

**CLASS I AIR QUALITY PERMIT  
DRAFT PERMIT No. 90238**

**PERMITTEE:** Griffith Energy, LLC  
**FACILITY:** Griffith Energy power generating plant  
**PLACE ID:** 6081  
**DATE ISSUED:**  
**EXPIRY DATE:**

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**SUMMARY**

This Class I air quality permit is issued to Griffith Energy, LLC, the Permittee, for the continued operation of the Griffith Energy power generating plant. The facility is located in Golden Valley, approximately nine miles southeast of the town of Kingman in Mohave County, Arizona. This permit renews and supersedes Permit #64101.

The Griffith Energy power plant is a 600 megawatt (MW) natural gas fired, combined cycle electric generating facility. The facility consists of two combustion turbine generators (CTGs) operated in conjunction with two heat recovery steam generating units (HRSGs) and one steam turbine. The facility also includes an auxiliary boiler, cooling towers, evaporative condenser and an emergency diesel fire pump. Nitrogen oxide (NO<sub>x</sub>) emissions from the facility are controlled by using low-NO<sub>x</sub> burners and selective catalytic reduction (SCR) units for the two CTG/HRSGs, and low-NO<sub>x</sub> burners for the auxiliary boiler. The facility uses pipeline natural gas as fuel in the CTGs, HRSGs and auxiliary boiler. The facility uses a turbo mister to enhance the natural evaporation from its pond to comply with minimum freeboard requirements to prevent overflow.

The uncontrolled emissions from this facility are greater than major source thresholds as defined in Arizona Administrative Code (A.A.C.) R18-2-101.75.c. Therefore, a class I permit is required for this facility in accordance with A.A.C. R18-2-302.B.1.a.

This permit is issued in accordance with Arizona Revised Statutes (ARS) 49-426. It contains requirements from Title 18, Chapter 2 of the A.A.C. and Title 40 of the Code of Federal Regulations. All definitions, terms, and conditions used in this permit conform to those in the Arizona Administrative Code R18-2-101 et. seq. (A.A.C.) and Title 40 of the Code of Federal Regulations (CFR), except as otherwise defined in this permit.

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**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 its 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]

IV. POSTING OF PERMIT

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 15<sup>th</sup>, and shall report the compliance status of the source during the period between October 1<sup>st</sup> of the previous year and March 31<sup>st</sup> of the current year. The second certification shall be submitted no later than November 15<sup>th</sup>, and shall report the compliance status of the source during the period between April 1<sup>st</sup> and September 30<sup>th</sup> 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. R18-2-309.2.c.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.

[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 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.B.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]

**XII. RECORDKEEPING REQUIREMENTS**

(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]

(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;  
[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, 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 sampling 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 analyses;

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

4. 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 sampling 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]

**C.** Reporting Requirements

The Permittee shall submit the following reports:

1. Compliance certifications in accordance with Section VII above.  
[A.A.C. R18-2-306.A.5.a]
2. Excess emission; permit deviation, and emergency reports in accordance with Section XI above.  
[A.A.C. R18-2-306.A.5.b]
3. Other reports required by any condition of Attachment "B".

**XIII. 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]

**XIV. 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 XV below, as follows:

- A. Administrative Permit Amendment; [A.A.C. R18-2-318]
- B. 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.

**XV. 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 XV.A, C, and D of this Attachment. [A.A.C. R18-2-317.B]

- C.** For each change under Conditions XV.A and XV.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:
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.
- [A.A.C. R18-2-317.E.1]  
[A.A.C. R18-2-317.E.2]  
[A.A.C. R18-2-317.E.3]  
[A.A.C. R18-2-317.E.7]
- E.** The permit shield described in A.A.C. R18-2-325 shall not apply to any change made under this Section XV.
- [A.A.C. R18-2-317.F]
- 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 XV.
- [A.A.C. R18-2-317.G]
- G.** Notwithstanding any other part of Section XV, 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 XV over the term of the permit, do not satisfy Condition XV.A above.
- [A.A.C. R18-2-317.H]

## **XVI. TESTING REQUIREMENTS**

- A.** Except as provided in Condition XVI.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 XVI.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 XVI.H.1, 2, and 3 above, the Permittee remains subject to the requirements of Section XVI.

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

5. For purposes of this Section XVI, 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]

## **XVII. 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]

## **XVIII. 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]

## **XIX. 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 XIV.B of this Attachment and any facility changes without a permit revision pursuant to Condition XV of this Attachment.

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

## **XX. 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]

## **XXI. 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]

**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

I. FACILITY-WIDE REQUIREMENTS

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 six-minute 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. Reporting Requirements**

1. Deviations from the following Attachment "B" 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.2, II.D.3, and II.E.2

- b. Condition III.C.3,
- c. Condition IV.C.2
- d. Condition VI.B.2

**II. COMBUSTION TURBINE GENERATORS (WITH OR WITHOUT SUPPLEMENTAL DUCT FIRING)**

**A. Startup and Shutdown**

Mode 6Q shall be defined as the low emission mode during which all (4) gas supply modes are activated in the (14) combustion cans and are in use, burning optimized gas ready for steady-state operation.

Startup shall be defined as the period starting when fuel is first combusted in the combustion turbine, and ending upon initiation of dry, low-NO<sub>x</sub> operation as indicated by receipt of a Mode 6Q signal from the turbine control system.

Shutdown shall be defined as the period of time following normal operations starting when the Mode 6Q signal from the turbine control system is lost, and ending when fuel is no longer being combusted in the combustion turbine.

1. The Permittee shall limit the overall start-up period for each start-up to less than five (5) hours.  
[A.A.C. R18-2-406.A.4]
2. The Permittee shall limit emissions for nitrogen oxides to 5.2 lb./min, carbon monoxide to 124 lb./min, and volatile organic compounds to 28.5 lb./min per unit based on a 3-hour averaging time during startup and shutdown.  
[A.A.C. R18-2-406.A.4]
3. Startup and shutdown periods shall not exceed 1,200 hours per year per unit.  
[A.A.C. R18-2-406.A.4]
4. On a monthly basis, the Permittee shall maintain rolling 12-month totals of the hours of startup and shutdown for each unit.  
[A.A.C. R18-2-306.A.3.c]

**B. Fuel Limitation**

1. The Permittee shall burn only pipeline quality natural gas.  
[40 CFR 72.2, A.A.C. R18-2-406.A.4]
2. The Permittee shall maintain a vendor-provided copy of that part of the Federal Energy Regulatory Commission (FERC)-approved tariff agreement that contains the sulfur content and the lower heating value of the pipeline quality natural gas.  
[A.A.C. R18-2-306.A.3.c]

**C. Particulate Matter**

1. Emission Limitations and Standards

- a. When operating with supplemental duct firing, 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 any of the following limits: 28.2 lb./hr., or 5.2 nanograms per joule heat input (0.012 lb. per million Btu), based on a 3-hour averaging time, derived from high heating value of natural gas.

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

- b. When operating without supplemental duct firing, 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 any of the following limits: 17.8 lb./hr., or 4.7 nanograms per joule heat input (0.011 lb. per million Btu), based on a 3-hour averaging time, derived from the high heating value of natural gas.

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

2. Testing Requirements

The Permittee shall conduct a performance test in the first year of the permit term using EPA Reference Method 5 to demonstrate compliance with the emission limits specified in Condition II.C.1 above.

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

**D. Nitrogen Oxides**

1. Emission Limitations and Standards

- a. When operating with supplemental duct firing, the Permittee shall not cause to be discharged into the atmosphere from the stack of each unit, any gases, which contain nitrogen oxides in excess of any of the following limits: 28.6 lb./hr., or 3.0 ppmvd at 15% O<sub>2</sub>, based on a 3-hour averaging time.

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

- b. When operating without supplemental duct firing, the Permittee shall not cause to be discharged into the atmosphere from the stack of each unit, any gases, which contain nitrogen oxides in excess of any of the following limits: 21.1 lb./hr., or 3.0 ppmvd at 15% O<sub>2</sub>, based on a 3-hour averaging time.

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

- c. The Permittee shall not cause to be discharged into the atmosphere from any stationary gas turbine, any gases which contain nitrogen oxides in excess of:

$$\text{STD} = 0.0075(14.4/Y) + F$$

Where:

STD = allowable ISO corrected (if required as given in 40 CFR 60.335(b)(1)) NO<sub>x</sub> emission concentration (percent by volume at 15 percent oxygen and on a dry basis),

Y = manufacturer's rated heat rate at manufacturer's rated load (kilojoules per watt hour) or, actual measured heat rate based on lower heating value of fuel as measured at actual peak load for the facility. The value of Y shall not exceed 14.4 kilojoules per watt hour, and

F = NO<sub>x</sub> emission allowance for fuel-bound nitrogen as defined in 40 CFR 60.332(a)(4).

[40 CFR 60.332(a)(1)]

- d. The use of F in equation above is optional. The Permittee may choose to apply a NO<sub>x</sub> allowance for fuel-bound nitrogen and determine the appropriate F-value in accordance with 40 CFR 60.332(a)(4) or may accept an F-value of zero.

[40 CFR 60.332(a)(3)]

2. Air Pollution Control Requirements

*At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain and operate the low-NO<sub>x</sub> burners and Selective Catalytic Reduction (SCR) system in a manner consistent with good air pollution control practices for minimizing NO<sub>x</sub> emissions.*

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

[Material Permit Condition is indicated by underline and italics]

3. Monitoring, Recordkeeping and Reporting Requirements

- a. *The Permittee shall calibrate, maintain, and operate continuous monitoring systems (CEMS) for measuring emissions of nitrogen oxides and carbon dioxide or oxygen.*

[40 CFR 60.334(c) and A.A.C. R18-2-331.A.3.c]

[Material Permit Condition is indicated by underline and italics]

- b. The CEMS for NO<sub>x</sub>, CO<sub>2</sub> or O<sub>2</sub> shall meet the following requirements:

[40 CFR 75 Appendix A]

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

- (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) 40 CFR Part 75 Appendix C, Missing Data Estimation Procedures  
Load-Based Procedure for Missing Flow Rate, and NOx Emission Rate Data
- (4) 40 CFR Part 75 Appendix F Conversion Procedures  
Procedures for NOx Emission Rate
- (5) Data Reduction

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

- c. The Permittee shall comply with all the applicable recordkeeping and reporting requirements of 40 CFR Part 75 Subparts F and G respectively.  
[A.A.C.R18-2-306.A.2 and -306.A.3.c]
- d. 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 part 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) and A.A.C.R18-2-306.A.2]
- e. Nitrogen Oxide Excess Emissions
  - (1) For the purpose of the emission limit in Condition II.D.1.c of this Attachment, excess emissions shall be reported for all periods of unit operation, including startup, shutdown and malfunction. For the purpose of reports required under §60.7(c), periods of excess emissions and monitor downtime that shall be reported are defined as follows:

[40 CFR 60.334(j)]

- (a) An hour of excess emissions shall be any unit operating hour in which the 4-hour rolling average NO<sub>x</sub> concentration exceeds the emission limit in Condition II.D.1.c. A “4-hour rolling average NO<sub>x</sub> concentration” is the arithmetic average of the average NO<sub>x</sub> concentration measured by the CEMS for a given hour (corrected to 15 percent O<sub>2</sub>) and the three-unit operating hour average NO<sub>x</sub> concentrations immediately preceding that unit operating hour.
  - (b) A period of monitor downtime shall be any unit operating hour in which sufficient data are not obtained to validate the hour, for either NO<sub>x</sub> concentration or diluent (or both).
- (2) For the purpose of the emission limits in Conditions II.D.1.a and b, excess emissions indicated by the CEMS shall be considered violations of the applicable emission limit for the purposes of this permit.

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

- (3) The summary report form shall contain the information and be in the format shown in Figure 1 of 40 CFR 60.7(d) unless otherwise specified by the Department. One summary report form shall be submitted for each pollutant monitored at each affected facility. If the total duration of excess emissions for the reporting period less than 1 percent of the total operating time for the reporting period and 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. If the total duration of excess emissions for the reporting period is 1 percent greater of the total operating time for the reporting period or the total CEMS downtime for the reporting period is 5 percent 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.

[40 CFR 60.7(d), A.A.C.R18-2-306.A.2]

- (4) The summary quarterly report form submission required in Condition II.D.3.e(3) above shall be in the format specified in 40 CFR 60.7(d). The excess emissions report shall include the following information:

[40 CFR 60.7(c), A.A.C.R18-2-306.A.2]

- (a) The magnitude of excess emissions computed, any conversion factor(s) used, and time of commencement

and completion of each time period of excess emissions. The process operating time during the reporting period.

- (b) Specific identification of each period of excess emissions that occurs during startup, shutdowns, and malfunctions of the affected facility. The nature and cause of any malfunction (if known), the corrective action taken or preventive measures adopted.
- (c) The date and time identifying each period during which the CEMS was inoperative except for zero and span checks and the nature of the system.
- (d) When no excess emissions have occurred or the CEMS have not been inoperative, required, or adjusted, such information shall be state in the report.

4. Testing Requirements

The Permittee shall conduct a performance test in the first year of the permit term using EPA Reference Method 7E to show compliance with the emission limit specified in Condition II.D.1.

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

5. Permit Shield

Compliance with the conditions of this part be deemed compliance with 40 CFR 60.332(a)(1), 40 CFR 60.332(a)(3), 40 CFR 60.334(c) and 40 CFR 60.334(j).

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

**E.** Carbon Monoxide (CO)

1. Emission Limitations and Standards

a. When operating with supplemental duct firing, the Permittee shall not cause to be discharged into the atmosphere from the stack of each unit, any gases, which contain carbon monoxide in excess of any of the following limits: 98.5 lb./hr., or 20 ppmvd at 15% O<sub>2</sub>, based on a 3-hour averaging time.

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

b. When operating without supplemental duct firing, the Permittee shall not cause to be discharged into the atmosphere from the stack of each unit, any gases, which contain carbon monoxide in excess of any of the following limits: 29.5 lb./hr., or 10 ppmvd at 15% O<sub>2</sub>, based on a 3-hour averaging time.

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

2. Monitoring, Recordkeeping and Reporting Requirements

- a. *The Permittee shall calibrate, maintain, and operate continuous monitoring systems (CEMS) for measuring emissions of carbon monoxide.*  
[A.A.C. R18-2-306.A.3.c and A.A.C. R18-2-331.A.3.c]  
[Material Permit Condition are indicated by underline and italics]
- b. The CEMS for CO shall meet the following requirements:
- (1) 40 CFR Part 60, Appendix B, Performance Specifications, Performance Specification 4A, 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, as 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 Appendix B. The system must allow the amount of excess zero and span drift measured at the 24-hour interval checks to be recorded and quantified, whenever specified.  
[40 CFR 60.13(d)(1), A.A.C.R18-2-306.A.2]
  - (4) Except for system breakdowns, repairs, calibration checks, and zero and span adjustments required under Condition II.E.2.b(3) above, the CO CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.  
[40 CFR 60.13(e)(2), A.A.C.R18-2-306.A.2]
  - (5) 1-hour averages shall be computed from four or more data points equally spaced over each 1-hour period. Data recorded during periods of continuous monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments shall not be included in the data averages computed under this paragraph. An arithmetic or integrated average of all data may be used. The data may be recorded in reduced or non-reduced form (e.g., ppm pollutant and percent O<sub>2</sub> or ng/J of pollutant). All excess emissions shall be converted into units of the standard using the appropriate conversion procedures specified in applicable subparts. After conversion into the units of the standard, the data may be rounded to the same number of significant digits and used in the applicable subparts to specify the emission limit.  
[40 CFR 60.13(h), A.A.C.R18-2-306.A.2]
- c. Carbon Monoxide Excess Emissions

- (1) Excess emissions indicated by the CEMS shall be considered violations of the applicable emission limit for the purposes of this permit.

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

- (2) The summary report form shall contain the information and be in the format shown in Figure 1 of 40 CFR 60.7(d) unless otherwise specified by the Department. One summary report form shall be submitted for each pollutant monitored at each affected facility. If the total duration of excess emissions for the reporting period less than 1 percent of the total operating time for the reporting period and 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 emission report described in 40 CFR 60.7(c) need not be submitted unless requested by the Department. If the total duration of excess emissions for the reporting period is 1 percent greater of the total operating time for the reporting period or the total CEMS downtime for the reporting period is 5 percent 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.

[40 CFR 60.7 (d) and A.A.C.R18-2-306.A.2]

- (3) The summary quarterly report form submission required in Condition II.E.2.c(2) above shall be in the format specified in 40 CFR 60.7 (d). The excess emissions report shall include the following information:

[40 CFR 60.7 (c) and A.A.C.R18-2-306.A.2]

- (a) The magnitude of excess emissions computed, any conversion factor(s) used, and time of commencement and completion of each time period of excess emissions. The process operating time during the reporting period.
- (b) Specific identification of each period of excess emissions that occurs during startup, shutdowns, and malfunctions of the affected facility. The nature and cause of any malfunction (if known), the corrective action taken or preventive measures adopted.
- (c) The date and time identifying each period during which the CEMS was inoperative except for zero and span checks and the nature of the system.
- (d) When no excess emissions have occurred or the CEMS have not been inoperative, required, or adjusted, such information shall be state in the report.

### 3. Testing Requirements

The Permittee shall conduct a performance test in the first year of the permit term using EPA Reference Method 10 to show compliance with the emission limit specified in Condition II.E.1.

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

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

1. Emission Limitations and Standards

a. When operating with supplemental duct firing, 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 any of the following limits: 5.7 lb./hr., or 0.99 nanograms per joule heat input (0.0023 lb. per million BTU), based on a 3-hour averaging time, derived from the high heating value of natural gas.

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

b. When operating without the supplemental duct firing, 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 any of the following limits: 4.2 lb./hr., or .99 nanograms per joule heat input (0.0023 lb. per million BTU), based on a 3-hour averaging time, derived from the high heating value of the natural gas.

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

2. Testing Requirements

The Permittee shall conduct a performance test in the first year of the permit term using EPA Reference Method 19 to show compliance with the emission limits specified in Conditions II.F.1.a and b.

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

**G. Volatile Organic Compounds**

1. Emission Limitations and Standards

a. When operating with supplemental duct burners, the Permittee shall not cause to be discharged into the atmosphere from the stack of each unit, any gases, which contain volatile organic compounds in excess of any of the following limits: 35.2 lb./hr., or 6.3 nanograms per joule heat input (0.015 lb. per million BTU), based on a 3-hour averaging time, derived from the high heating value of natural gas.

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

b. When operating without supplemental duct burners, the Permittee shall not cause to be discharged into the atmosphere from the stack of each unit, any gases, which contain volatile organic compounds in excess of any of the following limits: 7.4 lb./hr., or 1.7 nanograms per joule heat input (0.0041 lb. per million BTU), based on a 3-hour averaging time, derived from the high heating value of natural gas.

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

2. Testing Requirements

The Permittee shall conduct a performance test in the first year of the permit term using EPA Reference Method 25A to test for the total gaseous organic compounds and EPA Reference Method 18 to measure both methane and ethane concentrations to show compliance with the emission limits specified in Conditions II.G.1.a and b.

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

**III. DUCT BURNERS**

This Section applies to the duct burners for HRSGs listed in Equipment List, Attachment “C”.

**A. Fuel Limitation**

1. The Permittee shall burn only pipeline quality natural gas.  
[40 CFR 72.2, A.A.C. R18-2-406.A.4]
2. The Permittee shall maintain a vendor-provided copy of that part of the Federal Energy Regulatory Commission (FERC)-approved tariff agreement that contains the sulfur content and the lower heating value of the pipeline quality natural gas.  
[A.A.C. R18-2-306.A.3.c]

**B. Particulate Matter and Opacity**

1. Emission Standards and Limitations
  - a. The Permittee shall not cause to be discharged into the atmosphere from any affected facility any gases that contain PM in excess of 13 ng/J (0.03 lb./MMBtu) heat input derived from the combustion gaseous fuel.  
[40 CFR 60.42Da(a)]
  - b. *The Permittee shall not cause to be discharged into the atmosphere from any affected facility any gases which exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity.*  
[40 CFR 60.42Da(b), A.A.C. R18-2-331.A.3.f]  
[Material Permit are indicated by underline and italics]
  - c. The emission standards under Conditions III.B.1.a and b above shall apply at all times except during periods of startup, shutdown, or malfunction.  
[40 CFR 60.48Da(a)]
  - d. For the purposes of the reports, periods of excess emissions are defined as all 6-minute periods during which the average opacity exceeds the applicable opacity standards under Condition III.B.1.b.  
[40 CFR 60.51Da(i)]

2. Monitoring, Recordkeeping and Reporting Requirements

- a. The Permittee shall monitor visible emissions, and demonstrate compliance with the opacity standard using the following procedures.

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

- (1) The Permittee shall conduct a performance test using Method 9 of appendix A-4 of 40 CFR 60 and the procedures in 40 CFR 60.11. If during the initial 60 minutes of the observation all the 6-minute averages are less than 10 percent and all the individual 15-second observations are less than or equal to 20 percent, then the observation period may be reduced from 3 hours to 60 minutes.

[40 CFR 60.49Da(a)(3)(i)]

- (2) Except as provided in Conditions III.B.2.a(3) and (4) below, the Permittee shall conduct subsequent Method 9 performance tests using the procedures in Conditions III.B.2.a(1) above according to the following schedule, as determined by the most recent Method 9 performance test results.

[40 CFR 60.49Da(a)(3)(ii)]

- (a) If the maximum 6-minute average opacity is less than or equal to 5 percent, a subsequent Method 9 performance test must be completed within 12 calendar months from the date that the most recent performance test was conducted;

- (b) If the maximum 6-minute average opacity is greater than 5 percent but less than or equal to 10 percent, a subsequent Method 9 performance test must be completed within 3 calendar months from the date that the most recent performance test was conducted; or

- (c) If the maximum 6-minute average opacity is greater than 10 percent, a subsequent Method 9 performance test must be completed within 30 calendar days from the date that the most recent performance test was conducted.

- (3) If the maximum 6-minute opacity is less than 10 percent during the most recent Method 9 performance test, the Permittee may, as an alternative to performing subsequent Method 9 performance tests, elect to perform subsequent monitoring using Method 22 of appendix A-7 of 40 CRR 60 according to the following procedures.

[40 CFR 60.49Da(a)(3)(iii)]

- (a) The Permittee shall conduct 10-minute observations (during normal operation) each operating day the affected facility fires fuel for which an opacity standard is applicable using Method 22 and demonstrate that the sum



of the occurrences of any visible emissions is not in excess of 5 percent of the observation period (i.e., 30 seconds per 10-minute period). If the sum of the occurrence of any visible emissions is greater than 30 seconds during the initial 10-minute observation, immediately conduct a 30-minute observation. If the sum of the occurrence of visible emissions is greater than 5 percent of the observation period (i.e., 90 seconds per 30 minute period) the Permittee shall either document and adjust the operation of the facility and demonstrate within 24 hours that the sum of the occurrence of visible emissions is equal to or less than 5 percent during a 30-minute observation (i.e., 90 seconds) or conduct a new Method 9 part performance test using the procedures in Condition III.B.2.a(1) of this Attachment within 30 calendar days.

- (b) If no visible emissions are observed for 30 operating days during which an opacity standard is applicable, observations can be reduced to once every 7 operating days during which an opacity standard is applicable. If any visible emissions are observed, daily observations shall be resumed.
- (4) If the maximum 6-minute opacity is less than 10 percent during the most recent Method 9 performance test, the Permittee may, as an alternative to performing subsequent Method 9, elect to perform subsequent monitoring using a digital opacity compliance system according to a site-specific monitoring plan approved by the Director. The observations shall be similar, but not necessarily identical, to the requirements Condition III.B.2.a(3) above. For reference purposes in preparing the monitoring plan, see OAQPS “Determination of Visible Emission Opacity from Stationary Sources Using Computer-Based Photographic Analysis Systems.” This document is available from the U.S. Environmental Protection Agency (U.S. EPA); Office of Air Quality and Planning Standards; Sector Policies and Programs Division; Measurement Policy Group (D243-02), Research Triangle Park, NC 27711. This document is also available on the Technology Transfer Network (TTN) under Emission Measurement Center Preliminary Methods.

[40 CFR 60.49Da(a)(3)(iv)]

- b. The Permittee shall maintain following records, as applicable to the visible emissions monitoring method used.

[40 CFR 60.52Da(b)]

- (1) For each performance test conducted using Method 9, the Permittee shall keep the following records:

[40 CFR 60.52Da(b)(1)]

III. DUCT BURNERS

- (a) Dates and time intervals of all opacity observation periods;
  - (b) Name, affiliation, and copy of current visible emission reading certification for each visible emission observer participating in the performance test; and
  - (c) Copies of all visible emission observer opacity field data sheets;
- (2) For each performance test conducted using Method 22, the Permittee shall keep the following records:  
[40 CFR 60.52Da(b)(2)]
- (a) Dates and time intervals of all visible emissions observation periods;
  - (b) Name and affiliation for each visible emission observer participating in the performance test;
  - (c) Copies of all visible emission observer opacity field data sheets; and
  - (d) Documentation of any adjustments made and the time the adjustments were completed to the affected facility operation by the owner or operator to demonstrate compliance with the applicable monitoring requirements.
- (3) For each digital opacity compliance system, the Permittee shall maintain records and submit reports according to the requirements specified in the site-specific monitoring plan approved by the Administrator.  
[40 CFR 60.52Da(b)(3)]
- c. Opacity levels in excess of the applicable opacity standard and the date of such excesses shall be submitted to the Director each calendar quarter.  
[40 CFR 60.51Da(i)]
3. Testing Requirements
- The Permittee shall utilize the performance tests performed under Condition II.C.2 to demonstrate compliance with the emission limit specified in Condition III.B.1.a above.  
[A.A.C.R18-2-312]
4. Permit Shield
- Compliance with the conditions in this part shall be deemed compliance with, 40 CFR 60.42Da(a)(1), 40 CFR 60.42Da(b), 40 CFR 60.48Da(c), 40 CFR

60.49Da(a)(2)(ii), 40 CFR 60.49Da(a)(3), 40 CFR 60.50Da(b)(2), 40 CFR 60.50Da(b)(3), 40 CFR 60.51Da(i) and 40 CFR 60.52Da(b).

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

**C. Nitrogen Oxides**

1. Emission Limitations and Standards

- a. The Permittee shall not cause to be discharged into the atmosphere any gases that contain NO<sub>x</sub> (expressed as NO<sub>2</sub>) in excess of 200 ng/J (1.6 lb./MWh) gross energy output.

[40 CFR 60.44Da(d)(1)]

- b. The NO<sub>x</sub> emission standards under Condition III.C.1.a above shall apply at all times except during periods of startup, shutdown, or malfunction.

[40 CFR 60.48Da(a)]

2. Compliance Requirements

- a. The Permittee shall determine compliance with the NO<sub>x</sub> emission limitation in Condition III.C.1.a on a 30-day rolling average basis as per the following procedure.

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

- (1) The emission rate (E) of NO<sub>x</sub> shall be computed using the following equation:

$$E = (C_{sg} * Q_{sg}) / Occ$$

Where:

E = Emission rate of NO<sub>x</sub> from the duct burner, ng/J (lb./MWh) gross output;

C<sub>sg</sub> = Average hourly concentration of NO<sub>x</sub> exiting the steam generating unit, ng/dscm (lb./dscf);

Q<sub>sg</sub> = Average hourly volumetric flow rate of exhaust gas from steam generating unit, dscm/hr. (dscf/hr.); and

Occ = Average hourly gross energy output from entire combined cycle unit, J (MWh).

[40 CFR 60.48Da(k)(2)(i)]

- (2) The CEMS specified under Condition III.C.3.a of this Attachment for measuring NO<sub>x</sub> and O<sub>2</sub> (or CO<sub>2</sub>) shall be used to determine the average hourly NO<sub>x</sub> concentrations (C<sub>sg</sub>). The continuous flow monitoring system specified in Condition III.C.3.f or g of this Attachment shall be used to determine the volumetric flow rate (Q<sub>sg</sub>) of the exhaust gas. If the option to use the flow monitoring system in Condition III.C.3.g of this Attachment is selected, the

flow rate data used to meet the requirements of Condition III.C.4 of this Attachment shall not include substitute data values derived from the missing data procedures in subpart D of 40 CFR 75, nor shall the data have been bias adjusted according to the procedures of 40 CFR 75. The sampling site shall be located at the outlet from the steam generating unit.

[40 CFR 60.48Da(k)(2)(ii)]

- (3) The continuous monitoring system specified under Condition III.C.3.e of this Attachment for measuring and determining gross energy output shall be used to determine the average hourly gross energy output from the entire combined cycle unit (Occ), which is the combined output from the combustion turbine and the steam generating unit.

[40 CFR 60.48Da(k)(2)(iii)]

- (4) The Permittee may, in lieu of installing, operating, and recording data from the continuous flow monitoring system specified in Condition III.C.3.f of this Attachment, determine the mass rate (lb./hr.) of NO<sub>x</sub> emissions by installing, operating, and maintaining continuous fuel flow meters following the appropriate measurements procedures specified in appendix D of part 75 of this chapter. If this compliance option is selected, the emission rate (E) of NO<sub>x</sub> shall be computed using the following Equation 4 in this section:

$$E = (ERsg * Hcc) / Occ$$

Where:

E = Emission rate of NO<sub>x</sub> from the duct burner, ng/J (lb./MWh) gross output;

ERsg = Average hourly emission rate of NO<sub>x</sub> exiting the steam generating unit heat input calculated using appropriate F factor as described in Method 19 of appendix A of this part, ng/J (lb./MMBtu);

Hcc = Average hourly heat input rate of entire combined cycle unit, J/hr. (MMBtu/hr.); and

Occ = Average hourly gross energy output from entire combined cycle unit, J (MWh).

[40 CFR 60.48Da(k)(2)(iv)]

- b. Compliance with the NO<sub>x</sub> emission limitations under Condition III.C.1.a of this Attachment is based on the average emission rate for 30 successive boiler operating days. A separate performance test is completed at the end of each boiler operating day after the initial performance test, and a new 30-day average emission rate for NO<sub>x</sub> is calculated to show compliance

with the standards. The 30-day rolling average NO<sub>x</sub> emission limitations is determined by calculating the arithmetic average of all hourly emission rates for NO<sub>x</sub> for the 30 successive boiler operating days, except for data obtained during startup, shutdown, and malfunction.

[40 CFR 60.48Da(d)]

- c. If the Permittee has not obtained the minimum quantity of emission data as required under Condition III.C.3 of this Attachment, compliance with the emission standard in Condition III.C.1.a of this Attachment for the day on which the 30-day period ends may be determined by the Director by following the applicable procedures in Section 7 of Method 19 of appendix A of 40 CFR 60.

[40 CFR 60.48Da(h)]

- d. The Permittee shall determine compliance with the NO<sub>x</sub> standard in Condition III.C.1.a of this Attachment as follows:

[40 CFR 60.50Da(d)]

- (1) The appropriate procedures in Method 19 of appendix A of 40 CFR 60 shall be used to determine the emission rate of NO<sub>x</sub>.
- (2) The continuous monitoring system shall be used to determine the concentrations of NO<sub>x</sub> and CO<sub>2</sub> or O<sub>2</sub>.

[40 CFR 60.50Da(d)]

### 3. Monitoring Requirements

- a. The CEMS installed under Condition II.D.3 of this Attachment to meet requirements of 40 CFR 75 shall be used to meet the requirements of this section, except that the Permittee shall also meet the reporting requirements under Condition III.C.4 of this Attachment. Data reported to meet these requirements shall not include data substituted using the missing data procedures in Subpart D of 40 CFR 75, nor shall the data have been bias adjusted according to the procedures of 40 CFR 75.

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

- b. The CEMS shall be operated and data recorded during all periods of operation of the affected facility including periods of startup, shutdown, malfunction or emergency conditions, except for CEMS breakdowns, repairs, calibration checks, and zero and span adjustments.

[40 CFR 60.49Da(e)]

- c. The Permittee shall obtain emission data for at least 18 hours in at least 22 out of 30 successive boiler operating days. If this minimum data requirement cannot be met with CEMS, the Permittee shall supplement emission data with other monitoring systems approved by the Administrator or the reference methods and procedures as described in Condition III.C.3.d below.

[40 CFR 60.49Da(f)(1)]

- d. When it becomes necessary to supplement CEMS data to meet the minimum data requirements in Condition III.C.2.c above, the Permittee shall use the reference methods and procedures in 40 CFR 60.49Da(h).  
[40 CFR 60.49Da(h)]
- e. The Permittee shall install, calibrate, maintain, and operate a wattmeter; measure gross electrical output in MWh on a continuous basis; and record the output of the monitor.  
[40 CFR 60.49Da(k)(1), A.A.C. R18-2-331.A.3.c]  
[Material Permit Condition is indicated by underline and italics]
- f. To demonstrate compliance with the NOx emission standard in Condition III.C.1.a of this Attachment, the Permittee shall install, certify, operate, and maintain a continuous flow monitoring system meeting the requirements of Performance Specification 6 of appendix B of 40 CFR 60 and the CD assessment, RATA and reporting provisions of procedure 1 of appendix F of 40 CFR 60, and record the output of the system, for measuring the volumetric flow rate of exhaust gases discharged to the atmosphere;  
[40 CFR 60.49Da(l), A.A.C. R18-2-331.A.3.c]  
[Material Permit Condition is indicated by underline and italics]
- g. Alternately to Condition III.C.3.f above, data from a continuous flow monitoring system certified according to the requirements of 40 CFR 75.20(c) and appendix A to 40 CFR 75. The system shall meet the applicable quality control and quality assurance requirements of 40 CFR 75.21 and appendix B to 40 CFR 75. Flow rate data reported to meet the requirements of Condition III.C.4 of this Attachment shall not include substitute data values derived from the missing data procedures in subpart D of 40 CFR 75, nor shall the data have been bias adjusted according to the procedures of 40 CFR 75.  
[40 CFR 60.49Da(m), A.A.C. R18-2-331.A.3.c]  
[Material Permit Condition is indicated by underline and italics]
- h. The Permittee, may use, as an alternative to the requirements specified in either Condition III.C.3.f or III.C.3.g above, a fuel flow monitoring system certified and operated according to the requirements of appendix D to 40 CFR 75.  
[40 CFR 60.49Da(n), A.A.C. R18-2-331.A.3.c]  
[Material Permit Condition is indicated by underline and italics]
- i. The Permittee shall prepare and submit to the Director for approval a unit-specific monitoring plan for each monitoring system, at least 45 days before commencing certification testing of the monitoring systems. The Permittee shall comply with the requirements in the plan. The plan must address the following requirements:  
[40 CFR 60.49Da(s)]
- (1) Installation of the CEMS sampling probe or other interface at a measurement location relative to each affected process unit such

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

- (2) Performance and equipment specifications for the sample interface, the pollutant concentration or parametric signal analyzer, and the data collection and reduction systems;
- (3) Performance evaluation procedures and acceptance criteria (e.g., calibrations, relative accuracy test audits (RATA), etc.);
- (4) Ongoing operation and maintenance procedures in accordance with the general requirements of 40 CFR 60.13(d) or 40 CFR 75 (as applicable);
- (5) Ongoing data quality assurance procedures in accordance with the general requirements of 40 CFR 60.13 or 40 CFR 75 (as applicable); and
- (6) Ongoing recordkeeping and reporting procedures in accordance with the requirements of this subpart.

4. Reporting Requirements

- a. The following information shall be reported to the Director for each 24-hour period.

[40 CFR 60.51Da(b)]

- (1) Calendar date.
- (2) The average NO<sub>x</sub> emission rates (ng/J, lb./MMBtu, or lb./MWh) for each 30 successive boiler operating days, ending with the last 30-day period in the quarter; reasons for non-compliance with the emission standards; and, description of corrective actions taken.
- (3) Identification of the boiler operating days for which pollutant or diluent data have not been obtained by an approved method for at least 75 percent of the hours of operation of the facility; justification for not obtaining sufficient data; and description of corrective actions taken.
- (4) Identification of the times when emissions data have been excluded from the calculation of average emission rates because of startup, shutdown, malfunction, or other reasons, and justification for excluding data for reasons other than startup, shutdown, malfunction, or emergency conditions.
- (5) Identification of "F" factor used for calculations, method of determination, and type of fuel combusted.

- (6) Identification of times when hourly averages have been obtained based on manual sampling methods.
- (7) Identification of the times when the pollutant concentration exceeded full span of the CEMS.
- (8) Description of any modifications to CEMS which could affect the ability of the CEMS to comply with Performance Specifications 2 or 3.

- b. If the minimum quantity of emission data as required by Condition III.C.3.c of this Attachment is not obtained for any 30 successive boiler operating days, the following information obtained under the requirements of Condition III.C.2.c of this Attachment is reported to the Director for that 30-day period:

[40 CFR 60.51Da(c)]

- (1) The number of hourly averages available for outlet emission rates ( $n_o$ ) and inlet emission rates ( $n_i$ ) as applicable.
- (2) The standard deviation of hourly averages for outlet emission rates ( $s_o$ ) and inlet emission rates ( $s_i$ ) as applicable.
- (3) The lower confidence limit for the mean outlet emission rate ( $E_o^*$ ) and the upper confidence limit for the mean inlet emission rate ( $E_i^*$ ) as applicable.
- (4) The applicable potential combustion concentration.
- (5) The ratio of the upper confidence limit for the mean outlet emission rate ( $E_o^*$ ) and the allowable emission rate ( $E_{std}$ ) as applicable.

- c. For any periods  $NO_x$  emissions data are not available, the Permittee shall submit a signed statement indicating if any changes were made in operation of the emission control system during the period of data unavailability. Operations of the control system and affected facility during periods of data unavailability shall be compared with operation of the control system and affected facility before and following the period of data unavailability.

[40 CFR 60.51Da(f)]

- d. The Permittee shall submit a signed statement indicating whether:

[40 CFR 60.51Da(h)]

- (1) The required CEMS calibration, span, and drift checks or other periodic audits have or have not been performed as specified.



III. DUCT BURNERS

- (2) The data used to show compliance was or was not obtained in accordance with approved methods and procedures of this part and is representative of plant performance.
- (3) The minimum data requirements have or have not been met; or, the minimum data requirements have not been met for errors that were unavoidable.
- (4) Compliance with the standards has or has not been achieved during the reporting period.

e. The Permittee shall submit the written reports required under 40 CFR 60 Subpart A to the Director semiannually for each six-month period. All semiannual reports shall be postmarked by the 30th day following the end of each six-month period.

[40 CFR 60.51Da(j)]

f. The Permittee may submit electronic quarterly reports for NO<sub>x</sub> in lieu of submitting the written reports required under Condition III.C.4.b of this Attachment. The format of each quarterly electronic report shall be coordinated with the Department. The electronic report shall be submitted no later than 30 days after the end of the calendar quarter and shall be accompanied by a certification statement from the Permittee, indicating whether compliance with the applicable emission standards and minimum data requirements of 40 CFR 60 was achieved during the reporting period. Before submitting reports in the electronic format, the Permittee shall coordinate with the Department to obtain their agreement to submit reports in this alternative format.

[40 CFR 60.51Da(k)]

5. Testing Requirements

The Permittee shall utilize the performance tests performed under Condition II.D.4 to demonstrate compliance with the emission limit specified in Condition III.C.1 above.

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

**D. Sulfur Dioxide**

1. Emission Limitations and Standards

The Permittee shall not cause to be discharged into the atmosphere any gases that contain sulfur dioxide (SO<sub>2</sub>) in excess of:

[40 CFR 60.43Da(b)]

a. 340 ng/J (0.80 lb./MMBtu) heat input and 10 percent of the potential combustion concentration (90 percent reduction); or

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- b. 100 percent of the potential combustion concentration (zero percent reduction) when emissions are less than 86 ng/J (0.20 lb./MMBtu) heat input.

2. Testing Requirements

The Permittee shall utilize the performance tests performed under Condition II.F.2 to demonstrate compliance with the emission limit specified in Condition III.D.1 above.

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

3. Permit Shield

Compliance with the conditions of this Part shall be deemed compliance with 40 CFR 60.43Da(b).

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

**IV. AUXILIARY BOILER**

**A. Fuel Limitations**

1. The Permittee shall burn only pipeline quality natural gas.  
[40 CFR 72.2, A.A.C. R18-2-406.A.4]
2. The Permittee shall maintain a vendor-provided copy of that part of the Federal Energy Regulatory Commission (FERC)-approved tariff agreement that contains the sulfur content and the lower heating value of the pipeline quality natural gas.  
[A.A.C. R18-2-306.A.3.c]

**B. Particulate Matter and Opacity**

1. Emission Limitations and Standards
  - a. The Permittee shall not cause to be discharged into the atmosphere, any gases, which contains particulate matter in excess of any of the following limits: 0.19 lb./hr., or 2.2 nanograms per joule heat input (0.0050 lb. per million Btu), based on a 3-hour averaging time, derived from the high heating value of the natural gas.  
[A.A.C. R18-2-406.A.4]
  - b. *The opacity of emissions from the auxiliary boiler stack shall not be greater than 10 percent based on a six-minute average.*

[A.A.C. R18-2-406.A.4, and A.A.C..R18-2-331.A.3.f]

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

2. Monitoring, Recordkeeping and Reporting Requirements

- a. The Permittee shall perform a visible emission observation quarterly, when the unit is operating, to determine opacity using EPA Reference

IV. AUXILIARY BOILER

Method 9. The Permittee shall keep records of observation performed, name of the observer, date & time of observation, and the results of the observation. If the opacity observed exceed 10 percent, the Permittee shall report the incident as an excess emission and take corrective action to reduce the opacity below 10 percent.

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

- b. The Permittee shall maintain a record of monthly natural gas consumption for the boiler. This may be done maintaining a copy of the monthly natural gas bill for the auxiliary boiler.

[40 CFR 60.48c(g)(2)]

3. Testing Requirements

The Permittee shall conduct a performance test in the first year of the permit term using EPA Reference Method 5 to show compliance with the emission limit specified in Condition IV.B.1.a.

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

4. Permit Shield

Compliance with the conditions of this part shall be deemed compliance with 40 CFR 60.48.c(g).

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

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

1. Emission Limitations and Standards

The Permittee shall not cause to be discharged into the atmosphere, any gases, which contain nitrogen oxides in excess of any of the following limits: 3.5 lb./hr., or 40 nanograms per joule heat input (0.092 lb. per million Btu), based on a 3-hour averaging time, derived from the high heating value of the natural gas.

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

2. Air Pollution Control Equipment

*At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain and operate the Low-NO<sub>x</sub> Burners and FGR(flue gas recirculation) system in a manner consistent with good air pollution control practices for minimizing NO<sub>x</sub> emissions.*

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

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

3. Testing Requirements

The Permittee shall conduct a performance test in the first year of the permit term using EPA Reference Method 7E to show compliance with the emission limit specified in Condition IV.C.1.

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

IV. AUXILIARY BOILER

**D. Carbon Monoxide (CO)**

1. Emission Limitations and Standards

The Permittee shall not cause to be discharged into the atmosphere, any gases, which contain carbon monoxide in excess of any of the following limits: 2.1 lb./hr., or 24 nanograms per joule heat input (0.055 lb. per million Btu), based on a 3-hour averaging time, derived from the high heating value of the natural gas.

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

2. Testing Requirements

The Permittee shall conduct a performance test in the first year of the permit term using EPA Reference Method 10 to show compliance with the emission limit specified in Condition IV.D.1.

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

**E. Sulfur Dioxide (SO<sub>2</sub>)**

1. Emission Limitations/Standards

The Permittee shall not cause to be discharged into the atmosphere, any gases, which contain sulfur dioxide in excess of any of the following limits: 0.09 lb./hr., or 0.99 nanograms per joule heat input (0.0024 lb. per million Btu), based on a 3-hour averaging time, derived from the high heating value of the natural gas.

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

2. Testing Requirements

The Permittee shall conduct a performance test in the first year of the permit term using EPA Reference Method 6 to show compliance with the emission limit specified in Condition IV.E.1.

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

**F. Volatile Organic Compounds**

1. Emission Limitations and Standards

The Permittee shall not cause to be discharged into the atmosphere from the stack of each unit, any gases, which contain volatile organic compounds in excess of any of the following limits: 0.49 lb./hr., or 5.6 nanograms per joule heat input (0.013 lb. per million Btu), based on a 3-hour averaging time, derived from the high heating value of the natural gas.

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

2. Testing Requirements

The Permittee shall conduct a performance test in the first year of the permit term using EPA Reference Methods 25A to show compliance with the emission limit specified in Condition IV.F.1.

[A.A.C.R18-312]

**V. INTERNAL COMBUSTION ENGINE**

**A. Applicability**

This Section applies to the fire pump engine identified in the equipment list in Attachment “C”.

[40 CFR 63.6585]

**B. A.A.C. Requirements for Existing Stationary Rotating Machinery**

**1. Fuel Limitations**

The Permittee shall only fire diesel in the fire pump engine.

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

**2. Particulate Matter and Opacity**

**a. Emissions Limitations and Standards**

- (1) The Permittee shall not cause, allow or permit the emission of particulate matter, caused by combustion of fuel, from the fire pump engine into the atmosphere in excess of the amounts calculated by the following equation:

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

$$E = 1.02 Q^{0.769}$$

Where

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

Q = the heat input in million Btu per hour

- (2) The Permittee shall not cause, allow or permit to be emitted into the atmosphere from the engine 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]

**b. Monitoring and Recordkeeping Requirements**

- (1) A certified EPA Reference Method 9 observer shall conduct a monthly survey of visible emissions emanating from the stack of the engine, when in operation, in accordance with Condition I.A.2.

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

- (2) The Permittee shall keep records of fuel supplier certifications documenting the lower heating value of the fuel. These records shall be made available to ADEQ upon request.

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

c. Permit Shield

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

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

3. Sulfur Dioxide

a. Emission Limitations and Standards

The Permittee shall not emit or cause to emit more than 1.0 pound of sulfur dioxide per million Btu. The Permittee shall not burn fuel with sulfur content greater than 0.9 weight percent.

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

b. Monitoring, Recordkeeping, and Reporting Requirements

(1) The Permittee shall keep records of fuel supplier certifications documenting the sulfur content of the fuel. These records shall be made available to ADEQ upon request.

[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 engine exceeds 0.8%.

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

c. Permit Shield

Compliance with this Part shall be deemed compliance with A.A.C. R18-2-719.F, A.A.C. R18-2-719.H, A.A.C. R18-2-719.I, and A.A.C. R18-2-719.J.

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

C. Internal Combustion Engines Subject to National Emission Standards for Hazardous Air Pollutants (NESHAP)

1. General Operating Limitations/Requirements

a. At all times the Permittee shall operate and maintain the engine, including associated air pollution control equipment 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 Director which may include, but is not limited to, monitoring results, review of operation and maintenance

V. INTERNAL COMBUSTION ENGINE

procedures, review of operation and maintenance records, and inspection of the source.

[40 CFR 63.6605(b)]

- b. The Permittee shall operate and maintain the engine in accordance with 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)]

- c. The Permittee shall perform the following on the engine:

[40 CFR 63.6603(a), Table 2d, Item 4]

- (1) The Permittee shall change the oil and filter every 500 hours of operation or annually, whichever comes first.
- (2) The Permittee shall inspect the air cleaner every 1,000 hours of operation or annually, whichever comes first.
- (3) The Permittee shall inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

- d. Option of Utilizing Oil Analysis Program

[40 CFR §63.6625(i)]

The Permittee has the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Condition V.C.1.c(1) above. The oil analysis shall be performed at the same frequency specified for changing the oil. The analysis program must at a minimum analyze the following three parameters:

- (1) Total Base Number;
- (2) Viscosity; and
- (3) Percent water content.

The condemning limits for these parameters are as follows:

- (1) Total Base Number is less than 30 percent of the Total Base Number of the oil when new;
- (2) Viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or
- (3) Percent water content (by volume) is greater than 0.5.

V. INTERNAL COMBUSTION ENGINE

If all of these condemning limits are not exceeded, the Permittee is not required to change the oil. If any of the limits are exceeded, the Permittee must change the oil before continuing to use the engine. The Permittee shall keep records of the parameters that are analyzed as part of the program, the results of the analysis, the oil changes for the engine, and replacement of hoses and belts. The analysis program shall be part of the maintenance plan for the engine.

- e. If the emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements required in Condition V.C.2.c above, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under federal, state, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under federal, state, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under federal, state, or local law has abated. Sources must report any failure to perform the management practice on the schedule required and the federal, state or local law under which the risk was deemed unacceptable.

[40 CFR 63.6603(a), Table 2d, Item 4, Footnote 2]

- f. *The Permittee shall install a non-resettable hour meter on the emergency engine if one is not already installed.*

[40 CFR 63.6625(f), A.A.C. R-18-2-331.A.3.c]

[Material Permit Condition identified by underline and italics]

- g. The Permittee shall minimize the engine's time 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.

[40 CFR 63.6625(h)]

- h. The Permittee shall not operate the engine for more than 50 hours per year except during emergency situations or for maintenance and testing purposes. There is no time limit on the use of emergency engine in emergency situations.

[40 CFR 63.6640(f), (f)(i)]

- i. The Permittee may operate the 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 such units is limited to 100 hours per year. 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 year.

[40 CFR 63.6640(f)(ii)]



- j. The Permittee may operate the engine up to 50 hours per year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year provided for maintenance and testing.  
[40 CFR 63.6640(f)(iii)]

2. Compliance Demonstration

The Permittee shall demonstrate continuous compliance by operating and maintaining the engine according to the manufacturer's emission-related operation and maintenance instructions; or by developing and following its own 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 63.6640(a), 40 CFR 63 Subpart ZZZZ-Table 6, Item 9]

3. Reporting and Recordkeeping requirements

- a. The Permittee shall submit a semiannual compliance certification in accordance with Condition VII.A of Attachment "A".  
[40 CFR 63.6650(b)(5)]

- b. The compliance certification shall include the following:  
[40 CFR 63.6650(c), (d)]

- (1) Company name and address.
- (2) A statement by the responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report.
- (3) Date of report and beginning and ending dates of the reporting period.
- (4) For any malfunction during the reporting period, the compliance report shall include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report shall also include a description of actions taken by the Permittee during a malfunction of an affected source to minimize emissions in accordance with Condition V.C.1.a of this Attachment, including actions taken to correct a malfunction.
- (5) If there are no deviations from any operating limitations, a statement that there were no deviations from the operating limitations during the reporting period.
- (6) If a deviation from an operating limitation occurs during the reporting period, the following additional information shall be provided:

V. INTERNAL COMBUSTION ENGINE

- (a) The total operating time of the engine at which the deviation occurred during the reporting period.
  - (b) Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.
- c. The Permittee shall report each instance in which the Permittee did not meet each operating limitation in Condition V.C.1 of this Attachment.  
[40 CFR 63.6640(b)]
- d. The Permittee shall report each instance in which the facility did not meet the requirements in Table of 40 CFR 63 Subpart ZZZZ Table 8.  
[40 CFR 63.6640(e)]
- e. The Permittee shall keep records of the following:
  - (1) A copy of each notification and report that was submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status that is submitted, according to the requirement in 40 CFR 63.10(b)(2)(xiv).  
[40 CFR 63.6655(a)(1)]
  - (2) Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment.  
[40 CFR 63.6655(a)(2)]
  - (3) Records of actions taken during periods of malfunction to minimize emissions in accordance with Condition V.C.2.a of this Attachment, including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.  
[40 CFR 63.6655(a)(5)]
  - (4) Records required in Condition V.C.3 to show continuous compliance with each operating limitation.  
[40 CFR 63.6655(d)]
  - (5) Records of the maintenance conducted on the engine in order to demonstrate that the facility operated and maintained the engine and after-treatment control device (if any) according to the Permittee's own maintenance plan.  
[40 CFR 63.6655(e)]
  - (6) Records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The Permittee shall document how many hours are spent for emergency operation; including what classified the operation as emergency and how many hours are spent for non-emergency operation.

[40 CFR 63.6655(f)]

4. Permit Shield

Compliance with the conditions in this Part shall be deemed compliance with 40 CFR 63: 6595(a), 6603(a), 6605(a) and (b), 6625(e), (f)(1), (f)(3), (f)(4), (i) and (h), 6640(a), (b), (e) and (f), 6650(b)(5), (c) and (d), 6655(a), (d), (e) and (f).

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

**VI. COOLING TOWERS AND EVAPORATIVE CONDENSER**

**A. General Operational Requirements**

1. The Permittee shall not emit gaseous or odorous materials from equipment, operations, or premises in such quantities or concentrations so 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 thereof to a degree that will adequately dilute, reduce, or eliminate the discharge of air pollution to adjoining property.

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

**B. Particulate Matter and Opacity**

1. Emission Limitations/Standards

a. The Permittee shall not cause to be discharged from the main cooling tower into the atmosphere, any gases, which contain particulate matter in excess of any of the following limits: 5.9 lb./hr., or 0.83 lb./million gallon of circulating water.

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

b. The Permittee shall not cause to be discharged from the chiller cooling tower into the atmosphere, any gases, which contain particulate matter in excess of any of the following limits: 1.4 lb./hr., or 0.88 lb./million gallon of circulating water.

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

c. The Permittee shall not cause or permit the emissions of particulate matter discharged into the atmosphere in any one hour from the evaporative condenser in total quantities in excess of the amounts calculated by one of the following equations:

[A.A.C. R18-2-730.A.1]

(1) For process sources having a process weight rate of 60,000 pounds per hour (30 tons per hour) or less, the maximum allowable emissions shall be determined by the following equation:

$$E = 4.10P^{0.67}$$

where:

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

P = the process weight rate in tons-mass per hour.

- (2) For process weight rate greater than 60,000 pounds per hour (30 tons per hour), the maximum allowable emissions shall be determined by the following equation:

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

where "E" and "P" are defined as indicated in (1) above.

- d. The Permittee shall not cause, allow or permit to be emitted into the atmosphere any plume or effluent the opacity from the main cooling tower and the chiller cooling tower of which exceeds 5 percent, based on a 6-minute averaging time. Opacity readings of portions of plumes which contain condensed, uncombined water vapor shall not be used for the purposes of determining compliance with the standards.

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

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

- e. The Permittee shall not cause or allow to be discharged into the atmosphere any plume from the evaporative condenser which exhibits opacity greater than 20%, measured in accordance with EPA Reference Method 9. Where the presence of uncombined water is the only reason for the exceedance of this opacity standard, such exceedance shall not constitute a violation.

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

## 2. Air Pollution Control Requirements

At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain and operate the high efficiency drift eliminator system on the cooling towers and the evaporative condenser in a manner consistent with good air pollution control practice for minimizing particulate matter emissions.

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

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

## 3. Monitoring, Record keeping and Reporting Requirements

- a. A certified EPA Reference Method 9 observer shall conduct a quarterly survey of visible emissions emanating from the cooling towers and evaporative condenser in accordance with Condition I.A.2.

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

VII. TURBO-MISTER

- b. The Permittee shall conduct annual drift eliminator inspections and will monitor monthly the delta T (difference between inflow temperature and outflow temperature) of the cooling tower during normal operations. If delta T is less than or equal to 6 degrees, then a drift eliminator inspection will be scheduled as soon as practicable.  
[A.A.C. R18-2-306.A.3.c]
- c. The Permittee shall perform monthly analysis of the total dissolved solids in the system circulation water during months for each cooling tower and evaporative condenser, when in operation. The Permittee shall keep records of the results in a written facility log.  
[A.A.C.R18-2-306.A.3.c]
- d. To demonstrate compliance with the particulate matter emission limitations in Condition VI.B.1, the Permittee shall perform calculations for emissions every month based on the average cooling water circulation rate for the month, the TDS analysis for that month, and drift rates of 0.0005, 0.003 and 0.002 for the main cooling tower, chilling cooling tower and evaporative condenser respectively. The Permittee shall maintain records of these calculations.  
[A.A.C.R18-2-306.A.3.c]

**C. Permit Shield**

Compliance with the conditions in this Section shall be deemed compliance with A.A.C.R18-2-730.D and A.A.C.R18-2-730.G.

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

**VII. TURBO-MISTER**

**A. 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 owner or operator thereof to a degree that will adequately dilute, reduce or eliminate the discharge of air pollution to adjoining property.  
[A.A.C R18-2-730.G]

**B. Particulate Matter and Opacity**

1. Emission Limitations and Standards
  - a. The Permittee shall ensure that the opacity of an emission from the Turbo-Mister shall not be greater than 20% as determined by Reference Method 9 in 40 CFR 60, Appendix A.

VII. TURBO-MISTER

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

- b. The Permittee shall not cause or permit the emission of particulate matter discharged into the atmosphere in any one hour from the Turbo-Mister in total quantities in excess of the amounts calculated by one of the following equations:

[A.A.C R18-2-730.A.1]

- (1) For process sources having a process weight rate of 60,000 pounds per hour (30 tons per hour) or less, the maximum allowable emissions shall be determined by the following equation:

$$E = 4.10P^{0.67}$$

Where

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

P = the process weight rate in tons-mass per hour.

- (2) For process weight rate greater than 60,000 pounds per hour (30 tons per hour), the maximum allowable emissions shall be determined by the following equation:

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

Where

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

P = the process weight rate in tons-mass per hour.

2. Monitoring, Reporting and Record Keeping Requirements

- a. A certified EPA Reference Method 9 observer shall conduct a quarterly survey of visible emissions emanating from the Turbo-Mister, when in operation in accordance with Condition I.A.2.

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

- b. If the observations resulted in a Method 9 opacity reading in excess of the opacity standards in Condition VII.B.1.a, the Permittee shall report this to ADEQ as an excess emission and initiate corrective action to reduce the opacity below the opacity standard in Condition VII.B.1.a. The Permittee shall keep a record of the corrective action performed.

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

3. Permit Shield

VIII. FUGITIVE DUST REQUIREMENTS

Compliance with Section VII shall be deemed compliance with A.A.C. R18-2-702.B, -730.D, -730.G, and -730.A.1.

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

**VIII. FUGITIVE DUST REQUIREMENTS**

**A. Applicability**

Section VIII 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 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

VIII. FUGITIVE DUST REQUIREMENTS

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

Unpaved 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 VIII.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.2.

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

C. Permit Shield

Compliance with Section VIII shall be deemed compliance with A.A.C. R18-2-604, -605, -606, -607, -608, -614, and -804.B.

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



**IX. 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 IX.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

IX. OTHER PERIODIC ACTIVITIES

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 IX.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 IX.B.1.a(3)(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 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.
- (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 IX.B.1.a(1), 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 IX.B.1.b(1).

c. Permit Shield

Compliance with Condition IX.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 IX.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

IX. OTHER PERIODIC ACTIVITIES

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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 IX.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

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EQUIPMENT TYPE	MAX. CAPACITY	MAKE	MODEL	SERIAL NUMBER	INSTALLATION/ MFG. DATE	A.A.C. / NSPS / NESHAP
CTG 1 & 2	Combustion Turbine Generator	138 MW each	297479 297480	GE MS-7001FA	1/15/2002	40 CFR 60 Subpart GG
HRSG 1 & 2 w/Supplemental Firing Duct Burners	Heat Recovery Steam Generator	650 MMBtu/hr. each	25961-01 25961-02	Waste Heat Boiler	1/15/2002	40 CFR 60 Subpart Da
Auxiliary Boiler	Auxiliary Boiler	30 MMBtu/hr.	2000-23	Rentech	1/15/2002	40 CFR 60 Subpart Dc
Main Cooling Tower	Main Cooling Tower- evaporative	122,120 gal/min	156565-W489-6.0-08-00	Marley W489-6.0-8	1/15/2002	A.A.C. R18-2-730
Chiller Cooling Tower	Chiller Cooling Tower Evaporative	27,000 gal/min	00-12343-45	Niagra	1/15/2002	A.A.C. R18-2-730
Chiller Cooling Evaporative Tower	Baltimore Aircoil	5,160 gpm	NA	CXV-T1888/CXV-T944	2008	A.A.C. R18-2-730
SCR	Catalyst	N/A	99-229-C	Dixie Southern Construction WRT3	1/15/2002	Control
CTG Low NO <sub>x</sub> Burners	Combustor	NA	99637	DE Jong Coen	1/15/2002	Control
Auxiliary Boiler Low NO <sub>x</sub> Burners	Combustor	NA	C-10044	Rentech	1/15/2002	Control
Diesel Fire Water Pump	Diesel engine with fuel tank	275 HP	RG081A117284	John Deere Power Tech	1999	A.A.C. R18-2-719 40 CFR 63 Subpart ZZZZ
Turbo-Mister	NA	80 gallons/minute	NA	S30FP	2015	A.A.C. R18-2-730

**ATTACHMENT "D": ACID RAIN PROVISIONS  
FOR  
AIR QUALITY CONTROL PERMIT NO. 90238 FOR GRIFFITH ENERGY, LLC**

**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 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. SO<sub>2</sub> ALLOWANCE<sup>†</sup> ALLOCATIONS AND NO<sub>x</sub> 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 SO<sub>2</sub> Allowances as of the allowance transfer deadline in the GE Combustion Turbine Generators compliance sub-account not less than the total annual actual emissions of SO<sub>2</sub> from the GE Combustion Turbine Generators for the previous calendar year as required by the Acid Rain Program.
- C. The SO<sub>2</sub> Allowance Allocations and NO<sub>x</sub> Requirements for the GE Combustion Turbine Generators are as follows:

Affected Unit	Pollutant	Years 2000-2009	Years 2010 and Beyond
CTG 1 & 2	SO <sub>2</sub> allowances	NA	23
	NO <sub>x</sub> emission limit	These units are not subject to a NO <sub>x</sub> emission limit under 40 CFR Part 76.	

<sup>†</sup>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 renewal signed by the Designated Representative Scott Henry on July 21, 2021.

[40 CFR 72, 73, and 75]