



ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

AIR QUALITY CLASS I PERMIT

COMPANY: *Yuma Cogeneration Associates*
FACILITY: *Power Generation*
PERMIT #: *51193*
DATE ISSUED: *February 3, 2011*
EXPIRY DATE: *February 3, 2016*

SUMMARY

This renewal operating permit is issued to Yuma Cogeneration Associates (YCA) for the operation of a 55 MW (nominal) combined cycle gas turbine cogeneration facility in Yuma, AZ. The facility is located at 280 North 27th Drive, Yuma. This is a renewal of Operating Permit #31433.

YCA operates a General Electric Frame 6 turbine, fired by natural gas to generate electricity for sale. The turbine operates 24 hours a day, 7 days a week. A #2 fuel oil system is available to fuel the turbine in the unlikely event of a curtailment of the natural gas supply. A Heat Recovery Steam Generator (HRSG) uses waste heat from the gas turbine exhaust, to generate high, intermediate, and low pressure steam. The majority of the steam produced in the HRSG is utilized in a turbine/generator set that generates additional electricity. The remaining available steam provides steam injection for the gas turbine as well as process and chilling steam for the neighboring industrial facility. Emissions of nitrogen oxides (NO_x) from the gas turbine are reduced by steam injection. The gas fired duct burner is operated to increase the temperature of the combustion turbine's exhaust thereby increasing the efficiency of steam generation in the HRSG. One 20 million Btu per hour gas fired standby boiler is used to generate intermediate pressure steam for the industrial customer in case the gas turbine is out of service. A cooling tower is used to complete the steam generator/condenser closed cycle by rejecting waste heat from the steam condenser to the atmosphere.

YCA is a 'major source'. The potential emission rates of the nitrogen oxides, carbon monoxide, and sulfur dioxide are more than 100 tons per year. This permit is issued in accordance with Title 49, Chapter 3 of the Arizona Revised Statutes. 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. All terms and conditions in this permit are enforceable by the Administrator of the U.S. Environmental Protection Agency.

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ATTACHMENT "A": GENERAL PROVISIONS

Air Quality Control Permit No. 51193

for

Yuma Cogeneration Associates

- 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.c-d, 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 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 certifications shall be submitted no later than May 15th and November 15th. The May 15th compliance certification shall report the compliance status of the source during the period between October 1st of the previous year and March 31st of the current year. The November 15th compliance certification shall report the compliance status of the source during the period between April 1st and September 30th of the current year.

The compliance certification shall include the following:

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

i. 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.

ii. Detailed written notification by submission of an excess emissions report within 72 hours of the notification pursuant to Condition XII.A.1.a.i above.

b. The report shall contain the following information:

i. Identity of each stack or other emission point where the excess emissions occurred;

ii. 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;

- iii. Date, time and duration, or expected duration, of the excess emissions;
- iv. Identity of the equipment from which the excess emissions emanated;
- v. Nature and cause of such emissions;
- vi. 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
- vii. 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 when emission limitations were exceeded due to an emergency or within two working days of the time when the owner or operator first learned of the occurrence of a deviation from a permit requirement.

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

- 1. An “emergency” means any situation arising from sudden and 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.
- 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 § 49-426.1.5]

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 a permit to meet the requirements of A.A.C. R18-2-406.A.5.

2. Affirmative Defense for Malfunctions

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

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

3. Affirmative Defense for Startup and Shutdown

- a. Except as provided in Condition XII.E.3.b below, and unless otherwise provided for in the applicable requirement, emissions in excess of an applicable emission limitation due to startup and shutdown shall constitute a violation. When emissions in excess of an applicable emission limitation are due to startup and shutdown, the Permittee has an affirmative defense to a civil or administrative enforcement proceeding based on that violation, other than a judicial action seeking injunctive relief, if the Permittee has complied with the reporting requirements of A.A.C. R18-2-310.01 and has demonstrated all of the following:
- i. The excess emissions could not have been prevented through careful and prudent planning and design;
 - ii. 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;
 - iii. 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;
 - iv. The amount and duration of the excess emissions (including any bypass operation) were minimized to the maximum extent practicable during periods of such emissions;
 - v. All reasonable steps were taken to minimize the impact of the excess emissions on ambient air quality;
 - vi. 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;
 - vii. All emissions monitoring systems were kept in operation if at all practicable; and
 - viii. 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.** 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. R18-2-306.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.G]

XVI. PERMIT AMENDMENT OR REVISION [A.A.C. R18-2-317.01, -318, -319, and -320]

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

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

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

XVII. FACILITY CHANGE WITHOUT A PERMIT REVISION [A.A.C. R18-2-306.A.4 and -317.02]

- 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(24);
 - 2. The changes do not exceed the emissions allowable under the permit whether expressed therein as a rate of emissions or in terms of total emissions;
 - 3. The changes do not violate any applicable requirements or trigger any additional applicable requirements;
 - 4. The changes satisfy all requirements for a minor permit revision under A.A.C. R18-2-319.A; and
 - 5. The changes do not contravene federally enforceable permit terms and conditions that are monitoring (including test methods), record keeping, reporting, or compliance certification requirements.

- B.** The substitution of an item of process or pollution control equipment for an identical or substantially similar item of process or pollution control equipment shall qualify as a change that does not require a permit revision, if it meets all of the requirements of Conditions XVII.A and XVII.C of this Attachment.
- C.** For each change under Conditions XVII.A and XVII.B above, a written notice by certified mail or hand delivery shall be received by the Director and the Administrator a minimum of 7 working days in advance of the change. Notifications of changes associated with emergency conditions, such as malfunctions necessitating the replacement of equipment, may be provided less than 7 working days in advance of the change, but must be provided as far in advance of the change as possible or, if advance notification is not practicable, as soon after the change as possible.
- D.** Each notification shall include:
 1. When the proposed change will occur;
 2. A description of the change;
 3. Any change in emissions of regulated air pollutants; and
 4. Any permit term or condition that is no longer applicable as a result of the change.
- E.** The permit shield described in A.A.C. R18-2-325 shall not apply to any change made under this Section.
- F.** Except as otherwise provided for in the permit, making a change from one alternative operating scenario to another as provided under A.A.C. R18-2-306.A.11 shall not require any prior notice under this Section.
- G.** Notwithstanding any other part of this Section, the Director may require a permit to be revised for any change that, when considered together with any other changes submitted by the same source under this Section over the term of the permit, do not satisfy Condition XVII.A above.

XVIII. TESTING REQUIREMENTS

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

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

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

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

D. Test Plan

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

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

E. Stack Sampling Facilities

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

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

F. Interpretation of Final Results

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

G. Report of Final Test Results

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

XIX. PROPERTY RIGHTS [A.A.C. R18-2-306.A.8.d]

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

XX. SEVERABILITY CLAUSE [A.A.C. R18-2-306.A.7]

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

XXI. PERMIT SHIELD [A.A.C. R18-2-325]

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

XXII. PROTECTION OF STRATOSPHERIC OZONE [40 CFR Part 82]

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

XXIII. GREENHOUSE GAS REPORTING [40 CFR Part 98]

If this source becomes subject to the provisions of 40 CFR Part 98, then the Permittee shall comply with these provisions accordingly.

ATTACHMENT "B": SPECIFIC CONDITIONS

Air Quality Control Permit # 51193 for Yuma Cogeneration Associates

I. FACILITY WIDE REQUIREMENTS

- A. The Permittee shall have on site or on call a person 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]
- C. The Permittee shall keep a log of all emission related maintenance activities performed at the facility. [A.A.C. R18-2-306.A.3.c]

II. GE FRAME 6 TURBINE

This section applies to GE Frame 6 Turbine listed in Equipment List, Attachment "C".

A. Fuel Limitation

1. Fuel Type

The Permittee shall burn only natural gas or No. 2 fuel oil in the GE Frame 6 Turbine. [A.A.C. R18-2-306.A.2]

2. Monitoring, Reporting, and Record keeping Requirements [A.A.C. R18-2-306.A.3.c]

On a daily basis, the Permittee shall keep records of the type of fuel burned in the turbine.

B. Nitrogen Oxide (NO_x)

1. Emissions Limitations and Standards [A.A.C. R18-2-306.01]
[Material permit conditions are indicated by underline and italics]

- a. *The Permittee shall not cause to be discharged into the atmosphere from the stack of the GE Frame 6 Turbine and duct burner any gases which contain NO_x in excess of 25 parts per million (ppm), at 15 percent oxygen. Emissions in excess of this limit during the periods of start-up, shutdown, and malfunction shall not be considered a violation. Excess emissions of NO_x are defined as any consecutive three-hour period during which the average hourly emissions of nitrogen oxides measured by the continuous monitoring system exceeds the maximum emission limit given above. This three-hour rolling average shall begin with the first complete hour of steam injection operation following startup.*

- b. The Permittee shall not cause to be discharged into the atmosphere from the turbine and duct burner any gases which contains nitrogen oxides (NO_x) in excess of:

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

where:

STD = allowable ISO corrected NO_x 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_x emission allowance for fuel-bound nitrogen = 0.

For gas turbine unit, STD = 75 ppmv at 15% oxygen

[A.A.C. R18-2-901(40), 40 CFR 60.332(a)(1), 60.332(b)]

- c. The Permittee shall not emit more than 230 tons per year of NO_x, calculated as a 12-month rolling total, from the gas turbine and duct burner, as measured by the continuous emission monitors.

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

- d. "Startup" is defined as the time period following the initiation of a gas turbine start until the steam injection system is placed in service immediately upon reaching 300 psia at 450°F.

[Operating Permit #1000103, Attachment "B", Condition I.A.1.b]

2. Air Pollution Control Equipment [40 CFR 60.11.d and R18-2-331.A.3.e]
[Material permit conditions are indicated by underline and italics]

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

3. Monitoring, Reporting, and Record keeping

- a. The Permittee shall, maintain, operate, and quality-assure Continuous Emission Monitoring Systems (CEMS) consisting of NO_x and O₂ (or CO₂) monitors for measuring NO_x emissions from the turbine.

[A.A.C. R18-2-306.A.3, -306.02.C, -331.A.3.c]

[Material permit conditions are indicated by underline and italics]

- b. The Permittee shall, maintain and operate fuel flow rate monitoring system for determining the natural gas or No. 2 fuel input rate to the turbine unit and ratio of steam to fuel being fired in the turbine for each operating hour. The system shall be accurate within ±5% of the measured value. The monitoring system shall be calibrated and quality-assured in accordance with 40 CFR 60.11(d).

[A.A.C. R18-2-306.A.3, -306.02.C, -331.A.3.c]

[Material permit conditions are indicated by underline and italics]

- c. For the NO_x and diluent CEMS, the following requirements shall apply:
- i. The NO_x and diluent CEMS shall be certified, maintained, and operated as follows:
- (a) The CEMS must be certified according to Performance Specification 2 and 3 (for diluent) of 40 CFR Part 60, Appendix B, except the 7-day calibration drift is based on unit operating days, not calendar days.
[40 CFR 60.334(b)(1)]
- (b) During each full unit operating hour, each monitor must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each 15-minute quadrant of the hour, to validate the hour. For partial unit operating hours, at least one valid data point must be obtained for each quadrant of the hour in which the unit operates. For unit operating hours in which required quality assurance and maintenance activities are performed on the CEMS, a minimum of two valid data points (one in each of two quadrants) are required to validate the hour.
[40 CFR 60.334(b)(2)]
- (c) For the purpose of identifying excess emissions, CEMS data must be reduced to hourly averages as specified in 40 CFR 60.13(h).
[40 CFR 60.334(b)(3)]
- (d) For each unit operating hour in which a valid hourly average is obtained for both NO_x and diluent, the data acquisition and handling system must calculate and record the hourly NO_x emissions in the units of the applicable NO_x emission standard under Condition II.B.1.b of this Attachment. For any hour in which the hourly average O₂ concentration exceeds 19.0 percent O₂, a diluent cap value of 19.0 percent O₂ may be used in the emission calculations.
[40 CFR 60.334(b)(3)(i)]

- (e) A worst case ISO correction factor may be calculated and applied using historical ambient data in accordance with the procedures in 40 CFR 60.334(b)(3)(ii).
[40 CFR 60.334(b)(3)(ii)]
- ii. The Permittee shall submit reports of excess emissions and monitor downtime in accordance with 40 CFR 60.7(c). The reports shall be postmarked by the 30th day following the end of each calendar quarter. Excess emissions shall be reported for all periods of unit operation, including startup, shutdown and malfunction. Periods of excess emissions and monitor downtime that shall be reported are defined as follows:
[40 CFR 60.334(j)(1)(iii)]
 - (a) An hour of excess emissions shall be any unit operating hour in which the 4-hour rolling average NO_x concentration exceeds the applicable emission limit in Condition II.B.1.b of this Attachment. A 4-hour rolling average NO_x concentration is the arithmetic average of the average NO_x concentration measured by the CEMS for a given hour (corrected to 15 percent O₂ and, to ISO standard conditions) and the three unit operating hour average NO_x 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_x concentration or diluent (or both).
 - (c) Each report shall include the ambient conditions (temperature, pressure, and humidity) at the time of the excess emission period. The Permittee is not required to report ambient conditions if opting to use the worst case ISO correction factor as specified in 40 CFR 60.334(b)(3)(ii).
- iii. The Permittee shall utilize the NO_x and diluent CEMS, and fuel flow monitoring systems to calculate mass emissions in units of pounds per hour, pounds per day, and tons per month, and rolling twelve-month totals in tons to show compliance with the NO_x limits in Condition II.B.1.
[A.A.C. R18-2-306.A.3.c]
- iv. The Permittee shall comply with the following requirements in 40 CFR 60.13 for each CEMS: [A.A.C. R18-2-306.A.3.c and -312.H.3]
 - (a) 40 CFR 60.13(d): Zero, span, and calibration drift check requirements;

- (b) 40 CFR 60.13(e): Minimum frequency of operation requirements;
 - (c) 40 CFR 60.13(f): Installation guidelines;
 - (d) 40 CFR 60.13(h): Data reduction; and
 - (e) 40 CFR 60.13(i): Provisions for the approval of alternate monitoring procedures
- v. The CEMS shall meet the following Performance Specifications in 40 CFR 60 Appendix B: [A.A.C. R18-2-306.A.3.c and -312.H.3]
- (a) NO_x: Performance Specification 2 – Specifications and Test Procedures for SO₂ and NO_x Continuous Emission Monitoring Systems in Stationary Sources
 - (b) O₂ or CO₂: Performance Specification 3 – Specifications and Test Procedures for O₂ and CO₂ Continuous Emission Monitoring Systems in Stationary Sources
- vi. The CEMS shall meet the Quality Assurance Requirements in 40 CFR 60 Appendix F. [A.A.C. R18-2-306.A.3.c and -312.H.3]
- vii. Quality Assurance Requirements for Natural Gas Fuel Flowmeters [A.A.C. R18-2-306.A.3.c and -312.H.3]
- (a) Each transmitter or transducer shall be calibrated by equipment that has a current certificate of traceability to NIST standards at least once every four calendar quarters in which a unit operated on natural gas for 168 hours or more during each quarter but not less than once every three years. The Permittee shall check the calibration of each transmitter or transducer by comparing its readings to that of the NIST traceable equipment at least once at the following levels: the zero-level, and at least two other upscale levels (e.g., “mid” and “high”), such that the full range of transmitter or transducer readings corresponding to normal unit operation is represented.
 - (b) The Permittee shall calculate the accuracy of each transmitter or transducer at each level tested, using the following equation:

$$ACC = \frac{|R - T|}{FS} \times 100$$

Where:

ACC = Accuracy of the transmitter or transducer as a percentage of full-scale.

R = Reading of the NIST traceable reference value (in milliamperes, inches of water, psi, or degrees).

T = Reading of the transmitter or transducer being tested (in milliamperes, inches of water, psi, or degrees, consistent with the units of measure of the NIST traceable reference value).

FS = Full-scale range of the transmitter or transducer being tested (in milliamperes, inches of water, psi, or degrees, consistent with the units of measure of the NIST traceable reference value).

- (c) If each transmitter or transducer meets an accuracy of ± 1.0 percent of its full-scale range at each level tested, the fuel flowmeter accuracy of 2.0 percent is considered to be met at all levels. If, however, one or more of the transmitters or transducers does not meet an accuracy of ± 1.0 percent of full-scale at a particular level, then the Permittee may demonstrate that the fuel flowmeter meets the total accuracy specification of 2.0 percent at that level by using one of the following alternative methods. If, at a particular level, the sum of the individual accuracies of the three transducers is less than or equal to 4.0 percent, the fuel flowmeter accuracy specification of 2.0 percent is considered to be met for that level. Or, if at a particular level, the total fuel flowmeter accuracy is 2.0 percent or less, when calculated in accordance with Part 1 of American Gas Association Report No. 3, General Equations and Uncertainty Guidelines, the flowmeter accuracy requirement is considered to be met for that level.
- (d) If during a transmitter or transducer accuracy test the flowmeter accuracy specification of 2.0 percent is not met at any of the levels tested, the Permittee shall repair or replace the transmitter(s) or transducer(s) as necessary until the flowmeter accuracy specification has been achieved at all levels. (Note that only transmitters or transducers which are repaired or replaced need to be re-tested; however, the re-testing is required at all three

measurement levels to ensure that the flowmeter accuracy specification is met at each level).

- (e) For orifice, nozzles, and venturi type flowmeters, the Permittee shall perform a primary element inspection for damage and corrosion at least once every 12 calendar quarters in which a unit operated on natural gas for 168 hours or more during each quarter but not less than once during the term of this permit. If damage and/or corrosion are found, the Permittee shall replace the flowmeter or restore the damaged or corroded flowmeter to “as new” condition.
 - (f) The Permittee shall log in ink, or in an electronic format the date that the calibration and inspection was conducted, the results of the calibration or inspection, and corrective action taken if needed.
- viii. Each calendar day during which total combined rolling twelve-month total NO_x emission rate from the turbine and duct burner exceed 230 tons shall constitute an exceedance of Condition II.B.1.c. Exceedances shall be reported to the Director in accordance with Condition XII.A of Attachment “A”.
[A.A.C. R18-2-306.A.3.c]
- ix. Each individual day and twelve-month rolling total NO_x emission rate in the reporting period shall be included in the semiannual compliance certification required by Condition VII of Attachment “A”.
[A.A.C. R18-2-306.A.3.c]
- x. The Permittee shall maintain the following records in accordance with Condition XIII of Attachment “A”: [A.A.C. R18-2-306.A.3.c]
- (a) Records all CEMS and fuel flow rate monitoring system performance evaluations, calibration checks & adjustments, and maintenance activities.
 - (b) All compliance records including calculations, reports, and supporting documentation.

4. Permit Shield

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

Compliance with conditions of this Part shall be deemed compliance with 40 CFR 60.332(a)(1), 332(b), and 334(a).

C. Sulfur Dioxide

1. Emissions Limitations and Standards [40 CFR 60.333.b]

The Permittee shall not burn in the GE Frame 6 Turbine natural gas which contains sulfur in excess of 0.8 percent by weight, or fuel oil, which contains sulfur in excess of 0.05 percent by weight.

2. Monitoring, Reporting, and Record keeping

a. The Permittee shall monitor daily, the sulfur content of the natural gas burned in the turbine. This requirement may be complied with by maintaining a vendor-provided copy of that part of the FERC-approved Tariff agreement that limits transmission to pipeline quality natural gas of sulfur content less than 0.8 percent by weight. [40 CFR 60.334(b)]

b. The Permittee shall notify the Director in writing within 30 days of any change to the vendor provided FERC-approved tariff agreement relating to the fuel sulfur content and lower heating value limits that occur during the term of the permit. [A.A.C. R18-2-306.A.5]

c. The Permittee shall keep on record a copy of the fuel oil purchase specification sheet. This specification sheet shall include the sulfur content (sulfur weight percentage) and the method used to determine the sulfur content of the fuel. [40 CFR §60.334(b)]

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

Compliance with this Condition II.C.1 shall be deemed compliance with the requirements of 40 CFR 60.333(b) and 40 CFR 60.334(b).

D. Carbon Monoxide

1. Monitoring, Reporting & Recordkeeping Requirements [A.A.C. R18-2-306.A.3.c]

a. The Permittee shall monitor and record the total hours of operation of the GE Frame 6 turbine on daily basis.

b. The Permittee shall monitor and record monthly totals and rolling 12-month total hours of operation of GE Frame 6 Turbine.

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

a. The Permittee shall conduct a performance test for carbon monoxide if the rolling twelve-month total hours of operation exceed 4,650 hours.

b. The performance test shall be conducted within six months of triggering the need for the test.

- c. No more than one performance test shall be required in any calendar year.

III. AUXILIARY BOILER AND DUCT BURNER

This Section applies to the auxiliary boiler and duct burner listed in Equipment List, Attachment “C”.

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

The Permittee shall burn only natural gas in the auxiliary boiler and the duct burner.

- B. Monitoring, Reporting and Recordkeeping [40 CFR 60.48 c(g)]

The Permittee shall record and maintain records of the amount of natural gas combusted during each calendar month.

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

Compliance with this Condition III.A shall be deemed compliance with 40 CFR 60.48.c(g).

IV. INTERNAL COMBUSTION ENGINE (ICE)

This Section applies to diesel fired ICE listed in the Equipment List, Attachment “C”.

- A. Operating Limitations

The Permittee shall not operate the ICE for more than 500 hours in any twelve-month rolling period.

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

[Material Permit Conditions are indicated by underline and italics]

- B. Applicable requirements from Arizona Administrative Code

- 1. Particulate Matter and Opacity

- a. Emissions Limitations and Standards

- i. The Permittee shall not cause, allow or permit the emission of particulate matter, caused by combustion of fuel, from any stationary rotating machinery into the atmosphere in excess of the amounts calculated by the following equation:

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

Where

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

Q = the heat input in million Btu per hour. [A.A.C. R18-2-719.C.1]

ii. For purposes of this Section, the heat input shall be the aggregate heat content of all fuels whose products of combustion pass through a stack or other outlet. The total heat input of all operating fuel-burning units on a plant or premises shall be used for determining the maximum allowable amount of particulate matter which may be emitted [A.A.C. R18-2-719.B]

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

i. The Permittee shall not cause, allow or permit to be emitted into the atmosphere from any stationary rotating machinery, smoke for any period greater than 10 consecutive seconds which exceeds 40 percent opacity.

ii. Visible emissions when starting cold equipment shall be exempt from this requirement for the first 10 minutes.

c. Monitoring, Reporting, and Recordkeeping [A.A.C. R18-2-306.A.3.c]

i. The Permittee shall keep records of fuel supplier certifications. The certification shall contain information regarding the name of fuel supplier and heating value of the fuel. These records shall be made available to ADEQ upon request.

ii. A certified EPA Reference Method 9 observer shall conduct a monthly survey of visible emissions emanating from the ICE when in operation. If the opacity of the emissions observed appears to exceed the standard, the observer shall conduct a certified EPA Reference Method 9 observation. The Permittee shall keep records of the initial survey and any EPA Reference Method 9 observations performed. These records shall include the emission point observed, name of observer, date and time of observation, and the results of the observation.

iii. If the observation results in a Method 9 opacity reading in excess of 40 percent, the Permittee shall report this to ADEQ as excess emission and initiate appropriate corrective action to reduce the opacity below 40 percent. The Permittee shall keep a record of the corrective action performed.

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

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

2. Sulfur Dioxide

a. Emission Limitations and Standards

- i. While firing diesel fuel, the Permittee shall not emit or cause to emit more than 1.0 pound of sulfur dioxide per million Btu. [A.A.C. R18-2-719.F]
- ii. The Permittee shall only burn fuel containing less than 0.9 percent by weight of sulfur. [A.A.C. R18-2-719.H]

b. Monitoring, Recordkeeping, and Reporting

- i. The Permittee shall keep daily records of the sulfur content of the fuel being fired in the ICEs. The Permittee shall keep records of fuel supplier certifications to demonstrate compliance with the sulfur content limit specified in Condition IV.B.2.a.ii. The certification shall contain the sulfur content of the fuel and the method used to determine 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]
- ii. The Permittee shall report to the Director any daily period during which the sulfur content of the fuel being fired in the machine exceeds 0.8 percent. [A.A.C. R18-2-719.J]

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

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.

C. Applicable requirements from National Emission Standards for Hazardous Air Pollutants (NESHAP)

- 1. The Permittee shall comply with the terms of this Section no later than May 3, 2013. [40 CFR §63.6595(a)(1)]

2. General Operating Requirements

- a. The Permittee must be in compliance with the applicable operating limitations at all times. [40 CFR § 63.6605(a)]
- b. At all times the Permittee shall operate and maintain the CI 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. [40 CFR § 63.6605(b)]
- c. The Permittee shall perform the following on the ICE:
 - i. Change oil and filter every 500 hours of operation or annually,

whichever comes first;

ii. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; and

iii. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

[40 CFR §63.6603(a), Table 2d, Item 1 and 4)]

d. If the CI 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 Conditions IV.C.2.c.i through iii 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. The Permittee 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]

e. The Permittee shall install a non-resettable hour meter on the emergency ICEs identified in the Equipment List, Attachment "C".

[40 CFR 63.6625(f) and A.A.C. R18-2-331.A.3.c]

[Material permit conditions are indicated by underline and italics]

f. The Permittee shall not operate the emergency CI engine for more than 50 hours per year except during emergency situations or for maintenance and testing purposes.

[40 CFR § 63.6640(f)(1)]

g. The Permittee may operate the emergency CI 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 owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of the CI engine beyond 100 hours per year.

[40 CFR § 63.6640(f)(3)]

h. The Permittee may operate the emergency CI 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)(4)]

3. Monitoring Requirements

- a. The Permittee must operate and maintain the stationary reciprocating internal combustion engine (RICE) in accordance with manufacturer's 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)]
- b. 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 IV.C.2.c.i. The oil analysis must be performed at the same frequency specified for changing the oil. The analysis program must at a minimum analyze the following three parameters:

- i. Total Base Number;
- ii. Viscosity; and
- iii. Percent water content.

The condemning limits for these parameters are as follows:

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

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 must 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 must be part of the maintenance plan for the engine.

4. Reporting and Recordkeeping requirements

- a. The Permittee shall submit a semiannual compliance certification in accordance with Condition VII of Attachment "A" for the reporting requirements of this Section. [40 CFR § 63.6650(b)(5)]
- b. 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)]
- c. The Permittee shall keep records in a form suitable and readily available

for expeditious review according to 40 CFR § 63.10(b)(1).

[40 CFR § 63.6660(a)]

- d. The Permittee shall keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.
[40 CFR § 63.6660(b)]
- e. The Permittee shall keep each record readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record.
[40 CFR § 63.6660(c)]
- f. The compliance certification shall include the following:
[40 CFR § 63.6650(c)]
 - i. Company name and address.
 - ii. A statement by the responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report.
 - iii. Date of report and beginning and ending dates of the reporting period.
 - iv. For any malfunction during the reporting period, the compliance report must 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 must also include a description of actions taken by the Permittee during a malfunction of an affected source to minimize emissions in accordance with §63.6605(b), including actions taken to correct a malfunction.
 - v. If there are no deviations from any operating limitations that apply, a statement that there were no deviations from the operating limitations during the reporting period.
 - vi. If a deviation from an operating limitation occurs during the reporting period, the following additional information shall be provided:
 - (a) The total operating time of the CI 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.

- g. The Permittee shall keep records of the following:
[40 CFR § 63.6655(a), (d), (e), and (f)]
- i. 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 you submitted, according to the requirement in §63.10(b)(2)(xiv).
 - ii. Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment.
 - iii. The Permittee shall keep records of the maintenance conducted on the CI in order to demonstrate that the facility operated and maintained the CI engine and after-treatment control device (if any) according to the Permittee's own maintenance plan.
 - iv. The Permittee shall keep records of the hours of operation of the engine that is recorded through the non-resettable hours 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.

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

Compliance with the conditions in this Part shall be deemed compliance with 40 CFR 6595(a)(1); 6603(a); 6605(a) & (b); 6625(e), (f), & (i); 6640(e), (f)(1), (f)(3), & (f)(4); 6650(b)(5) & (c); 6655(a), (d), (e), & (f); and 6660(a), (b), & (c).

V. COOLING TOWER AND FUEL STORAGE TANK

This Section applies to the cooling tower and the fuel storage tank listed in the Equipment List, Attachment "C".

A. Particulate Matter and Opacity

1. Emission Limitations/Standards [A.A.C.R18-2-730.A.1]

- a. The Permittee shall not emit or cause to be emitted into the atmosphere particulate matter in excess of the amount calculated by the following equation:

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

Where:

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

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

- b. The opacity of any plume or effluent from the cooling towers and storage tank shall not be greater than 20 percent, measured in accordance with EPA Reference Method 9. [A.A.C. R 18-2-702.B.1]
- c. If the presence of uncombined water is the only reason for an exceedance of any visible emissions requirement, the exceedance shall not constitute a violation of the applicable opacity limit. [A.A.C. R 18-2-702.C]

2. Monitoring, Reporting, and Record keeping [A.A.C. R18-2-306.A.3.c]

A certified EPA Reference Method 9 observer shall conduct a quarterly survey of visible emissions emanating from the cooling tower and storage tank. The Permittee shall keep records of the type of observation performed, emission unit, name of observer, date, time of observation, location and the results of the observation. If the observation shows Method 9 opacity reading in excess of applicable standard, the Permittee shall initiate appropriate corrective action to reduce the opacity below the applicable limit. The Permittee shall keep a record of the corrective action performed. These records shall be made available to the ADEQ inspector upon request. For all instances of an exceedance of the opacity standard, the Permittee shall submit excess emission reports in accordance with XII.A.1 of Attachment "A".

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

Compliance with conditions of this Part shall be deemed compliance with A.A.C. R18-2-702.B.1 & C, and -730.A.1.

B. Gaseous Emissions

1. Emission Limitations

- a. The Permittee shall not emit gaseous or odorous materials from equipment, operations or premises under his control in such quantities or concentrations 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]

- c. Materials including solvents or other volatile compounds, paints, acids, alkalies, pesticides, fertilizers and manure 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. Where means are available to reduce effectively the contribution to air pollution from evaporation, leakage or discharge, the installation and use of such control methods, devices, or equipment shall be mandatory. [A.A.C. R18-2-730.F]

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

Compliance with conditions of this Part shall be deemed compliance with A.A.C. R18-2-730.D, F, and G.

VI. FUGITIVE DUST REQUIREMENTS

A. Applicability

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

B. Particulate Matter and Opacity

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

a. Emission Limitations/Standards

- i. Opacity of emissions from any fugitive dust non-point source shall not be greater than 40 percent measured in accordance with the Arizona Testing Manual, Reference Method 9. [A.A.C. R18-2-614]
- ii. The Permittee shall not cause, allow or permit visible emissions from any fugitive dust point source, in excess of 20 percent opacity. [A.A.C. R18-2-702.B]
- iii. The Permittee shall employ the following reasonable precautions to prevent excessive amounts of particulate matter from becoming airborne:
 - (a) Keep dust and other types of air contaminants to a minimum in an open area where construction operations, repair operations, demolition activities, clearing operations, leveling operations, or any earth moving or excavating activities are taking place, by good modern practices such as using an approved dust suppressant or adhesive soil stabilizer, paving, covering, landscaping,

continuous wetting, detouring, barring access, or other acceptable means; [A.A.C. R18-2-604.A]

(b) Keep dust to a minimum from driveways, parking areas, and vacant lots where motor vehicular activity occurs by using an approved dust suppressant, or adhesive soil stabilizer, or by paving, or by barring access to the property, or by other acceptable means;

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

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

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

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

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

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

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

(f) 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]

(g) 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]

(h) Any other method as proposed by the Permittee and approved by the Director.

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

b. Monitoring and Recordkeeping Requirements

i. The Permittee shall maintain records of the dates on which any of the activities listed in Conditions VI.B.1.a.iii.(a) through VI.B.1.a.iii.(h) above were performed and the control measures that were adopted.

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

ii. Opacity Monitoring Requirements

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

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

c. Permit Shield

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

Compliance with the conditions of this Part shall be deemed compliance with A.A.C. R18-2-604.A, A.A.C. R18-2-604.B, A.A.C. R18-2-605, A.A.C. R18-2-606, A.A.C. R18-2-607, and A.A.C. R18-2-612 as of the date of issuance of this permit.

2. Open Burning

a. Emission Limitation/Standard

Except as provided in A.A.C. R18-2-602.C.1, C.2, C.3, and C.4, and except when permitted to do so by either ADEQ or the local officer delegated the authority for issuance of open burning permits, the Permittee shall not conduct open burning. [A.A.C. R18-2-602]

- b. Monitoring and Recordkeeping Requirement [A.A.C. R18-2-306.A.3.c]

Compliance with the requirements of Condition V.B.2.a above may be demonstrated by maintaining copies of all open burning permits on file.

- c. Permit Shield

Compliance with the conditions of this Part shall be deemed compliance with A.A.C. R18-2-602. [A.A.C. R18-2-325]

VII. OTHER PERIODIC ACTIVITIES

A. Abrasive Blasting

Particulate Matter and Opacity

- 1. Emission Limitations/Standards [A.A.C. R18-2-726]

- a. 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:

- i. wet blasting;
- ii. effective enclosures with necessary dust collecting equipment; or
- iii. any other method approved by the Director.

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

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

- 2. Monitoring and Recordkeeping Requirement [A.A.C. R18-2-306.A.3.c]

Each time an abrasive blasting project is conducted, 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.

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

Compliance with conditions of this Part shall be deemed compliance with A.A.C. R18-2-726 and A.A.C. R18-2-702.B as of the date of issuance of this permit.

B. Use of Paints

1. Volatile Organic Compounds

- a. Emission Limitations/Standards

While performing spray painting operations, the Permittee shall comply with the following requirements:

- i. 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]
- ii. The Permittee or their designated contractor shall not either:
 - (a) Employ, apply, evaporate, or dry any architectural coating containing photochemically reactive solvents for industrial or commercial purposes; or
 - (b) Thin or dilute any architectural coating with a photochemically reactive solvent. [A.A.C.R18-2-727.B]
- iii. For the purposes of Conditions VII.B.1.a.ii and VII.B.1.a.iv, 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 VII.B.1.a.iii.(a) through VII.B.1.a.iii.(c), 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.

iv. Whenever any organic solvent or any constituent of an organic solvent may be classified from its chemical structure into more than one of the groups of organic compounds described in Conditions VII.B.1.a.iii.(a) through VII.B.1.a.iii.(c), 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

i. 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) The date the project was conducted;
- (b) The duration of the project;
- (c) Type of control measures employed;
- (d) Material Safety Data Sheets for all paints and solvents used in the project; and
- (e) The amount of paint consumed during the project.

ii. Architectural coating and spot painting projects shall be exempt from the recordkeeping requirements of Condition VI.B.1.b.i.

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

c. Permit Shield

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

Compliance with conditions of this Part shall be deemed compliance with A.A.C.R18-2-727 as of the date of issuance of this permit.

2. Opacity

a. Emission Limitation/Standard

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

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

b. Permit Shield

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

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

C. Demolition/Renovation - Hazardous Air Pollutants

1. Emission Limitation/Standard [A.A.C. R18-2-1101.A.8]

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

2. Monitoring and Recordkeeping Requirement [A.A.C. R18-2-306.A.3.c]

The Permittee shall keep all required records in a file. The required records shall include the “NESHAP Notification for Renovation and Demolition Activities” form and all supporting documents.

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

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

VIII. MOBILE SOURCE REQUIREMENTS

A. Applicability

The requirements of this Section are applicable to mobile sources which either move while emitting air contaminants or are frequently moved during the course of their utilization but are not classified as motor vehicles, agricultural vehicles, or agricultural equipment used in normal farm operations. Mobile sources shall not include portable sources as defined in A.A.C. R18-2-101.90. [A.A.C.R18-2-801.A]

B. Particulate Matter and Opacity

1. Emission Limitations/Standards

- a. Off-Road Machinery

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

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

- b. Roadway and Site Cleaning Machinery

- i. The Permittee shall not cause, allow or permit to be emitted into the atmosphere from any roadway and site cleaning machinery smoke or dust for any period greater than ten consecutive

seconds, the opacity of which exceeds 40 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]

ii. The Permittee shall take reasonable precautions, such as the use of dust suppressants, before the cleaning of a site, roadway, or alley. Earth or other material shall be removed from paved streets onto which earth or other material has been transported by trucking or earth moving equipment, erosion by water or by other means. [A.A.C. R18-2-804.B]

c. Unless otherwise specified, no mobile source shall emit smoke or dust the opacity of which exceeds 40 percent. [A.A.C.R18-2-801.B]

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

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

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

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

ATTACHMENT "C": EQUIPMENT LIST
Air Quality Control Permit No. 51193 for
Yuma Cogeneration Associates

ID / Serial No.	Name	Make	Model	Capacity	Date of Manufacture	NSPS Applicability
4101/296417	GE Frame 6 Turbine	General Electric	MS-6001	36.7 MW	3/10/1994	Yes, Subpart GG
5101/932400	HRSB	Nooter Erikson	N/A	N/A	1994	Not Applicable
3101/155035	Steam Turbine Generator	General Electric	N/A	18.3 MW	04/04/1994	Not Applicable
5125	Duct Burner	Coen Natural Gas	N/A	45 MMBtu/hr	1998	Yes, Subpart Dc
5175/L-92034	Auxiliary Boiler	Cleaver Brooks	700-500	20 MMBtu/hr	1993	Yes, Subpart Dc
3D-211951	Internal Combustion Engine	Detroit Diesel	DDFP-03DT 5068F	111 HP	1993	No
2101/ TD-3636-2-2421	Cooling Tower	GEA	Counter-flow	18,000 gallons per minute	1993	Not Applicable
4105/ 93-1565A	Fuel Oil Storage Tank	Schuff Steel Co.	N/A	525,000 gallons	1993	No
5152/4941	NO _x Monitor	Anarad	AR-880	N/A	1993	Not Applicable
5153/0414	Flow Monitor	EMRC	2271	N/A	N/A	Not Applicable
5151/4942	O ₂ Monitor	Anarad	AR-23	N/A	1993	Not Applicable