



ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

AIR QUALITY CLASS I PROPOSED FINAL PERMIT

COMPANY: Bowie Power Station, LLC
FACILITY: Bowie Power Station Project
PERMIT #: 58787
PROPOSED FINAL ISSUE DATE: July 21, 2014
DATE EXPIRES: _____

SUMMARY

This Air Quality Class I Permit is issued to Bowie Power Station, LLC, the Permittee, for the construction and operation of a power generating plant, located approximately two miles north of the unincorporated community of Bowie, in Cochise County, Arizona.

The planned Bowie Power Station will be a natural gas-fired, combined cycle power plant with a total rating of 1,050 Megawatts (MW) (nominal). This permit covers Phase 1, which is the first of two identical construction phases. Phase 1 comprises two combustion turbine generators (CTG), two heat recovery steam generators (HRSG) with duct firing, one steam turbine generator (STG), and one mechanical draft nine-cell cooling tower. Auxiliary equipment include a natural gas-fired boiler, one diesel-fired emergency fire pump, two evaporation ponds, and five circuit breakers.

Pollution control equipment for the CTG/HRSG units include dry low-NO_x (DLN) combustors and selective catalytic reduction (SCR) for the control of nitrogen oxides (NO_x), and oxidation catalyst for the control of carbon monoxide (CO), volatile organic compounds (VOC), and hazardous air pollutants (HAPs). The auxiliary boiler will be equipped with ultra-low-NO_x burners and flue gas recirculation and the mechanical draft cooling tower will be equipped with high-efficiency drift eliminators. With the exception of the diesel-fueled fire pump engine, the only fuel used at the facility will be pipeline quality natural gas; there are no provisions for back-up fuels for the CTG/HRSG units or the auxiliary boiler.

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

Bowie Power Station is a major source because the potential emission rates of the following regulated NSR pollutants are greater than 100 tons per year: NO_x, CO, and greenhouse gases (GHG). Bowie Power Station is also subject to the Acid Rain Program of the Clean Air Act. This permit is issued in accordance with Titles I and V of the Clean Air Act, and Title 49, Chapter 3 of the Arizona Revised Statutes (A.R.S.).

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ATTACHMENT “A”: GENERAL CONDITIONS

Air Quality Control Permit No. 58787 for Bowie Power Station Project

I. PERMIT EXPIRATION AND RENEWAL

[A.R.S. § 49-426.F, A.A.C. R18-2-304.C.2, and -306.A.1]

- A. This permit is valid for a period of five years from the date of issuance.
- B. The Permittee shall submit an application for renewal of this permit at least 6 months, but not more than 18 months, prior to the date of permit expiration.

II. COMPLIANCE WITH PERMIT CONDITIONS

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

- A. The Permittee shall comply with all conditions of this permit including all applicable requirements of the Arizona Revised Statutes (A.R.S.) Title 49, Chapter 3, and the and air quality rules under Title 18, Chapter 2 of the Arizona Administrative Code. Any noncompliance is grounds for enforcement action; for permit termination, revocation and reissuance, or revision; or for denial of a permit renewal application. In addition, noncompliance with any federally enforceable requirement constitutes a violation of the Clean Air Act.
- B. It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

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

[A.A.C. R18-2-306.A.8.c, -321.A.1, and -321.A.2]

- A. The permit may be revised, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a permit revision, revocation and reissuance, termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.
- B. The permit shall be reopened and revised under any of the following circumstances:
 - 1. Additional applicable requirements under the Clean Air Act become applicable to the Class I source. Such a reopening shall only occur if there are three or more years remaining in the permit term. The reopening shall be completed no later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless an application for renewal has been submitted pursuant to A.A.C. R18-2-322.B. Any permit revision required

pursuant to this subparagraph shall comply with the provisions in A.A.C. R18-2-322 for permit renewal and shall reset the five-year permit term.

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

IV. POSTING OF PERMIT

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

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

V. FEE PAYMENT

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

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

VI. ANNUAL EMISSION INVENTORY QUESTIONNAIRE

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

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

- B. The questionnaire shall be on a form provided by the Director and shall include the information required by A.A.C. R18-2-327.

VII. COMPLIANCE CERTIFICATION

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

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

The compliance certifications shall include the following:

1. Identification of each term or condition of the permit that is the basis of the certification;
 2. Identification of the methods or other means used by the Permittee for determining the compliance status with each term and condition during the certification period,
 3. The status of compliance with the terms and conditions of the permit for the period covered by the certification, including whether compliance during the period was continuous or intermittent. The certification shall be based on the methods or means designated in Condition VII.A.2 above. The certifications shall identify each deviation and take it into account for consideration in the compliance certification;
 4. For emission units subject to 40 CFR Part 64, the certification shall also identify as possible exceptions to compliance any period during which compliance is required and in which an excursion or exceedance defined under 40 CFR Part 64 occurred;
 5. All instances of deviations from permit requirements reported pursuant to Condition XII.B of this Attachment; and
 6. Other facts the Director may require to determine the compliance status of the source.
- B. A copy of all compliance certifications shall also be submitted to the EPA Administrator.
- C. If any outstanding compliance schedule exists, a progress report shall be submitted with the semi-annual compliance certifications required in Condition VII.A above.

VIII. CERTIFICATION OF TRUTH, ACCURACY AND COMPLETENESS

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

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

IX. INSPECTION AND ENTRY

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

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

- A. Enter upon the Permittee's premises where a source is located, emissions-related activity is conducted, or where records are required to be kept under the conditions of the permit;
- B. Have access to and copy, at reasonable times, any records that are required to be kept under the conditions of the permit;
- C. Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit;
- D. Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the permit or other applicable requirements; and
- E. Record any inspection by use of written, electronic, magnetic and photographic media.

X. PERMIT REVISION PURSUANT TO FEDERAL HAZARDOUS AIR POLLUTANT STANDARD

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

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

XI. ACCIDENTAL RELEASE PROGRAM

[40 CFR Part 68]

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

XII. EXCESS EMISSIONS, PERMIT DEVIATIONS, AND EMERGENCY REPORTING

- A. Excess Emissions Reporting

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

- 1. Excess emissions shall be reported as follows:

- a. The Permittee shall report to the Director any emissions in excess of the limits established by this permit. Such report shall be in two parts as specified below:
 - (1) Notification by telephone or facsimile within 24 hours of the time when the Permittee first learned of the occurrence of excess emissions including all available information from Condition XII.A.1.b below.
 - (2) Detailed written notification by submission of an excess emissions report within 72 hours of the notification pursuant to Condition XII.A.1.a.(1) above.
- b. The report shall contain the following information:
 - (1) Identity of each stack or other emission point where the excess emissions occurred;
 - (2) Magnitude of the excess emissions expressed in the units of the applicable emission limitation and the operating data and calculations used in determining the magnitude of the excess emissions;
 - (3) Date, time and duration, or expected duration, of the excess emissions;
 - (4) Identity of the equipment from which the excess emissions emanated;
 - (5) Nature and cause of such emissions;
 - (6) If the excess emissions were the result of a malfunction, steps taken to remedy the malfunction and the steps taken or planned to prevent the recurrence of such malfunctions; and
 - (7) Steps taken to limit the excess emissions. If the excess emissions resulted from start-up or malfunction, the report shall contain a list of the steps taken to comply with the permit procedures.

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

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

B. Permit Deviations Reporting

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

C. Emergency Provision

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

1. An “emergency” means any situation arising from sudden and reasonable unforeseeable events beyond the control of the source, including acts of God, that require immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.
2. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if Condition XII.C.3 is met.
3. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - a. An emergency occurred and that the Permittee can identify the cause(s) of the emergency;
 - b. The permitted facility was being properly operated at the time;
 - c. During the period of the emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and
 - d. The Permittee submitted notice of the emergency to the Director by certified mail, facsimile, or hand delivery within two working days of the time when emission limitations were exceeded due to the emergency. This notice shall contain a description of the emergency, any steps taken to mitigate emissions, and corrective action taken.
4. In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
5. This provision is in addition to any emergency or upset provision contained in any applicable requirement.

D. Compliance Schedule

[A.R.S. § 49-426.I.5]

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

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

1. Applicability

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

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

2. Affirmative Defense for Malfunctions

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

- a. The excess emissions resulted from a sudden and unavoidable breakdown of process equipment or air pollution control equipment beyond the reasonable control of the Permittee;
- b. The air pollution control equipment, process equipment, or processes were at all times maintained and operated in a manner consistent with good practice for minimizing emissions;
- c. If repairs were required, the repairs were made in an expeditious fashion when the applicable emission limitations were being exceeded. Off-shift

labor and overtime were utilized where practicable to ensure that the repairs were made as expeditiously as possible. If off-shift labor and overtime were not utilized, the Permittee satisfactorily demonstrated that the measures were impracticable;

- d. The amount and duration of the excess emissions (including any bypass operation) were minimized to the maximum extent practicable during periods of such emissions;
- e. All reasonable steps were taken to minimize the impact of the excess emissions on ambient air quality;
- f. The excess emissions were not part of a recurring pattern indicative of inadequate design, operation, or maintenance;
- g. During the period of excess emissions there were no exceedances of the relevant ambient air quality standards established in Title 18, Chapter 2, Article 2 of the Arizona Administrative Code that could be attributed to the emitting source;
- h. The excess emissions did not stem from any activity or event that could have been foreseen and avoided, or planned, and could not have been avoided by better operations and maintenance practices;
- i. All emissions monitoring systems were kept in operation if at all practicable; and
- j. The Permittee's actions in response to the excess emissions were documented by contemporaneous records

3. Affirmative Defense for Startup and Shutdown

- a. Except as provided in Condition XII.E.3.b below, and unless otherwise provided for in the applicable requirement, emissions in excess of an applicable emission limitation due to startup and shutdown shall constitute a violation. When emissions in excess of an applicable emission limitation are due to startup and shutdown, the Permittee has an affirmative defense to a civil or administrative enforcement proceeding based on that violation, other than a judicial action seeking injunctive relief, if the Permittee has complied with the reporting requirements of A.A.C. R18-2-310.01 and has demonstrated all of the following:
 - (1) The excess emissions could not have been prevented through careful and prudent planning and design;
 - (2) If the excess emissions were the result of a bypass of control equipment, the bypass was unavoidable to prevent loss of life,

personal injury, or severe damage to air pollution control equipment, production equipment, or other property;

- (3) The air pollution control equipment, process equipment, or processes were at all times maintained and operated in a manner consistent with good practice for minimizing emissions;
- (4) The amount and duration of the excess emissions (including any bypass operation) were minimized to the maximum extent practicable during periods of such emissions;
- (5) All reasonable steps were taken to minimize the impact of the excess emissions on ambient air quality;
- (6) During the period of excess emissions there were no exceedances of the relevant ambient air quality standards established in Title 18, Chapter 2, Article 2 of the Arizona Administrative Code that could be attributed to the emitting source;
- (7) All emissions monitoring systems were kept in operation if at all practicable; and
- (8) Contemporaneous records documented the Permittee's actions in response to the excess emissions.

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

4. Affirmative Defense for Malfunctions during Scheduled Maintenance

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

5. Demonstration of Reasonable and Practicable Measures

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

XIII. RECORD KEEPING REQUIREMENTS

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

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

1. The date, place as defined in the permit, and time of sampling or measurements;
 2. The date(s) analyses were performed;
 3. The name of the company or entity that performed the analyses;
 4. A description of the analytical techniques or methods used;
 5. The results of such analyses; and
 6. The operating conditions as existing at the time of sampling or measurement.
- B. The Permittee shall retain records of all required monitoring data and support information for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings or other data recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.
- C. All required records shall be maintained either in an unchangeable electronic format or in a handwritten logbook utilizing indelible ink.

XIV. REPORTING REQUIREMENTS

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

The Permittee shall submit the following reports:

- A. Compliance certifications in accordance with Section VII of Attachment "A."
- B. Excess emission; permit deviation, and emergency reports in accordance with Section XII of Attachment "A."
- C. Other reports required by any condition of Attachment "B."

XV. DUTY TO PROVIDE INFORMATION

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

- A. The Permittee shall furnish to the Director, within a reasonable time, any information that the Director may request in writing to determine whether cause exists for revising, revoking and reissuing, or terminating the permit, or to determine compliance with the permit. Upon request, the Permittee shall also furnish to the Director copies of records required to be kept by the permit. For information claimed to be confidential, the Permittee shall furnish an additional copy of such records directly to the Administrator along with a claim of confidentiality.
- B. If the Permittee has failed to submit any relevant facts or has submitted incorrect information in the permit application, the Permittee shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrected information.

XVI. PERMIT AMENDMENT OR REVISION

[A.A.C. R18-2-318, -319, and -320]

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

- A. Administrative Permit Amendment (A.A.C. R18-2-318);
- B. Minor Permit Revision (A.A.C. R18-2-319); and
- C. Significant Permit Revision (A.A.C. R18-2-320)

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

XVII. FACILITY CHANGE WITHOUT A PERMIT REVISION

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

- A. The Permittee may make changes at the permitted source without a permit revision if all of the following apply:
 - 1. The changes are not modifications under any provision of Title I of the Clean Air Act or under A.R.S. § 49-401.01(24);
 - 2. The changes do not exceed the emissions allowable under the permit whether expressed therein as a rate of emissions or in terms of total emissions;
 - 3. The changes do not violate any applicable requirements or trigger any additional applicable requirements;
 - 4. The changes satisfy all requirements for a minor permit revision under A.A.C. R18-2-319.A; and
 - 5. The changes do not contravene federally enforceable permit terms and conditions that are monitoring (including test methods), record keeping, reporting, or compliance certification requirements.
- B. The substitution of an item of process or pollution control equipment for an identical or substantially similar item of process or pollution control equipment shall qualify as a change that does not require a permit revision, if it meets all of the requirements of Conditions XVII.A and XVII.C of this Attachment.
- C. For each change under Conditions XVII.A and XVII.B above, a written notice by certified mail or hand delivery shall be received by the Director and the Administrator a minimum of 7 working days in advance of the change. Notifications of changes associated with emergency conditions, such as malfunctions necessitating the replacement of equipment, may be provided less than 7 working days in advance of the change, but must be provided as far in advance of the change, as possible or, if advance notification is not practicable, as soon after the change as possible.

- D. Each notification shall include:
 - 1. When the proposed change will occur;
 - 2. A description of the change;
 - 3. Any change in emissions of regulated air pollutants; and
 - 4. Any permit term or condition that is no longer applicable as a result of the change.
- E. The permit shield described in A.A.C. R18-2-325 shall not apply to any change made under this Section.
- F. Except as otherwise provided for in the permit, making a change from one alternative operating scenario to another as provided under A.A.C. R18-2-306.A.11 shall not require any prior notice under this Section.
- G. Notwithstanding any other part of this Section, the Director may require a permit to be revised for any change that, when considered together with any other changes submitted by the same source under this Section over the term of the permit, do not satisfy Condition XVII.A above.

XVIII. TESTING REQUIREMENTS

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

- A. The Permittee shall conduct performance tests as specified in the permit and at such other times as may be required by the Director.
- B. Operational Conditions during Testing

Tests shall be conducted during operation at the maximum possible capacity of each unit under representative operational conditions unless other conditions are required by the applicable test method or in this permit. With prior written approval from the Director, testing may be performed at a lower rate. Operations during periods of start-up, shutdown, and malfunction (as defined in A.A.C. R18-2-101) shall not constitute representative operational conditions unless otherwise specified in the applicable standard.
- C. Tests shall be conducted and data reduced in accordance with the test methods and procedures contained in the Arizona Testing Manual unless modified by the Director pursuant to A.A.C. R18-2-312.B.
- D. Test Plan

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

1. Test duration;
2. Test location(s);
3. Test method(s); and
4. Source operation and other parameters that may affect test results.

E. Stack Sampling Facilities

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

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

F. Interpretation of Final Results

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

G. Report of Final Test Results

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

XIX. PROPERTY RIGHTS

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

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

XX. SEVERABILITY CLAUSE

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

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

XXI. PERMIT SHIELD

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

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

XXII. PROTECTION OF STRATOSPHERIC OZONE

[40 CFR Part 82]

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

XXIII. APPLICABILITY OF NSPS/NESHAP GENERAL PROVISIONS

[40 CFR Part 60, Part 63]

For all equipment subject to a New Source Performance Standard, 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.

ATTACHMENT “B”: SPECIFIC CONDITIONS

Air Quality Control Permit No. 58787 for Bowie Power Station Project, LLC

I. RELATIONSHIP OF PERMIT TO APPLICABLE STATE IMPLEMENTATION PLAN

[A.R.S. § 49-404.c and -426]

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

II. FACILITY-WIDE REQUIREMENTS

A. Operational Limitations

1. Authority to construct shall terminate if the Permittee does not commence construction within 18 months after the date of issuance of this proposed final Class I Permit 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.

[A.A.C. R18-2-402.I.4]

2. The Permittee shall operate and maintain all equipment at the facility in accordance with the manufacturer’s specifications.

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

B. Monitoring Requirement

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

Prior to beginning actual construction, the Permittee shall have on-site or on-call a person that is certified in EPA Reference Method 9 for the observation and evaluation of visible emissions.

C. Record Keeping Requirements

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

1. The Permittee shall maintain on-site records of the manufacturer’s specifications for all equipment identified in Attachment “C.”
2. All records, analyses, and reports shall be retained for a minimum of five years from the date of generation. The most recent two years of data shall be kept on-site.
3. For the purposes of determining compliance with any GHG emission limitation in this permit, the following Global Warming Potential factors, as listed in 40 CFR part 98, subpart A, Table A-1, amended on November 29, 2013 [78 *Fed. Reg.* 71948] and effective on January 1, 2014, shall be used:

CO ₂	1
CH ₄	25
N ₂ O	298
SF ₆	22,800

D. Reporting Requirements

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

1. The Permittee shall submit to the Department a notice of the date of commencement of construction within 30 days following such date.
2. The Permittee shall submit an updated equipment list along with the first semi-annual compliance certification required by Section VII.A of Attachment "A."
3. The Permittee shall submit reports of all monitoring activities required in Attachment "B" along with the compliance certifications required by Section VII.A of Attachment "A."

III. COMBUSTION TURBINE GENERATORS AND HEAT RECOVERY STEAM GENERATORS

A. Applicability

1. This Section applies to Combustion Turbine Generator (CTG) Units CTG1 and CTG2 and to Heat Recovery Steam Generator (HRSG) Units HRSG1 and HRSG 2.
2. A CTG in combination with a HRSG is considered a Combined Cycle System. Except as noted in Section I.1, the emission limits and operational limitations presented in this Section apply separately to each Combined Cycle System.

B. Operational Limitations

1. Operating Limits for Startup, Shutdown, and Tuning

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

a. Applicability

- (1) Startup means the setting in operation of a Combined Cycle System, beginning when fuel is first supplied to the turbine and ending at the point in time when the control equipment has reached operating temperature and emission limits in Sections III.D.1 and III.E.1 can be met.
- (2) Shutdown means the cessation of operation of a Combined Cycle System, beginning at the point in time when the combustion turbine load falls below the point at which the emission limits in

Sections III.D.1 and III.E.1 can be met and ending when the fuel supply to the turbine ceases.

- (3) Hot Start means a startup event occurring after a Combined Cycle System has been non-operational for a period of less than 8 hours.
 - (4) Warm Start means a startup event occurring after a Combined Cycle System has been non-operational for a period of at least 8 hours but less than 72 hours.
 - (5) Cold Start means a startup event occurring after a Combined Cycle System has been non-operational for a period of at least 72 hours.
 - (6) Tuning means an event during which the turbine is tested at various incremental loads and during which the emission limits in Sections III.D.1 and III.E.1 are not met.
- b. The Permittee shall not cause, allow, or permit the cumulative duration of startup and tuning events at a Combined Cycle System to exceed 325 hours per rolling 12-month period.
 - c. The Permittee shall not cause, allow, or permit the cumulative duration of shutdown events at a Combined Cycle System to exceed 91.25 hours per rolling 12-month period.

2. Operating Limits for Duct Firing

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

- a. The Permittee shall not cause, allow, or permit duct firing in HRSG1 or HRSG2 when the heat input to the corresponding turbine, CTG1 or CTG2, is less than 1,448 MMBtu/hr (HHV).
- b. The Permittee shall not cause, allow, or permit the total fuel consumption in HRSG1 or HRSG2 to exceed 1,774,080 MMBtu (HHV) per rolling 12-month period.

3. Fuel Limitation

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

[Material Permit Conditions are indicated with an underline and italics.]

The Permittee shall not burn any fuel other than pipeline quality natural gas in the Combustion Turbine Generators and Heat Recovery Steam Generators.

4. Monitoring Requirement

- a. *The Permittee shall install, calibrate, maintain, and operate a flow meter to monitor the unit-specific fuel flow to each of the Combustion Turbine*

Generators and the Heat Recovery Steam Generators in accordance with 40 CFR Part 75, Appendix D.

[A.A.C. R18-2-306.A.3.a, -331.A.3.c, -333.C; 40 CFR § 60.4345(c)]
[Material Permit Conditions are indicated with underline and italics.]

- b. The fuel flow meter shall meet all applicable requirements of 40 CFR Part 75. This shall include, but shall not be limited to, the requirements of 40 CFR Part 75, Appendix B, “Quality Assurance and Quality Control Procedures.”

[A.A.C. R18-2-306.A.3.a, -333.C; 40 CFR § 60.4345(e)]

- c. All required fuel flow rate data shall be reduced to hourly averages.

[A.A.C. R18-2-306.A.3.a; 40 CFR § 60.4350(e)]

5. Record Keeping Requirements

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

- a. The Permittee shall maintain daily records of all startup, shutdown, and tuning events for each Combined Cycle System. Records shall contain, at a minimum, the type of event and the duration of the event in hours and minutes.
- b. The Permittee shall maintain daily, monthly, and rolling 12-month total records of operation, in hours and minutes, for each operating mode (startup, shutdown, tuning, normal operation with duct firing, or normal operation without duct firing) for each Combined Cycle System.
- c. The Permittee shall maintain records of any periods during which a continuous monitoring system or device is inoperative.
- d. The Permittee shall maintain a daily record of the amount of natural gas combusted in each CTG, each HRSG, and each Combined Cycle System.

6. Reporting Requirements

- a. The Permittee shall comply with all applicable reporting requirements of 40 CFR Part 60 and 40 CFR Part 75.

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

7. Permit Shield

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

Compliance with the terms of Section III.B of this Attachment shall be deemed compliance with the following applicable requirements: 40 CFR § 60.4345, § 60.4350.

C. Particulate Matter (PM/PM10/PM2.5)

1. Emission Limitations/Standards

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

- a. Emissions of PM/PM10/PM2.5 from each Combined Cycle System shall not exceed 8.5 lb/hr, based on a 3-hour averaging time, during periods of duct firing.
- b. Emissions of PM/PM10/PM2.5 from each Combined Cycle System shall not exceed 6.5 lb/hr, based on a 3-hour averaging time, during periods of no duct firing.

2. Testing Requirements

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

Within 60 days after achieving the maximum production rate of each Combined Cycle System, but no later than 180 days after its initial startup (as defined by 40 CFR § 60.2), and at other times as may be required by the Director, the Permittee shall conduct performance tests for PM/PM10/PM2.5 using Reference Method 5 in appendix A-3 to 40 CFR part 60 and Method 202 in appendix M to 40 CFR part 51. The initial performance testing shall be conducted under representative operating conditions, which will include at a minimum 65% and 80% of peak load without duct firing and 100% of peak load both with and without duct firing.

3. Permit Shield

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

Compliance with the terms of this Section shall be deemed compliance with the following applicable requirements: A.A.C. R18-2-406.A.4.

D. Nitrogen Oxides (NO_x)

1. Emission Limitations/Standards

- a. Emissions of NO_x from each Combined Cycle System shall not exceed any of the following limits:

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

- (1) 2.0 ppmvd, corrected to 15% O₂, based on a one-hour average, excluding periods of startup, shutdown, and tuning.
- (2) 50.7 lb per hot startup event.
- (3) 78.9 lb per warm startup event.
- (4) 78.9 lb per cold startup event.
- (5) 78.9 lb/hr during tuning.
- (6) 16.4 lb per shutdown event.

- b. Emissions of NO_x from each Combined Cycle System shall not exceed 15 ppmvd, corrected to 15% O₂, on a 30 unit operating day rolling average basis.

[40 CFR § 60.4320, § 60.4350(h), § 60.4380(b)]

- (1) A 30 unit operating day rolling average is the arithmetic average of all hourly NO_x emission data in ppmvd measured by the CEMS for a given day and the twenty-nine unit operating days immediately preceding that unit operating day. A new 30 unit operating day average is calculated each unit operating day as the average of all hourly NO_x emissions rates for the preceding 30 unit operating days if a valid NO_x emission rate is obtained for at least 75 percent of all unit operating hours in that unit operating day.
- (2) “Unit operating day” means a 24-hour period between 12 midnight and the following midnight during which any fuel is combusted at any time in the Combined Cycle System. It is not necessary for fuel to be combusted continuously for the entire 24-hour period.
- (3) “Unit operating hour” means a clock hour during which any fuel is combusted in the Combined Cycle System. If the unit combusts fuel for the entire clock hour, it is considered to be a full unit operating hour. If the unit combusts fuel for only part of the clock hour, it is considered to be a partial unit operating hour.

2. Air Pollution Control Requirements

[A.A.C. R18-2-306.01, -331.A.3.d-e and -406.A.1; 40 CFR § 60.4333]
[Material Permit Conditions are indicated with an underline and italics.]

At all times, including periods of startup, shutdown, tuning, and malfunction, the Permittee shall, to the extent practicable, maintain and operate each Combined Cycle System, including dry low-NO_x Burner and SCR system, in a manner consistent with good air pollution control practice for minimizing emissions.

3. Monitoring, Record Keeping, and Reporting Requirements

a. Continuous Emissions Monitoring Systems

- (1) The Permittee shall install, calibrate, maintain, and operate a continuous emission monitoring systems (CEMS), including NO_x monitor and O₂ monitor, for determining the hourly NO_x emission rate in parts per million (ppmvd) and in lb/hr.

[A.A.C. R18-2-306.A.3.a, -331.A.3.c; 40 CFR 60.4335(b)(1)]
[Material Permit Conditions are indicated with an underline and italics.]

- (2) The CEMS for NO_x and O₂ shall meet all applicable requirements of 40 CFR Part 75. This shall include, but shall not be limited to, the following requirements:

[A.A.C. R18-2-306.A.3.a, -331.A.3.c, -333.C; 40 CFR 60.4345]
[Material Permit Conditions are indicated with an underline and italics.]

- (a) 40 CFR Part 75, Appendix A, "Specification and Test Procedures."
 - (b) 40 CFR Part 75, Appendix B, "Quality Assurance and Quality Control Procedures."
 - (c) Equipment performance requirements at 40 CFR § 75.10(b).
 - (d) Hourly operating requirements at 40 CFR § 75.10(d).
 - (e) Certification and re-certification requirements at 40 CFR § 75.20.
 - (f) The Permittee shall comply with all of the applicable recordkeeping and reporting requirements of 40 CFR Part 75, Subparts F and G, respectively.
- b. The Permittee shall operate the CEMS for NO_x and O₂ such that, for each unit operating hour in which a valid hourly average is obtained for both NO_x and O₂ monitors, the data acquisition and handling system must calculate and record the hourly NO_x emission rate in units of ppmvd, using the appropriate equation from method 19 in appendix A-7 to 40 CFR part 60.
- [A.A.C. R18-2-306.A.3.a; 40 CFR § 60.4350(b)]
- c. Only quality assured data from the CEMS shall be used. Periods where the missing data substitution procedures in subpart D of 40 CFR part 75 are applied are to be reported as monitor downtime in the excess emissions and monitoring performance report required under 40 CFR § 60.7(c).
- [A.A.C. R18-2-306.A.3.a; 40 CFR § 60.4350(d)]
- d. The Permittee shall maintain a file of all measurements, including continuous monitoring system data in ppmvd and lb/hr, 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 40 CFR part 60 recorded in a permanent form suitable for inspection.
- [A.A.C. R18-2-306.A.4.a; 40 CFR § 60.7(f), 40 CFR § 60.4350(f)]

- e. The Permittee shall notify the Department, within 30 days after CEMS installation, of the verification of operational status of all continuous monitoring systems including completion of the manufacturer's written recommendations for installation, operation, and calibration of the device.

[A.A.C. R18-2-306.A.5; 40 CFR § 60.13(b)]

- f. The Permittee shall furnish the Director within 60 days of completion, two, or upon request, more copies of a written report of the results of the performance evaluation of any CEMS required under 40 CFR § 60.8.

[A.A.C. R18-2-306.A.5; 40 CFR § 60.13(c)(2)]

- g. Excess emission and monitoring system performance (MSP) reports for CTG (Units 1 and 2) and HRSG (Units 1 and 2) shall be submitted to the Department and EPA Region IX semiannually. All quarterly reports shall be postmarked by the 30th day following the end of the six-month period. Each excess emission and MSP report shall include the information listed in 40 CFR § 60.7(c).

[A.A.C. R18-2-306.A.5; 40 CFR § 60.7(c)]

- h. The Permittee shall comply with all applicable reporting requirements of 40 CFR Part 60 and 40 CFR Part 75.

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

4. Testing Requirements

- a. Within 60 days after achieving the maximum production rate of each Combined Cycle System, but no later than 180 days after its initial startup (as defined by 40 CFR § 60.2), and at other times as may be required by the Director, the Permittee shall conduct a performance test for NO_x emissions using Method 7E in appendix A-4 to 40 CFR part 60 or Method 20 in appendix A-7 to 40 CFR part 60.

[A.A.C. R18-2-312; 40 CFR § 60.8; 40 CFR § 60.4400(a)]

- a. The initial performance test shall be conducted under representative operating conditions, which will include at a minimum 100% of peak load both with and without duct firing.

[A.A.C. R18-2-312; 40 CFR § 60.8]

5. Permit Shield

Compliance with the terms of this Section shall be deemed compliance with the following applicable requirements: A.A.C. R18-2-406.A.4; 40 CFR §§ 60.7, 60.8, 60.4320, 60.4333, 60.4335, 60.4345, 60.4350.

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

E. Carbon Monoxide (CO)

1. Emission Limitations/Standards

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

- a. Emissions of CO from each Combined Cycle System shall not exceed any of the following limits:
- (3) 2.0 ppmvd, corrected to 15% O₂, based on a one-hour average, excluding periods of startup, shutdown, and tuning.
 - (4) 131.1 lb per hot startup event.
 - (5) 145.0 lb per warm startup event.
 - (6) 145.0 lb per cold startup event.
 - (7) 145.0 lb/hr during tuning.
 - (8) 51.5 lb per shutdown event.

2. Air Pollution Control Requirements

[A.A.C. R18-2-306.01, -331.A.3.d-e and -406.A.1]

[Material Permit Conditions are indicated with an underline and italics.]

At all times, including periods of startup, shutdown, tuning, and malfunction, the Permittee shall, to the extent practicable, maintain and operate each Combined Cycle System, including *oxidation catalyst system*, in a manner consistent with good air pollution control practice for minimizing emissions.

3. Monitoring, Record Keeping, and Reporting Requirements

- a. The Permittee shall install, calibrate, maintain, and operate a continuous emission monitoring systems (CEMS), including CO monitor and O₂ monitor, for determining the hourly CO emission rate in parts per million (ppmvd) and in lb/hr. The CO and O₂ monitors shall be installed and certified according to Performance Specifications 4 and 3, respectively, in appendix B to 40 CFR part 60.

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

[Material Permit Conditions are indicated with an underline and italics.]

- b. The Permittee shall operate the CEMS for CO and O₂ such that, for each unit operating hour in which a valid hourly average is obtained for both CO and O₂ monitors, the data acquisition and handling system must calculate and record the hourly CO emission rate in units of ppmvd, using the appropriate equation from method 19 in appendix A-7 to 40 CFR part 60. Only quality assured data from the CEMS shall be used.

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

- c. The Permittee shall maintain a file of all measurements, including continuous monitoring system data in ppmvd and lb/hr, 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 recorded in a permanent form suitable for inspection.

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

- a. The Permittee shall notify the Department, within 30 days after CEMS installation, of the verification of operational status of all continuous monitoring systems including completion of the manufacturer's written recommendations for installation, operation, and calibration of the device.

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

4. Permit Shield

Compliance with the terms of this Section shall be deemed compliance with the following applicable requirements: A.A.C. R18-2-406.A.4.

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

F. Sulfur Dioxide (SO₂)

1. Emission Limitations/Standards

- a. *The Permittee shall not combust in the Combustion Turbine Generators or Heat Recovery Steam Generators natural gas with a sulfur content in excess of 0.75 grains per 100 dscf.*

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

[Material Permit Conditions are indicated with an underline and italics.]

- b. The Permittee shall not combust in the Combustion Turbine Generators or Heat Recovery Steam Generators natural gas which contains total potential sulfur emissions in excess of 0.060 lb SO₂/MMBtu heat input.

[40 CFR § 60.4330(a)]

2. Record Keeping Requirements

[A.A.C. R18-2-306.A.4.a; 40 CFR § 60.4365(a)]

The Permittee shall demonstrate compliance with Condition III.F.1 by maintaining records of a current, valid purchase contract, tariff sheet or transportation contract for the natural gas combusted in the Combustion Turbine Generators and Heat Recovery Steam Generators, specifying that the maximum total sulfur content of the fuel does not exceed 0.75 grains per 100 dscf.

3. Testing Requirements

[A.A.C. R18-2-312; 40 CFR § 60.8; 40 CFR § 60.4415(a)]

- a. Within 60 days after achieving the maximum production rate of each Combined Cycle System, but no later than 180 days after its initial startup (as defined by 40 CFR § 60.2), and subsequently on an annual basis (no more than 14 calendar months following the previous

performance test), the Permittee shall conduct a performance test for sulfur content of the natural gas combusted in each Combined Cycle System.

- b. Each performance test shall comprise collection of a representative fuel sample in accordance with ASTM D5287 and analysis of the sample for total sulfur content using ASTM D1072, D3246, D4084, D4468, D4810, D6228, or D6667. The fuel analysis may be performed by the Permittee, a service contractor, the fuel vendor, or any other qualified agency.

4. **Permit Shield**

Compliance with the terms of this Section III.E.1 shall be deemed compliance with the following applicable requirements: 40 CFR §§ 60.4330, 60.4365, 60.4415.

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

G. Volatile Organic Compounds (VOC)

1. Emission Limitations/Standards

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

[Material Permit Conditions are indicated with an underline and italics.]

- a. Emissions of VOC from each Combined Cycle System shall not exceed any of the following limits:

- (1) 1.6 lb/hr, based on a three-hour average, excluding periods of startup, shutdown, tuning, and duct firing.
- (2) 4.1 lb/hr, based on a three-hour average, during periods of duct firing.
- (3) 15.5 tons per rolling 12-month period.

2. Air Pollution Control Requirements

[A.A.C. R18-2-306.01, -331.A.3.d-e]

[Material Permit Conditions are indicated with an underline and italics.]

At all times, including periods of startup, shutdown, tuning, and malfunction, the Permittee shall, to the extent practicable, maintain and operate each Combined Cycle System, including oxidation catalyst system, in a manner consistent with good air pollution control practice for minimizing emissions.

3. Recordkeeping Requirements

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

Compliance with the VOC emission limit in Condition III.G.1.a(3) shall be demonstrated through monthly records of emissions calculations performed using operational records required by Condition III.B.5.b and the following emission factors:

- a. 17.56 lb VOC per hour during startup and tuning.
- b. 6.43 lb VOC per shutdown event.
- c. For periods other than startup, shutdown, and tuning, VOC emission factors for Combined Cycle System operation with and without duct firing, expressed in lb per hour, based on the results of the most recent performance test conducted pursuant to Condition III.G.4.

4. Testing Requirements

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

Within 60 days after achieving the maximum production rate of each Combined Cycle System, but no later than 180 days after its initial startup (as defined by 40 CFR § 60.2), and at other times as may be required by the Director, the Permittee shall conduct performance tests for VOC.

- a. Performance tests shall be conducted using Reference Methods 19 and 25A in appendix A-7 to 40 CFR part 60. Reference Method 18 in appendix A-6 to 40 CFR part 60 may be used concurrently to measure and deduct methane and ethane emissions from the total organic compounds emission rate measured using Method 25A.
- b. Performance tests shall be conducted at 100 percent load with and without duct firing.

H. Ammonia (NH₃)

1. Emissions Limitations/Standards

- a. Emissions of ammonia from each Combined Cycle System shall not exceed 5 ppmvd, corrected to 15% O₂, based on a 24-hour average.
[A.A.C. R18-2-406.A.4]
- b. The Permittee shall not allow ammonia in excess of the threshold quantity to be stored on site unless a Risk Management Plan has been submitted by the date on which ammonia is first present above the threshold quantity as required by Section 112(r) of the Clean Air Act.
[40 CFR 68.130]

2. Monitoring, Record Keeping, and Reporting Requirements

[A.A.C. R18-2-306.01, -331.A.3.d-e and -406.A.1]

[Material Permit Conditions are indicated with an underline and italics.]

Within 30 days after initial start-up (as defined by 40 CFR 60.2), the Permittee shall install, calibrate, maintain, and operate ammonia CEMS or an ammonia parametric emissions monitoring system (PEMS) based on ammonia flow rate to each SCR and NO_x emissions monitoring data as approved by the Department. The CEMS or flow meters will be sampled by a data acquisition system at a

frequency of no less than once every 15 minutes and averaged into rolling 24-hour periods.

3. Testing Requirements

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

The Permittee shall conduct an initial performance test, and additional performance tests every two years thereafter, for ammonia emissions from each Combined Cycle System using methods approved by the Director.

4. Permit Shield

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

Compliance with the terms of this Section shall be deemed compliance with the following applicable requirements: A.A.C. R18-2-406.A.4.

I. Greenhouse Gases (GHG)

1. Emissions Limitations/Standards

[40 CFR § 52.21(j)(2)]

- a. Emissions of GHG from each Combined Cycle System shall not exceed 876,385 tons (CO₂e basis) per rolling 12-month period.
- b. Combined emissions of GHG from the two Combined Cycle Systems shall not exceed 995 lb (CO₂e basis) per MWh gross electric output based on a rolling 12-operating month period.

2. Monitoring and Recordkeeping

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

- a. Compliance with the GHG emission limit in Condition III.I.1.a shall be demonstrated through monitoring and emissions calculations performed in accordance in 40 CFR § 98.43(a).
- b. Compliance with the GHG emission limit in Condition III.I.1.b shall be demonstrated as follows.
 - (1) GHG emissions shall be determined through monitoring and emissions calculations performed in accordance in 40 CFR § 98.43(a).
 - (2) The Permittee shall install, calibrate, maintain, and operate watt meters to continuously measure and record the gross electric output from each CTG and from the STG.

3. Permit Shield

Compliance with the terms of this Section shall be deemed compliance with the following applicable requirements: 40 CFR § 52.21(j)(2).

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

IV. AUXILIARY BOILER

A. Applicability

This Section applies to the auxiliary boiler identified in the Equipment List of Attachment “C” below.

B. Operational Limitations

1. Operating Limits

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

- a. The Permittee shall not operate the Auxiliary Boiler in excess of 12 hours in any calendar day.
- b. The Permittee shall not operate the Auxiliary Boiler in excess of 450 hours per rolling 12-month period.
- c. The Permittee shall not burn any fuel other than pipeline quality natural gas in the Auxiliary Boiler.

2. Monitoring and Record Keeping Requirements

- a. The Permittee shall record and maintain records of the amount of natural gas combusted in the Auxiliary Boiler during each calendar month.
[A.A.C. R18-2-901.5 {40 CFR 60.48c(g)}]
- b. The Permittee shall record daily and maintain records of the hours of operation of the Auxiliary Boiler, including the date and startup and shutdown times in hours and minutes, and shall maintain a monthly record of cumulative operating hours on a rolling 12-month basis. No records are required on any calendar day during which the Auxiliary Boiler does not operate.

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

3. Reporting Requirements

[A.A.C. R18-2-901.5 {40 CFR 60.48c(a)}]

The Permittee shall submit notification of the date of construction and actual startup of the Auxiliary Boiler, as provided by 40 CFR § 60.7. This notification shall include:

- a. The design heat input capacity of the Auxiliary Boiler and identification of fuels to be combusted;
- b. The annual capacity factor at which the Permittee anticipates operating the Auxiliary Boiler.

4. Permit Shield

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

Compliance with the terms of this Section shall be deemed compliance with the following applicable requirements: A.A.C. R18-2-901.5 {40 CFR 60.48c}.

C. Particulate Matter

1. Emission Limitation/Standard

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

The Permittee shall not cause to be discharged into the atmosphere from the Auxiliary Boiler any gases which contain particulate matter in excess of 0.35 lb/hr.

2. Testing Requirements

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

Within 60 days after achieving the maximum production rate of the Auxiliary Boiler, but no later than 180 days after its initial startup (as defined by 40 CFR § 60.2), and at other times as may be required by the Director, the Permittee shall conduct performance tests for PM/PM10/PM2.5 using Reference Method 5 in appendix A-3 to 40 CFR part 60 and Method 202 in appendix M to 40 CFR part 51.

3. Permit Shield

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

Compliance with the terms of this Section shall be deemed compliance with the following applicable requirements: A.A.C. R18-2-406.A.4.

D. Nitrogen Oxides (NO_x)

1. Emission Limitations/Standards

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

Emissions of NO_x from the Auxiliary Boiler shall not exceed 0.011 lb per MMBtu heat input.

2. Air Pollution Control Requirements

[A.A.C. R18-2-306.01, -331.A.3.d-e and -406.A.4]

[Material Permit Conditions are indicated with an underline and italics.]

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

3. Testing Requirements

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

Within 60 days after achieving the maximum production rate of the Auxiliary Boiler, but no later than 180 days after its initial startup (as defined by 40 CFR § 60.2), and at other times as may be required by the Director, the Permittee shall conduct performance tests for NO_x using Reference Method 7E in appendix A-4 to 40 CFR part 60.

4. Permit Shield

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

Compliance with the terms of this Section shall be deemed compliance with the following applicable requirements: A.A.C. R18-2-406.A.4.

E. Carbon Monoxide (CO)

1. Emission Limitations/Standards

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

Emissions of CO from the Auxiliary Boiler shall not exceed 0.037 lb per MMBtu heat input.

2. Testing Requirements

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

Within 60 days after achieving the maximum production rate of the Auxiliary Boiler, but no later than 180 days after its initial startup (as defined by 40 CFR § 60.2), and at other times as may be required by the Director, the Permittee shall conduct performance tests for CO using Reference Method 10B in appendix A-4 to 40 CFR part 60.

3. Permit Shield

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

Compliance with the terms of this Section shall be deemed compliance with the following applicable requirements: A.A.C. R18-2-406.A.4.

F. Greenhouse Gases (GHG)

1. Emission Limitation/Standard

[40 CFR § 52.21(j)(2)]

Emissions of GHG from the Auxiliary Boiler shall not exceed 1,317 tons per rolling 12-month period (CO₂e basis).

2. Record Keeping Requirement

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

On a monthly basis, the Permittee shall calculate and record GHG emissions (CO₂e basis) from the Auxiliary Boiler using the fuel use records required by Condition IV.B.2.a in conjunction with the default emission factors in 40 CFR part 98, subpart C.

3. Permit Shield

Compliance with the terms of this Section shall be deemed compliance with the following applicable requirements: A.A.C. R18-2-406.A.4.

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

V. MECHANICAL DRAFT COOLING TOWER

A. Applicability

This Section applies to the Mechanical Draft Cooling Tower identified in the Equipment List of Attachment “C” below.

B. Operational Limitations

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

1. Operating Limits

- a. The Permittee shall not cause, allow, or permit the circulating water flow rate in the mechanical-draft cooling tower to exceed 127,860 gallons per minute, total for the nine cells, based on a 60-minute average.
- b. The Permittee shall not cause, allow, or permit the total dissolved solids of the circulating water in the mechanical-draft cooling towers to exceed 4,039 ppmw.

2. Monitoring and Record Keeping Requirements

[A.A.C. R18-2-306.A.3.a, -306.A.4.a]

- a. The Permittee shall continuously monitor and record the circulating water flow rate to the mechanical draft cooling tower.
- b. The Permittee shall monitor and record the conductivity of the circulating water in the mechanical draft cooling tower daily and shall measure the total dissolved solids of the circulating water at least once per month. Solids measurement shall be performed using EPA Method

160.3 (in Methods for the Chemical Analysis of Water and Wastes. EPA-600/4-79-020. U.S. EPA, Environmental Monitoring and Systems Laboratory, Cincinnati, Ohio).

C. Particulate Matter

1. Air Pollution Control Requirements

[A.A.C. R18-2-331.A.3.d-e and -406.A.4]

[Material Permit Conditions are indicated with an underline and italics.]

- a. *The Permittee shall ensure that the mechanical draft cooling towers are equipped with drift eliminators certified by the cooling tower vendor not to exceed a total drift rate of 0.0005 percent of circulating water flow.*
- b. *At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain and operate the high efficiency drift eliminators in a manner consistent with good air pollution control practice for minimizing emissions.*

2. Monitoring and Record Keeping Requirements

[A.A.C. R18-2-306.A.3.a, -306.A.4.a, -406.A.4]

- a. The Permittee shall maintain readily available records of the certified design total drift rate of the mechanical draft cooling tower, as specified by the cooling tower vendor.
- b. The Permittee shall perform visual inspection of the mechanical draft cooling tower and drift eliminators as recommended by the cooling tower vendor.

3. Permit Shield

Compliance with the terms of this Section shall be deemed compliance with the following applicable requirement: A.A.C. R18-2-406.A.4.

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

VI. DIESEL-FIRED EMERGENCY FIRE PUMP

A. Applicability

This Section applies to the diesel-fired emergency fire pump identified in the Equipment List of Attachment “C” below.

B. Operational Limitations

1. Operating Limits

- a. The Permittee shall not cause the diesel-fired emergency fire pump to operate for purposes of readiness testing or maintenance checks in excess of 4 hours in any calendar day.
[A.A.C. R18-2-306.A.2]
- b. The Permittee shall not cause to be combusted in the diesel-fired emergency fire pump any fuel other than No. 2 diesel fuel that meets the requirements of 40 CFR § 80.510(b) for non-road diesel fuel.
[40 CFR § 60.4207(b)]
- c. The Permittee shall not cause the diesel-fired emergency fire pump to operate for purposes of readiness testing or maintenance checks in excess of 100 hours per rolling 12-month period. Operation during periods other than emergency operation for purposes other than readiness testing and maintenance checks is prohibited.
[40 CFR § 60.4211(f)]
- d. The Permittee shall install, configure, maintain, and operate the diesel-fired emergency fire pump according to the manufacturer's emission-related written instructions.
[A.A.C. R18-2-406.A.4; 40 CFR §§ 60.4211(a), 60.4211(c)]

2. Monitoring and Record Keeping Requirement

- a. The Permittee shall install a non-resettable hour meter prior to startup of the diesel-fired emergency fire pump.
[A.A.C. R18-2-306.A.3.a, -306.A.4.a; 40 CFR § 60.4209(a)]
- b. The Permittee shall maintain daily records of the hours of operation of the diesel-fired emergency fire pump, including notation of whether the operation is for purposes of readiness testing, maintenance checks, or another purpose.
[A.A.C. R18-2-306.A.3.a, -306.A.4.a]

C. Particulate Matter and Opacity

1. Emission Limitations/Standards

- a. The Permittee shall comply with an emission standard for particulate matter of 0.12 grams per horsepower-hour. The Permittee shall comply with this emission standard by purchasing an engine certified to meet this emission standard. The engine shall be installed and configured according to the manufacturer's emission-related specifications.
[A.A.C. R18-2-406.A.4]

- b. The Permittee shall comply with an emission standard for particulate matter of 0.15 grams per horsepower-hour. The Permittee shall comply with this emission standard by purchasing an engine certified to meet the emission standards in 40 CFR § 60.4205(c) for the same model year and NFPA nameplate engine power. The engine shall be installed and configured according to the manufacturer's emission-related specifications.

[40 CFR §§ 60.4205(c), 60.4211(c)]

2. Permit Shield

Compliance with the terms of this Section shall be deemed compliance with the following applicable requirements: A.A.C. R18-2-406.A.4; 40 CFR §§ 60.4205(c), 60.4211(c).

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

D. Nonmethane Hydrocarbons (NMHC) and Nitrogen Oxides (NO_x)

1. Emission Limitations/Standards

The Permittee shall comply with an emission standard for combined nonmethane hydrocarbons and NO_x of 3.0 grams per horsepower-hour. The Permittee shall comply with this emission standard by purchasing an engine certified to meet the emission standards in 40 CFR § 60.4205(c) for the same model year and NFPA nameplate engine power. The engine shall be installed and configured according to the manufacturer's emission-related specifications.

[A.A.C. R18-2-406.A.4; 40 CFR §§ 60.4205(c), 60.4211(c)]

2. Permit Shield

Compliance with the terms of this Section shall be deemed compliance with the following applicable requirements: A.A.C. R18-2-406.A.4; 40 CFR §§ 60.4205(c), 60.4211(c).

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

E. Carbon Monoxide (CO)

1. Emission Limitations/Standards

The Permittee shall comply with an emission standard for CO of 2.6 grams per horsepower-hour. The Permittee shall comply with this emission standard by purchasing an engine certified to meet the emission standards in 40 CFR § 60.4205(c) for the same model year and NFPA nameplate engine power. The engine shall be installed and configured according to the manufacturer's emission-related specifications.

[A.A.C. R18-2-406.A.4; 40 CFR §§ 60.4205(c), 60.4211(c)]

2. Permit Shield

Compliance with the terms of this Section shall be deemed compliance with the following applicable requirements: A.A.C. R18-2-406.A.4; 40 CFR §§ 60.4205(c), 60.4211(c).

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

F. Greenhouse Gases (GHG)

1. Emission Limitation/Standard

[40 CFR § 52.21(j)(2)]

The Permittee shall not cause to be discharged into the atmosphere from the diesel-fired emergency fire pump GHG in excess of 22.6 lb per gallon of fuel combusted (CO₂e basis).

2. Record Keeping Requirement

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

On a monthly basis, the Permittee shall record the quantity of fuel combusted in the diesel-fired emergency fire pump, in gallons, and shall calculate and record GHG emissions (CO₂e basis) using the default emission factors and high heat values in 40 CFR part 98, subpart C.

3. Permit Shield

Compliance with the terms of this Section shall be deemed compliance with the following applicable requirements: A.A.C. R18-2-406.A.4.

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

VII. CIRCUIT BREAKERS

A. Applicability

This Section applies to each of the five Circuit Breakers identified in the Equipment List of Attachment “C” below.

B. Operational Limitations

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

The Permittee shall not operate any Circuit Breaker that contains more than 360 pounds sulfur hexafluoride (SF₆).

C. Greenhouse Gases

1. Emission Limitation/Standard

[40 CFR § 52.21(j)(2)]

The Permittee shall not cause to be discharged into the atmosphere from the circuit breakers GHG in excess of 103 tons GHG (CO₂e basis) per rolling 12-month period.

2. Monitoring Requirement

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

The Permittee shall implement a leak detection monitoring program for each Circuit Breaker that provides alerts at a ten percent loss of SF₆.

3. Record Keeping Requirements

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

a. The Permittee shall calculate and record GHG emissions from Circuit Breakers on a monthly basis in accordance with 40 CFR § 98.303(a), using Equation A-1 in 40 CFR § 98.2. The Permittee shall maintain these records on site and make them available upon demand.

b. The Permittee shall maintain records on site for the leak detection monitoring program and make them available upon demand.

4. Permit Shield

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

Compliance with the conditions of this Section shall be deemed compliance with A.A.C. R18-2-406.A.4.

VIII. NATURAL GAS PIPING

A. Applicability

This Section applies to fugitive emissions from components in Natural Gas Piping identified in the Equipment List of Attachment “C” below.

B. Greenhouse Gases

1. Work Practice Requirement

[40 CFR § 52.21(j)(2)]

The Permittee shall implement an auditory/visual/olfactory method for detecting leaking from natural gas piping components and shall make observations on a daily basis.

2. Record Keeping Requirements

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

The Permittee shall maintain records on site for the leak detection program and make them available upon demand.

3. Permit Shield

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

Compliance with the conditions of this Section shall be deemed compliance with A.A.C. R18-2-406.A.4.

IX. FUGITIVE DUST REQUIREMENTS

A. Applicability

This Section applies to any source of fugitive dust in the facility.

B. Particulate Matter and Opacity

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

1. Emission Limitations/Standards

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

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

- b. The Permittee shall not cause, allow or permit visible emissions from any fugitive dust point source, in excess of 20% opacity.

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

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

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

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

- (2) Keep dust to a minimum from driveways, parking areas, and vacant lots where motor vehicular activity occurs by using an approved dust suppressant, or adhesive soil stabilizer, or by

paving, or by barring access to the property, or by other acceptable means;

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

- (3) Keep dust and other particulates to a minimum by employing dust suppressants, temporary paving, detouring, wetting down or by other reasonable means when a roadway is repaired, constructed, or reconstructed;

[A.A.C. R18-2-605.A]

- (4) Take reasonable precautions, such as wetting, applying dust suppressants, or covering the load when transporting material likely to give rise to airborne dust;

[A.A.C. R18-2-605.B]

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

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

- (6) Take reasonable precautions such as chemical stabilization, wetting, or covering when organic or inorganic dust producing material is being stacked, piled, or otherwise stored;

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

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

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

- (8) Operate mineral tailings piles by taking reasonable precautions to prevent excessive amounts of particulate matter from becoming airborne. Reasonable precautions shall mean wetting, chemical stabilization, revegetation or such other measures as are approved by the Director.

[A.A.C. R18-2-608]

C. 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]

D. Monitoring and Recordkeeping Requirements

1. The Permittee shall maintain records of the dates on which any of the activities listed in Condition VIII.B.1.c above were performed and the control measures that were adopted.

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

2. **Opacity Monitoring Requirements**

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

- a. A certified Method 9 observer shall conduct a monthly visual survey of visible emissions from the fugitive dust sources. The Permittee shall keep a record of the name of the observer, the date and location on which the observation was made, and the results of the observation.
- b. If the observer sees a visible emission from a fugitive dust source that on an instantaneous basis appears to exceed applicable opacity standard, then the observer shall, if practicable, take a six-minute Method 9 observation of the visible emission.
 - (1) If the six-minute opacity of the visible emission is less than or equal to applicable opacity standard, the observer shall make a record of the following:
 - (a) Location, date, and time of the observation; and
 - (b) The results of the Method 9 observation.
 - (2) If the six-minute opacity of the visible emission exceeds applicable opacity standard, then the Permittee shall do the following:
 - (a) Adjust or repair the controls or equipment to reduce opacity to below the applicable standard; and
 - (b) Report it as an excess emission under Section XII.A of Attachment "A."

E. Permit Shield

Compliance with the conditions of this Section shall be deemed compliance with A.A.C. R18-2-604.A, A.A.C. R18-2-604.B, A.A.C. R18-2-605, A.A.C. R18-2-606, A.A.C. R18-2-607, A.A.C. R18-2-608 and A.A.C. R18-2-612.

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

X. MOBILE SOURCE REQUIREMENTS

A. Applicability

The requirements of this Section are applicable to mobile sources which either move while emitting air contaminants or are frequently moved during the course of their

utilization but are not classified as motor vehicles, agricultural vehicles, or agricultural equipment used in normal farm operations. Mobile sources shall not include portable sources as defined in A.A.C. R18-2-101.90.

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

B. Particulate Matter and Opacity

1. Emission Limitations/Standards

a. Off-Road Machinery

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

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

b. Roadway and Site Cleaning Machinery

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

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

(2) The Permittee shall take reasonable precautions, such as the use of dust suppressants, before the cleaning of a site, roadway, or alley. Earth or other material shall be removed from paved streets onto which earth or other material has been transported by trucking or earth moving equipment, erosion by water or by other means.

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

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

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

2. Recordkeeping Requirement

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

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

3. Permit Shield

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

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

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:

- (1) wet blasting;
- (2) effective enclosures with necessary dust collecting equipment; or
- (3) any other method approved by the Director.

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

b. Opacity

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

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

2. Record Keeping Requirement

Each time an abrasive blasting 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; and
- c. Type of control measures employed.

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

3. Permit Shield

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

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

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) Employ, apply, evaporate, or dry any architectural coating containing photochemically reactive solvents for industrial or commercial purposes; or
- (b) Thin or dilute any architectural coating with a photochemically reactive solvent.

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

- (3) For the purposes of Condition X.B.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 X.B.1.a.(3)(a) through X.B.1.a.(3)(c) below, or which exceeds any of the following percentage composition limitations, referred to the total volume of solvent:

- (a) A combination of the following types of compounds having an olefinic or cyclo-olefinic type of unsaturation-hydrocarbons, 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.

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

- (4) Whenever any organic solvent or any constituent of an organic solvent may be classified from its chemical structure into more than

one of the groups of organic compounds described in Conditions X.B.1.a.(3)(a) through X.B.1.a.(3)(c) above, it shall be considered to be a member of the group having the least allowable percent of the total volume of solvents.

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

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) Material Safety Data Sheets 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 X.B.1.b(1) above.

c. Permit Shield

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

Compliance with this Part shall be deemed compliance with A.A.C. R18-2-727.

2. Opacity

a. Emission Limitation/Standard

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

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

b. Permit Shield

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

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

C. Demolition/Renovation - Hazardous Air Pollutants

1. Emission Limitation/Standard

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

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

2. Monitoring and Recordkeeping Requirement

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

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.

3. Permit Shield

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

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

ATTACHMENT “C”: EQUIPMENT LIST

Air Quality Control Permit No. 58787 for Bowie Power Station Project

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment ID Number
Combustion Turbine Generator	1735 MMBtu/hr (HHV)	General Electric	Frame 7FA Model 4	TBD	TBD	CTG1
Combustion Turbine Generator	1735 MMBtu/hr (HHV)	General Electric	Frame 7FA Model 4	TBD	TBD	CTG2
Heat Recovery Steam Generator with Duct Burner	420 MMBtu/hr (HHV)	TBD	TBD	TBD	TBD	HRSG1
Heat Recovery Steam Generator with Duct Burner	420 MMBtu/hr (HHV)	TBD	TBD	TBD	TBD	HRSG2
Auxiliary Boiler	50 MMBtu/hr(HHV)	Rentech	TBD	TBD	TBD	AB1
Mechanical Draft Cooling Tower with Drift Eliminators	127,860 gal/min	Marley	Custom	TBD	TBD	CT1
Evaporation Ponds	131 gal/min	Custom	Custom	Not applicable	TBD	EVP
Diesel-Fired Emergency Fire Pump	260 hp	Cummins	CFP9WE-F10	TBD	TBD	CFP1
Selective Catalytic Reduction System	Not applicable	TBD	TBD	TBD	TBD	SCR1
Selective Catalytic Reduction System	Not applicable	TBD	TBD	TBD	TBD	SCR2
Oxidation Catalyst	Not applicable	TBD	TBD	TBD	TBD	OC1
Oxidation Catalyst	Not applicable	TBD	TBD	TBD	TBD	OC2
Circuit Breakers (5)	345 kV	TBD	TBD	TBD	TBD	CB1 – CB5
Natural Gas Piping	Not applicable	TBD	TBD	TBD	TBD	Not applicable

Note: TBD is “to be determined”

ATTACHMENT “D”: PHASE II ACID RAIN PROVISIONS

Air Quality Control Permit No. 58787 for Bowie Power Station Project

I. STATEMENT OF BASIS

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

II. SO₂ ALLOWANCE[†] ALLOCATIONS AND NO_x REQUIREMENTS FOR EACH AFFECTED UNIT

- A. The Permittee shall comply with the Acid Rain Permit and 40 CFR Parts 72, 73, and 75.
- B. The Permittee shall hold SO₂ Allowances as of the allowance transfer deadline in each combined cycle system compliance sub-account not less than the total annual actual emissions of SO₂ from each combined cycle system for the previous calendar year as required by the Acid Rain Program.
- C. The SO₂ Allowance Allocations and NO_x Requirements for each combined cycle system are as follows:

Affected Unit	Pollutant	Years 2000-2009	Years 2010 and beyond
Combined Cycle Systems	SO ₂ allowances	NA	TBD
	NO _x emission limit	These units are not subject to a NO _x emission limit under 40 CFR Part 76.	

[†] 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.

III. PERMIT APPLICATION

The Permittee, and any other owners or operators of the units at this facility, shall comply with the requirements contained in the Acid Rain Permit Application (Phase II Permit Application and Certificate of Representation) signed by the Designated Representative Tom C. Wray on October 27, 2010.

[40 CFR 72, 73, and 75]