discharge of air pollution to adjoining property.

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

3. Permit Shield

Compliance with Section VII.D shall be deemed compliance with A.A.C. R18-730.D and G.

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

VIII. COOLING TOWERS 1 AND 2

A. Applicability

This Section applies to Cooling Tower 1 and Cooling Tower 2 listed in Equipment List, Attachment "C".

- **B.** Operating Requirements
 - 1. 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]
 - 2. Where a stack, vent or other outlet is at such a level that fumes, gas mist, odor, smoke, vapor or any combination thereof constituting air pollution is 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 to a degree that will adequately dilute, reduce or eliminate the discharge of air pollution to adjoining property.

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

3. Permit Shield

Compliance with Section VIII.B shall be deemed compliance with A.A.C. R18-2-730.D and G.

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

- C. Opacity
 - 1. Emission Limitations/Standards
 - a. 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]
 - b. If the presence of uncombined water is the only reason for an exceedance of the applicable opacity limit, the exceedance shall not constitute a violation of the applicable opacity limit.

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



IX. WATER CANNON EVAPORATIVE SPRAY SYSTEMS (WCESS)

2. Monitoring, Recordkeeping, & Reporting

Each week, the Permittee shall monitor visible emissions from the cooling towers in accordance with Condition I.A.

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

3. Permit Shield

Compliance with Section VIII.C shall be deemed compliance with A.A.C. R18-2-702.B.3 and C.

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

- **D.** Particulate Matter
 - 1. Emission Limitations/Standards
 - a. The Permittee shall not cause, allow or permit the discharge of particulate matter into the atmosphere in any one hour from any systems operation in total quantities in excess of the amounts calculated by the following equation:

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

Where:

- E = the maximum allowable particulate emissions rate in pounds-mass per hour.
- P = the process weight rate in tons-mass per hour.

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

b. The total process weight from all similar units employing a similar type process shall be used in determining the maximum allowable emission of particulate matter.

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

2. Permit Shield

Compliance with Section VIII.D shall be deemed compliance with A.A.C. R18-2-730.A.1.b and B.

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

IX. WATER CANNON EVAPORATIVE SPRAY SYSTEMS (WCESS)

A. Applicability

This Section applies to the Water Cannon Evaporative Spray Systems (WCESS) listed in the Equipment List, Attachment "C".

B. Operating Requirements



- 1. 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]
- 2. Where a stack, vent or other outlet is at such a level that fumes, gas mist, odor, smoke, vapor or any combination thereof constituting air pollution is discharged to adjoining property, the Director may require the installation of abatement equipment or the alteration of such stacks, vent, or other outlet by the Permittee to a degree that will adequately dilute, reduce or eliminate the discharge of air pollution to an adjoining property.

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

3. Permit Shield

Compliance with Section IX.B shall be deemed compliance with A.A.C. R18-2-730.D and G.

- **C.** Particulate Matter and Opacity
 - 1. Emission Limitation/Standards
 - a. Particulate Matter
 - (1) The Permittee shall not cause, allow, or permit the discharge of particulate matter into the atmosphere in any one hour from any process source having a process weight rate greater than 60,000 pounds per hour (30 tons per hour) in total quantities in excess of the amount calculated by the following equation: [A.A.C. R-18-2-730.A.1.b]

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

Where:

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

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

b. Opacity

(1) The Permittee shall not cause, allow, or permit the opacity of any plume or effluent, from any point source, to exceed 20 percent. [A.A.C-R18-2-702.B.3]



(2) If the presence of uncombined water is the only reason for an exceedance of the applicable opacity limit, the exceedance shall not constitute a violation of the applicable opacity limit.

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

2. Monitoring, Reporting, and Recordkeeping Requirements

Each month, the Permittee shall monitor visible emissions from the WCESS in accordance with Condition I.A.

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

3. Permit Shield

Compliance with Section IX.C shall be deemed compliance with A.A.C. R18-2-702.B.3 and C, and 730.A.1.b, and B.

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

X. FUGITIVE DUST REQUIREMENTS

A. Applicability

Section X applies to any non-point source of fugitive dust in the facility.

B. Particulate Matter and Opacity

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

- 1. Emission Limitations and Standards
 - a. Opacity of emissions from any fugitive dust non-point source shall not be greater than 40%.

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

- b. The Permittee shall employ the following reasonable precautions to prevent excessive amounts of particulate matter from becoming airborne:
 - (1) For a building or its appurtenances, or a building or subdivision site, or a driveway, or a parking area, or a vacant lot or sales lot, or an urban or suburban open area to be constructed, used, altered, repaired, demolished, cleared, or leveled, or the earth to be moved or excavated, keep dust and other types of air contaminants to a minimum by good modern practices such as using an approved dust suppressant or adhesive soil stabilizer, paving, covering, landscaping, continuous wetting, detouring, barring access, or other acceptable means;

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

(2) Keep dust to a minimum from vacant lots or an urban or suburban open area where motor vehicular activity occurs by using an approved dust suppressant, or adhesive soil stabilizer, or by



X. FUGITIVE DUST REQUIREMENTS

paving, or by barring access to the property, or by other acceptable means;

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

(3) Keep dust and other particulates to a minimum by employing dust suppressants, temporary paving, detouring, wetting down or by other reasonable means when a roadway or alley is used, repaired, constructed, or reconstructed;

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

(4) Take reasonable precautions, such as wetting, applying dust suppressants, or covering the load when transporting material likely to give rise to airborne dust. Earth or other material that is deposited by trucking or earth moving equipment shall be removed from paved streets by the person responsible for such deposits;

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

(5) Take reasonable precautions, such as the use of spray bars, wetting agents, dust suppressants, covering the load, and hoods when crushing, screening, handling, transporting or conveying of materials or other operations likely to result in significant amounts of airborne dust;

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

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

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

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

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

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

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

2. Air Pollution Control Requirements

Haul Roads and Storage Piles

Water, or an equivalent control, shall be used to control visible emissions from haul roads and storage piles.

[A.A.C. R18-2-306.A.2 and -331.A.3.d] [Material Permit Condition is indicated by underline and italics]

3. Monitoring and Recordkeeping Requirements



a. The Permittee shall maintain records of the dates on which any of the activities listed in Condition X.B.1.b above were performed and the control measures that were adopted.

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

b. Opacity Monitoring Requirements

Each month, the Permittee shall monitor visible emissions from fugitive sources in accordance with Condition I.A.

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

C. Permit Shield

Compliance with Section X shall be deemed compliance with A.A.C. R18-2-604. -605, -606, -607, and -614.

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

XI. OTHER PERIODIC ACTIVITIES

- **A.** Abrasive Blasting
 - 1. Particulate Matter and Opacity
 - a. Emission Limitations/Standards

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]

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

The Permittee shall not cause, allow or permit visible emissions from sandblasting or other abrasive blasting operations in excess of 20% opacity.

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

2. Monitoring and Recordkeeping Requirement

Each time an abrasive blasting project is conducted, the Permittee shall make a record of the following:

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

a. The date the project was conducted;



- b. The duration of the project; and
- c. Type of control measures employed.
- 3. Permit Shield

Compliance with Condition XI.A.1 shall be deemed compliance with A.A.C. R18-2-702.B.3 and -726.

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

- **B.** Use of Paints
 - 1. Volatile Organic Compounds
 - a. Emission Limitations/Standards

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

- (1) The Permittee shall not conduct 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 or their designated contractor shall not either: [A.A.C.R18-2-727.B]
 - (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.
- (3) For the purposes of Condition XI.A.1.a(2), a photochemically reactive solvent shall be any solvent with an aggregate of more than 20 percent of its total volume composed of the chemical compounds classified in Conditions (a) thru (c) below, or which exceeds any of the following percentage composition limitations, referred to the total volume of solvent:

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

(a) A combination of the following types of compounds having an olefinic or cyclo-olefinic type of unsaturationhydrocarbons, alcohols, aldehydes, esters, ethers, or ketones: 5 percent.



- (b) A combination of aromatic compounds with eight or more carbon atoms to the molecule except ethylbenzene: 8 percent.
- (c) A combination of ethylbenzene, ketones having branched hydrocarbon structures, trichloroethylene or toluene: 20 percent.
- (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 of organic compounds described in Condition XI.B.1.a(3), 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]

b. Monitoring and Recordkeeping Requirements

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

- (1) Each time a spray painting project is conducted, the Permittee shall make a record of the following:
 - (a) The date the project was conducted;
 - (b) The duration of the project;
 - (c) Type of control measures employed;
 - (d) Safety Data Sheets (SDS) for all paints and solvents used in the project; and
 - (e) The amount of paint consumed during the project.
- (2) Architectural coating and spot painting projects shall be exempt from the recordkeeping requirements of Condition XI.B.1.b(1).
- c. Permit Shield

Compliance with Condition XI.B.1.a shall be deemed compliance with A.A.C.R18-2-727.

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

- 2. Opacity
 - a. Emission Limitation/Standard

The Permittee shall not cause, allow or permit visible emissions from painting operations in excess of 20% opacity.

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



b. Permit Shield

Compliance with Condition XI.B.2.a shall be deemed compliance with A.A.C.R18-2-702.B.3.

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

- C. Demolition/Renovation Hazardous Air Pollutants
 - 1. Emission Limitation/Standard

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

[A.A.C. R18-2-1101.A.12]

2. Monitoring and Recordkeeping Requirements

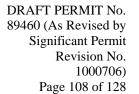
The Permittee shall keep all required records in a file. The required records shall include the "NESHAP Notification for Renovation and Demolition Activities" form and all supporting documents.

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

3. Permit Shield

Compliance with Condition XI.C.1 shall be deemed compliance with A.A.C. R18-2-1101.A.12.

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





ATTACHMENT "C": EQUIPMENT LIST

EQUIPMENT TYPE	MAX. CAPACITY	QUANTITY	MODEL	SERIAL NUMBER/ EQUIPMENT NUMBER	INSTALLATION/ MFG. DATE	A.A.C./NSPS/NESHAP
Steam Generation						
Unit 1 Boiler	4,719 MMBtu/hr	1	Riley Stoker Corporation	3901	7/25/1974	NSPS Subpart D, NESHAP Subpart UUUUU
Unit 2 Boiler	4,719 MMBtu/hr	1	Riley Stoker Corporation	3902	7/25/1974	NSPS Subpart D, NESHAP Subpart UUUUU
Auxiliary Boiler	157 MMBtu/hr	1	Combustion Engineering	CFAABOIL	7/25/1974	NESHAP Subpart DDDDD
Coal Pulverizer U1	145,000 lbs/hr ea	3	Riley Stoker Corporation	1BAFMILL A, B, C	7/25/1974	N/A
Coal Pulverizer U2	145,000 lbs/hr ea	3	Riley Stoker Corporation	2BAFMILL A, B, C	7/25/1974	N/A
Pulverizer Feeder Unit 1	72,500 lbs/hr ea	3	Riley Stoker Corporation	1BAFFDR 1A1, 1A2, 1B1	7/25/1974	N/A
Pulverizer Feeder Unit 1	72,500 lbs/hr ea	3	Riley Stoker Corporation	1BAFFDR 1B2, 1C1, 1C2	7/25/1974	N/A
Pulverizer Feeder Unit 2	72,500 lbs/hr ea	3	Riley Stoker Corporation	2BAFFDR 2A1, 2A2, 2B1	7/25/1974	N/A
Pulverizer Feeder Unit 2	72,500 lbs/hr ea	3	Riley Stoker Corporation	2BAFFDR 2B2, 2C1, 2C2	7/25/1974	N/A
Cooling Tower 1	179,900 gallons/min	1	Marley Company 664-4-14	1DABSTRU	7/25/1974	A.A.C. R18-2-702 and - 730
Cooling Tower 2	179,900 gallons/min	1	Marley Company 664-4-14	2DABSTRU	7/25/1974	A.A.C. R18-2-702 and - 730

DRAFT PERMIT No. 89460 (As Revised by Significant Permit Revision No. 1000706) Page 109 of 128



EQUIPMENT TYPE	MAX. CAPACITY	QUANTITY	MODEL	SERIAL NUMBER/ EQUIPMENT NUMBER	INSTALLATION/ MFG. DATE	A.A.C./NSPS/NESHAP
Hot Side Electrostatic Precipitator	2,800,000 acfm (Design Flow/unit)	2	Joy-Western	1JPAPREC0002 1JPAPREC0005	7/25/1974	N/A
Hot Side Electrostatic Precipitator	2,800,000 acfm (Design Flow/unit)	2	Joy-Western	2JPAPREC0080 1JPAPREC0082	7/25/1974	N/A
Sulfur Dioxide Absorbers	2 Alstom WRAABS $4/12/2012$			N/A		
Low NOx Burners	4,719 MMBtu/hr	24 per boiler	Babcock Power	1BAEBURNNEFR 2BAEBURNNEFR	5/19/2009 5/20/2011	N/A
Selective Catalyst Reduction System	3,096,256 acfm Design	1	Riley Power	Contract # 10051	May 2014	N/A
Oxidizer Application System	56 gph	2	Alstom	N/A	Late 2011	N/A
			Coal Hand	ling System		
Rotary Car Dumper	100,000 lbs	1	Heyl & Patterson	CJKADUMPRCD	7/24/1974	A.A.C. R18-2-702 and - 716
Track Hopper	500 tons	1	Heyl & Patterson	СЈКАНОРР	7/24/1974	A.A.C. R18-2-702 and - 716
Coal Crusher	1,200 tph ea.	2	Pennsylvania Crusher	CJKARUSACL, CJKAROSBCL	7/24/1974	A.A.C. R18-2-702 and - 716

DRAFT PERMIT No. 89460 (As Revised by Significant Permit Revision No. 1000706) Page 110 of 128



EQUIPMENT TYPE	MAX. CAPACITY	QUANTITY	MODEL	SERIAL NUMBER/ EQUIPMENT NUMBER	INSTALLATION/ MFG. DATE	A.A.C./NSPS/NESHAP
Track Hopper Feeders	1000 tph ea.	4	FMC	CJKAFDRV1, 2, 3, 4	7/24/1974	A.A.C. R18-2-702 and - 716
Belt Conveyor BC-2A	3,000 tph	1	FMC	CJKCONVB2A	7/24/1974	A.A.C. R18-2-702 and - 716
Belt Conveyor BC-4	3,000 tph	1	FMC	CJKCONVBC4	7/24/1974	A.A.C. R18-2-702 and - 716
Belt Conveyor BC-5	1,200 tph	1	FMC	CJKCONVBC5	7/24/1974	A.A.C. R18-2-702 and - 716
Belt Conveyor BC-6	1,200 tph	1	FMC	CJKCONVBC6	7/24/1974	A.A.C. R18-2-702 and - 716
Belt Conveyor BC-7A & 7B	1,200 tph	2	FMC	CJKCONVB7A, 7B	7/24/1974	A.A.C. R18-2-702 and - 716
Belt Conveyor BC-8A & 8B	1,200 tph	2	FMC	2JKCONVB8A, 8B	7/24/1974	A.A.C. R18-2-702 and - 716
Belt Conveyor BC-9A & 9B	1,200 tph	2	FMC	1JKCONVB9A, 9B	7/24/1974	A.A.C. R18-2-702 and - 716
Belt Conveyor BC-10A & 10B	1,200 tph	2	FMC	2JKCONVB10A, 10B	7/24/1974	A.A.C. R18-2-702 and - 716
Belt Conveyor BC-11	1,200 tph	1	N/A	N/A	8/1/2012	A.A.C. R18-2-702 and - 716
Belt Conveyor BC-12	1,200 tph	1	N/A	N/A	8/1/2012	A.A.C. R18-2-702 and - 716
Emergency Hopper	280 tons	1	FMC	CJKAHOPPRCL	7/24/1974	A.A.C. R18-2-702 and - 716
Emergency Hopper Feeders	1,000 tons	2	FMC	CJKAFDRAER CJKAFDRBER	7/24/1974	A.A.C. R18-2-702 and - 716
Crusher Surge Bin	345 tons	1	FMC	CJKABINBNC	7/24/1974	A.A.C. R18-2-702 and - 716

DRAFT PERMIT No. 89460 (As Revised by Significant Permit Revision No. 1000706) Page 111 of 128



EQUIPMENT TYPE	MAX. CAPACITY	QUANTITY	MODEL	SERIAL NUMBER/ EQUIPMENT NUMBER	INSTALLATION/ MFG. DATE	A.A.C./NSPS/NESHAP				
Surge Bin Feeders	1,200 tons	2	FMC	CJKAFDRASB CJKAFDRBSB	7/24/1974	A.A.C. R18-2-702 and - 716				
"As fired" Coal Sampling System	N/A	1	FMC	N/A	N/A 1982					
U1 Coal Silos	825 tons ea.	3	FMC	1JKASILO1A, 1B, 1C	7/24/1974	A.A.C. R18-2-702 and - 716				
U2 Coal Silos	825 tons ea.	3	FMC	2JKASILO2A, 2B, 2C	7/24/1974	A.A.C. R18-2-702 and - 716				
Sampling Building Dust collector, CM1	7,200 cfm	1	FMC	N/A	N/A	A.A.C. R18-2-702 and - 716				
Dust Extractor 2, DC-2	17,000 cfm	1	Engart	CJKABACDDC2	7/24/1974	A.A.C. R18-2-702 and - 716				
Dust Extractor 3, DC-3	22,000 cfm	1	Engart	1JKACOLLDC3	7/24/1974	A.A.C. R18-2-702 and - 716				
Dust Extractor 4, DC-4	22,000 cfm	1	Engart	2JKACOLLDC4	7/24/1974	A.A.C. R18-2-702 and - 716				
Dust Extractor 5, DC-5	6,000 cfm	1	Engart	1JKACOLLDC5	7/24/1974	A.A.C. R18-2-702 and - 716				
Dust Extractor 6, DC-17	5,250 cfm	1	Tri-Mer	40859	12/1/2012	A.A.C. R18-2-702 and - 716				
Dust Extractor 7, DC-18	5,250 cfm	1	Tri-Mer 40860		12/1/2012	A.A.C. R18-2-702 and - 716				
	Coal Mixing System									
Belt Conveyor, BC-3A	3,000 tph	1	Continental Conveyor and Equipment	CJKACONVB3A	7/24/1974	A.A.C. R18-2-702 and - 716				

DRAFT PERMIT No. 89460 (As Revised by Significant Permit Revision No. 1000706) Page 112 of 128



EQUIPMENT TYPE	MAX. CAPACITY	QUANTITY	MODEL	SERIAL NUMBER/ EQUIPMENT NUMBER	INSTALLATION/ MFG. DATE	A.A.C./NSPS/NESHAP			
Belt Conveyor, BC-3B	1,200 tph	1	Continental Conveyor and Equipment	CJKAFCONVB3B	7/24/1974	A.A.C. R18-2-702 and - 716			
Belt Conveyor, BC-3C	1,200 tph	1	Continental Conveyor and Equipment CJKAFCONVB3C		7/24/1974	A.A.C. R18-2-702 and - 716			
Belt Feeder CMI	1,200 tph	1	N/A	CJKACONVCMI	7/24/1974	A.A.C. R18-2-702 and - 716			
Transfer Hopper CMI	40 tons	1	N/A	CJKAHOPPXFR	7/24/1974	A.A.C. R18-2-702 and - 716			
Coal Storage Pile	1,000,000 tons	2	N/A	N/A CJKAPILECL		A.A.C. R18-2-702 and - 716			
Rotary Plow Feeders	600 tph	3	Continental Conveyor and Equipment	CJKAFDRCM 1, M2. M3, M4	7/24/1974	A.A.C. R18-2-702 and - 716			
Coal Crusher	1,200 tph	1	N/A	N/A	N/A	A.A.C. R18-2-702 and - 716			
Traveling Boom Stacker	3,000 tph	1	Stephens- Adamson	CJKASTACCL	7/24/1974	A.A.C. R18-2-702 and - 716			
	Fly Ash Handling System								
Fly Ash Storage Silos	62,800 ft ³	2	Allen- Shermann- Hoff	1JNASILOFAS 2JNASILOFAS	7/24/1974	A.A.C. R18-2-702 and - 730			

DRAFT PERMIT No. 89460 (As Revised by Significant Permit Revision No. 1000706) Page 113 of 128



EQUIPMENT TYPE	MAX. CAPACITY	QUANTITY	MODEL	SERIAL NUMBER/ EQUIPMENT NUMBER	INSTALLATION/ MFG. DATE	A.A.C./NSPS/NESHAP
Fly Ash Storage Silos Dust Collector, DC- 7A	2,375 cfm	5	Flex-Kleen	IJNAFLTRAEB –A, B, C, D, E	7/24/1974	A.A.C. R18-2-702 and - 730
Fly Ash Storage Silos Dust Collector, DC- 7B	2,375 cfm	5	Flex-Kleen 2JNAFLTRAEB – A, B, C, D, E		7/24/1974	A.A.C. R18-2-702 and - 730
Fly Ash Silo #2 Load-out Dust Collector, DC-21	1,800 cfm	1	DCL EV-32 Self- Sealing Load EV-32 Spout		6/19/2018	A.A.C. R18-2-702 and - 730
Fly Ash Receiving Silos Dust Collector, DC-8	15,000 cfm	1	Scientific Cjnamrtdc1		01/01/2012	A.A.C. R18-2-702 and - 730
			Limestone Ha	andling System		
Limestone Truck Unloading Hopper	30 tons	1	McNally Pittsburg	CJSAHOPPTUL	7/24/1974	N/A
Limestone Truck Unloading Hopper Feeder	200 tph	1	Marathon Electric Mfg.	C-M-JS-R-5910	6/23/2009	NSPS Subpart OOO
Limestone Belt Conveyor, BC- 101	200 tph	1	Varo	C-M-JS-R-5911	6/23/2009	NSPS Subpart OOO

DRAFT PERMIT No. 89460 (As Revised by Significant Permit Revision No. 1000706) Page 114 of 128



EQUIPMENT TYPE	MAX. CAPACITY	QUANTITY	MODEL	SERIAL NUMBER/ EQUIPMENT NUMBER	INSTALLATION/ MFG. DATE	A.A.C./NSPS/NESHAP	
Limestone Belt Conveyor, BC- 101A	200 tph	1	Varo C-M-JS-R-5914		6/23/2009	NSPS Subpart OOO	
Limestone Belt Conveyor, BC- 101B	200 tph	1	Varo	N/A	N/A	NSPS Subpart OOO	
Limestone Belt Conveyor B	200 tph	1	TBD	N/A	N/A	NSPS Subpart OOO	
Limestone Ball Mill	18 tph	1	TBD	N/A	N/A	NSPS Subpart OOO	
Limestone Transfer Tower, TT-1 Dust Collector, DC-12	3,000 cfm	1	SDC	SL Series (SL2-8)	2013	NSPS Subpart OOO	
Limestone Transfer Tower, TT-2 Dust Collector, DC-13	3,000 cfm	1	SDC	LP Series	2013	NSPS Subpart OOO	
Limestone Storage Bin A	73 tons	1	N/A	C-M-JS-R-5917	6/23/2009	NSPS Subpart OOO	
Limestone Storage Bin B	73 tons	1	N/A	C-M-JS-R-5921	6/23/2009	NSPS Subpart OOO	

DRAFT PERMIT No. 89460 (As Revised by Significant Permit Revision No. 1000706) Page 115 of 128



EQUIPMENT TYPE	MAX. CAPACITY	QUANTITY	MODEL	SERIAL NUMBER/ EQUIPMENT NUMBER	INSTALLATION/ MFG. DATE	A.A.C./NSPS/NESHAP
Limestone Storage Bin C	250 tons	1	N/A	N/A	N/A	NSPS Subpart OOO
Limestone Storage Bin A Vent Filter, DC- 14	600 scfm	1	Met-Pro Flex Kleen Division 11918		6/23/2009	NSPS Subpart OOO
Limestone Storage Bin B Vent Filter, DC- 15	600 scfm	1	Met-Pro Flex Kleen Division 11918		6/23/2009	NSPS Subpart OOO
Limestone Storage Bin C Vent Filter, DC- 16 (Future)	1,000 scfm	1	TBD	TBD	TBD	NSPS Subpart OOO
		C	coal Additive Soda	Ash Handling System		
Coal Additive Soda Ash Silo	3,000 ft ³	1	CHEMCO Systems, L.P.	SILO-12	01/01/2003	A.A.C. R18-2-702 and - 730
Coal Additive Soda Ash Silo Baghouse	750 scfm	1	CHEMCO Systems, L.P.	DC-9	01/01/2013	A.A.C. R18-2-702 and - 730
			Cement Kiln Dus	t Handling System		

DRAFT PERMIT No. 89460 (As Revised by Significant Permit Revision No. 1000706) Page 116 of 128



EQUIPMENT TYPE	MAX. CAPACITY	QUANTITY	MODEL	SERIAL NUMBER/ EQUIPMENT NUMBER	INSTALLATION/ MFG. DATE	A.A.C./NSPS/NESHAP
CKD Storage Silos	150 tons ea.	2	N/A	N/A	08/2012	A.A.C. R18-2-702 and - 730
CKD Silos Vents Dust Collectors	2,340 acfm ea.	2	C&W Mfg. & CP-LPR-8_S Sales Co.		08/2012	A.A.C. R18-2-702 and - 730
		Pow	vdered Activated C	arbon Handling System		
PAC Silos (Existing)	50 tons ea.	2	Silo	Silo 33801/33802 04/2016		A.A.C. R18-2-702 and - 730
PAC Silos Dust Collectors (Existing)	750 cfm ea.	2	Merrick	N/A	04/2016	A.A.C. R18-2-702 and - 730
PAC Silos (Future)	TBD	2	TBD	TBD	TBD	A.A.C. R18-2-702 and - 730
PAC Silos Dust Collectors (Future)	750 cfm	2	TBD	TBD	TBD	A.A.C. R18-2-702 and - 730
			Other Contr	ol Equipment		
Lime Silo Baghouse- Water Treatment	300 SCFM	1	Peabody	CARACOOLL135	7/24/1974	N/A
Soda Ash Silo Baghouse- Water Treatment	300 SCFM	1	Peabody	CARACOOLL134	7/24/1974	N/A
Weld Shop Baghouse	N/A	2	Torit	UNIT1 1G569313 UNIT2 1G569313	N/A	N/A

DRAFT PERMIT No. 89460 (As Revised by Significant Permit Revision No. 1000706) Page 117 of 128



: EQUIPMENT LIST

EQUIPMENT TYPE	MAX. CAPACITY	QUANTITY	MODEL	SERIAL NUMBER/ EQUIPMENT NUMBER	INSTALLATION/ MFG. DATE	A.A.C./NSPS/NESHAP
Paint Booth Filter	N/A	1	N/A CZAAFLTR0001		N/A	N/A
		Eme	rgency Internal Co	mbustion Engines (ICEs)		
Fire Booster Pump	800 hp	1	Cummins	10644000	1977	A.A.C. R18-2-719, NESHAP Subpart ZZZZ
Emergency Generator	1,177hp	1	Detroit Diesel	501681	1978	A.A.C. R18-2-719, NESHAP Subpart ZZZZ
Emergency Fire Pump A	266 hp	1	Caterpillar	64Z09303	1977	A.A.C. R18-2-719, NESHAP Subpart ZZZZ
Emergency Fire Pump B	305 hp	1	Cummins/ CFP9E-F30	N/A	2013	NSPS Subpart IIII, NESHAP Subpart ZZZZ
			Miscellaneou	us Equipment		
Diesel Tank	1,023,750 gallons	1	N/A	N/A	1977	N/A
Water Cannon Evaporative Spray Systems (WCESS)	65 gpm	3	Super PoleCat	N/A	WC-1-2016 WC-2-2016 WC-3-Future	A.A.C. R18-2-702 and - 730

CONTINUOUS MONITORING SYSTEMS FOR UNIT 1 AND UNIT 2

DRAFT PERMIT No. 89460 (As Revised by Significant Permit Revision No. 1000706) Page 118 of 128



STEAM				MONITORS				Inlet	Inlet	
UNIT	NO _x	SO ₂	CO2	Opacity	Flow	со	PM	SO ₂	CO ₂	Hg CEMS
Unit 1	TEI 42i	Sick Maihak FWE 200	TEI 43i	Teledyne - LightHawk	EMRC DP-75	TEI 48i	Sick Maihak FWE 200	TEI 43i	TEI 410i	Thermo Scientific Freedom System with model 80i Hg Analyzer
Unit 2	TEI 42i	Sick Maihak FWE 200	TEI 43i	Teledyne - LightHawk	EMRC DP-75	TEI 48i	Sick Maihak FWE 200	TEI 43i	TEI 410i	Thermo Scientific Freedom System with model 80i Hg Analyzer



I. STATEMENT OF BASIS

ATTACHMENT "D": PHASE II ACID RAIN PROVISIONS

I. STATEMENT OF BASIS

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

II. SO₂ ALLOWANCES' ALLOCATIONS AND NO_x REQUIREMENTS FOR EACH AFFECTED UNIT

		2021	2022	2023	2024	2025	2026	2027
Unit 1	SO ₂ allowances under Tables 2, 3, or 4 of 40 CFR part 73		5,332*	5,332*	5,332*	5,332*	5,332*	5,332*
and Unit 2	NO _x limit	40 CFR In addition comply 76, inclu	76.7(a)(2 on to the o with all o), of 0.46 described other appl duty to re	bb/MMB NOx con icable re- eapply for	tu. npliance p quiremen r NO _X con	plan, this ts of 40 (on, under unit shall CFR Part plan and

- ! As defined under 40 CFR §72.2, "Allowance" means an authorization by the Administrator under the Acid Rain Program to emit up to one ton of sulfur dioxide during or after a specified calendar year.
- * The number of allowances actually held by an affected source in a unit account may differ from the number allocated by U.S. EPA. Neither of the aforementioned conditions necessitate a revision to the unit SO₂ allowance allocations identified in this permit (See 40 CFR 72.84).

III. COMMENTS, NOTES, AND JUSTIFICATIONS

SRP has early-elected for NO_x requirements on Units 1 and 2.

IV. PERMIT APPLICATION

The Permittee, and any other owners or operators of the units at this facility, shall comply with the requirements contained in the attached acid rain permit application (OMB No. 2060-0258) signed by the Alternate Designated Representative Craig R. Larson on 05/25/2021.



ATTACHMENT "E": BART ALTERNATIVES

I. GENERAL

Where multiple emission limits, standards, or requirements apply to a unit, compliance with the most stringent emission limit, standard, or requirement shall be deemed compliance with less stringent emission limits, standards, or requirements.

[40 CFR 52.120(d); Operating Permit No. 64169 (as amended by Significant Permit Revision No. 63088), Attachment "E", Condition I]

II. COMPLIANCE OPTIONS – BART ALTERNATIVES

A. BART Alternative - Final Operating Strategies

[40 CFR 52.120(d); Operating Permit No. 64169 (as amended by Significant Permit Revision No. 63088), Attachment "E", Condition II.A]

The Permittee shall notify the Administrator and the Director of the selection of one of the following two BART Alternative operating strategies by December 31, 2022, and shall thereafter implement the selected operating strategy:

- 1. Operating Strategy-1 (OS-1): Installation and operation of SCR on Unit 1 no later than December 31, 2025.
- 2. Operating Strategy-2 (OS-2): Unit 1 shutdown no later than December 31, 2025.
- **B.** BART Alternative- Interim Operating Strategies

The Permittee shall comply with one of the three Unit 1 curtailment options under the BART Alternative interim operating strategy requirements listed in Condition II.D beginning no later than December 5, 2017, and continuing until the Permittee either has permanently shut down Unit 1 in accordance with Condition II.A.2 or has installed and commenced operation of a SCR system on Unit 1 in accordance with Condition II.A.1.

[40 CFR 52.120(d); Operating Permit No. 64169 (as amended by Significant Permit Revision No. 63088), Attachment "E", Condition II.B]

- C. Emissions and Operational Limitations for Particulate Matter and H₂SO₄
 - 1. The Permittee shall not emit filterable particulate matter below 10 micron size (PM_{10}) in excess of 0.030 lb/MMBtu from Unit 1 and 0.030 lb/MMBtu from Unit 2, as determined by annual performance tests conducted in accordance with the particulate matter testing provisions of 40 CFR 60.46.

[40 CFR 52.120(d); Operating Permit No. 64169 (as amended by Significant Permit Revision No. 63088), Attachment "E", Condition II.C.1]

2. If a SCR on Unit 1 begins operation as provided by Condition II.A.1, the Permittee shall not emit total filterable and condensable particulate matter (as a surrogate for PM₁₀ and PM_{2.5}) below 10 micron size in excess of 0.033 lb/MMBtu from Unit 1, as determined by annual performance tests in accordance with Condition II.F.3.

[40 CFR 52.120(d); Operating Permit No. 64169 (as amended by Significant Permit Revision No. 63088), Attachment "E", Condition II.C.2; A.A.C. R18-2-406]

3. If a SCR on Unit 1 begins operation as provided by Condition II.A.1, the Permittee shall not emit H₂SO₄ in excess of 0.0050 lb/MMBtu from Unit 1, as determined by annual performance tests in accordance with Condition II.F.4.

[40 CFR 52.120(d); Operating Permit No. 64169 (as amended by Significant Permit Revision No. 63088), Attachment "E", Condition II.C.3; A.A.C. R18-2-406]

4. Authority to construct the SCR system on Unit 1 shall terminate if the Permittee does not commence construction within 18 months after the date of issuance of Operating Permit No. 64169 (as amended by Significant Permit Revision No. 63088) or if, during construction, the Permittee suspends work for more than 18 months. The Director may extend the 18-month period upon a satisfactory showing that an extension is justified.

[40 CFR 52.120(d); Operating Permit No. 64169 (as amended by Significant Permit Revision No. 63088), Attachment "E", Condition II.C.4; A.A.C. R18-2-402. J]

D. Emissions and Operational Limitations for Unit 1 and Unit 2 for NO_x and SO_2

[40 CFR 52.120(d); Operating Permit No. 64169 (as amended by Significant Permit Revision No. 63088), Attachment "E", Condition II D]

- 1. BART Alternative Interim Operating Strategy Requirements
 - a. Until operating under a final BART Alternative operating strategy pursuant to Condition II.A.1 or II.A.2, the Permittee shall not exceed the following NO_x emission rates on a 30-boiler-operating-day average
 - (1) 0.320 lb/MMBtu for Unit 1.
 - (2) 0.080 lb/MMBtu for Unit 2.
 - b. Until operating under a final BART Alternative operating strategy pursuant to Condition II.A.1 or II.A.2, the Permittee shall not exceed the following SO₂ emission rates on a 30-boiler-operating-day average
 - (1) 0.060 lb/MMBtu for Unit 1.
 - (2) 0.060 lb/MMBtu for Unit 2.
 - c. For the first compliance year (2017), the Permittee shall cause Unit 1 to be shut down on December 5, 2017, and shall not re-start the unit before January 20, 2018, or January 31, 2018, depending on the applicable Interim Operating Strategy option as listed in Table 1.
 - d. Beginning in calendar year 2018 and continuing each year thereafter until the Final BART Alternative Compliance Date pursuant to Condition II.D.2.b, the Permittee shall select, for each such year, an Interim Operating Strategy option as outlined in Table 1 and shall implement the selected interim operating strategy with respect to that year.



II. COMPLIANCE OPTIONS – BART ALTERNATIVES

	Unit	t 1	Unit 2	
Strategies	(lb/MMBtu) (H	ighest 30-boiler-	operating-day	Unit 1 Curtailment
		average)		Period
	NO _x	SC	O_2	
IS 2	0.320	0.060	0.060	Oct. 21 to Jan. 31
IS 3	0.320	0.050	0.050	Nov. 21 to Jan. 20
IS 4	0.310	0.060	0.060	Nov. 21 to Jan. 20
IS 2, IS 3,		1,970 tons		
and IS 4		calendar year s	tarting in 2018	
		(Unit 1 and Un	it 2 combined)	

Table 1: Seasonal Curtailment Options for Unit 1 Interim Operating Strategies (IS)

- (1) To qualify for an Interim Operating Strategy option, the Permittee must demonstrate that NO_x emissions from Unit 1, and SO_2 emissions from Unit 1 and Unit 2, did not exceed the emission limit specified for that IS option in Table 1 during the calendar year.
- (2) By October 21 of each calendar year, the Permittee shall notify the Administrator and the Director of the applicable Interim Operating Strategy option for the calendar year in which the notification is given, except that for 2017, notification shall be given no later than December 5, 2017. This notification shall include the highest 30-boiler-operating-day average NO_x emission rate for Unit 1, the highest 30-boiler-operating-day average SO_2 emission rate for Unit 1, and the highest 30-boiler-operating-day average SO_2 emissions for Unit 2 for each boiler-operating-day during the calendar year up to and not including the October 21 notification date.
- (3) For each calendar year after selecting an Interim Operating Strategy option, the Permittee shall not allow NO_x emissions from Unit 1 to exceed the emission rate associated with that option beginning on October 21 of the calendar year in which the strategy was selected through the end of the Unit 1 curtailment period. In the event the emissions limits are exceeded, the excess emissions provisions of Attachment A shall apply.
- (4) For each calendar year after selecting an Interim Operating Strategy option, the Permittee shall not allow SO₂ emissions from Unit 1 or Unit 2 to exceed the emission rate associated with that option beginning on October 21 of the calendar year in which the strategy was selected through the end of the Unit 1 curtailment



period. In the event the emissions limits are exceeded, the excess emissions provisions of Attachment A shall apply.

- e. Beginning January 1, 2018, the Permittee shall not emit more than 1,970 combined tons of SO_2 from the stacks of Unit 1 and Unit 2 in any calendar year.
- 2. BART Alternative Final Operating Strategy Requirements
 - a. Table 2 below lists the NO_x, SO₂, and PM₁₀ emission standards that Unit 1 and Unit 2 shall meet upon final implementation of a final BART Alternative Operating Strategy pursuant to Condition II.A.1 or II.A.2.

Final BART	Unit 1			Unit 2			Annual
Alternative	(lb/MMBtu) (30- boiler-operating-day average)						Combined
Operating							Unit 1 and
Strategies	NO _x	SO_2	PM_{10}^{1}	NO _x	SO_2	PM_{10}	Unit 2 SO ₂
							Cap
							(Tons/year)
OS-1	0.065	0.060	0.033	0.080	0.060	0.030	1,970
SCR							
Installation*							
OS-2	0.00	0.00	0.00	0.080	0.060	0.030	1,080
Unit 1							(Unit 2 only)
Shutdown**							

Table 2: Final BART Alternative Operating Strategy

* SCR installation and operation no later than December 31, 2025. Unit 1 will be subject to a 0.033 total $PM_{10/2.5}$ BACT limit in Condition II.C.2.

**Unit 1 shut down no later than December 31, 2025.

Notification of selection of the Final BART Alternative Operating Strategy shall be sent by SRP to EPA and ADEQ by December 31, 2022.

 1 PM₁₀ BART limits are based on filterable PM testing using method 5 as provided in Attachment B.

b. The date on which both Unit 1 and Unit 2 begin complying with the emission limits in Table 2, which shall be no later than December 31, 2025, shall be the "Final BART Alternative Compliance Date."

E. Air Pollution Control Requirements

1. At all times during the operation of Unit 1 and until the SCR system is installed on Unit 1, the Permittee shall operate the low NO_x burners and overfire air in a manner consistent with technological limitations, manufacturer's specifications, and good engineering and good air pollution control practices for minimizing emissions.

[40 CFR 52.120(d); Operating Permit No. 64169 (as amended by Significant Permit Revision No. 63088), Attachment "E", Condition II E.1;d A.A.C. R-18-2-331.A.3.e] [Material Permit Condition indicated by italics and underline]



2. If OS-1 is selected, the Permittee shall install a SCR system on Unit 1 no later than December 31, 2025. At all times during the operation of Unit 1 after the SCR commences operation, the Permittee shall operate the SCR in a manner consistent with technological limitations, manufacturer's specifications, and good engineering and maintenance practices for minimizing emissions to the extent practicable.

[40 CFR 52.120(d); Operating Permit No. 64169 (as amended by Significant Permit Revision No. 63088), Attachment "E", Condition II E.2; A.A.C. R-18-2-331.A.3.c & e] [Material Permit Condition indicated by italics and underline]

> 3. <u>At all times during the operation of Unit 2, the Permittee shall operate the low NO_x </u> <u>burners, overfire air, and the SCR system in accordance with manufacturer's</u> <u>specifications and good engineering practices to minimize emissions to the extent</u> practicable.

[40 CFR 52.120(d); Operating Permit No. 64169 (as amended by Significant Permit Revision No. 63088), Attachment "E", Condition II E.3; A.A.C. R-18-2-331.A.3.e] [Material Permit Condition indicated by italics and underline]

4. <u>At all times, including during periods of startup, shutdown, and malfunction, the</u> <u>Permittee shall, to the extent practicable, maintain and operate each unit in a</u> <u>manner consistent with good air pollution control practices for minimizing</u> <u>emissions to the extent practicable.</u>

[40 CFR 52.120(d); Operating Permit No. 64169 (as amended by Significant Permit Revision No. 63088), Attachment "E", Condition II E.4; A.A.C. R-18-2-331.A.3.e] [Material Permit Condition indicated by italics and underline]

> 5. <u>The Permittee shall, at all times when Unit 1 and Unit 2 are operating,</u> <u>continuously operate the Wet Flue Gas Desulfurization systems and Hot Side</u> <u>Electrostatic Precipitators in accordance with manufacturer's specifications and</u> good engineering practices to minimize emissions to the extent practicable.

[40 CFR 52.120(d); Operating Permit No. 64169 (as amended by Significant Permit Revision No. 63088), Attachment "E", Condition II E.5; A.A.C. R-18-2-331.A.3.e]

[Material Permit Condition indicated by italics and underline]

- **F.** Compliance Determination Requirements
 - 1. Oxides of Nitrogen (NO_x)
 - a. <u>At all times, the Permittee shall calibrate</u>, maintain, and operate <u>a</u> <u>continuous emissions monitoring system for monitoring NO_x emissions in</u> accordance with 40 CFR Part 75 requirements.

[40 CFR 52.120(d); Operating Permit No. 64169 (as amended by Significant Permit Revision No. 63088), Attachment "E", Condition II F.1.a; A.A.C. R-18-2-331.A.3.c] [Material Permit Condition indicated by italics and underline]

b. The Permittee shall demonstrate compliance with the NO_x emission limitations specified in Condition II.D.1 or 2 (whichever is applicable) in accordance with the following procedure:

[40 CFR 52.120(d); Operating Permit No. 64169 (as amended by Significant Permit Revision No. 63088), Attachment "E", Condition II.F.1.b]



- (1) Sum the total pounds of NO_x emitted from each unit during the current boiler operating day and the immediately preceding twenty-nine (29) boiler operating days for that unit;
- Sum the total heat input to each unit, in MMBtu, during the current boiler operating day and the immediately preceding twenty-nine (29) boiler operating days for that unit; and
- (3) Divide the total number of pounds of NO_x emitted from each unit during the thirty (30) boiler operating days by the total heat input during the thirty (30) boiler operating days. A new 30-boileroperating-day average NO_x emission rate shall be calculated for each new boiler operating day. Each 30-boiler-operating-day average NO_x emission rate shall include all emissions and all heat input that occur during all periods within any boiler operating day, including emissions from startup, shutdown, and malfunction.
- c. If a valid NO_x -pounds-per-hour value or a valid heat input value is not available for any hour for a unit in a given boiler operating day, the NO_x -pounds-per-hour value or the heat input value (as the case may be) for that hour shall not be used in the calculation of the 30-boiler-operating-day average.

[40 CFR 52.120(d); Operating Permit No. 64169 (as amended by Significant Permit Revision No. 63088), Attachment "E", Condition II.F.1.c]

d. The Permittee shall maintain records of the 30-boiler-operating-day average NO_x emission rate for each unit for each boiler operating day.

[40 CFR 52.120(d); Operating Permit No. 64169 (as amended by Significant Permit Revision No. 63088), Attachment "E", Condition II .F.1.d]

2. Sulfur Dioxide (SO₂)

a. <u>At all times, the Permittee shall calibrate</u>, maintain, and operate <u>a</u> <u>continuous emissions monitoring system for monitoring SO₂ emissions in</u> accordance with 40 CFR Part 75 requirements.

[40 CFR 52.120(d); Operating Permit No. 64169 (as amended by Significant Permit Revision No. 63088), Attachment "E", Condition II.F.2.a; A.A.C. R-18-2-331.A.3.c] [Material Permit Condition indicated by italics and underline]

b. The Permittee shall demonstrate compliance with the SO₂ emission limitations specified in Condition II.D.1.b or Condition II.D.2.a (whichever is applicable) in accordance with the following procedure:

[40 CFR 52.120(d); Operating Permit No. 64169 (as amended by Significant Permit Revision No. 63088), Attachment "E", Condition II.F.2.b]

(1) Sum the total pounds of SO₂ emitted from each unit during the current boiler operating day and the immediately preceding twenty-nine (29) boiler operating days for that unit.



- (2) Sum the total heat input from each unit, in MMBtu, during the current boiler operating day and the immediately preceding twenty-nine (29) boiler-operating days for that unit.
- (3) Divide the total number of pounds of SO₂ emitted from each unit during the thirty (30) boiler operating days by the total heat input during the thirty (30) boiler operating days. A new 30-boileroperating-day average SO₂ emission rate shall be calculated for each new boiler operating day. Each 30-boiler-operating-day average SO₂ emission rate shall include all emissions and all heat input that occur during all periods within any boiler operating day, including emissions from startup, shutdown, and malfunction.
- c. In determining the 30-boiler-operating-day average SO₂ emission rate, the Permittee shall use CEMS in accordance with the procedures of 40 CFR Part 75 except for the following, as to which the Permittee shall follow 40 CFR Part 63.10010(e)(4) and (f):

[40 CFR 52.120(d); Operating Permit No. 64169 (as amended by Significant Permit Revision No. 63088), Attachment "E", Condition II.F.2.c]

- (1) SO_2 emissions data shall not be bias adjusted,
- (2) The missing data substitution procedures from 40 CFR Part 75 shall not apply, and
- (3) Diluent capping (i.e., 5% CO₂) will be applied to the SO₂ emission calculation for any hours where the measured CO₂ concentration is less than 5% following the procedures in 40 CFR Part 63.10007(f).
- d. If a valid SO_2 pounds per hour value or a valid heat input value is not available for any hour for a unit in a given boiler operating day, the SO_2 pounds per hour value or the heat input value (as the case may be) for that hour shall not be used in the calculation of the 30-boiler-operating-day average.

[40 CFR 52.120(d); Operating Permit No. 64169 (as amended by Significant Permit Revision No. 63088), Attachment "E", Condition II.F.2.d]

e. The Permittee shall maintain records of the 30-boiler-operating-day average SO_2 emission rate for each unit for each boiler-operating day.

[40 CFR 52.120(d); Operating Permit No. 64169 (as amended by Significant Permit Revision No. 63088), Attachment "E", Condition II.F.2.e]

f. The Permittee shall demonstrate compliance with the SO₂ emission limitation specified in Condition II.D.1.e by daily summing the total tons of SO₂ emitted from each unit during the current calendar year.

[40 CFR 52.120(d); Operating Permit No. 64169 (as amended by Significant Permit Revision No. 63088), Attachment "E", Condition II.F.2.f]

3. Particulate Matter



a. If OS-1 is selected, within 180 days after installation and commencing commercial operation of a SCR system on Unit 1, the Permittee shall conduct a performance test to determine compliance with the total particulate matter emission limitation established in Condition II.C.2 using EPA Method 5, in 40 CFR part 60, Appendix A-3, and Method 202 in 40 CFR Part 51- Appendix M, and/or other approved alternative test methods. Thereafter, the tests shall be conducted annually.

[40 CFR 52.120(d); Operating Permit No. 64169 (as amended by Significant Permit Revision No. 63088), Attachment "E", Condition II.F.3.a; A.A.C. R18-2-406]

b. A test protocol shall be submitted to EPA and ADEQ a minimum of 30 days prior to the scheduled testing. The protocol shall identify which method(s) will be used to demonstrate compliance.

[40 CFR 52.120(d); Operating Permit No. 64169 (as amended by Significant Permit Revision No. 63088), Attachment "E", Condition II.F.3.b; A.A.C. R18-2-406]

c. Each test shall consist of three runs, with each run at least 120 minutes in duration and with each run collecting a minimum sample of 60 dry standard cubic feet. Results shall be reported in lb/MMBtu using the calculation in Method 19 in 40 CFR Part 60 Appendix A-7.

[40 CFR 52.120(d); Operating Permit No. 64169 (as amended by Significant Permit Revision No. 63088), Attachment "E", Condition II.F.3.c; A.A.C. R18-2-406]

4. Sulfuric Acid (H_2SO_4) Mist

[40 CFR 52.120(d); Operating Permit No. 64169 (as amended by Significant Permit Revision No. 63088), Attachment "E", Condition II.F.4; A.A.C. R18-2-406]

- a. If OS-1 is selected, within 180 days after installation and commencing commercial operation of a SCR system on Unit 1, the Permittee shall conduct performance tests using EPA Conditional Test Method 13 (CTM-13) or an approved alternative test method, to show compliance with the emission limit in Condition II.C.3. Thereafter, the tests shall be conducted annually.
- b. If the Permittee requests approval of an alternative test method, the Permittee must submit its request for approval to the Director at least 60 days prior to commencing the test program. The Permittee must notify the Director at least 30 days prior to commencing the test program and shall submit the test report to the Director within 60 days after completing the test program.

G. Monitoring Requirements

1. <u>At all times, the Permittee shall calibrate</u>, maintain, and operate <u>CEMS, in full</u> compliance with the requirements of 40 CFR Part 75, to accurately measure SO₂, <u>NO_x, diluent, and stack gas volumetric flow rate from each unit.</u>

[40 CFR 52.120(d); Operating Permit No. 64169 (as amended by Significant Permit Revision No. 63088), Attachment "E", Condition II.G.1); A.A.C. R-18-2-331.A.3.c] [Material Permit Condition indicated by italics and underline]



II. COMPLIANCE OPTIONS – BART ALTERNATIVES

2. All valid CEMS hourly data shall be used to determine compliance with the emission limitations for NO_x and SO_2 in Condition II.D.

[40 CFR 52.120(d); Operating Permit No. 64169 (as amended by Significant Permit Revision No. 63088), Attachment "E", Condition II.G.2]

H. Recordkeeping Requirements

[40 CFR 52.120(d); Operating Permit No. 64169 (as amended by Significant Permit Revision No. 63088), Attachment "E", Condition II.H]

The Permittee shall maintain the following records for five years:

- 1. All CEMS data including the date, place, and time of sampling or measurement; parameters sampled or measured; and results.
- 2. Daily 30-boiler-operating-day average emission rates for NO_x and SO_2 , when applicable, for each unit calculated in accordance with Conditions II.F.1 and 2.
- 3. Records of quality assurance and quality control activities for emissions measuring systems, including, but not limited to. Any records required by 40 CFR Part 75.
- 4. Records of the relative accuracy test for hourly NO_x and SO_2 lb/hr measurement and hourly heat input measurement.
- 5. Records of all major maintenance activities conducted on emission units, air pollution control equipment, and CEMS.
- 6. Any other records required by 40 CFR Part 75.
- 7. Records of annual SO_2 emissions from Units 1 and 2.

I. Reporting Requirements

[40 CFR 52.120(d); Operating Permit No. 64169 (as amended by Significant Permit Revision No. 63088), Attachment "E", Condition II.I]

All reports shall be submitted to ADEQ and the EPA.

- 1. The owner/operator shall notify the Administrator and the Director within ten (10) business days after completion of any installation of a Selective Catalytic Reduction system on Unit 1 subject to this section.
- 2. Within 30 days after the end of every calendar quarter, the Permittee shall submit a report that lists the daily 30-boiler-operating-day average emission rates for NO_x and SO_2 for each unit calculated in Conditions II.F.1.b and II.F.2.b, respectively, and SO_2 annual emissions calculated in Condition II.F.2.f.