



## ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

### AIR QUALITY CLASS I PERMIT

**COMPANY:** *Griffith Energy, LLC*  
**FACILITY:** *Griffith Energy*  
**PERMIT #:** *31910*  
**DATE ISSUED:**  
**EXPIRY DATE:**

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#### SUMMARY

This renewal permit is issued to Griffith Energy LLC, the Permittee, to operate a power generating plant, located approximately nine (9) miles southeast of the town of Kingman in Mohave County, Arizona. Griffith Energy produces and supplies power on the wholesale market.

The Griffith Energy operations consists of a 650 megawatt (MW), natural gas fired, combined cycle generating facility and on-site supporting infrastructure including an administration building, warehouse storage, auxiliary boiler, water treatment and storage facilities, cooling towers, gas conditioning equipment and access roads. The plant and infrastructure occupies 45 acres of a 160-acre site in the Mohave County I-40 Industrial Corridor.

The Plant has two combustion turbine generators (CTGs) in conjunction with two heat recovery steam generators (HRSGs). The control equipment are low NO<sub>x</sub> burners and selective catalytic reduction (SCR) for the two CTG/HRSG units and low NO<sub>x</sub> burners and flue gas recirculation (FGR) for the auxiliary boiler. The plant has a base load of 520 MW. The fuel used is pipeline natural gas only.

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 40 Code of Federal Regulations (CFR), except as otherwise defined in this permit. Unless noted otherwise, references cited in the permit conditions refer to the A.A.C. All material permit conditions have been identified within the permit by a double underline. All terms and conditions in this permit are enforceable by the Administrator of the U.S. Environmental Protection Agency, except for those terms and conditions that have been designated as "State Requirements".

Griffith Energy is a major source because the potential emission rates of the following pollutants are greater than 100 tons per year: (i) particulate matter, (ii) nitrogen oxides, (iii) carbon monoxide, and (iv) volatile organic compounds. Griffith is subject to the Acid Rain Program of the Clean Air Act. This permit is issued in accordance with the Title V program of the Clean Air Act, and Title 49, Chapter 3 of the Arizona Revised Statutes.

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## ATTACHMENT "A": GENERAL PROVISIONS

### Air Quality Control Permit No. 31910 *Griffith Energy, LLC*

#### I. PERMIT EXPIRATION AND RENEWAL

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

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

#### II. COMPLIANCE WITH PERMIT CONDITIONS

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

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

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

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

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

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

#### **IV. POSTING OF PERMIT**

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

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

#### **V. FEE PAYMENT**

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

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

#### **VI. ANNUAL EMISSION INVENTORY QUESTIONNAIRE**

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

- A. The Permittee shall complete and submit to the Director an annual emissions inventory questionnaire. The questionnaire is due by March 31st or ninety days after the Director makes the inventory form available each year, whichever occurs later, and shall include emission information for the previous calendar year.
- B. The questionnaire shall be on a form provided by the Director and shall include the information required by A.A.C. R18-2-327.

#### **VII. COMPLIANCE CERTIFICATION**

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

- A. The Permittee shall submit a compliance certification to the Director semiannually, which describes the compliance status of the source with respect to each permit condition. The first certification shall be submitted no later than May 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.

The compliance certifications shall include the following:

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

### **VIII. CERTIFICATION OF TRUTH, ACCURACY AND COMPLETENESS**

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

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

### **IX. INSPECTION AND ENTRY**

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

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

- A.** Enter upon the Permittee's premises where a source is located, emissions-related activity is conducted, or where records are required to be kept under the conditions of the permit;
- B.** Have access to and copy, at reasonable times, any records that are required to be kept under the conditions of the permit;
- C.** Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit;

- D. Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the permit or other applicable requirements; and
- E. Record any inspection by use of written, electronic, magnetic and photographic media.

**X. PERMIT REVISION PURSUANT TO FEDERAL HAZARDOUS AIR POLLUTANT STANDARD**

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

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

**XI. ACCIDENTAL RELEASE PROGRAM**

[40 CFR Part 68]

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

**XII. EXCESS EMISSIONS, PERMIT DEVIATIONS, AND EMERGENCY REPORTING**

**A. Excess Emissions Reporting**

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

- 1. Excess emissions shall be reported as follows:
  - a. The Permittee shall report to the Director any emissions in excess of the limits established by this permit. Such report shall be in two parts as specified below:
    - (1) Notification by telephone or facsimile within 24 hours of the time when the Permittee first learned of the occurrence of excess emissions including all available information from Condition XII.A.1.b below.
    - (2) Detailed written notification by submission of an excess emissions report within 72 hours of the notification pursuant to Condition XII.A.1.a.(1) above.
  - b. The report shall contain the following information:
    - (1) Identity of each stack or other emission point where the excess emissions occurred;
    - (2) Magnitude of the excess emissions expressed in the units of the applicable emission limitation and the operating data and calculations used in determining the magnitude of the excess emissions;
    - (3) Date, time and duration, or expected duration, of the excess emissions;
    - (4) Identity of the equipment from which the excess emissions emanated;
    - (5) Nature and cause of such emissions;

- (6) If the excess emissions were the result of a malfunction, steps taken to remedy the malfunction and the steps taken or planned to prevent the recurrence of such malfunctions; and
  - (7) Steps taken to limit the excess emissions. If the excess emissions resulted from start-up or malfunction, the report shall contain a list of the steps taken to comply with the permit procedures.
2. In the case of continuous or recurring excess emissions, the notification requirements of this section shall be satisfied if the source provides the required notification after excess emissions are first detected and includes in such notification an estimate of the time the excess emissions will continue. Excess emissions occurring after the estimated time period, or changes in the nature of the emissions as originally reported, shall require additional notification pursuant to Condition XII.A.1 above.

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

**B. Permit Deviations Reporting**

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

The Permittee shall promptly report deviations from permit requirements, including those attributable to upset conditions as defined in the permit, the probable cause of such deviations, and any corrective actions or preventive measures taken. Prompt reporting shall mean that the report was submitted to the Director by certified mail, facsimile, or hand delivery within two working days of the time the deviation occurred.

**C. Emergency Provision**

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

1. An “emergency” means any situation arising from sudden and reasonable unforeseeable events beyond the control of the source, including acts of God, that require immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.
2. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if Condition XII.C.3 is met.
3. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:
  - a. An emergency occurred and that the Permittee can identify the cause(s) of the emergency;
  - b. The permitted facility was being properly operated at the time;
  - c. During the period of the emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and

- d. The Permittee submitted notice of the emergency to the Director by certified mail, facsimile, or hand delivery within two working days of the time when emission limitations were exceeded due to the emergency. This notice shall contain a description of the emergency, any steps taken to mitigate emissions, and corrective action taken.
4. In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
5. This provision is in addition to any emergency or upset provision contained in any applicable requirement.

**D. Compliance Schedule**

[ARS § 49-426.I.5]

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

**E. Affirmative Defenses for Excess Emissions Due to Malfunctions, Startup, and Shutdown**

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

1. Applicability

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

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

2. Affirmative Defense for Malfunctions

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

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

- b. The air pollution control equipment, process equipment, or processes were at all times maintained and operated in a manner consistent with good practice for minimizing emissions;
- c. If repairs were required, the repairs were made in an expeditious fashion when the applicable emission limitations were being exceeded. Off-shift labor and overtime were utilized where practicable to ensure that the repairs were made as expeditiously as possible. If off-shift labor and overtime were not utilized, the Permittee satisfactorily demonstrated that the measures were impracticable;
- d. The amount and duration of the excess emissions (including any bypass operation) were minimized to the maximum extent practicable during periods of such emissions;
- e. All reasonable steps were taken to minimize the impact of the excess emissions on ambient air quality;
- f. The excess emissions were not part of a recurring pattern indicative of inadequate design, operation, or maintenance;
- g. During the period of excess emissions there were no exceedances of the relevant ambient air quality standards established in Title 18, Chapter 2, Article 2 of the Arizona Administrative Code that could be attributed to the emitting source;
- h. The excess emissions did not stem from any activity or event that could have been foreseen and avoided, or planned, and could not have been avoided by better operations and maintenance practices;
- i. All emissions monitoring systems were kept in operation if at all practicable; and
- j. The Permittee's actions in response to the excess emissions were documented by contemporaneous records

3. Affirmative Defense for Startup and Shutdown

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

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

4. Affirmative Defense for Malfunctions During Scheduled Maintenance

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

5. Demonstration of Reasonable and Practicable Measures

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

### **XIII. RECORD KEEPING REQUIREMENTS**

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

- A.** The Permittee shall keep records of all required monitoring information including, but not limited to, the following:
1. The date, place as defined in the permit, and time of sampling or measurements;
  2. The date(s) analyses were performed;
  3. The name of the company or entity that performed the analyses;
  4. A description of the analytical techniques or methods used;
  5. The results of such analyses; and

6. The operating conditions as existing at the time of sampling or measurement.
- B.** The Permittee shall retain records of all required monitoring data and support information for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings or other data recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.
- C.** All required records shall be maintained either in an unchangeable electronic format or in a handwritten logbook utilizing indelible ink.

#### **XIV. REPORTING REQUIREMENTS**

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

The Permittee shall submit the following reports:

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

#### **XV. DUTY TO PROVIDE INFORMATION**

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

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

#### **XVI. PERMIT AMENDMENT OR REVISION**

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

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

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

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

#### **XVII. FACILITY CHANGE WITHOUT A PERMIT REVISION**

- A.** The Permittee may make changes at the permitted source without a permit revision if all of the following apply:
1. The changes are not modifications under any provision of Title I of the Act or under ARS § 49-401.01(19);
  2. The changes do not exceed the emissions allowable under the permit whether expressed therein as a rate of emissions or in terms of total emissions;
  3. The changes do not violate any applicable requirements or trigger any additional applicable requirements;
  4. The changes satisfy all requirements for a minor permit revision under A.A.C.-R18-2-319.A; and
  5. The changes do not contravene federally enforceable permit terms and conditions that are monitoring (including test methods), record keeping, reporting, or compliance certification requirements.
- B.** The substitution of an item of process or pollution control equipment for an identical or substantially similar item of process or pollution control equipment shall qualify as a change that does not require a permit revision, if it meets all of the requirements of Conditions XVII.A and XVII.C of this Attachment.
- C.** For each change under Conditions XVII.A and XVII.B above, a written notice by certified mail or hand delivery shall be received by the Director and the Administrator a minimum of 7 working days in advance of the change. Notifications of changes associated with emergency conditions, such as malfunctions necessitating the replacement of equipment, may be provided less than 7 working days in advance of the change, but must be provided as far in advance of the change, as possible or, if advance notification is not practicable, as soon after the change as possible.
- D.** Each notification shall include:
1. When the proposed change will occur;
  2. A description of the change;
  3. Any change in emissions of regulated air pollutants; and
  4. Any permit term or condition that is no longer applicable as a result of the change.
- E.** The permit shield described in A.A.C. R18-2-325 shall not apply to any change made under this Section, other than implementation of an alternate to Conditions XVII.A and XVII.B above.
- F.** Except as otherwise provided for in the permit, making a change from one alternative operating scenario to another as provided under A.A.C. R18-2-306.A.11 shall not require any prior notice under this Section.
- G.** Notwithstanding any other part of this Section, the Director may require a permit to be revised for any change that, when considered together with any other changes submitted by the same source under this Section over the term of the permit, do not satisfy Condition XVII.A above.

## **XVIII. TESTING REQUIREMENTS**

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

**A.** The Permittee shall conduct performance tests as specified in the permit and at such other times as may be required by the Director.

**B.** Operational Conditions During Testing

Tests shall be conducted during operation at the maximum possible capacity of each unit under representative operational conditions unless other conditions are required by the applicable test method or in this permit. With prior written approval from the Director, testing may be performed at a lower rate. Operations during periods of start-up, shutdown, and malfunction (as defined in A.A.C. R18-2-101) shall not constitute representative operational conditions unless otherwise specified in the applicable standard.

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

**D.** Test Plan

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

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

**E.** Stack Sampling Facilities

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

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

**F.** Interpretation of Final Results

Each performance test shall consist of three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in the applicable standard. For the purpose of determining compliance with an applicable standard, the arithmetic mean of the results of the three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the three runs is required to be discontinued because of forced shutdown,

failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances beyond the Permittee's control, compliance may, upon the Director's approval, be determined using the arithmetic mean of the results of the other two runs. If the Director or the Director's designee is present, tests may only be stopped with the Director's or such designee's approval. If the Director or the Director's designee is not present, tests may only be stopped for good cause. Good cause includes: forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances beyond the Permittee's control. Termination of any test without good cause after the first run is commenced shall constitute a failure of the test. Supporting documentation, which demonstrates good cause, must be submitted.

**G. Report of Final Test Results**

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

**XIX. PROPERTY RIGHTS**

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

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

**XX. SEVERABILITY CLAUSE**

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

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

**XXI. PERMIT SHIELD**

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

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

**XXII. PROTECTION OF STRATOSPHERIC OZONE**

[40 CFR Part 82]

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

## ATTACHMENT "B": SPECIFIC CONDITIONS

Air Quality Control Permit No. 31910  
for  
**Griffith Energy, LLC**

### I. FACILITY WIDE LIMITATIONS

- A. The Permittee shall have on site or on call a person that is certified in EPA Reference Method 9.  
[A.A.C R18-2-306.A.3.c]
- B. At the time the compliance certifications required by Section VII of Attachment "A" are submitted, the Permittee shall submit reports of all monitoring activities required by Attachment "B" performed during the six month compliance term.  
[A.A.C. R18-2-306.A.5.a]

### II. COMBUSTION TURBINE GENERATORS UNIT 1 AND UNIT 2 – HEAT RECOVERY STEAM GENERATORS UNIT 1 AND UNIT 2 IN COMBINED CYCLE OPERATION WITH AND 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 to less than five (5) hours.
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.
3. Startup and shutdown periods shall not exceed 1200 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. Particulate Matter and Opacity

1. Emission Limitations/Standards with and without supplement duct firing
  - a. Opacity

*The opacity of emissions from the stack of each unit shall not be greater than 10 percent based on a six-minute average, except for periods of startup, shutdown, or malfunction as defined in condition II.A above. Opacity readings of portions of plumes which contain condensed, uncombined water vapor shall not be used for*

the purposes of determining compliance with opacity standards.

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

- b. Excess emissions for CTG (Units 1 and Unit 2) and HRSG (Units 1 and Unit 2) are defined as any six-minute period during which the average opacity of emissions exceeds 10 percent opacity.

[40 CFR 60.45(g)(3)]  
[A.A.C.R18-2-306.A.2]

c. Particulate Matter

- (1) 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]

- (2) 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 high heating value of natural gas. [A.A.C. R18-2-406.A.4]

- (3) The Permittee shall not cause, suffer, allow, or permit the emission of particulate matter, caused by combustion of fuel, from the duct burner in excess of the amounts calculated by the following equation:

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

where:

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

Q = the heat input in million Btu per hour

[Arizona SIP R9-3-503.C.1.a.i]

2. Monitoring/Recordkeeping/Reporting Requirements

- a. The Permittee shall perform a visible emission observation monthly, when the units are operating to determine opacity using EPA Reference Method 9. The Permittee shall keep records of observation performed, emission point or emission unit being observed, name of the observer, date & time of the 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.

[40 CFR 60.45(g)(3)]  
[A.A.C. R-18-2-306.A.3.c]

- b. The Permittee shall maintain a record of daily fuel consumption for the duct

burners. This may be done by maintaining a copy of the monthly natural gas bill for the duct burners.

[40 CFR 60.48c(g)]

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 II.B.1.c.

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

4. Permit Shield

Compliance with this condition II.B shall be deemed compliance with Arizona SIP R9-3-503.C.1.a.i, 40 CFR 60.42(a)b, 40 CFR 60.48c(g), and 40 CFR 60.45(g)(3) as of the date of issuance of this permit.

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

**C. Nitrogen Oxides (NOx)**

1. Emission Limitations/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 emit nitrogen oxides more than 0.20 lbs/MMBtu, maximum three hour average, from the duct burner.

[Arizona SIP R9-3-503.C.4.a]

2. Air Pollution Control Requirements

*At all times, including periods of startup, shutdown, and malfunction, Permittee shall, to the extent practicable, maintain and operate the Low-NOx Burners and Selective Catalytic Reduction system in a manner consistent with good air pollution control practices for minimizing NOx 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. Monitoring/Recordkeeping/Reporting Requirements

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

[40 CFR 60.47a(d) and A.A.C. R18-2-331.A.3.e]

- b. The CEMS for NO<sub>x</sub>, CO<sub>2</sub> or O<sub>2</sub> shall meet the following requirements:
- (1) 40 CFR Part 75, Appendix A, Specification and Test Procedures•
    - (a) Installation and measurement location
    - (b) Equipment specifications
    - (c) Performance specifications
    - (d) Data acquisition and handling systems
    - (e) Calibration gas
    - (f) Certifications tests and procedures
    - (g) Calculations
  - (2) 40 CFR Part 75, Appendix B, Quality Assurance and Quality Control Procedure
    - (a) Quality control program
    - (b) Frequency of testing
  - (3) 40 CFR Part 75 Appendix C, Missing Data Estimation Procedures•

Load-Based Procedure for Missing Flow Rate and NO<sub>x</sub> Emission Rate Data
  - (4) 40 CFR Part 75 Appendix F, Conversion Procedures  
Procedures for NO<sub>x</sub> Emission Rate
  - (5) Data Reduction  

Permittee shall comply with the data reduction requirements of 40 CFR Part 75.10(d)(1).
- c. 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]
- d. 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)]  
[A.A.C.R18-2-306.A.2]
- e. Nitrogen Oxide Excess Emissions
- (1) Excess emissions indicated by the CEMS shall be considered violations of

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 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]

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

[40CFR 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. Permit Shield

Compliance with this section shall be deemed compliance with the following requirements as of the date of issuance of this permit: 40 CFR 60.47a(a), 40 CFR 60.45(g)(3) and Arizona SIP R9-3-503.C.4.a.

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

### **D. Carbon Monoxide (CO)**

1. Emission Limitations/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/Reporting Requirements

- a. Permittee shall calibrate, maintain, and operate continuous monitoring systems (CEMS) for measuring emissions of carbon monoxide.

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

[Material Permit Condition are defined by double 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) 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 paragraph (3) of this section, Permittee shall meet minimum frequency of operation requirements as follows:

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), 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 emission 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 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 Figure1 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 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]

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

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

1. Emission Limitations/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 form 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. Monitoring/Recordkeeping/Reporting Requirements

- a. 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. R18-2-406.A.4]
- b. Permittee shall calculate SO<sub>2</sub> emissions in accordance with 40 CR 75 Appendix D, "SO<sub>2</sub> Mass Emissions Calculations for Gaseous Fuels," Section 2.3.3. [A.A.C. R18-2-406.A.4]
- c. 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]

3 Testing Requirements

Permittee shall conduct a performance test in the first year of the permit term using EPA Reference Method 19 or equivalent to show compliance with the emission limit specified in condition II.E.1.a and II.E.1.b. [A.A.C.R18-2-312]

**F. Volatile Organic Compounds**

1. Emission Limitations/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

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 concentration and EPA Reference Method 18 to measure both the methane and ethane concentration to show compliance with the emission limit specified in condition II.F.1.a and II.F.1.b

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

**G. Fuel Limitations**

**Fuel Specification**

The Permittee shall burn only pipeline quality natural gas. Pipeline natural gas contains 0.5 grains or less of total sulfur per 100 standard cubic feet. Additionally, pipeline natural gas must either be composed of at least 70 percent methane by volume or have a gross calorific value between 950 and 1100 BTU per standard cubic feet.

[ 40 CFR 72.2]

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

**III. AUXILIARY BOILER**

**A. Particulate Matter and Opacity**

1. Emission Limitations/Standards

a. Opacity

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

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

b. Particulate Matter

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]

2. Monitoring/Recordkeeping/Reporting Requirements

- a. The Permittee shall perform a visible emission observation quarterly, when the unit is operating, to determine opacity using EPA Reference 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, 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 daily fuel consumption. This may be done maintaining a copy of the monthly natural gas bill for the auxiliary boiler.  
[40 CFR 60.48c(g)]
- c. The Permittee shall report all six-minute periods in which the opacity of any plume or effluent exceeds 10 percent from the auxiliary boiler. [A.A.C.R18-2-406.A.4]
- d. 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.R18-2-406.A.4]

3. Testing Requirements

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 III.A.1.b.

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

4. Permit Shield

Compliance with this section shall be deemed compliance with 40 CFR 60.48(g) as of the date of permit issuance.

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

**B. Nitrogen Oxides (NO<sub>x</sub>)**

1. Emission Limitations/Standards

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. The Permittee shall not emit nitrogen oxide more than 0.20 lbs/MMBtu, maximum three hour average, from the auxiliary boiler. [Arizona SIP R9-3-503.C.4.a]

3. Air Pollution Control Equipment

At all times, including periods of startup, shutdown, and malfunction, 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.

3. Testing Requirements

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 III.B.1.

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

4. Permit Shield

Compliance with this section shall be deemed compliance with Arizona SIP R9-3-503.C.4.a as of the date of issuance of this permit.

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

**C. Carbon Monoxide (CO)**

1. Emission Limitations/Standards

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. R18-2-406A.4]

2. Testing Requirements

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 III.C.1.

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

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

1. Emission Limitations/Standards

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. R18-2-406A.4]

2. Testing Requirements

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 III.D.1.

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

**E. Volatile Organic Compounds**

1. Emission Limitations/Standards

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. R18-2-406A.4]

2. Testing Requirements

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 III.E.1.

[A.A.C.R18-312]

**F. Fuel Limitations**

**Fuel Specification**

The Permittee shall burn only pipeline quality natural gas. Pipeline natural gas contains 0.5 grains or less of total sulfur per 100 standard cubic feet. Additionally, pipeline natural gas must either be composed of at least 70% methane by volume or have a gross calorific value between 950 and 1100 BTU per standard cubic feet.

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

[40 CFR 72.2]

**IV. COOLING TOWERS**

**A. Particulate Matter and Opacity**

1. Operational Requirements

a. 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]

b. 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]

2. Emission Limitations/Standards

a. Opacity

*The Permittee shall not cause, allow or permit to be emitted into the atmosphere any plume or effluent the opacity 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.f]

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

b. Particulate Matter

1. 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]

2. 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]

3. 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 high efficiency drift eliminator system 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]

4. Monitoring/Recordkeeping/Reporting Requirements

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]

5. Permit Shield

Compliance with this section shall be deemed compliance with A.A.C.R18-2-730.D and A.A.C.R18-2-730.G as of the date of permit issuance.

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

**V. SULFURIC ACID TANKS, SODIUM HYDROXIDE TANKS, SODIUM HYPOCHLORITE TANKS, ANHYDROUS AMMONIA TANKS, CORROSIVE INHIBITOR TANKS, COAGULANT TANKS, SODA ASH TANKS, MAGNESIUM OXIDE TANKS, AND HYDRATED LIME SILOS**

**Particulate Matter and Opacity**

1. Operational Requirements

- a. Permittee shall not emit gaseous or odorous materials from equipment, operations, or premises in such quantities or concentrations so as to cause air pollutions.

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

- b. Material including solvent or other volatile organic compounds shall be processed, stored, used and transported in such a manner and by such means that they will not evaporate, leak, escape or be otherwise discharged into the ambient air so as to cause or contribute to air pollution to the air pollution. Where means are available to reduce effectively the contribution to air pollution from evaporation, leakage or equipment shall be mandatory. [A.A.C. R18-2-730.F]
- c. 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]

2. Emission Limitations/Standards [A.A.C. R18-2-702.B.3]

- a. The Permittee shall not cause to be discharged into the atmosphere any plume or effluent shall not exceed 40 percent opacity limit until April 23, 2006.
- b. After April 23, 2006, the Permittee shall not cause to be discharged into the atmosphere any plume or effluent shall not exceed 20 percent opacity limit.

3. Permit Shield

Compliance with this section shall be deemed compliance with A.A.C.R18-2-730.D, A.A.C.R18-2-730.F and A.A.C.R18-2-730.G as of the date of permit issuance. [A.A.C. R18-2-325]

**VI. FUGITIVE EMISSIONS**

**Particulate Matter and Opacity**

A. Operational Requirements for Open Areas, Roadways & Streets, Storage Piles, and Material Handling

- 1. Permittee shall not cause, allow, or permit visible emissions from any non-point source in excess of 40 percent opacity limited in accordance with the Arizona Testing Manual, Reference Method 9. [A.A.C.R18-2-612.A.4]

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

- a. All roads, parking lots, and any other areas with frequent vehicular traffic shall be paved. Service or maintenance roads that are used infrequently shall be graveled or otherwise treated with dust suppressants, adhesive soil stabilizer, or wetting agents to control dust. Infrequently used roads include those which provide access to and around the brine disposal pond, the fuel gas metering station, the transmission lines, and the construction heavy equipment haul road. [A.A.C. R18-2-406.A.4]

- b. Use approved dust suppressants, adhesive soil stabilizer, paving, covering, detouring, or wetting agents on, or bar access to open areas during construction operations,

repair operations, demolition activities, clearing operations, and leveling operations, or when any earth is moved or excavated.

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

- c. Use approved dust suppressants, temporary paving, detouring or wetting agents when a roadway is repaired, constructed, or reconstructed.

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

B. Monitoring, Recordkeeping, and Reporting Requirements

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

The Permittee shall maintain records of dates and type of control measures adopted pursuant to Specific Condition VI.A.2 of Attachment "B."

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

2. Quarterly Opacity Survey

a. Quarterly Monitoring Requirements [A.A.C.R18-2-306.A.3.c]

- (1) A certified Method 9 observer shall conduct a quarterly survey of visible emissions from the non-point sources. The Permittee shall keep a record of the name of the observer, the date on which the observation/survey was conducted, and the results of the observation/survey.

- (2) If the observer sees a plume from a non-point source that on an instantaneous basis appears to exceed 40%, then the observer shall, if practicable, take a six-minute Method 9 observation of the plume. If the six-minute opacity of the plume is less than 40%, the observer shall make a record of the following:

- (i) Location, date, and time of the observation; and

- (ii) The results of the Method 9 observation.

- (3) If the six-minute opacity of the plume exceeds 40%, then the Permittee shall do the following:

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

- (ii) Report it as an excess emission under Section XII.A of Attachment "A".

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

- b. Permittee shall maintain records of the dates on which any of the control measures employed.

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

C. Permit Shield

Compliance with this section shall be deemed compliance with A.A.C.R18-2-604.A, A.A.C.R18-2-605.A, and A.A.C.R18-2-612 as of the date of permit issuance.

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

## VII. OTHER PERIODIC ACTIVITIES

### A. Abrasive Blasting

#### 1. Opacity

a. The Permittee shall not cause, allow, or permit visible emissions from sandblasting or other abrasive blasting operations in excess of 40 percent opacity limit until April 23, 2006. [A.A.C.R18-2-702.A]

b. After April 23, 2006, the Permittee shall not cause, allow, or permit visible emissions from sandblasting or other abrasive blasting operation in excess of 20 percent opacity limit. [A.A.C.R18-2-702.B]

c. The Permittee shall not cause or allow sandblasting or other abrasive blasting without minimizing dust emissions to the atmosphere through the use of good modern practices. Good modern practices include:

(1) Wet blasting;

(2) Effective enclosure with necessary dust collecting equipment; or

(3) Any other method as approved by the Director. [A.A.C.R18-2-726]

#### 2. Monitoring, Recordkeeping and Reporting Requirements

Each time an abrasive blasting project is conducted in an area open to the atmosphere, the Permittee shall log in ink or in an electronic format, a record of the following:

a. The date the project was conducted;

b. The duration of the project; and

c. Type of control measures employed. [A.A.C.R18-2-306.A.3.c]

#### 3. Permit Shield

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

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

### B. Spray Painting

#### Volatile Organic Compounds

##### 1. Emission Limits and Standards

- a. 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]

- b. The Permit shall not employ, apply, evaporate, thin, dilute or dry any architectural coating photochemically reactive solvents for industrial or commercial purpose.

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

- c. For purposes of parts b and f of this section, a photochemically reactive solvent shall be any solvent with an aggregate of more than 20 percent of its total volume composed of the chemical compounds classified in paragraphs 1 through c of this subsection, or which exceeds any of the following percentage composition limitations, referred to the total volume of solvents:

- (1) A combination of the following types of compounds having an olefinic or cyclo-olefinic type of unsaturation-hydrocarbons, alcohols, aldehydes, esters, ethers, ethers, or ketones: five percent.
- (2) A combination of aromatic compounds with eight or more carbon atoms to the molecule except ethylbenzene: eight percent
- (3) A combination of ethylbenzene, ketones having branched hydrocarbons structures, trichloroethylene or toluene: 20 percent.

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

- d. Whenever any organic solvent or any constituent of an organic solvent may be classified from its chemical structure into more than one of the groups or organic compounds described in subsection c(1) through c(3) above, it shall be considered to be a member of the group having the least allowable percent of the total volume of solvents.

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

- e. The Permittee shall not dispose by evaporation more than 1.5 gallons of photochemically reactive solvent in any one day.

[SIP Provision R9-3-527.C]

- f. Visible emissions from spray painting operations shall not have opacity greater than 40 percent until April 23, 2006, after which, the opacity of any plume or effluent shall not be greater than 20 percent opacity, measured in accordance with EPA Reference Method 9.

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

## 2. Monitoring, Recordkeeping, and Reporting Requirements

- a. Each time a spray painting project is conducted, the Permittee shall log in ink or in an electronic format, a record of the following:

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

- i. The date the project was conducted;
- ii. The duration of the project;

- iii. Type of control measures employed; and
- iv. Material Safety Data Sheets for all paints and solvents used in the project.

b. Architectural coating and spot painting projects shall be exempt from the recordkeeping requirements.

3. Permit Shield

Compliance with conditions of this part shall be deemed compliance with SIP Provision R9-3-527.C, A.A.C.R18-2-727 and A.A.C.R18-2-702.B.

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

**C. Mobile Sources**

1. Classification

The requirements of this condition are applicable to mobile sources which either move while emitting air contaminants or are frequently moved during the course of their utilization but are not classified as motor vehicles, agricultural vehicles, or are agricultural equipment used in normal farm operations. Mobile sources shall not include portable sources as defined in A.A.C. R18-2-101.87.

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

2. Roadway and Site Cleaning Machinery

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

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

3. Permit Shield

Compliance with the conditions of this part shall be deemed compliance with A.A.C.R18-2-801 and A.A.C.R18-2-804.A.

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

**D. Non-Vehicle Air Conditioner Maintenance and/or Services**

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

[40 CFR 82, Subpart F]

2. Permit Shield

Compliance with the conditions of this Part shall be deemed compliance with 40 CFR 82, Subpart F, as of the date of permit issuance.

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

**ATTACHMENT "C": PROCESS AND CONTROL EQUIPMENT LIST**

Air Quality Control Permit No. 31910  
for  
**Griffith Energy LLC**

<b>Equipment ID</b>	<b>Description</b>	<b>Nominal Rating</b>	<b>Serial Number</b>	<b>Model</b>	<b>Date of Commercial Operation/ Manufacture</b>
CTG 1 & 2	Combustion Turbine Generator	136.5 MW @94° F	297479 297480	GE MS-7001FA	15-Jan-02
HRSO 1 & 2 w/Supplemental Firing	Heat Recovery Steam Generator	650 MMBtu/hr	25961-01 25961-02	Waste Heat Boiler	15-Jan-02
Auxiliary Boiler	Auxiliary Boiler	30 MMBtu/hr	2000-23	Rentech	15-Jan-02
Main Cooling Tower	Main Cooling Tower- evaporative	120,000 gal/min	156565-W489-6.0-08-00	Marley W489-6.0-8	15-Jan-02
Chiller Cooling Tower	Chiller Cooling Tower Evaporative	27,000 gal/min	00-12343-45	Niagra	15-Jan-02
SCR	Catalyst	N/A	99-229-C	Dixie Southern Construction WRT3	15-Jan-02
Sodium Hydroxide Tank	Tank	6803 gal	99-229-C	Dixie Southern Construction WWRT3	15-Jan-02
CTG Low NOx Burners	Combustor	NA	99637	DE Jong Coen	15-Jan-02
Auxiliary Boiler Low NOx Burners	Combustor	NA	C-10044	Rentech	15-Jan-02
Auxiliary Boiler Flue Gas Recirculation	Ductwork System	NA	C-10044	Rentech	15-Jan-02

<b>Equipment ID</b>	<b>Description</b>	<b>Nominal Rating</b>	<b>Serial Number</b>	<b>Model</b>	<b>Date of Commercial Operation/ Manufacture</b>
Sulfuric Acid	Sulfuric Acid for Clarifiers, WAC's and mixed Beds	4500 gal	99-229-A	Dixie Southern Construction WRT3	15-Jan-02
Citric Water Sulfuric Acid	Sulfuric Acid for Main Cooling and Chiller Towers	4500 gal	99-229-B	Dixie Southern Construction WRT3	15-Jan-02
Sodium Hypochlorite Storage Tank	For Main Cooling and Chiller Towers	4500 gal	G6-5484	Raven Industries	15-Jan-02
Coagulant Aid	Feeds Clarifiers	4500 gal	6084	Diamond Fiberglass	15-Jan-02
Soda ash Silo	Soda ash for Waste Water Clarifier	1500 cu ft	I-25177	Imperial Industries Incorporated	15-Jan-02
Magnesium Oxide Silo	Magnesium Oxide for Pre-Treatment Clarifier	1300 cu ft	I-25176	Imperial Industries Incorporated	15-Jan-02
Hydrated Lime Silo	Feed Clarifiers	5000 cu ft	I-25178	Imperial Industries Incorporated	15-Jan-02
Control OS5607	Mixing Tank for Oxygen Scavenger	50 gal	N/A	Neptune	15-Jan-02

<b>Equipment ID</b>	<b>Description</b>	<b>Nominal Rating</b>	<b>Serial Number</b>	<b>Model</b>	<b>Date of Commercial Operation/ Manufacture</b>
Optisperse HP 2100 & HP 3100	Mixing tank for Phosphate to HP drum	50 gal	N/A	Neptune	15-Jan-02
Optisperse HP 2100 & HP 3100	Mixing tank for Phosphate to HP drum	50 gal	N/A	Neptune	15-Jan-02
Spectus DT1404	Mixing Tank for Bisulfite to RO's	55 gal	N/A	Chemtainer	15-Jan-02
Hypersperse MDC150	Mixing Tank for RO Antiscalant	55 gal	N/A	Chemtainer	15-Jan-02
Polyfloc AE1115	Mixing Tank for Polymer Aid	400 gal	N/A	Chemtainer	15-Jan-02
C1-2 for gravity Filters	Dilution Tank of CL-2	200 gal	N/A	Chemtainer	15-Jan-02
Low and High PH cleaning	Mixing tank for RO & Hero's	400 gal	N/A	Chemtainer	15-Jan-02
Anhydrous Ammonia Tank	Main Storage Tank for Chillers	22000 gal	S008235	Refrigeration Valves & System	15-Jan-02

<b>Equipment ID</b>	<b>Description</b>	<b>Nominal Rating</b>	<b>Serial Number</b>	<b>Model</b>	<b>Date of Commercial Operation/ Manufacture</b>
Anhydrous Ammonia Receiver Tank	Receiver Tank for Chillers	15000 gal	S008233-S	Refrigeration Valves & System	15-Jan-02

**ATTACHMENT "D": PHASE II ACID RAIN PROVISIONS**

Air Quality Control Permit No. 31910  
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>a</sup> Allocations and NO<sub>x</sub> Requirements for Each Affected Unit**

		2005	2006	2007	2008	2009	2010	2011
<b>Unit P1</b>	SO <sub>2</sub> allowances under Tables 2, 3, or 4 of 40 CFR part 73	NA	NA	NA	NA	NA	NA	NA
	NO <sub>x</sub> limit	This unit is not subject to a NO <sub>x</sub> limit under 40 CFR Part 76.						

		2005	2006	2007	2008	2009	2010	2011
<b>Unit P2</b>	SO <sub>2</sub> allowances under Tables 2, 3, or 4 of 40 CFR part 73	NA	NA	NA	NA	NA	NA	NA
	NO <sub>x</sub> limit	This unit is not subject to a NO <sub>x</sub> limit under 40 CFR Part 76.						

		2005	2006	2007	2008	2009	2010	2011
<b>Unit P3</b>	SO <sub>2</sub> allowances under Tables 2, 3, or 4 of 40 CFR part	NA						

		2005	2006	2007	2008	2009	2010	2011
	73							
	NO <sub>x</sub> limit	This unit is not subject to a NO <sub>x</sub> limit under 40 CFR Part 76.						

▪ As defined under 40 CFR §72.2, ■Allowance■ means an authorization by the Administrator under the Acid Rain Program to emit up to one ton of sulfur dioxide during or after a specified calendar year.