
CLASS I AIR QUALITY PERMIT

DRAFT PERMIT No. 96392

PERMITTEE: UNS Electric, Inc.
FACILITY: UNS Electric, Inc. – Black Mountain Generating Station
PLACE ID: 126082
DATE ISSUED: Date Pending
EXPIRY DATE: Date Pending

SUMMARY

This Class I air quality permit is issued to UNS Electric (UNSE), Inc., the Permittee, for the continued operation of a peaking power plant identified as Black Mountain Generating Station (BMGS). BMGS is located approximately 11 miles southwest of the town of Kingman, Arizona. This permit renews and supersedes Permit No. 69273.

BMGS was installed to supply peaking power and/or backup power as well as voltage stabilization for the UNSE service territory in Mohave County. It consists of two simple cycle combustion turbine/generator units with a nominal net capacity of 45 MW each for a total of 90 MW. These are known as Gas Turbine Units 1 and 2, and are fired exclusively on natural gas.

Moreover, BMGS includes ancillary equipment, a black start generator, a fire pump, a chiller cooling tower, a wastewater evaporation pond, access and plant roads, office and control facilities, a substation along with associated distribution lines, warehouses for electric service and an outside storage area for transformers and other equipment.

Without the limits or controls specified in the permit, BMGS has the capacity to emit NO_x and carbon monoxide (CO) in excess of major source thresholds. It has taken a limit on NO_x and CO to avoid Prevention of Significant Deterioration (PSD) requirements. BMGS is a minor source for hazardous air pollutants (HAPs) as individual and combined HAPs are less than 10 and 25 tons per year, respectively.

Continuous emissions monitoring systems (CEMS) at each turbine exhaust to satisfy applicable requirements in 40 Code of Federal Regulations (CFR) Part 60 Subpart GG for Stationary Gas Turbines. The CEMS data acquisition and handling system are utilized to keep track of NO_x and CO emission limits. Therefore, BMGS qualifies for a Class I permit under Arizona Administrative Code (A.A.C.) R18-101.75.c.

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

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ATTACHMENT "A": GENERAL PROVISIONS

I. PERMIT EXPIRATION AND RENEWAL

- A.** This permit is valid for a period of five (5) years from the date of issuance.
[ARS § 49-426.F, A.A.C. R18-2-306.A.1]
- B.** The Permittee shall submit an application for renewal of this permit at least six (6) months, but not more than eighteen (18) months, prior to the date of permit expiration.
[A.A.C. R18-2-304.D.2]

II. COMPLIANCE WITH PERMIT CONDITIONS

- A.** The Permittee shall comply with all conditions of this permit including all applicable requirements of the Arizona Revised Statutes (A.R.S.) Title 49, Chapter 3, and the air quality rules under Title 18, Chapter 2 of the Arizona Administrative Code. Any permit noncompliance is grounds for enforcement action; for permit termination, revocation and reissuance, revision; or for denial of a permit renewal application. In addition, noncompliance with any federally enforceable requirement constitutes a violation of the Clean Air Act.
[A.A.C. R18-2-306.A.8.a]
- B.** It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
[A.A.C. R18-2-306.A.8.b]

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

- A.** The permit may be revised, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a permit revision, revocation and reissuance, termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.
[A.A.C. R18-2-306.A.8.c]
- B.** The permit shall be reopened and revised under any of the following circumstances:
1. Additional applicable requirements under the Clean Air Act become applicable to the Class I source. Such a reopening shall only occur if there are three (3) or more years remaining in the permit term. The reopening shall be completed no later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to A.A.C. R18-2-322.B. Any permit revision required pursuant to this subparagraph shall comply with the provisions in A.A.C. R18-2-322 for permit renewal and shall reset the 5-year permit term;
[A.A.C. R18-2-321.A.1.a]

IV. POSTING OF PERMIT

2. Additional requirements, including excess emissions requirements, become applicable to an affected source under the acid rain program. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into the Class I permit;
[A.A.C. R18-2-321.A.1.b]
 3. The Director or the EPA Administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit; and
[A.A.C. R18-2-321.A.1.c]
 4. The Director or the EPA Administrator determines that the permit needs to be revised or revoked to assure compliance with the applicable requirements.
[A.A.C. R18-2-321.A.1.d]
- C. Proceedings to reopen and issue a permit, including appeal of any final action relating to a permit reopening, shall follow the same procedures as apply to initial permit issuance and shall, except for reopenings under Condition III.B.1 above, affect only those parts of the permit for which cause to reopen exists. Such reopening shall be made as expeditiously as practicable. Permit reopenings for reasons other than those stated in Condition III.B.1 above shall not result in a resetting of the 5-year permit term.
[A.A.C. R18-2-321.A.2]

IV. POSTING OF PERMIT

- A. The Permittee shall post this permit or a certificate of permit issuance at the facility in such a manner as to be clearly visible and accessible. All equipment covered by this permit shall be clearly marked with one of the following:
[A.A.C. R18-2-315.A]
1. Current permit number; or
 2. Serial number or other equipment identification number (equipment ID number) that is also listed in the permit to identify that piece of equipment.
- B. A copy of the complete permit shall be kept on site.
[A.A.C. R18-2-315.B]

V. FEE PAYMENT

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

VI. EMISSIONS INVENTORY QUESTIONNAIRE

- A. The Permittee shall complete and submit to the Director an emissions inventory questionnaire no later than June 1 of each year.
[A.A.C. R18-2-327.A.1.a]

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

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

- C.** The Permittee shall submit to the Director an amendment to an emissions inventory questionnaire, containing the documentation required by A.A.C. R18-2-327.A.3, whenever the Permittee discovers or receives notice, within two (2) years of the original submittal, that incorrect or insufficient information was submitted to the Director by a previous emissions inventory questionnaire. The amendment shall be submitted to the Director within 30 days of discovery or receipt of notice. If the incorrect or insufficient information resulted in an incorrect annual emissions fee, the Director shall require that additional payment be made or shall apply an amount as a credit to a future annual emissions fee. The submittal of an amendment shall not subject the Permittee to an enforcement action or a civil or criminal penalty if the original submittal of incorrect or insufficient information was not due to willful neglect.

[A.A.C. R18-2-327.A.4]

VII. COMPLIANCE CERTIFICATION

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

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

- B.** The compliance certifications shall include the following:

1. Identification of each term or condition of the permit that is the basis of the certification;

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

2. Identification of the methods or other means used by the Permittee for determining the compliance status with each term and condition during the certification period;

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

3. Status of compliance with the terms and conditions of the permit for the period covered by the certification, including whether compliance during the period was continuous or intermittent. The certifications shall identify each deviation (including any deviations reported pursuant to Condition XI.B of this Attachment) during the period covered by the certification and take it into account for consideration in the compliance certification;

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

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

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

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

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

- C. A copy of all compliance certifications shall also be submitted to the EPA Administrator.
[A.A.C. R18-2-309.2.d]

- D. If any outstanding compliance schedule exists, a progress report shall be submitted with the semiannual compliance certifications required in Condition VII.A above. The progress reports shall contain the information required by A.A.C R18-2-309.5.d.

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

VIII. CERTIFICATION OF TRUTH, ACCURACY AND COMPLETENESS

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

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

IX. INSPECTION AND ENTRY

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

- A. Enter upon the Permittee's premises where a source is located, emissions-related activity is conducted, or where records are required to be kept under the conditions of the permit;
[A.A.C. R18-2-309.4.a]

- B. Have access to and copy, at reasonable times, any records that are required to be kept under the conditions of the permit;
[A.A.C. R18-2-309.4.b]

- C. Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit;
[A.A.C. R18-2-309.4.c]

- D. Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the permit or other applicable requirements; and
[A.A.C. R18-2-309.4.d]

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

X. ACCIDENTAL RELEASE PROGRAM

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

[40 CFR Part 68]

XI. EXCESS EMISSIONS, PERMIT DEVIATIONS, AND EMERGENCY REPORTING

A. Excess Emissions Reporting

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

1. Excess emissions shall be reported as follows:

a. The Permittee shall report to the Director any emissions in excess of the limits established by this permit. Such report shall be in two parts as specified below:

(1) Notification by telephone or facsimile within 24 hours of the time when the Permittee first learned of the occurrence of excess emissions including all available information from Condition XI.A.1.b below.

(2) Detailed written notification by submission of an excess emissions report within 72 hours of the notification pursuant to Condition XI.A.1.a(1) above.

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

b. The report shall contain the following information:

(1) Identity of each stack or other emission point where the excess emissions occurred;

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

(2) Magnitude of the excess emissions expressed in the units of the applicable emission limitation and the operating data and calculations used in determining the magnitude of the excess emissions;

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

(3) Time and duration, or expected duration, of the excess emissions;

[A.A.C. R18-2-310.01.B.3]

(4) Identity of the equipment from which the excess emissions emanated;

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

(5) Nature and cause of such emissions;

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

(6) If the excess emissions were the result of a malfunction, steps taken to remedy the malfunction and the steps taken or planned to prevent the recurrence of such malfunctions;

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

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

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

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

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

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

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

B. Permit Deviations Reporting

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

1. Notice that complies with Condition XI.A.1 above is prompt for deviations that constitute excess emissions;
2. Notice that is submitted within two (2) working days of discovery of the deviation is prompt for deviations of permit conditions identified by Condition I.D.5 of Attachment “B”;
3. Except as provided in Conditions XI.B.1 and 2 above, prompt notification of all other types of deviations shall be every 6 months, concurrent with the semiannual compliance certifications required in Section VII, and can be submitted via myDEQ, the Arizona Department of Environmental Quality’s online portal.

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

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

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

C. Emergency Provision

1. An “emergency” means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, that require immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

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

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

[A.A.C. R18-2-306.E.2]
3. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:

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

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

[A.A.C. R18-2-306.E.3.a]
 - b. The permitted facility was being properly operated at the time of the emergency;

[A.A.C. R18-2-306.E.3.b]
 - c. During the period of the emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and

[A.A.C. R18-2-306.E.3.c]
 - d. The Permittee submitted notice of the emergency to the Director by certified mail, facsimile, or hand delivery within two (2) working days of the time when emission limitations were exceeded due to the emergency. This notice shall contain a description of the emergency, any steps taken to mitigate emissions, and corrective action taken.

[A.A.C. R18-2-306.E.3.d]
4. In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.

[A.A.C. R18-2-306.E.4]
5. This provision is in addition to any emergency or upset provision contained in any applicable requirement.

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

D. Compliance Schedule

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

[ARS § 49-426.I.3]

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

1. Applicability

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

- a. Promulgated pursuant to Sections 111 or 112 of the Act;
[A.A.C. R18-2-310.A.1]
- b. Promulgated pursuant to Titles IV or VI of the Clean Air Act;
[A.A.C. R18-2-310.A.2]
- c. Contained in any Prevention of Significant Deterioration (PSD) or New Source Review (NSR) permit issued by the U.S. EPA;
[A.A.C. R18-2-310.A.3]
- d. Contained in A.A.C. R18-2-715.F; or
[A.A.C. R18-2-310.A.4]
- e. Included in a permit to meet the requirements of A.A.C. R18-2-406.A.5.
[A.A.C. R18-2-310.A.5]

2. Affirmative Defense for Malfunctions

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

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

- a. The excess emissions resulted from a sudden and unavoidable breakdown of process equipment or air pollution control equipment beyond the reasonable control of the Permittee;
[A.A.C. R18-2-310.B.1]
- b. The air pollution control equipment, process equipment, or processes were at all times maintained and operated in a manner consistent with good practice for minimizing emissions;
[A.A.C. R18-2-310.B.2]
- c. If repairs were required, the repairs were made in an expeditious fashion when the applicable emission limitations were being exceeded. Off-shift labor and overtime were utilized where practicable to ensure that the repairs were made as expeditiously as possible. If off-shift labor and overtime were not utilized, the Permittee satisfactorily demonstrated that the measures were impracticable;
[A.A.C. R18-2-310.B.3]

- d. The amount and duration of the excess emissions (including any bypass operation) were minimized to the maximum extent practicable during periods of such emissions;
[A.A.C. R18-2-310.B.4]
- e. All reasonable steps were taken to minimize the impact of the excess emissions on ambient air quality;
[A.A.C. R18-2-310.B.5]
- f. The excess emissions were not part of a recurring pattern indicative of inadequate design, operation, or maintenance;
[A.A.C. R18-2-310.B.6]
- g. During the period of excess emissions there were no exceedances of the relevant ambient air quality standards established in Title 18, Chapter 2, Article 2 of the Arizona Administrative Code that could be attributed to the emitting source;
[A.A.C. R18-2-310.B.7]
- h. The excess emissions did not stem from any activity or event that could have been foreseen and avoided, or planned, and could not have been avoided by better operations and maintenance practices;
[A.A.C. R18-2-310.B.8]
- i. All emissions monitoring systems were kept in operation if at all practicable; and
[A.A.C. R18-2-310.B.9]
- j. The Permittee's actions in response to the excess emissions were documented by contemporaneous records.
[A.A.C. R18-2-310.B.10]

3. Affirmative Defense for Startup and Shutdown

- a. Except as provided in Condition XI.E.3.b, and unless otherwise provided for in the applicable requirement, emissions in excess of an applicable emission limitation due to startup and shutdown shall constitute a violation. When emissions in excess of an applicable emission limitation are due to startup and shutdown, the Permittee has an affirmative defense to a civil or administrative enforcement proceeding based on that violation, other than a judicial action seeking injunctive relief, if the Permittee has complied with the reporting requirements of A.A.C. R18-2-310.01 and has demonstrated all of the following:
[A.A.C. R18-2-310.C.1]
 - (1) The excess emissions could not have been prevented through careful and prudent planning and design;
[A.A.C. R18-2-310.C.1.a]
 - (2) If the excess emissions were the result of a bypass of control equipment, the bypass was unavoidable to prevent loss of life,

personal injury, or severe damage to air pollution control equipment, production equipment, or other property;
[A.A.C. R18-2-310.C.1.b]

(3) The air pollution control equipment, process equipment, or processes were at all times maintained and operated in a manner consistent with good practice for minimizing emissions;
[A.A.C. R18-2-310.C.1.c]

(4) The amount and duration of the excess emissions (including any bypass operation) were minimized to the maximum extent practicable during periods of such emissions;
[A.A.C. R18-2-310.C.1.d]

(5) All reasonable steps were taken to minimize the impact of the excess emissions on ambient air quality;
[A.A.C. R18-2-310.C.1.e]

(6) During the period of excess emissions there were no exceedances of the relevant ambient air quality standards established in Title 18, Chapter 2, Article 2 of the Arizona Administrative Code that could be attributed to the emitting source;
[A.A.C. R18-2-310.C.1.f]

(7) All emissions monitoring systems were kept in operation if at all practicable; and
[A.A.C. R18-2-310.C.1.g]

(8) Contemporaneous records documented the Permittee's actions in response to the excess emissions.
[A.A.C. R18-2-310.C.1.h]

b. If excess emissions occur due to a malfunction during routine startup and shutdown, then those instances shall be treated as other malfunctions subject to Condition XI.E.2.
[A.A.C. R18-2-310.C.2]

4. Affirmative Defense for Malfunctions during Scheduled Maintenance

If excess emissions occur due to a malfunction during scheduled maintenance, then those instances will be treated as other malfunctions subject to Condition XI.E.2.
[A.A.C. R18-2-310.D]

5. Demonstration of Reasonable and Practicable Measures

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

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

XII. RECORDKEEPING REQUIREMENTS

- A.** The Permittee shall keep records of all required monitoring information including, but not limited to, the following:
- [A.A.C. R18-2-306.A.4.a]
1. The date, place as defined in the permit, and time of sampling or measurements;
[A.A.C. R18-2-306.A.4.a.i]
 2. The date(s) any analyses were performed;
[A.A.C. R18-2-306.A.4.a.ii]
 3. The name of the company or entity that performed the analyses;
[A.A.C. R18-2-306.A.4.a.iii]
 4. A description of the analytical techniques or methods used;
[A.A.C. R18-2-306.A.4.a.iv]
 5. The results of analyses; and
[A.A.C. R18-2-306.A.4.a.v]
 6. The operating conditions as existing at the time of sampling or measurement.
[A.A.C. R18-2-306.A.4.a.vi]
- B.** The Permittee shall retain records of all required monitoring data and support information for a period of at least five (5) years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings or other data recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.
[A.A.C. R18-2-306.A.4.b]

XIII. REPORTING REQUIREMENTS

The Permittee shall submit the following reports:

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

XIV. DUTY TO PROVIDE INFORMATION

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

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

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

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

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

XV. PERMIT AMENDMENT OR REVISION

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

- A.** Administrative Permit Amendment;

[A.A.C. R18-2-318]

- B.** Minor Permit Revision; and

[A.A.C. R18-2-319]

- C.** Significant Permit Revision.

[A.A.C. R18-2-320]

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

XVI. FACILITY CHANGE WITHOUT A PERMIT REVISION

- A.** The Permittee may make changes that contravene an express permit term without a permit revision if all of the following apply:

1. The changes are not modifications under any provision of Title I of the Act or under ARS § 49-401.01(24);

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

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

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

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

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

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

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

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

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

6. The changes do not constitute a minor NSR modification. [A.A.C. R18-2-317.A.6]
- B.** The substitution of an item of process or pollution control equipment for an identical or substantially similar item of process or pollution control equipment shall qualify as a change that does not require a permit revision, if it meets all of the requirements of Conditions XVI.A, C, and D of this Attachment. [A.A.C. R18-2-317.B]
- C.** For each change under Conditions XVI.A and XVI.B, a written notice by certified mail or hand delivery shall be received by the Director and the Administrator a minimum of 7 working days in advance of the change. Notifications of changes associated with emergency conditions, such as malfunctions necessitating the replacement of equipment, may be provided less than 7 working days in advance of the change, but must be provided as far in advance of the change, as possible or, if advance notification is not practicable, as soon after the change as possible. [A.A.C. R18-2-317.D]
- D.** Each notification shall include:
1. When the proposed change will occur; [A.A.C. R18-2-317.E.1]
 2. A description of the change; [A.A.C. R18-2-317.E.2]
 3. Any change in emissions of regulated air pollutants; and [A.A.C. R18-2-317.E.3]
 4. Any permit term or condition that is no longer applicable as a result of the change. [A.A.C. R18-2-317.E.7]
- E.** The permit shield described in A.A.C. R18-2-325 shall not apply to any change made under this Section XVI. [A.A.C. R18-2-317.F]
- F.** Except as otherwise provided for in the permit, making a change from one alternative operating scenario to another as provided under A.A.C. R18-2-306.A.11 shall not require any prior notice under this Section XVI. [A.A.C. R18-2-317.G]
- G.** Notwithstanding any other part of Section XVI, the Director may require a permit to be revised for any change that, when considered together with any other changes submitted by the same source under Section XVI over the term of the permit, do not satisfy Condition XVI.A. [A.A.C. R18-2-317.H]

XVII. TESTING REQUIREMENTS

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

B. Operational Conditions During Performance Testing

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

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

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

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

D. Test Plan

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

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

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

E. Stack Sampling Facilities

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

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

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

F. Interpretation of Final Results

Each performance test shall consist of three (3) 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 (3) 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 (2) runs. If the Director or the Director's designee is present, tests may only be stopped with the Director's or such designee's approval. If the Director or the Director's designee is not present, tests may only be stopped for good cause. Good cause includes: forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances beyond the Permittee's control. Termination of any test without good cause after the first run is commenced shall constitute a failure of the test. Supporting documentation, which demonstrates good cause, must be submitted.

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

G. Report of Final Test Results

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

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

H. Extension of Performance Test Deadline

For performance testing required under Condition XVII.A above, the Permittee may request an extension to a performance test deadline due to a force majeure event as follows:

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

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

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

2. The Permittee shall provide to the Director a written description of the force majeure event and a rationale for attributing the delay in testing beyond the regulatory deadline to the force majeure, describe the measures taken or to be taken to minimize the delay, and identify a date by which the Permittee proposes to conduct the performance test. The performance test shall be conducted as soon as practicable after the force majeure event occurs.

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

3. The decision as to whether or not to grant an extension to the performance test deadline is solely within the discretion of the Director. The Director shall notify

the Permittee in writing of approval or disapproval of the request for an extension as soon as practicable.

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

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

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

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

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

XVIII. PROPERTY RIGHTS

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

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

XIX. SEVERABILITY CLAUSE

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

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

XX. PERMIT SHIELD

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

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

XXI. PROTECTION OF STRATOSPHERIC OZONE

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

[40 CFR Part 82]

XXII. APPLICABILITY OF NSPS/NESHAP GENERAL PROVISIONS

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

[40 CFR Part 60 and Part 63 Subpart A]

ATTACHMENT "B": SPECIFIC CONDITIONS

I. FACILITY-WIDE REQUIREMENTS

A. Applicability

This Section is applicable to facility-wide operations.

B. Emission Limitations

1. Nitrogen Oxides (NO_x)

Total combined emissions of NO_x from Gas Turbine Units 1 and 2, Emergency Diesel Generator Engine (EGEN), and Fire Pump Engine (FPEN) shall not exceed 244 tons per year, calculated daily as a 365-day rolling total.

[A.A.C R18-2-306.01, ~~306.02~~, and -331.A.3.a]

[Material permit conditions are indicated by italic and underline]

2. Carbon Monoxide (CO)

Total combined emissions of CO from Gas Turbine Units 1 and 2, Emergency Diesel Generator Engine (EGEN), and Fire Pump Engine (FPEN) shall not exceed 244 tons per year, calculated daily as a 365-day rolling total.

[A.A.C R18-2-306.01, ~~306.02~~, and -331.A.3.a]

[Material permit conditions are indicated by italic and underline]

3. Monitoring, Recordkeeping and Reporting Requirements

[A.A.C. R18-2-306.A.3, 4, 5, ~~306.02(C)~~, and -312.H.3]

a. For the purpose of compliance demonstration with the annual NO_x and CO emission limitations in Condition I.B, the Permittee shall comply with the continuous emission monitoring, recordkeeping and reporting provisions in Conditions II.C.2.c and II.C.4 of this Attachment.

b. For demonstrating compliance with Conditions I.B.1 and I.B.2, the Permittee shall utilize NO_x and diluent continuous emissions monitoring system (CEMS) required under Condition II.C.2.c(1), CO and diluent CEMS required under Condition II.C.4.a, fuel flow rate monitoring system required under Condition II.C.2.c(8), and the hours of engines' operation recorded under Condition I.B.3.e, in conjunction with the CEMS Data Acquisition and Handling System (DAHS), to calculate the total emissions of NO_x and CO from Gas Turbine Units 1 and 2, Emergency Diesel Generator Engine (EGEN), and Fire Pump Engine (FPEN) in units of pounds per million Btu (lb/MMBtu), pounds per hour (lb/hr), pounds per day, and tons per daily 365-day rolling totals as follows:

(1) To calculate mass emissions in lb/MMBtu for Gas Turbine Units 1 and 2, the Permittee shall use the Procedures for NO_x Emission Rate in 40 CFR 75 Appendix F. For CO, the value of K in Equations F-5 and F-6 = 7.266×10^{-8} (lb/dscf)/ppm CO.

I. FACILITY-WIDE REQUIREMENTS

- (2) To calculate mass emissions in lb/hr for Gas Turbine Units 1 and 2, the Permittee shall use the calculated lb/MMBtu rates, fuel flow monitoring data, and the gross calorific value of the pipeline quality natural gas in accordance with the procedures for SO₂ emissions contained in 40 CFR 75 Appendix D.
- (3) The Permittee shall calculate daily emissions of NO_x and CO from Emergency Diesel Generator Engine (EGEN) and Fire Pump Engine (FPEN) using the hours of operation recorded and emission factors for each of the engines as provided below:

Source	Unit	Emission Factors	
		NO _x	CO
EGEN	g/Kw-hr	6.4	3.5
FPEN	g/Kw-hr	10.5	3.5

- c. Each calendar day during which total combined 365-day rolling total NO_x emission rate from Gas Turbine Units 1 and 2, Emergency Diesel Generator Engine (EGEN), and Fire Pump Engine (FPEN) exceed 244 tons shall constitute an exceedance of Condition I.B.1. Exceedances shall be reported to the Director in accordance with Condition XIA of Attachment “A”.
- d. Each calendar day during which total combined 365-day rolling total CO emission rate from Gas Turbine Units 1 and 2, Emergency Diesel Generator Engine (EGEN), and Fire Pump Engine (FPEN) exceed 244 tons shall constitute an exceedance of Condition I.B.2. Exceedances shall be reported to the Director in accordance with Condition XIA of Attachment “A”.
- e. Daily and 365-day rolling totals of NO_x and CO emission rates shall be included in the semiannual compliance certifications required by Section VII of Attachment “A”.
- f. The Permittee shall maintain the following records in accordance with Section XII of Attachment “A”:
 - (1) CEMS and fuel flow rate monitoring system performance evaluations, calibration checks and adjustments, and maintenance activities.
 - (2) All compliance records including calculations, reports, and supporting documents.

C. Opacity

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

I. FACILITY-WIDE REQUIREMENTS

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

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

(1) Alternative Method ALT-082 (Digital Camera Operating Technique)

(a) The Permittee, or Permittee representative, shall be certified in the use of Alternative Method ALT-082.

(b) The results of all instantaneous surveys and six-minute observations shall be obtained within 30 minutes.

(2) EPA Reference Method 9 Certified Observer.

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

b. Six-Minute Observations

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

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

(1) Alternative Method ALT-082 (Digital Camera Operating Technique)

(a) The Permittee, or Permittee representative, shall be certified in the use of Alternative Method ALT-082.

(b) The results of all instantaneous surveys and six-minute observations shall be obtained within 30 minutes.

(2) EPA Reference Method 9.

c. The Permittee shall have on site or on call a person certified in EPA Reference Method 9 unless all six-minute Method 9 observations required by this permit are conducted as a six-minute Alternative Method ALT-082 (Digital Camera Operating Technique) and all instantaneous visual surveys required by this permit are conducted as an instantaneous ALT-082 camera survey. Any six-minute Method 9 observation required by this permit can be conducted as a six-minute Alternative Method ALT-082 and any instantaneous visual survey required by this permit can be conducted as an instantaneous ALT-082 camera survey.

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

2. Monitoring, Recordkeeping, and Reporting Requirements

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

a. At the frequency specified in the following sections of this permit, the Permittee shall conduct an instantaneous survey of visible emissions from both process stack sources, when in operation, and fugitive dust sources.

I. FACILITY-WIDE REQUIREMENTS

- b. If the visible emissions on an instantaneous basis appears less than or equal to the applicable opacity standard, then the Permittee shall keep a record of the name of the observer, the date on which the instantaneous survey was made, and the results of the instantaneous survey.
- c. If the visible emissions on an instantaneous basis appears greater than the applicable opacity standard, then the Permittee shall immediately conduct a six-minute observation of the visible emissions.
 - (1) If the six-minute observation of the visible emissions is less than or equal to the applicable opacity standard, then the Permittee shall record the name of the observer, the date on which the six-minute observation was made, and the results of the six-minute observation.
 - (2) If the six-minute observation of the visible emissions is greater than the applicable opacity standard, then the Permittee shall do the following:
 - (a) Adjust or repair the controls or equipment to reduce opacity to less than or equal to the opacity standard;
 - (b) Record the name of the observer, the date on which the six-minute observation was made, the results of the six-minute observation, and all corrective action taken;
 - (c) Report the event as an excess emission for opacity in accordance with Condition XI.A of Attachment "A"; and
 - (d) Conduct another six-minute observation to document the effectiveness of the adjustments or repairs completed.

D. Monitoring, Recordkeeping and Reporting Requirements

- 1. The Permittee shall maintain on-site records of the manufacturer's operation and maintenance instructions or the facility's operation and maintenance plan.

[A.A.C. R18-2-306.A.4]
- 2. The Permittee shall keep records of maintenance activities that may impact the facility's emissions. These records shall include the start date of each maintenance activity.

[A.A.C. R18-2-306.A.4]
- 3. The Permittee shall maintain the records to demonstrate compliance with Condition I.D.2. These records shall be readily available upon request for a period of at least five (5) years in a form that is suitable for expeditious inspection and review.

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

4. The Permittee shall submit the supporting documents required in Attachment “B” with the semiannual compliance certifications required in Section VII of Attachment "A".

[A.A.C. R18-2-306.A.5.a]
5. Deviations from the following permit conditions in Attachment “B” shall be promptly reported in accordance with Condition XI.B.2 of Attachment “A”:

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

 - a. Condition II.C.1;
 - b. Condition II.C.2.b;
 - c. Condition II.C.2.c(1);
 - d. Condition II.C.2.c(8);
 - e. Condition II.C.4.a; and
 - f. Condition IV.D.2.

II. GAS TURBINE UNITS 1 & 2 REQUIREMENTS

A. Applicability

This Section is applicable to the two simple cycle combustion turbine/generator units known as Gas Turbine Units 1 and 2. These units are subject to New Source Performance Standards (NSPS) 40 Code of Federal Regulations (CFR) Part 60 Subpart A for General Provisions. In addition, they are subject to NSPS 40 CFR Part 60 Subpart GG for Stationary Gas Turbines.

B. General Provisions

1. All requests, reports, applications, submittals, and other communications pursuant to this Subpart shall be submitted in duplicate to the appropriate Regional Office of the U.S. Environmental Protection Agency (EPA) to the attention of the Director of the Division:

Director, Air Division
U.S. Environmental Protection Agency
75 Hawthorne Street
San Francisco, CA 94105

[40 CFR 60.4(a)]

2. The Permittee shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction, any malfunction of the air pollution control equipment, or any periods during which a continuous monitoring system or monitoring device is inoperative.

[40 CFR 60.7(b)]

3. The Permittee shall submit excess emissions, monitoring systems performance reports, and/or summary report forms on a quarterly basis as required by 40 CFR 60.7(c)(1)-(4) and (d)(1)-(2). The frequency of reporting may be reduced to a semiannual basis in accordance with 40 CFR 60.7(e).
[40 CFR 60.7(c), (d) and (e)]
4. The Permittee shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements, all continuous monitoring system performance evaluations, all continuous monitoring system or monitoring device calibration checks, adjustments and maintenance performed on these systems or devices, and all other information required in a permanent form suitable for inspection. The file shall be retained for at least two (2) years following the date of such measurements, maintenance, reports, and records, except as provided in 40 CFR 60.7(f)(1) and (2).
[40 CFR 60.7(f)]
5. *At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain and operate Gas Turbine Unit 1 and Unit 2 including associated air pollution control equipment in a manner consistent with good air pollution control practices for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the EPA Administrator which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.*
[40 CFR 60.11(d) and A.A.C. R18-2-331.A.3.e]
[Material permit conditions are indicated by underline and italic]
6. For the purpose of submitting semiannual compliance certifications or establishing whether or not the Permittee has violated or is in violation of any standard in 40 CFR Part 60, nothing shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether the facility would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed.
[40 CFR 60.11(g)]
7. The Permittee shall not build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission, which would otherwise constitute a violation of an applicable standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with opacity standard or with a standard, which is based on the concentration of a pollutant in the gases discharged to the atmosphere.
[40 CFR 60.12]
8. The Permittee shall comply with the “General Notification and Reporting Requirements” found in 40 CFR 60.19.
[40 CFR 60.19]

C. Specific Provisions

1. Fuel Requirement

The Permittee shall not cause or allow the combustion of any fuel in Gas Turbine Unit 1 or Unit 2 other than pipeline quality natural gas meeting the definition of "natural gas" in 40 CFR 60.331(u).

[40 CFR 60.334(h)(3), A.A.C. R18-2-306.01 and -331.A.3.a]
[Material permit conditions are indicated by underline and italic]

2. Nitrogen Oxides (NO_x)

a. Emission Limitations and Standards

The Permittee shall not cause to be discharged into the atmosphere from Gas Turbine Unit 1 or Unit 2 any gases which contain NO_x in excess of:

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

Where:

STD = Allowable International Organization for Standardization (ISO) corrected (if required as given in 40 CFR 60.335(b)(1)) 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 as defined by 40 CFR 60.332(a)(4).

For Gas Turbine Units 1 and 2, STD = 75 ppmv at 15% oxygen.

[40 CFR 60.332(a)(1) and (b)]

b. Air Pollution Control Requirement

At all times when Gas Turbine Unit 1 and/or Unit 2 are in operation, including during startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain and operate the water injection systems in a manner consistent with good air pollution control practices for minimizing NO_x emissions.

[40 CFR 60.11(d) and A.A.C. R18-2-331.A.3.e]
[Material permit conditions are indicated by underline and italic]

c. Monitoring, Recordkeeping, and Reporting Requirements

(1) *The Permittee shall certify, maintain, operate, and quality-assure continuous emission monitoring system (CEMS) consisting of NO_x and O₂ (or CO₂) monitors for measuring NO_x emissions from Gas Turbine Unit 1 and Unit 2.*

[40 CFR 60.334(b), A.A.C. R18-2-306.A.3 and -331.A.3.c]

[Material permit conditions are indicated by underline and italic]

- (2) For the NO_x and O₂ or CO₂ diluent CEMS, the Permittee shall meet all applicable requirements of 40 CFR Part 75, including but not limited to:
- [40 CFR 60.334(b)(3)(iii) and A.A.C. R18-2-306.A.3]
- (a) 75.10 – General Monitoring Requirements;
 - (b) 75.12 – Specific Provisions for Monitoring NO_x Emission Rate;
 - (c) Subpart C – Operation and Maintenance Requirements;
 - (d) Subpart D – Missing Data Substitution Procedures;
 - (e) Subpart F – Recordkeeping Requirements;
 - (f) Subpart G – Reporting Requirements;
 - (g) Appendix A – Specifications and Test Procedures;
 - (h) Appendix B – Quality Assurance and Quality Control Procedures;
 - (i) Appendix C – Missing Data Estimation Procedures; and
 - (j) Appendix F – Conversion Procedures.
- (3) As specified in 40 CFR 60.13(e)(2), during each full unit operating hour, each monitor must complete a minimum of one (1) 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)]
- (4) For purposes of identifying excess emissions associated with Condition II.C.2.a, CEMS data must be reduced to hourly averages as specified in 40 CFR 60.13(h).
- [40 CFR 60.334(b)(3)]
- (a) For each unit operating hour in which a valid hourly average, as described in Condition II.C.2.c(3), 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.C.2.a, i.e., percent NO_x by volume, dry basis, corrected to 15 percent O₂ and ISO standard conditions. 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.

- (b) 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).
- (5) The missing data substitution methodology provided in 40 CFR Part 75, Subpart D, is not required for purposes of identifying excess emissions associated with Condition II.C.2.a. Instead, periods of missing CEMS data are to be reported as monitor downtime in the excess emissions and monitoring performance report required in 40 CFR 60.7(c).

[40 CFR 60.334(b)(3)(iii)]
- (6) The Permittee shall submit reports of excess emissions and monitor downtime, in accordance with 40 CFR 60.7(c). Excess emissions shall be reported for all periods of Gas Turbine Unit 1 and Unit 2 operation, including startup, shutdown, and malfunction. Periods of excess emissions and monitor downtime that shall be reported are defined as follows:
 - (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.C.2.a. 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 if required, 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).

[40 CFR 60.334(j) and (j)(1)(iii)]

- (7) All reports required under 40 CFR 60.7(c) shall be postmarked by the 30th day following the end of each 6-month period.
[40 CFR 60.334(j)(5)]
- (8) *The Permittee shall calibrate, maintain, and operate fuel flow rate monitoring systems for determining the natural gas input rate to Gas Turbine Unit 1 and 2 for each operating hour.* Each fuel flow rate monitoring system shall be calibrated and quality assured in accordance with the applicable requirements of 40 CFR Part 75 Appendix D.
[A.A.C. R18-2-306.A.3 and -331.A.3.c]
[Material permit conditions are indicated by underline and italic]
- (9) The Permittee shall determine and record the gross caloric value of the pipeline quality natural gas at least once per month in accordance with the procedures in Section 2.3.4.1 or 2.3.4.2 of 40 CFR 75 Appendix D, as applicable.
[A.A.C. R18-2-306.A.3]
- (10) During CEMS or fuel flow rate monitoring system downtime, the Permittee shall implement the missing data procedures in 40 CFR Part 75 Subpart D, Appendix C, and Appendix D, as applicable.
[A.A.C. R18-2-306.A.3]

d. Permit Shield

Compliance with the Conditions of this Subsection shall be deemed compliance with 40 CFR 60.332(a)(1), (b), 334(b), (j), (j)(1), (j)(5), 335 and A.A.C. R18-2-901(40).

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

3. Sulfur Dioxide (SO₂)

a. Emission Limitation and Standard

The Permittee shall not burn in Gas Turbine Unit 1 or Unit 2 any fuel that contains total sulfur in excess of 0.8 percent by weight (8000 ppmw).

[40 CFR 60.333(b)]

b. Monitoring, Recordkeeping, and Reporting Requirements

- (1) The Permittee shall demonstrate that the gaseous fuel burned in Gas Turbine Unit 1 and 2 meets the definition of “natural gas” in 40 CFR 60.331(u).

The Permittee shall use one of the following sources of information to make this demonstration:

[40 CFR 60.334(h)(3)]

- (a) Maintain a current, valid purchase contract, tariff sheet, or transportation contract for the gaseous fuel, specifying

III. COOLING TOWER REQUIREMENTS

that the maximum total sulfur content of the fuel is 20 grains/100 standard cubic feet or less, or

[40 CFR 60.334(h)(3)(i)]

- (b) Maintain a record of representative fuel sampling data which show that the sulfur content of the gaseous fuel does not exceed 20 grains/100 standard cubic feet. At a minimum, the amount of fuel sampling data specified in Section 2.3.1.4 or 2.3.2.4 of 40 CFR 75 Appendix D is required.

[40 CFR 60.334(h)(3)(ii)]

c. Permit Shield

Compliance with the Conditions of this Subsection shall be deemed compliance with 40 CFR 60.333(b), 334(h) and A.A.C. R18-2-904(40).

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

4. Carbon Monoxide (CO)

Monitoring, Recordkeeping, and Reporting Requirements

- a. *The Permittee shall certify, maintain, operate, and quality-assure continuous emission monitoring system (CEMS consisting of CO and O₂ (or CO₂) monitors for measuring CO emissions from Gas Turbine Unit 1 and 2.*

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

[Material permit conditions are indicated by underline and italic]

- b. The CO CEMS shall meet all applicable requirements of 40 CFR Part 60, including but not limited to the following:

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

- (1) 60.13 – Monitoring Requirements;
- (2) Appendix B – Performance Specification 4A; and
- (3) Appendix F – Quality Assurance Procedures.

- c. During CEMS or fuel flow rate monitoring system downtime, the Permittee shall implement the missing data procedures in 40 CFR Part 75 Subpart D, Appendix C, and Appendix D, as applicable. For CO monitoring data, the Permittee shall use the missing data estimation and substitution procedures prescribed for NO_x.

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

III. COOLING TOWER REQUIREMENTS

A. Applicability

This Section is applicable to the cooling tower serving Gas Turbine Unit 1 and 2 as subject to Arizona Administrative Code (A.A.C.) R18-2-730 for Unclassified Sources.

B. Particulate Matter and Opacity

1. Emission Limitations and Standards

- a. The Permittee shall not cause, allow or emit into the atmosphere particulate matter in excess of the amounts calculated by the following equations:

For process weight rates of 60,000 pounds per hour (30 tons per hour) or less:

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

Where:

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

P = the process weight rate in tons-mass per hour.
 [A.A.C. R18-2-730.A.1.a]

For process weight rates greater than 60,000 pounds per hour (30 tons per hour):

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

Where:

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

P = the process weight rate in tons-mass per hour.
 [A.A.C. R18-2-730.A.1.b]

- b. The Permittee shall not cause, allow or permit to be emitted into the atmosphere any plume or effluent with an opacity greater than 20 percent measured in accordance with EPA Reference Method 9 in 40 CFR 60, Appendix A.
 [A.A.C. R18-2-702.B.3]

- c. If the presence of uncombined water is the only reason for an exceedance of the applicable opacity requirement, the exceedance shall not constitute a violation of the applicable opacity limit.
 [A.A.C. R18-2-702.C]

- d. 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. Monitoring, Recordkeeping, and Reporting Requirements

The Permittee shall conduct a quarterly survey of visible emissions from the cooling tower when in operation and in accordance with Condition I.C of Attachment "B".

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

3. Permit Shield

Compliance with the Conditions of this Section shall be deemed compliance with A.A.C. R18-2-702.B, C, -730.A.1 and G.

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

IV. EMERGENCY DIESEL GENERATOR AND FIRE PUMP ENGINE REQUIREMENTS

A. Applicability

This Section is applicable to the emergency diesel generator and fire pump engine as subject to New Source Performance Standards (NSPS) 40 Code of Federal Regulations (CFR) Part 60 Subpart III for Stationary Compression Ignition (CI) Internal Combustion Engines (ICEs).

B. Fuel Requirement

1. The Permittee shall use diesel fuel that meets the requirements of 40 CFR 1090.305:

[40 CFR 60.4207(b)]

a. Maximum sulfur content of 15 ppm;

[40 CFR 1090.305(b)]

b. Cetane index or aromatic content;

[40 CFR 1090.305(c)]

(1) Minimum cetane index of 40.

[40 CFR 1090.305(c)(1)]

(2) Maximum aromatic content of 35 volume percent.

[40 CFR 1090.305(c)(2)]

2. Recordkeeping Requirement

The Permittee shall keep records of fuel supplier certifications to demonstrate compliance with Condition IV.B.1.

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

C. Emission Standards

1. For 2007 model year and later CI ICEs with a displacement of less than 30 liters per cylinder, the Permittee shall comply with the emission standards for new ICEs in 40 CFR 60.4202, as applicable.
[40 CFR 60.4205(b)]
2. For fire pump CI ICEs with a displacement of less than 30 liters per cylinder, the Permittee shall comply with the emission standards in Table 4 of 40 CFR Part 60 Subpart III, for all pollutants.
[40 CFR 60.4205(c)]

D. Operation and Maintenance Requirements

1. The Permittee shall operate and maintain the CI ICEs to achieve the emission standards required in 40 CFR 60.4205 over the entire life of the CI ICEs.
[40 CFR 60.4206]
2. *The Permittee shall install a non-resettable hour meter prior to startup of the CI ICEs if one is not already installed.*
[40 CFR 60.4209(a) and R18-2-331.A.3.c]
[Material permit conditions are indicated by underline and italic]
3. The Permittee shall do all of the following:
[40 CFR 60.4211(a)]
 - a. Operate and maintain the CI ICEs and control devices according to the manufacturer's emission-related written instructions;
[40 CFR 60.4211(a)(1)]
 - b. Change only those emission-related settings that are permitted by the manufacturer; and
[40 CFR 60.4211(a)(2)]
 - c. Meet the requirements of 40 CFR Part 1068, as they apply.
[40 CFR 60.4211(a)(3)]
4. For 2007 model year and later CI ICEs, the Permittee shall comply by purchasing CI ICEs certified to the emission standards in 40 CFR 60.4204(b), as applicable, for the same model year and maximum power. The CI ICEs must be installed and configured according to the manufacturer's emission-related specifications.
[40 CFR 60.4211(c)]
5. The Permittee may operate the CI ICEs 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, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company for a maximum of 100 hours per calendar year.
[40 CFR 60.4211(f)(2)]

E. Monitoring, Recordkeeping and Reporting Requirements

1. The Permittee shall record the hours of operation from each CI ICE and the reason each CI ICE was in operation during that time.
[40 CFR 60.4214(b)]
2. The Permittee shall keep records of the hours of operation that are recorded through the non-resettable hour meter for each CI ICE on a 12-month rolling total.
[40 CFR 60.4214(b) and A.A.C. R18-2-306.A.4]

F. Permit Shield

Compliance with the Conditions of this Section shall be deemed compliance with 40 CFR 60.4205(b) and (c), 60.4206, 60.4207(b), 60.4209(a), 60.4211(f)(2), 60.4214(b), 1090.305(b) and (c).

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

V. FUGITIVE DUST REQUIREMENTS

A. Applicability

This Section is applicable to any non-point source of fugitive dust.

B. Particulate Matter and Opacity

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

1. Emission Limitations and Standards

- a. Opacity of emissions from any fugitive dust non-point source shall not be greater than 40 percent.
[A.A.C. R18-2-614]
- b. The Permittee shall employ the following reasonable precautions to prevent excessive amounts of particulate matter from becoming airborne:

(1) For a building or its appurtenances, or a building or subdivision site, or a driveway, or a parking area, or a vacant lot or sales lot, or an urban or suburban open area to be constructed, used, altered, repaired, demolished, cleared, or leveled, or the earth to be moved or excavated, keep dust and other types of air contaminants to a minimum by good modern practices such as using an approved dust suppressant or adhesive soil stabilizer, paving, covering, landscaping, continuous wetting, detouring, barring access, or other acceptable means;
[A.A.C. R18-2-604.A]

(2) Keep dust to a minimum from vacant lots or an urban or suburban open area where motor vehicular activity occurs by using an approved dust suppressant, or adhesive soil stabilizer, or by

V. FUGITIVE DUST REQUIREMENTS

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

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

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

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

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

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

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

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

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

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

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

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

- (8) Use any other method as proposed by the Permittee and approved by the Director.

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

2. Air Pollution Control Requirement

Unpaved Roads and Storage Piles

Water, or an equivalent control, shall be used to control visible emissions from unpaved roads and storage piles.

[A.A.C. R18-2-331.A.3.d]

[Material permit conditions are indicated by underline and italic]

3. Monitoring and Recordkeeping Requirements

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

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

- b. Each quarter, the Permittee shall monitor visible emissions from fugitive sources in accordance with Condition I.C of this Attachment.
[A.A.C. R18-2-306.A.3.c]

C. Permit Shield

Compliance with the Conditions in this Section shall be deemed compliance with A.A.C. R18-2-604, -605, -606, -607 and -614.

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

VI. OTHER PERIODIC ACTIVITIES

A. Abrasive Blasting

1. Particulate Matter and Opacity

a. Emission Limitations and Standards

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

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

- (1) Wet blasting;
- (2) Effective enclosures with necessary dust collecting equipment; or
- (3) Any other method approved by the Director.

b. Opacity

The Permittee shall not cause, allow or permit visible emissions from sandblasting or other abrasive blasting operations in excess of 20 percent opacity.

[A.A.C. R18-2-702.B.3]

2. Monitoring and Recordkeeping Requirements

- a. Each time an abrasive blasting project is conducted, the Permittee shall make a record of the following:

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

- (1) The date the project was conducted;
- (2) The duration of the project; and
- (3) Type of control measures employed.

- b. Each time an abrasive blasting project is conducted, the Permittee shall, at least once, monitor visible emissions from the project in accordance with Condition I.C of this Attachment.

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

B. Use of Paints

1. Volatile Organic Compounds and Opacity

a. Emission Limitations and Standards

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

(1) The Permittee shall not conduct or cause to be conducted any spray painting operation without minimizing organic solvent emissions. Such operations, other than architectural coating and spot painting, shall be conducted in an enclosed area equipped with controls containing no less than 96 percent of the overspray.

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

(2) The Permittee or their designated contractor shall not either:

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

(a) Employ, apply, evaporate, or dry any architectural coating containing photochemically reactive solvents for industrial or commercial purposes; or

(b) Thin or dilute any architectural coating with a photochemically reactive solvent.

(3) For the purposes of Condition VI.A.1.a(2), a photochemically reactive solvent shall be any solvent with an aggregate of more than 20 percent of its total volume composed of the chemical compounds classified in Conditions VI.B.1.a(3)(a) through VI.B.1.a(3)(c) below, or which exceeds any of the following percentage composition limitations, referred to the total volume of solvent:

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

(a) A combination of the following types of compounds having an olefinic or cyclo-olefinic type of unsaturation-hydrocarbons, alcohols, aldehydes, esters, ethers, or ketones: 5 percent.

(b) A combination of aromatic compounds with eight or more carbon atoms to the molecule except ethylbenzene: 8 percent.

(c) A combination of ethylbenzene, ketones having branched hydrocarbon structures, trichloroethylene or toluene: 20 percent.

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

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

b. Opacity

The Permittee shall not cause, allow or permit visible emissions from spray painting operations in excess of 20 percent opacity.

[A.A.C. R18-2-702.B.3]

2. Monitoring and Recordkeeping Requirements

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

- a. Each time a spray painting project is conducted, the Permittee shall make a record of the following:

- (1) The date the project was conducted;
- (2) The duration of the project;
- (3) Type of control measures employed;
- (4) Safety Data Sheets (SDS) for all paints and solvents used in the project; and
- (5) The amount of paint consumed during the project.

- b. Architectural coating and spot painting projects shall be exempt from the recordkeeping requirements of Condition VI.B.2.a.

- c. Each time a spray painting project is conducted, the Permittee shall, at least once, monitor visible emissions from the project in accordance with Condition I.C of this Attachment.

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

C. Demolition and Renovation

1. Emission Limitations and Standards

The Permittee shall comply with all of the requirements of National Emission Standards NESHAP 40 CFR 61 Subpart M for Asbestos.

[A.A.C. R18-2-1101.A.12]

2. Monitoring and Recordkeeping Requirements

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

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

D. Permit Shield

Compliance with Conditions in this Section shall be deemed compliance with A.A.C. R18-2-702.B.3, -726, -727 and -1101.A.12.

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

ATTACHMENT “A” ATTACHMENT “C”: EQUIPMENT LIST

EQUIPMENT TYPE	MAXIMUM CAPACITY	MAKE	MODEL	SERIAL NUMBER	INSTALLATION/ MFG. DATE	EQUIPMENT ID NUMBER	A.A.C. / NSPS / NESHAP
Gas Turbine Unit 1	48 MW (Continuous Maximum Capacity)	General Electric	LM6000PC-Sprint	N/A	2002	Unit 1 / 191-452	NSPS 40 CFR Part 60 Subpart A; NSPS 40 CFR Part 60 Subpart GG
Gas Turbine Unit 2	48 MW (Continuous Maximum Capacity)	General Electric	LM6000PC-Sprint	N/A	2002	Unit 2 / 191-454	NSPS 40 CFR Part 60 Subpart A; NSPS 40 CFR Part 60 Subpart GG
Fire Pump Engine	290 HP	John Deere	6081HF001	N/A	2007	00192	NSPS 40 CFR Part 60 Subpart IIII
Emergency Diesel Generator	600 KW (Continuous Maximum Capacity)	Caterpillar	C18	N/A	2007	EGEN1	NSPS 40 CFR Part 60 Subpart IIII
Cooling Tower	4,231 Gallons Per Minute (Recirculation Rate)	Evapco	AT-314 0972	N/A	2007	CT1	A.A.C. R18-2-730

*N/A – Not Available.