

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

Air Quality Division

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**AIR QUALITY CONTROL
TITLE V GENERAL PERMIT
FOR
AIR CURTAIN INCINERATOR**

(As required by Title 49, Chapter 3, Article 2, Section 49-426, Arizona Revised Statutes)

This air quality control permit does not relieve applicant of responsibility for meeting all air pollution regulations



THIS GENERAL PERMIT ISSUED SUBJECT TO THE FOLLOWING Conditions contained in Attachments "A", "B", "C", "D", "E"

ADEQ GENERAL PERMIT NUMBER _____ PERMIT CLASS II EXPIRATION DATE _____

PERMIT ISSUED THIS _____ DAY OF _____ 2017

SIGNATURE

Timothy S. Franquist, Director, Air Quality Division

TITLE



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**AIR QUALITY CONTROL
TITLE V GENERAL PERMIT
FOR
AIR CURTAIN INCINERATORS**

INTRODUCTION

This General Permit covers stationary and portable air curtain incinerators that are subject to Federal New Source Performance Standards (NSPS) Subpart EEEE that burn less than 35 tons/day of wood waste, clean lumber and yard waste.

This General Permit is revised to include the applicable requirements in Maricopa County.

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ATTACHMENT "A": GENERAL PROVISIONS

I. GENERAL PERMIT EXPIRATION AND RENEWAL

[A.R.S. § 49-426.F, A.A.C.R18-2-306.A.1, -505]

- A.** This General Permit is valid for a period of five years from the date of issuance. The Director of ADEQ (Director) shall review and may renew this General Permit every five years from its date of issuance. The Permittee's Authorization to Operate (ATOs) shall coincide with the term of this General Permit, regardless of when the individual authorization began during this five year period, except that the Director may require a Permittee authorized to operate under this General Permit to apply for and obtain an individual permit at any time, if the source is not in compliance with the terms and conditions of this General Permit.
- B.** At the time that the public notice is required, pursuant to issuance of the proposed General Permit renewal, the Director shall notify in writing all Permittees who have been granted, or who have applications pending for, ATO(s) under this General Permit. The written notice shall describe the source's duty to reapply and may include requests for information required under the proposed General Permit.

II. COMPLIANCE WITH PERMIT CONDITIONS

- C.** The Permittee shall comply with all conditions of this General Permit including all applicable requirements of Arizona air quality statutes and the air quality rules. Any permit noncompliance is grounds for enforcement action, for permit termination or revocation, or for denial of a renewal application. In addition, non-compliance with any federally enforceable requirements constitutes a violation of the Clean Air Act.
[A.A.C. R18-2-306.A.8.a]
- D.** 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. GENERAL PERMIT REOPENINGS, REVOCATION AND REISSUANCE, OR TERMINATION FOR CAUSE

- A.** The Director may terminate this General Permit at any time if:
1. The Director has determined that the emissions from the sources in the facility class cause or contribute to ambient air quality standards violations which are not adequately addressed by the requirements in this General Permit, or
[A.A.C. R18-2-510.A.1]
 2. The Director has determined that the terms and conditions of this General Permit no longer meet the requirements of A.R.S. §49-426 and 427.
[A.A.C. R18-510.A.2]
- B.** The Director may revoke, reopen or reissue the General Permit at any time if:
1. The Director 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.
[A.A.C. R18-2-321.A.1.c]

2. The Director 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. The Director may require a source authorized to operate under this General Permit to apply for and obtain an individual permit at any time if the source is not in compliance with the terms and conditions of this General Permit

[A.A.C. R18-2-510.C]

- D. If the Director revokes a source's authority to operate under this General Permit, the Director shall notify the Permittee by certified mail, return receipt requested. The notice shall include a statement detailing the grounds for the revocation of authority and a statement that the Permittee is entitled to a hearing. A source previously authorized to operate under this General Permit may operate under the terms of this General Permit until the earlier of the date it submits a complete application for an individual permit, at which time it may operate under that application, or 180 days after receipt of the notice of revocation of authority to operate under this General Permit.

[A.A.C. R18-2-510.D]

- E. Within 180 days of receipt of the notice of the expiration, termination or cancellation of any general permit, the Permittee shall submit an application to the Director for an individual permit.

[A.A.C. R18-510.B]

IV. POSTING OF GENERAL PERMIT

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

- A. Any person who has been granted coverage under this General Permit shall post such General Permit or a certificate of General Permit coverage on location where the equipment is installed in such a manner as to be clearly visible and accessible.

B. Equipment Labels

1. All portable equipment covered by this General Permit that has been issued an ATO shall have either an ADEQ certified label which will include the current permit number and ATO number, and the serial or other equipment number, or be clearly marked with one of the following:

- a. The current permit number and ATO number,

- b. A serial number or other equipment number that is also listed in the ATO.

2. All equipment covered by this General Permit but not issued an ATO shall be clearly marked with one of the following:

- a. The current permit number,

- b. A serial number or other equipment number that is also listed in the permit application.

3. A copy of the complete General Permit and associated ATO(s) shall be kept on the site.

V. FEE PAYMENT

The Permittee shall pay fees to the Director pursuant to A.R.S. §49-426(E) and A.A.C. R18-2-511.
[A.A.C. R18-2-511]

VI. ANNUAL EMISSION INVENTORY QUESTIONNAIRE

A. The Permittee shall complete and submit to the Director an annual emissions inventory questionnaire. The questionnaire is due by March 31 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.

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

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.B.

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

VII. COMPLIANCE CERTIFICATION

A. The Permittee shall submit to the Director a compliance certification at least once each year and upon request of the Director. The compliance certification shall describe the compliance status of the source. This certification shall be submitted by September 30th and shall cover the period from September 1 of the previous year to August 31 of the current year. A compliance certification submitted by the Permittee of a stationary source covered by a general permit shall be on a form provided by the Director and shall include the following information:

[A.A.C. R18-2-514.A]

1. The source's name, mailing address, contact person and contact person phone number, permit number, compliance reporting period, and physical address and location, if different than the mailing address.
2. A certification of truth, accuracy, and completeness signed by the facility's responsible officer.
3. Process information for the source, including design capacity, operations schedule, hours of operation, and total production.
4. Method of documenting compliance and the status of compliance with all recordkeeping, reporting, monitoring, and testing requirements and all emission limitations and standards imposed in the permit.

B. Upon notification from the Director of the availability of a web portal to complete and submit a compliance certification, the owner or operator shall complete and submit all compliance certifications through the portal.

[A.A.C. R18-2-514.B]

C. A progress report on all outstanding compliance schedules shall be submitted every six months beginning with six months after permit issuance.

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

VIII. CERTIFICATION OF TRUTH, ACCURACY AND COMPLETENESS

Any document required to be submitted by this General Permit, including reports, shall contain a certification by a responsible official of truth, accuracy, and completeness. This certification and any other certification required under this part 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

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

Upon presentation of credentials and other documents as may be required by law, Permittee shall allow the Department or an authorized representative (including an authorized contractor acting as a representative of the Department), to perform the following:

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

X. EXCESS EMISSIONS, PERMIT DEVIATIONS, AND EMERGENCY REPORTING

A. Excess Emissions Reporting

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:

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

- (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 X.A.1.b.

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

- b. The report shall contain the following information:

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

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

- (2) Magnitude of the excess emissions expressed in the units of the applicable emission limitation and the operating data and calculations used in determining the magnitude of the excess emissions;
- (3) Date, time and duration, or expected duration, of the excess emissions;
- (4) Identity of the equipment from which the excess emissions emanated;
- (5) Nature and cause of such emissions;
- (6) If the excess emissions were the result of a malfunction, steps taken to remedy the malfunction and the steps taken or planned to prevent the recurrence of such malfunctions; and
- (7) Steps taken to limit the excess emissions. If the excess emissions resulted from start-up or malfunction, the report shall contain a list of the steps taken to comply with the permit procedures.

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

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

C. Emergency Provision

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

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

2. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if Condition X.C.3 is met.
3. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - a. An emergency occurred and that the Permittee can identify the cause(s) of the emergency;
 - b. The permitted facility was being properly operated at the time;
 - c. During the period of the emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and
 - d. The Permittee submitted notice of the emergency to the Director by certified mail, facsimile, or hand delivery within two working days of the time when emission limitations were exceeded due to the emergency. This notice shall contain a description of the emergency, any steps taken to mitigate emissions, and corrective action taken.
4. In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
5. This provision is in addition to any emergency or upset provision contained in any applicable requirement.

D. Compliance Schedule

[ARS § 49-426.I.5]

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

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

1. Applicability

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

This condition 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;

2. Affirmative Defense for Malfunctions

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

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 Condition X.A 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.A.C. R18-2-310.C]

- a. Except as provided in Condition X.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 Condition X.A and has demonstrated all of the following:

- (1) The excess emissions could not have been prevented through careful and prudent planning and design;
- (2) If the excess emissions were the result of a bypass of control equipment, the bypass was unavoidable to prevent loss of life, personal injury, or severe damage to air pollution control equipment, production equipment, or other property;
- (3) The air pollution control equipment, process equipment, or processes were at all times maintained and operated in a manner consistent with good practice for minimizing emissions;
- (4) The amount and duration of the excess emissions (including any bypass operation) were minimized to the maximum extent practicable during periods of such emissions;
- (5) All reasonable steps were taken to minimize the impact of the excess emissions on ambient air quality;
- (6) During the period of excess emissions there were no exceedances of the relevant ambient air quality standards established in Title 18, Chapter 2, Article 2 of the Arizona Administrative Code that could be attributed to the emitting source;
- (7) All emissions monitoring systems were kept in operation if at all practicable; and
- (8) Contemporaneous records documented the Permittee's actions in response to the excess emissions.

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

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

5. Demonstration of Reasonable and Practicable Measures

For an affirmative defense under Condition X.E.2 or X.E.3, the Permittee shall demonstrate, through submission of the data and information required by Conditions X.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.

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

XI. RECORD KEEPING 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]

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.

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

C. All required records shall be maintained either in an unchangeable electronic format or in a handwritten logbook utilizing indelible ink.

XII. 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 this Attachment.
- B.** Excess emission; permit deviation, and emergency reports in accordance with Section X of this Attachment.
- C.** Other reports required by any conditions of other Attachments.

XIII. DUTY TO PROVIDE INFORMATION

A. The Permittee shall furnish to the Director, within a reasonable time, any information that the Director may request in writing to determine whether cause exists for revoking the General Permit coverage, or to determine compliance with this General Permit. Upon request, the Permittee shall also furnish to the Director copies of records that the Permittee is required to keep under the General Permit. For information claimed confidential, the Permittee shall furnish an additional copy of such records directly to the Director 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 if the Permittee has submitted incorrect information in a General Permit coverage application, the Permittee shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrected information.

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

XIV. CHANGES TO FACILITIES GRANTED COVERAGE UNDER GENERAL PERMITS

- A.** Facility Changes that Require New Authorization to Operate.

The following changes at a source that has been granted coverage under a general permit shall be made only after the source requests new authorization to operate from the Director:

[A.A.C. R18-2-512.B]

1. Adding new emissions units that require new authorization to operate,
2. Installing replacement emissions units that require authorization to operate.

- B.** Facility Changes that Do Not Require Authorization to Operate.

The following changes at a source that has been granted coverage under a general permit shall be made only after the source provides written notification to the Department:

[A.A.C. R18-2-512.C]

1. Adding new emissions units that do not require authorization to operate,
2. Installing a replacement emissions unit with a higher capacity that does not require authorization to operate,
3. Adding or replacing air pollution control equipment.

- C.** A source that has been granted coverage under a general permit shall keep a record of any physical change or change in the method of operation that could affect emissions. The record shall include a description of the change and the date the change occurred.

[A.A.C. R18-2-512.D]

- D.** For sources that submit a request or notification under Conditions XIV.A and B, the applicant shall provide information identifying and describing the source, its processes, and operating conditions in sufficient detail to allow the Director to determine continued qualification for, and to assure compliance with, the general permit. The Director shall act on a request for new authority to operate under a general permit as expeditiously as possible. The source may operate under the terms of the applicable general permit during that time.

[A.A.C. R18-2-512.E]

XV. 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.

XVI. PROPERTY RIGHTS

This General Permit does not convey any property rights of any sort, or any exclusive privilege.
[A.A.C. R18-2-306.A.8.d]

XVII. SEVERABILITY CLAUSE

The provisions of this General Permit are severable. In the event of a challenge to any portion of this General 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]

XVIII. PERMIT SHIELD

As of the date an ATO for a source is granted, compliance with the conditions of this General Permit shall be deemed compliance with all applicable requirements in effect on the date of General Permit issuance, provided that such applicable requirements are included and expressly identified in this permit. The permit shield shall not apply to any changes made pursuant to Sections XIV of this Attachment.
[A.A.C. R18-2-325]

XIX. 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 68]

XX. 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, Part 63]

XXI. CONDITIONS SPECIFIC TO PORTABLE SOURCES

A. This Section applies to sources that have been granted coverage under a general permit that allows for the operation of a source at more than one location.
[A.A.C. R18-2-513.A]

B. The Permittee that hold multiple coverages under the same general permit shall have separate coverage under the general permit for each location at which each portable source

operates.

[A.A.C. R18-2-513.C.1]

- C.** Until the Director notifies permittees of the availability of a web portal, the Permittee may move equipment between portable sources without obtaining a new authorization to operate. At no time shall the Permittee move equipment to a portable source if the move would cause emissions from the portable source to exceed emission limitations in the general permit. Equipment from a portable source covered by one general permit shall not be moved to a portable source covered by a different general permit, unless the Permittee obtains a new authorization to operate under the general permit covering the new location.

[A.A.C. R18-2-513.C.2]

- D.** After the Director notifies permittees of the availability of a web portal, the Permittee shall use the portal to obtain authorizations to operate for each location at which the equipment will operate.

[A.A.C. R18-2-513.C.2]

- E.** A portable source that will operate for the duration of its permit solely in one county that has established a local air pollution control program pursuant to A.R.S. § 49-479 shall obtain a permit from that county. A portable source with a county permit shall not operate in any other county. A portable source that has been granted coverage under a general permit that subsequently obtains a county permit shall request that the Director terminate the coverage under the general permit. Upon issuance of the county permit, the coverage under the general permit issued by the Director is no longer valid.

[A.A.C. R18-2-513.D]

- F.** A portable source which has a county permit but proposes to operate outside that county may obtain coverage under a general permit from the Director. A portable source that has a permit issued by a county and obtains coverage under a general permit issued by the Director shall request that the county terminate the permit. Upon issuance of coverage under a general permit by the Director, the county permit is no longer valid. Before commencing operation in the new county, the source shall notify the Director and the control officer who has jurisdiction in the county that includes the new location according to Condition XXI.G.

[A.A.C. R18-2-513.E]

- G.** A portable source granted coverage under a general permit may be transferred from one location to another provided that the Permittee notifies the Director and any control officer who has jurisdiction over the geographic area that includes the new location of the transfer prior to the transfer. The notification shall include:

[A.A.C. R18-2-513.F]

1. A description of the equipment to be transferred including the permit number and as appropriate the Authorization-to-Operate number for each piece of equipment;
2. A description of the present location;
3. A description of the new location;
4. The date on which the equipment is to be moved;
5. The date on which operation of the equipment will begin at the new location;
6. A complete list of all equipment requiring authorization to operate that may be

located at the new location; and

7. Revised emissions calculations demonstrating that the equipment at the new location continues to qualify for the general permit under which the portable source has coverage.

DRAFT

ATTACHMENT "B": FACILITYWIDE REQUIREMENTS

I. RELATIONSHIP OF PERMIT TO APPLICABLE STATE IMPLEMENTATION PLAN

[ARS § 49-404.c and -426]

This permit is issued pursuant to the provisions of the Arizona Revised Statutes (ARS) and constitutes an installation permit for the purpose of the applicable State Implementation Plan.

II. CONDITIONS FOR COVERAGE

This General Permit covers sources that meet the requirements as laid out in the general permit application for Air Curtain Incinerators.

[A.A.C.R18-2-302.B, -306.01, -501 through -511]

III. FACILITY WIDE REQUIREMENTS

A. Within 30 days of first obtaining coverage under this general permit, the Permittee shall have on site or on call a person certified in EPA Reference Method 9 unless all 6- minute Method 9 observations required by this permit are conducted as a 6-minute Alternative Method-082 (Digital Camera Operating Technique) and all instantaneous visual surveys required by this permit are conducted as an instantaneous Alt-082 camera survey. The results of any 6-minute observation or instantaneous survey completed using a camera shall be obtained within 30 minutes of completing the 6-minute observation or instantaneous camera survey.

[A.A.C. R18-2-306.A.3.c, 311.B]

B. The Permittee shall operate and maintain all equipment associated with this General Permit in accordance with the manufacturer's specifications. If manufacturer specifications are not available, the Permittee shall develop and implement procedures for the proper operation and maintenance of each piece of equipment. A copy of the manufacturer specifications or the operation and maintenance plan shall be kept on site and made available to ADEQ or the respective air quality control agency upon request.

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

C. Prior to operating in Pima or Pinal counties, the Permittee shall obtain written approval from the appropriate county agency in accordance with the requirements of Pima County Code (Title 17, Chapter 12, Article V) and Pinal County Code (Chapter 3, Article 8), respectively.

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

D. Opacity Monitoring Requirements

[A.A.C. R18-2-306.A.3.c and A.A.C. R18-2-310.01]

1. A certified EPA Reference Method 9 observer shall conduct surveys of visible emissions from the process sources at the frequency specified in various sections of this permit.
2. If the observer, during the visual survey, does not observe any plume that on an instantaneous basis appears to exceed the applicable opacity standard, then the observer shall keep a record of the name of the observer, the date on which the observation was made, and the results of the observation.
3. If the observer sees visible emissions that on an instantaneous basis appear to exceed the opacity standard, then the observer shall, if practicable, take a six-

minute Method 9 observation of the plume.

4. If the six-minute opacity reading of the plume exceeds the applicable opacity standard, then the Permittee shall do the following:
 - a. Adjust or repair the controls or equipment to reduce opacity to or below the opacity standard;
 - b. Document the results of the EPA Reference Method 9 observation and all corrective action taken; and
 5. Report the event as an excess emission for opacity in accordance with Condition X.A.1 of Attachment "A".
- E.** At the time the compliance certifications required by Section VII.A of Attachment "A" are submitted, the Permittee shall submit reports of all monitoring, recordkeeping, and testing activities required by Attachment "B", "C", "D", and "E" performed during the compliance term.

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

IV. AIR CURTAIN INCINERATOR REQUIREMENTS

A. Applicability

This Section is applicable to Air Curtain Incineration Units for which construction commenced after December 9, 2004, or for which modification or reconstruction is commenced on or after June 16, 2006, that burn wood waste, clean lumber and yard waste.

B. Definitions

[40 CFR 60.2977]

1. *Air Curtain Incinerator* – Equipment operated by forcefully projecting a curtain of air across an open, integrated combustion chamber (fire box) or open pit or trench (trench burner) in which combustion occurs.
2. *Wood Waste* - Untreated wood and untreated wood products, including tree stumps (whole or chipped), trees, tree limbs (whole or chipped), bark, sawdust, chips, scraps, slabs, millings, and shavings. Wood waste does not include:
 - a. Grass, grass clippings, bushes, shrubs, and clippings from bushes and shrubs from residential, commercial/retail, institutional, or industrial sources as part of maintaining yards or other private or public lands.
 - b. Construction, renovation, or demolition wastes.
 - c. Clean lumber.
 - d. Treated wood and treated wood products, including wood products that have been painted, pigment-stained, or pressure treated by compounds such as chromate copper arsenate, pentachlorophenol, and creosote, or manufactured wood products that contain adhesives or resins (e.g., plywood, particle board, flake board, and oriented strand board).

3. *Yard Waste* - Grass, grass clippings, bushes, shrubs, and clippings from bushes and shrubs. Yard waste comes from residential, commercial/retail, institutional, or industrial sources as part of maintaining yards or other private or public lands. Yard waste does not include:
 - a. Construction, renovation, and demolition wastes.
 - b. Clean lumber.
4. *Clean Lumber* - Wood or wood products that have been cut or shaped and include wet, air-dried, and kiln-dried wood products. Clean lumber does not include wood products that have been painted, pigment-stained, or pressure-treated by compounds such as chromate copper arsenate, pentachlorophenol, and creosote, or manufactured wood products that contain adhesives or resins (e.g., plywood, particle board, flake board, and oriented strand board).

C. Emission Standards

1. *Except as noted in Condition IV.C.2, the Permittee shall not cause the emissions of any criteria pollutant, from the air curtain incinerator, to exceed 225 tons per year in any rolling twelve month period.*

[A.A.C. R18-2-306.01 & A.A.C. R18-2-331.A.3.a]
[Material Permit conditions are indicated by underline and italics]

2. *While operating in portions of the state that are deemed non-attainment for any NAAQS in 40 CFR 81.303, the Permittee shall not cause the emissions of any criteria pollutant, from the air curtain incinerator, to exceed the limits specified in A.A.C. R18-2-401.11 in any rolling twelve month period.*

[A.A.C. R18-2-306.01 & A.A.C. R18-2-331.A.3.a]
[Material Permit conditions are indicated by underline and italics]

3. **Particulate Matter and Opacity**

- a. *At all times, except during startup and malfunction, the opacity of emissions from the air curtain incinerator shall not be greater than 10% (6-minute average) measured in accordance with the Arizona Testing Manual, Reference Method 9.*

[40 CFR 60.2971(a)(1), 60.2971(b) and A.A.C. R18-2-331.A.3.f]
[Material Permit conditions are indicated by underline and italics]

- b. *During the startup period that is within the first 30 minutes of operation, the opacity shall not exceed 35 percent (6-minute average).*

[40 CFR 60.2971(a)(2) and A.A.C. R18-2-331.A.3.f]
[Material Permit conditions are indicated by underline and italics]

D. Operating Limitations

1. *The Permittee shall burn in the air curtain incinerator only the material listed below. Except while used in an institutional facility, the Permittee shall not burn more than 35 tons per day of in the air curtain incinerator.*

[40 CFR 60.2888(b) & 2970(b), A.A.C. R18-2-306.01.A and -331.A.3.a]
[Material Permit conditions are indicated by underline and italics]

- c. 100 percent wood waste.

- d. 100 percent clean lumber.
- e. 100 percent yard waste.
- f. 100 percent mixture of only wood waste, clean lumber, and/or yard waste.

2. *The Permittee shall not collocate the air curtain incinerator with any other facility that requires an air quality permit.*

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

3. From May 1 through September 30 each year, the Permittee shall not operate its air curtain incinerators in Area A as defined in Arizona Revised Statutes Section 49-541. This condition shall not apply if the products of combustion from the air curtain incinerator are released through a stack, chimney, or equivalent.

[A.R.S. 49-501.A.2 and A.R.S. 49-501.H]

4. Notwithstanding any other provision of this permit, the Permittee shall not operate the air curtain incinerators on days when no-burn restrictions are in place or high pollution advisories have been issued.

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

E. Air Pollution Control Requirements

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

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

[Material Permit conditions are indicated by underline and italics]

F. General Operating Requirements

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

1. The air curtain incinerator shall be operated only between sunrise and sunset.
2. The proper blower speed must be maintained so as to meet emissions standards.
3. The blower must be operating when and as long as any material in the air curtain incinerator is burning.
4. When loading (feeding) the air curtain incinerator, the material must not extend above the air curtain (blower airflow).
5. The loading of materials into the air curtain incinerator must be discontinued at a minimum of 2 hours prior to sunset. The blower must continue to operate until combustion is completed.
6. Adequate measures must be taken to assure that no emissions emanate from materials left in the air curtain incinerator (i.e., overnight). For trench burners, all materials left in the trench must be extinguished with water or covered over with a minimum of 1 foot of mineral soil.
7. All materials removed from the air curtain incinerator must be completely extinguished and all reasonable precautions must be taken to control emissions.

8. A visual on-site inspection of the air curtain incinerator and the material must be conducted prior to start of burn. Any unauthorized material must be removed prior to burning.
9. Materials, such as oleander leaves that generate toxic fumes when burned, shall not be burned in the air curtain incinerator.
10. For trench operations, the burn pit must not exceed the length of the plenum.

G. Monitoring, Recordkeeping and Reporting Requirements

1. A certified EPA Reference Method 9 observer shall conduct a monthly survey of visible emissions emanating from the air curtain incinerator, when in operation, as per the procedure in Condition III.D.
[A.A.C. R18-2-306.A.3.c]
2. The Permittee shall maintain daily records of hours of operation including start and stop times, quantity and type of material burned in the air curtain incinerator, quantity and type of fuel burnt, if any.
[A.A.C. R18-2-306.A.3.c and -306.A.4]
3. For air curtain incinerators located at institutional facilities, the Permittee shall maintain monthly and rolling 12-month totals of the amount of material burned.
[A.A.C. R18-2-306.A.3.c and -306.A.4]
4. For air curtain incinerators located at institutional facilities, the Permittee shall perform emission calculations at the end of each calendar month. The Permittee shall use the rolling 12-month total throughput to the unit and the following emission factors:
 - g. PM₁₀: 13.0 pounds per ton
 - h. Carbon monoxide: 2.22 pounds per ton
 - i. Nitrogen oxides: 4.0 pounds per ton
 - j. Sulfur dioxide: 0.1 pounds per ton
[A.A.C. R18-2-306.A.3.c and -306.A.4]
5. Prior to commencing construction on the air curtain incinerator, the Permittee shall submit the following:
 - a. Notification of the intent to construct the air curtain incinerator.
 - b. Planned initial startup date.
 - c. Types of materials to be burned in the air curtain incinerator.
[40 CFR 60.2973(a)]
6. The Permittee shall keep records of results of all initial and annual opacity tests for at least 5 years, in either paper copy or computer-readable format that can be printed upon request, unless the Administrator approves another format. The records must be maintained on site for at least 2 years. All records shall be made available to the ADEQ Director and EPA Administrator upon request.

[40 CFR 60.2973(b), (c)]

7. The Permittee shall submit the result of initial opacity tests no later than 60 days following the initial test. Subsequent annual test results shall be submitted within 12 months following the previous report. The Permittee may submit these reports as electronic or paper copy.

[40 CFR 60.2973(d), (e)]

8. The Permittee shall keep records of the operational location of the air curtain incinerators. The record shall document if the location is in an area that is deemed non-attainment for any applicable National Ambient Air Quality Standards (NAAQS) in 40 CFR 81.303. For each location, the Permittee shall keep a record of the duration of operation.

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

9. All requests, reports, applications, submittals, and other communications, required under Section IV of this Attachment, submitted to the Director pursuant to A.A.C. R18-2-901, -902, and 40 CFR Part 60 shall be submitted in duplicate to the EPA Region 9 office at the following address:

Director, Air Division

U.S. Environmental Protection Agency

75 Hawthorne Street

San Francisco, CA 94105

H. Testing Requirements

1. If the initial performance test has not been conducted earlier, the Permittee shall, within 180 days of issuance of coverage under this permit, conduct initial performance test for opacity in accordance with EPA Method 9 test. If there is a record of initial performance test performed earlier, the Permittee shall, within 12 months of issuance coverage under this permit, conduct the performance test. Subsequent annual tests shall be performed no more than 12 months following the date of the previous test.

[40 CFR 60.2972(a), (b)]

2. If the air curtain incinerator has been out of operation for more than 12 months following the previous test, the Permittee shall perform the test upon the startup of the unit.

[40 CFR 60.2972(d)]

I. Permit Shield

Compliance with the conditions of this Section shall be deemed compliance with the 40 CFR 60.2970(b), 60.2971(a)(1) and (2), 60.2971(b) 60.2972(a) through (d), 60.2973(a) through (e), 60.2977, 60.2888(b)

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

V. INTERNAL COMBUSTION ENGINE(S)-NON-NSPS

A. Applicability

The requirements under this Section are applicable to any existing engine not subject to New Source Performance Standards, 40 CFR 60 Subpart IIII or 40 CFR 60 Subpart JJJJ.

B. Particulate Matter and Opacity

1. Emission Limitations and Standards

- a. The Permittee shall not cause or allow to be discharged into the atmosphere from the stack(s) particulate matter in excess of the amount calculated by the following equation:

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

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

Where:

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

Q = the heat input in million Btu per hour

- b. For the purposes of the calculations required above, 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 at 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]

- c. The Permittee shall not cause, allow or permit to be emitted into the atmosphere from any engine, smoke for any period greater than 10 consecutive seconds which exceeds 40% opacity. Visible emissions when starting cold equipment shall be exempt from this requirement for the first 10 minutes.

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

2. Monitoring, Recordkeeping and Reporting Requirements

- a. The Permittee shall conduct quarterly periodic opacity monitoring for all engines, when in operation, as per Condition III.D.

[A.A.C. R18-2-306.A.3.c, .306.A.4.a and 306.A.5]

- b. The Permittee shall keep records of a current, valid purchase contract, tariff sheet or transportation contract. The records shall contain information regarding the lower heating value of the fuel. These records shall be made available to ADEQ upon request.

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

3. Permit Shield

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

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

C. Sulfur Dioxide

1. Emission Limitations and Standards

The Permittee shall not emit or cause to emit more than 1.0 pound of sulfur dioxide per million Btu heat input

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

2. Monitoring, Recordkeeping and Reporting Requirements

a. For spark ignition (SI) engines, the Permittee shall maintain records of the gas quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the gaseous fuel, specifying that the maximum total sulfur content of the fuel.

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

b. For diesel engines, the Permittee shall keep records of fuel supplier certifications or other documentation listing the sulfur content. These records shall be made available to ADEQ upon request.

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

c. 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%.

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

3. Permit Shield

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

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

D. Hazardous Air Pollutants

1. Applicability

a. The requirements of this Part are applicable to any internal combustion engine marked on the ATO as applicable to 40 CFR 63 Subpart ZZZZ.

[40 CFR 63.6580 and 63.6590]

b. A new or reconstructed stationary compression ignition (CI)/spark ignition (SI) engine (constructed after June 12, 2006) shall meet the NESHAP requirements under 40 CFR 63 Subpart ZZZZ by meeting the requirements of 40 CFR part 60 Subpart IIII or JJJJ in Section V or VI as applicable.

[40 CFR 63.6590(c)(1)]

c. If an existing CI engine with a site rating of more than 300 HP located at an area source of HAP emissions is certified to the Tier 3 (Tier 2 for engines above 560 kilowatt (kW)) emission standards in Table 1 of 40 CFR 89.112), the Permittee may comply with the requirements under this Section by meeting the requirements for Tier 3 engines (Tier 2 for engines above 560 kW) in 40 CFR part 60 subpart IIII instead of the emission limitations and other requirements that would otherwise apply under this Part.

[40 CFR 63.6603(e)]

2. General Requirements

- a. The Permittee shall operate and maintain at all times the engine including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions.

[40 CFR 63.6605(b)]

- b. The Permittee shall minimize the engine time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup in shall apply.

[40 CFR 63.6625(h)]

3. Requirements for Emergency Engines

a. Operation Requirements

- (1) The Permittee shall operate and maintain the engine and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop a maintenance plan which shall 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)]

- (2) The Permittee shall comply with the following operation and maintenance requirements:

[40 CFR 63.6603(a), and 40 CFR 63, Subpart ZZZZ, Table 2d]

- (3) The Permittee shall change the oil and filter every 500 hours operation or annually, whichever comes first. If the Permittee prefers to extend the oil change requirement, an oil analysis program described below shall be completed. The oil analysis must be performed at the same frequency specified for changing the oil.

[40 CFR 63.6625 (i) and (j), and 40 CFR Table 2d of Subpart ZZZZ]

- (a) The Permittee shall at a minimum analyze the following three parameters: Total Base Number (for CI engines), Total Acid Number (for SI engines), viscosity and water content. The condemning limits for these parameters are as follows:

- (i) For diesel-fired engine, Total Base Number is less than 30 percent of the Total Base Number of the oil when new, and/or for natural gas-fired engine, Total Acid Number increases by more than 3.0 milligrams of potassium hydroxide (KOH) per gram from Total Acid Number of the

oil when new;

- (ii) Viscosity: changed more than 20 percent from the viscosity of oil when new; and
 - (iii) Water Content: greater than 0.5 percent by volume.
 - (iv) If all of the above limits are not exceeded, the Permittee is not required to change the oil. If any of the above limits are exceeded, the Permittee shall change the oil within 2 business days of receiving the results of the analysis or before commencing operation, whichever is later. Records shall be kept of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program shall be part of the maintenance plan for the operation of the engine.
- (b) Every 1,000 hours of operation or annually, whichever comes first, inspect and replace as necessary, spark plugs for SI engine, and/or air cleaner for CI engine.
[40 CFR 63, Subpart ZZZZ, Table 2d]
 - (c) The Permittee shall inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.
[40 CFR 63, Subpart ZZZZ, Table 2d]
- (4) If the emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the work practice requirements on the schedule required in Conditions V.D.3.a.(3)(a) through (c) or if performing the work practice on the required schedule would otherwise pose an unacceptable risk under federal, state, or local law, the work practice can be delayed until the emergency is over or the unacceptable risk under federal, state, or local law has abated. The work practice shall be performed as soon as practicable after the emergency has ended or the unacceptable risk under federal, state, or local law has abated.
[40 CFR 63 Subpart ZZZZ, Table 2d]
- (5) The Permittee shall operate the emergency engines according to the requirements in Conditions V.D.3.a.(5)(a) through (c). In order for the engines to be considered emergency stationary ICE under 40 CFR 63 Subpart ZZZZ, any operation other than emergency operation, maintenance response, and operation in non-emergency situations for 50 hours per year. If the emergency engine is not operated in accordance with the requirements in Conditions below, the engine will not be considered an emergency engine and must meet all requirements for non-emergency

engines.

[40 CFR 60.6640 (f)]

(a) There is no time limit on the use of emergency engine in emergency situations.

[40 CFR 60.6640 (f)(1)]

(b) The Permittee may operate the emergency engine for the purpose of maintenance checks and readiness testing for a maximum of 100 hours per calendar year provided that the tests are recommended by Federal, State, or local government, the manufacturer, the vendor, or the insurance company associated with the engine. The Permittee may petition the Director for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the Permittee maintains records indicating that the Federal, State, or local standards require maintenance and testing beyond 100 hours per year. Copies of records shall be made available to ADEQ upon request calendar year.

[40 CFR 63.6640(f)(2)(i)]

(c) The Permittee may operate an emergency engine for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing.

[40 CFR 63.6640(f)(4)]

(6) *The Permittee shall install a non-resettable hour meter if one is not already installed.*

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

[Material Permit Conditions are indicated by underline and italics]

b. Recordkeeping Requirements

(1) The Permittee shall keep records of the hours of operation of the RICE that is recorded through the non-resettable hour meter. Records shall include the date, start and stop times, hours spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation.

[40 CFR 63.6655(f)]

(2) The Permittee shall keep records of the parameters that are analyzed and the results of the oil analysis, if any, and the oil changes for the engine.

[40 CFR 63.6625(i) and (j)]

(3) The Permittee shall keep records of the maintenance conducted on the engine in order to demonstrate that the engine and after-treatment control device (if any) were operated and maintained in accordance with the Permittee's maintenance plan.

[40 CFR 63.6655(e)]

4. Requirements for Non-Emergency Compression Ignition Engines

a. Operation Requirements for CI Engines < 300 HP

(1) The Permittee shall operate and maintain the engine and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop a maintenance plan which shall 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)]

(2) The Permittee shall comply with the following operation and maintenance requirements:
[40 CFR 63.6603(a), and 40 CFR 63, Subpart ZZZZ, Table 2d]

(a) The Permittee shall change the oil and filter every 1,000 hours operation or annually, whichever comes first. If the Permittee prefers to extend the oil change requirement, an oil analysis program described below shall be completed. The oil analysis shall be performed at the same frequency specified for changing the oil.
[40 CFR 63.6625(i) and (j), and 40 CFR Table 2d of Subpart ZZZZ]

(i) The Permittee shall at a minimum analyze the following three parameters: Total Base Number, viscosity and water content. The condemning limits for these parameters are as follows:

(a) Total Base Number is less than 30 percent of the Total Base Number of the oil when new,

(b) Viscosity has changed more than 20 percent from the viscosity of oil when new;

(c) Water Content is greater than 0.5 percent by volume.

(ii) If all of the above limits are not exceeded, the Permittee is not required to change the oil. If any of the above limits are exceeded, the Permittee shall change the oil within 2 business days of receiving the results of the analysis or before commencing operation, whichever is later. Records must be kept of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program shall be part of the maintenance plan for the operation of the engine.

(b) Every 1,000 hours of operation or annually, whichever

comes first, the Permittee shall inspect and replace air cleaner as necessary.

[40 CFR 63, Subpart ZZZZ, Table 2d]

- (c) Every 500 hours of operation or annually, whichever comes first, the Permittee shall inspect all hoses and belts and replace as necessary.

[40 CFR 63, Subpart ZZZZ, Table 2d]

(3) Continuous Compliance Requirements

The Permittee shall demonstrate continuous compliance by operating and maintaining the engine according to the manufacturer's emission-related operation and maintenance instructions; or by developing and follow its own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions

[Table 6 to 40 CFR 63 Subpart ZZZZ]

b. Operating Requirements for CI Engines >300 HP

(1) Fuel Limitations

The Permittee shall use diesel fuel that meets the requirements in 40 CFR 80.510(b) for non-road diesel fuel.

[40 CFR 63.6604(a)]

(2) Emission Limitations

- (a) The Permittee shall comply with either of the following emission limitations:

[40 CFR 63.6603(a), and 40 CFR 63, Subpart ZZZZ, Table 2d]

- (i) The Permittee shall limit concentration of CO in the engine exhaust to

(a) 49 ppmv at 15 percent O₂ for engines between 300-500 HP,

(b) 23 ppmvd at 15 percent O₂ for engines greater than 500 HP;

- (ii) The Permittee shall reduce CO emissions by 70%

- (b) If any more than 300 HP engine is certified to the Tier 1 or Tier 2 emission standards in Table 1 of 40 CFR 89.112, the Permittee may, for up to 12 years after the installation date of the engine but not later than June 1, 2018, choose to comply with the management practices in Condition V.D.4.a.(2) instead of the applicable emission limitations in Condition V.D.4.b.(2)(a) and crankcase ventilation system requirements Condition V.D.4.b.(3). The Permittee shall comply with the emission limitations in

Condition V.D.4.b.(2)(a) no later than 12 years after the installation date of the engine or June 1, 2018, whichever is earlier. The Permittee shall also comply with the crankcase ventilation system requirements in Condition V.D.4.b.(3) no later than 12 years after the installation date of the engine or June 1, 2018, whichever is earlier.

[40 CFR 63.6603(d)]

(3) Operation and Maintenance Requirements

(a) The Permittee shall follow the manufacturer's specified maintenance requirements for operating and maintaining the open or closed crankcase ventilation systems and replacing the crankcase filters, or can request the Director to approve different maintenance requirements that are as protective as manufacturer requirements.

[40 CFR 63.6625(g)]

(b) If the CI engine is not equipped with a closed crankcase ventilation system, the Permittee shall either

(i) Install a closed crankcase ventilation system that prevents crankcase emissions from being emitted to the atmosphere, or

[40 CFR 63.6625(g)(1)]

(ii) Install an open crankcase filtration emission control system that reduces emissions from the crankcase by filtering the exhaust stream to remove oil mist, particulates and metals.

[40 CFR 63.6625(g)(2)]

c. Operating Limitations (Only for Engines > 500 HP)

[40 CFR 63.6603, Table 2b to 40 CFR 63 Subpart ZZZZ]

(1) If the Permittee is using an oxidation catalyst to comply with the requirement to limit or reduce the concentration of CO;

(a) The Permittee shall maintain the catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water from the pressure drop across the catalyst that was measured during the initial performance test; and

(b) The Permittee shall maintain the temperature of the engine exhaust so that the catalyst inlet temperature is greater than or equal to 450° F and less than or equal to 1350° F.

(2) If the Permittee is not using an oxidation catalyst to comply with the requirement to limit or reduce the concentration of CO, the Permittee shall comply with any operating limitations approved

by the Director.

d. Monitoring Requirements (Only for Engines greater than 500 HP)

The Permittee may choose to use Continuous Emissions Monitoring System (CEMS) or Continuous Parametric Monitoring System (CPMS) for monitoring CO emissions.

- (1) If the Permittee elects to use CEMS, the Permittee shall install, operate, and maintain a CEMS to monitor CO and either O₂ or CO₂ according to the requirements in 40 CFR 63.6625(a). If the Permittee is meeting a requirement to reduce CO emissions, the CEMS must be installed at both the inlet and outlet of the control device. If the Permittee is meeting a requirement to limit the concentration of CO, the CEMS shall be installed at the outlet of the control device.

[40 CFR 63.6625(a) and A.A.C R18-2-331.A.3.c]
[Material Permit Condition indicated by italics and underline]

- (2) If the Permittee is complying with the requirement to reduce CO emissions, or to limit the concentration of CO, and is using oxidation catalyst and CPMS, the Permittee shall install, operate, and maintain each CPMS to continuously monitor catalyst inlet temperature and catalyst pressure drop according to the requirements in 40 CFR 63.6625(b).

[40 CFR 63.6625(b) and A.A.C R18-2-331.A.3.c]
[Material Permit Condition indicated by italics and underline]

- (3) If the Permittee is complying with the requirement to reduce CO emissions, or to limit the concentration of CO, and is not using oxidation catalyst, the Permittee shall install, operate, and maintain CPMS to continuously monitor operating parameters approved by the Director (if any) according to the requirements in 40 CFR 63.6625(b).

[40 CFR 63.6625(b) and A.A.C R18-2-331.A.3.c]
[Material Permit Condition indicated by italics and underline]

e. Initial Performance Test/Compliance Demonstration

- (1) Initial Performance Test

- (a) For the engines not equipped with CEMS

[40 CFR 63.6612(a), 40 CFR 63.6630, Table 5 to 40 CFR 63 Subpart ZZZZ]

- (i) The Permittee shall conduct initial performance test in accordance with the method in Table 5 of 40 CFR 63 Subpart ZZZZ to demonstrate compliance with the emission limits in Condition V.D.4.b.(2)(a). If the Permittee is complying with the requirement to reduce CO emissions, or to limit the concentration of CO, and is using oxidation catalyst and CPMS, the Permittee shall record the catalyst pressure drop and catalyst inlet temperature during the initial performance test

using the CPMS installed according to the requirements in Condition V.D.4.d.(2).

- (i) If the Permittee is complying with the requirement to reduce CO emissions, or to limit the concentration of CO, and is not using oxidation catalyst, the Permittee shall record the approved operating parameters (if any) using the CPMS installed according to the requirements in Condition V.D.4.d.(2).

- (b) For engines equipped with CEMS, the Permittee shall demonstrate initial compliance by
[40 CFR 63.6612(a), 40 CFR 63.6630, Table 5 to 40 CFR 63 Subpart ZZZZ]

- (i) Conducting a performance evaluation of the CEMS using PS 3 and 4A of 40 CFR part 60, appendix B
- (ii) Demonstrating that the average concentration of CO, or the average reduction of CO calculated using 40 CFR 63.6620 is less than or equal to the CO emission limitation. The initial test shall comprise the first 4-hour period after successful validation of the CEMS. Compliance shall be based on the average concentration measured during the 4-hour period or, the average percent reduction achieved during the 4-hour period.

- (c) The Permittee is not required to conduct an initial performance test on a unit for which a performance test has been previously conducted, but the test must meet all of the conditions described in the Conditions below:
[40 CFR 63.6612(b)]

- (i) The test must have been conducted using the same methods specified in 40 CFR 63 Subpart ZZZZ, and these methods must have been followed correctly.
- (ii) The test must not be older than 2 years.
- (iii) The test must be reviewed and accepted by the Director.
- (iv) Either no process or equipment changes must have been made since the test was performed, or the Permittee must be able to demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process or equipment changes.

f. Continuous Compliance/Subsequent Performance Test Requirements

- (1) For engines not using CEMS, the Permittee shall conduct subsequent performance tests every 8,760 hours or 3 years, whichever comes first, in accordance with the method in Table 5 of 40 CFR 63 Subpart ZZZZ to demonstrate compliance with the emission limits in Condition V.D.4.b.(2)(a).

[40 CFR 63.6615, Tables 3 and 6 to 40 CFR 63 Subpart ZZZZ]

- (2) For engines using oxidation catalyst,

- (a) The Permittee shall collect the catalyst inlet temperature data according to 40 CFR 63.6625(b), reduce these data to 4-hour rolling averages; and maintain the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature established during the performance test; and

[40 CFR 63.6640(a), Table 6 to 40 CFR 63 Subpart ZZZZ]

- (b) Measure the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.

[40 CFR 63.6640(a), Table 6 to 40 CFR 63 Subpart ZZZZ]

- (c) If the Permittee changes the catalyst, the Permittee shall reestablish the values of the operating parameters measured during the initial performance test. While reestablishing the values of the operating parameters, the Permittee shall also conduct a performance test to demonstrate that the Permittee is meeting the required emission limitation applicable to the stationary RICE.

[40 CFR 63.6640(b)]

- (3) For engines not using oxidation catalyst,

The Permittee shall collect the approved operating parameter (if any) data according to Condition V.D.4.d.(3); reduce these data to 4-hour rolling averages; and maintain the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.

[40 CFR 63.6640, Table 6 to 40 CFR 63 Subpart ZZZZ]

g. Notification Requirements

- (1) The Permittee shall submit all applicable notifications in 40 CFR 63.7(b) and (c), 63.8(e), (f)(4) and (f)(6), 63.9(b) through (e), and (g) and (h).

[40 CFR 6645(a)(2) and (a)(5)]

- (2) The Permittee shall submit a Notification of Intent to conduct a performance test at least 60 days before the performance test is scheduled to begin as required in 40 CFR 63.7(b)(1).

[40 CFR 63.6645(g)]

- (3) For engines greater than 300 HP required to conduct a

performance test or initial compliance demonstration, the Permittee shall submit a Notification of Compliance Status according to 40 CFR 63.9(h)(2)(ii).

[40 CFR 63.6645(h)]

h. Recordkeeping Requirements

(1) The Permittee shall keep the following records:

[40 CFR 63.6655(a)]

- (a) A copy of each notification and report that was submitted to comply with 40 CFR 63 Subpart ZZZZ, including all documentation supporting any Initial Notification or Notification of Compliance Status that the Permittee submitted, according to the requirement in 40 CFR 63.10(b)(2)(xiv);
- (b) Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment;
- (c) Records of performance tests and performance evaluations as required in 40 CFR 63.10(b)(2)(viii);
- (d) Records of all required maintenance performed on the air pollution control and monitoring equipment; and
- (e) Records of actions taken during periods of malfunction to minimize emissions in accordance with Condition V.D.2.a including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

(2) For each CEMS or CPMS, the Permittee shall keep the following records.

- (a) Records described in 40 CFR 63.10(b)(2)(vi) through (xi).
- (b) Previous (i.e., superseded) versions of the performance evaluation plan as required in 40 CFR 63.8(d)(3).
- (c) Requests for alternatives to the relative accuracy test for CEMS or CPMS as required in 40 CFR 63.8(f)(6)(i), if applicable.

(3) The Permittee shall keep the records of continuous compliance with each emission or operating limitation for the requirements in Condition V.D.4.f.

[40 CFR 63.6655(d)]

(4) For engines less than 300 HP and subject to management practices

as shown in Condition V.D.4.a.(2), the Permittee shall keep records of the maintenance conducted on the stationary RICE in order to demonstrate that , the Permittee operated and maintained the stationary RICE and after-treatment control device (if any) according to the Permittee’s own maintenance plan.

[40 CFR 63.6655(e)]

i. Reporting Requirements

- (1) For engines greater than 300 HP, the Permittee shall submit semi-annual compliance in accordance with Section VII of Attachment “A”.

[40 CFR 63.6650(a) and (b)]

- (2) The Compliance report shall contain the following information

[40 CFR 63.6650(c)]

- (a) Company name and address;
- (b) Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report;
- (c) Date of report and beginning and ending dates of the reporting period;
- (d) If the Permittee had a 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 Condition V.D.2.a, including actions taken to correct a malfunction;
- (e) If there are no deviations from any applicable emission or operating limitations, a statement that there were no deviations from the emission or operating limitations during the reporting period;
- (f) If there were no periods during which the continuous monitoring system (CMS), including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), a statement that there were no periods during which the CMS was out-of-control during the reporting period;
- (g) For each deviation from an emission or operating limitation that occurs for a stationary RICE where the Permittee is not using a CMS to comply with the emission or operating limitations in 40 CFR 63 Subpart ZZZZ, the Compliance report shall contain the information in

Conditions (a) through (d) and the information below:

[40 CFR 63.6650(d)]

- (i) The total operating time of the stationary RICE at which the deviation occurred during the reporting period; and
 - (ii) Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.
- (h) For each deviation from an emission or operating limitation occurring for a stationary RICE where the Permittee is using a CMS to comply with the emission and operating limitations in 40 CFR 63 Subpart ZZZZ, the Permittee shall include information in Conditions V.D.4.i.(2)(a) through (d) and the information below:
- [40 CFR 63.6650(e)]
- (i) The date and time that each malfunction started and stopped.
 - (ii) The date, time, and duration that each CMS was inoperative, except for zero (low-level) and high-level checks.
 - (iii) The date, time, and duration that each CMS was out-of-control, including the information in 40 CFR 63.8(c)(8).
 - (iv) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction or during another period.
 - (v) A summary of the total duration of the deviation during the reporting period, and the total duration as a percent of the total source operating time during that reporting period.
 - (vi) A breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes.
 - (vii) A summary of the total duration of CMS downtime during the reporting period, and the total duration of CMS downtime as a percent of the total operating time of the stationary RICE at which the CMS downtime occurred during that reporting period.

- (viii) An identification of each parameter and pollutant that was monitored at the stationary RICE.
- (ix) A brief description of the stationary RICE.
- (x) A brief description of the CMS.
- (xi) The date of the latest CMS certification or audit.
- (xii) A description of any changes in CMS, processes, or controls since the last reporting period.

5. Requirements for Non-Emergency Spark Ignition Engines

a. Operation Requirements for 2 SLB Engines, 4 SRB (<500 HP) and 4SLB (<500 HP) Engines

- (1) The Permittee shall operate and maintain the engine and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop a maintenance plan which shall 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)(5), (7) and (8)]

(2) Operation and Maintenance Requirements

- (a) The Permittee shall comply with the operation and maintenance requirements in Conditions V.D.5.a.(2)(b), (c) and (d) at the following frequencies:

[40 CFR 63.6603(a) and 40 CFR 63, Subpart ZZZZ, Table 2d]

- (i) For 2 SLB engines: Every 4,320 hours operation or annually, whichever comes first; and
- (ii) For 4SLB and 4SRB engines (<500 HP): Every 1,440 hours operation or annually, whichever comes first.

- (b) The Permittee shall change the oil and filter. If the Permittee prefers to extend the oil change requirement, an oil analysis program described below shall be completed. The oil analysis shall be performed at the same frequency specified for changing the oil.

[40 CFR 63.6625(j) and 40 CFR Table 2d of Subpart ZZZZ]

- (i) The Permittee shall at a minimum analyze the following three parameters: Total Acid Number, viscosity and water content. The condemning limits for these parameters are as follows:

- (a) Total Acid Number increases by more than 3.0 milligrams of potassium

hydroxide (KOH) per gram from Total Acid Number of the oil when new,

- (b) Viscosity has changed more than 20 percent from the viscosity of oil when new;
- (c) Water Content is greater than 0.5 percent by volume.
- (d) If all of the above limits are not exceeded, the Permittee is not required to change the oil. If any of the above limits are exceeded, the Permittee shall change the oil within 2 business days of receiving the results of the analysis or before commencing operation, whichever is later. Records must be kept of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program shall be part of the maintenance plan for the operation of the engine.

(c) The Permittee shall inspect spark plugs and replace as necessary.

[40 CFR Table 2d of Subpart ZZZZ]

(d) The Permittee shall inspect all hoses and belts and replace as necessary.

[40 CFR Table 2d of Subpart ZZZZ]

(3) Continuous Compliance Requirements

The Permittee shall demonstrate continuous compliance by operating and maintaining the engine according to the manufacturer's emission-related operation and maintenance instructions; or by developing and follow its own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions

[40 CFR 63.6640(a), Table 6 to 40 CFR 63 Subpart ZZZZ]

b. Operating Requirements for 4SLB and 4SRB Engines >500HP

(1) Air Pollution Control Requirements

(a) *For 4SLB engines, the Permittee shall install and operate an oxidation catalyst to reduce HAP emissions.*

[Table 2d to 40 CFR 63 Subpart ZZZZ and A.A.C. R18-2-331.A.3.d & e]
 [Material Permit Conditions indicated by italics and underline]

(b) *For 4SRB engines, the Permittee install and operate non*

selective catalytic reduction (NSCR) to reduce HAP emissions.

[Table 2d to 40 CFR 63 Subpart ZZZZ and A.A.C. R18-2-331.A.3.d & e]
[Material Permit Conditions indicated by italics and underline]

(2) Monitoring Requirements

- (a) The Permittee shall install and operate a continuous parametric monitoring system (CPMS) to continuously monitor catalyst inlet temperature according to the requirements in 40 CFR 63.6625(b), or

[[40 CFR 63.6625(b) and A.A.C. R18-2-331.A.3.c]
[Material Permit Conditions indicated by italics and underline]

- (b) The Permittee shall install equipment to automatically shut down the engine if the catalyst inlet temperature exceeds 1350 °F for 4SLB engine and/or 1250 °F for 4SRB engine.

[40 CFR 63.6640, Table 5 to 40 CFR 63 Subpart ZZZZ, and A.A.C. R18-2-331.A.3.c]
[Material Permit Conditions indicated by italics and underline]

(3) Initial Performance Test/Compliance Demonstration

- (a) Within 180 days of issuance of the permit, the Permittee shall conduct initial performance test in accordance with the method in Table 4 of 40 CFR 63 Subpart ZZZZ to demonstrate compliance the following emission limits:

[40 CFR 63.6630(a) and Table 5 to 40 CFR 63 Subpart ZZZZ]

- (i) For 4SRB engine, the average reduction of emissions of CO is 93 percent or more, or the average CO concentration is less than or equal to 47 ppmvd at 15 percent O₂;
- (ii) For 4SLB engine, the average reduction of emissions of CO is 75 percent or more, the average CO concentration is less than or equal to 270 ppmvd at 15 percent O₂, or the average reduction of emissions of THC is 30 percent or more;

- (b) Compliance Demonstration procedure

[40 CFR 63.6630(e)]

- (i) The compliance demonstration shall consist of at least three test runs.
- (ii) Each test run shall be of at least 15 minute duration, except that each test conducted using the method in Appendix A to 40 CFR 63 shall consist of at least one measurement cycle and include at least 2 minutes of test data phase

measurement.

- (iii) If the Permittee is demonstrating compliance with the CO concentration or CO percent reduction requirement, the Permittee shall measure CO emissions using one of the CO measurement methods specified in Table 4 of 40 CFR Part 63 Subpart ZZZZ, or using appendix A to 40 CFR Part 63.
- (iv) If the Permittee is demonstrating compliance with the THC percent reduction requirement, the Permittee shall measure THC emissions using Method 25A, reported as propane, of 40 CFR Part 60, appendix A.
- (v) The Permittee shall measure O₂ using one of the O₂ measurement methods specified in Table 4 of 40 CFR Part 63 Subpart ZZZZ. Measurements to determine O₂ concentration must be made at the same time as the measurements for CO or THC concentration.
- (vi) If the Permittee is demonstrating compliance with the CO or THC percent reduction requirement, the Permittee shall measure CO or THC emissions and O₂ emissions simultaneously at the inlet and outlet of the control device.

(4) Subsequent Performance Test Requirements

- (a) The Permittee shall conduct annual performance test in accordance with the method in Table 4 of 40 CFR 63 Subpart ZZZZ to demonstrate compliance the emission limits in Conditions V.D.5.b.(3)(a). The annual compliance demonstration shall consist of at least one test run in accordance with the procedure in Conditions V.D.5.b.(3)(b).

[40 CFR 63.6640(a) and (c), Table 6 to 40 CFR 63 Subpart ZZZZ]

- (b) If the results of the annual compliance demonstration show that the emissions exceed the levels specified in Conditions V.D.5.b.(3)(a), the engine shall be shut down as soon as safely possible, and appropriate corrective action shall be taken (e.g., repairs, catalyst cleaning, catalyst replacement). The stationary RICE shall be retested within 7 days of being restarted and the emissions must meet the levels specified in Conditions V.D.5.b.(3)(a). If the retest shows that the emissions continue to exceed the specified levels, the stationary RICE must again be shut down as soon as safely possible, and the stationary RICE may not operate, except for purposes of startup and testing, until the Permittee

demonstrates through testing that the emissions do not exceed the levels specified in Conditions V.D.5.b.(3)(a).

[40 CFR 63.6640(c)(7)]

(5) Continuous Compliance Requirements

- (a) For 4SLB engine, the Permittee shall demonstrate continuous compliance by collecting the catalyst inlet temperature data according to Condition V.D.5.b.(2)(a), reducing these data to 4-hour rolling averages; and maintaining the 4-hour rolling averages within the limitation of greater than 450 °F and less than or equal to 1350 °F for the catalyst inlet temperature; or immediately shutting down the engine if the catalyst inlet temperature exceeds 1350 °F.

[Table 6 to 40 CFR 63 Subpart ZZZZ]

- (b) For 4SRB engine, the Permittee shall demonstrate continuous compliance by collecting the catalyst inlet temperature data according to Condition V.D.5.b.(2)(a), reducing these data to 4-hour rolling averages; and maintaining the 4-hour rolling averages within the limitation of greater than or equal to 750 °F and less than or equal to 1250 °F for the catalyst inlet temperature; or Immediately shutting down the engine if the catalyst inlet temperature exceeds 1250 °F.

[Table 6 to 40 CFR 63 Subpart ZZZZ]

c. Notification Requirements

- (1) The Permittee shall submit all applicable notifications in 40 CFR 63.7(b) and (c), 63.8(e), (f)(4) and (f)(6), 63.9(b) through (e), and (g) and (h).

[40 CFR 6645(a)(2) and (a)(5)]

- (2) The Permittee shall submit a Notification of Intent to conduct a performance test at least 60 days before the performance test is scheduled to begin as required in 40 CFR 63.7(b)(1).

[40 CFR 63.6645(g)]

- (3) For 4 SRB or 4 SLB engines greater than 500 HP and required to conduct a performance test or initial compliance demonstration, the Permittee shall submit a Notification of Compliance Status according to 40 CFR 63.9(h)(2)(ii).

[40 CFR 63.6645(h)]

d. Recordkeeping Requirements

- (1) The Permittee shall keep records described below:

[40 CFR 63.6655(a)]

- (a) A copy of each notification and report that the Permittee submitted to comply with 40 CFR 63 Subpart ZZZZ, including all documentation supporting any Initial

Notification or Notification of Compliance Status that was submitted, according to the requirement in 40 CFR 63.10(b)(2)(xiv).

- (b) Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment.
 - (c) Records of performance tests and performance evaluations as required in 40 CFR 63.10(b)(2)(viii).
 - (d) Records of all required maintenance performed on the air pollution control and monitoring equipment.
 - (e) Records of actions taken during periods of malfunction to minimize emissions in accordance with Condition V.D.5.a.(3) including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.
- (2) For each CPMS, the Permittee shall keep the following records:
[40 CFR 63.6655(b)]
- (a) Records described in 40 CFR 63.10(b)(2)(vi) through (xi).
 - (b) Previous (i.e., superseded) versions of the performance evaluation plan as required in 40 CFR 63.8(d)(3).
 - (c) Requests for alternatives to the relative accuracy test for CEMS or CPMS as required in 40 CFR 63.8(f)(6)(i), if applicable.
- (3) The Permittee shall keep the records to show continuous compliance with each emission or operating limitation for the requirements in Condition V.D.5.b.(5).
[40 CFR 63.6655(d)]
- (4) For 2 SLB engines, 4 SRB (<500 HP) engines, and 4SLB (<500 HP) engines subject to management practices in Condition, the Permittee shall keep records of the maintenance conducted on the engines in order to demonstrate that the Permittee operated and maintained the engine and after-treatment control device (if any) according to the Permittee's own maintenance plan.
[40 CFR 63.6655(e)]

e. Reporting Requirements

- (1) The Permittee shall submit semi-annual compliance in accordance with Section VII of Attachment A.
[40 CFR 63.6650(a) and (b)]

- (2) For 4SRB and 4SLB engines (> 500 HP), the compliance report shall contain the result of annual compliance demonstration, if conducted during the reporting period.
[40 CFR 63.6650(a), Table 7 to 40 CFR 63 Subpart ZZZZ]
- (3) The Compliance report shall contain the following information
[40 CFR 63.6650(c)]
- (a) Company name and address;
 - (b) Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report;
 - (c) Date of report and beginning and ending dates of the reporting period;
 - (d) If the Permittee had a 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;
 - (e) If there are no deviations from any applicable emission or operating limitations, a statement that there were no deviations from the emission or operating limitations during the reporting period; and
 - (f) If there were no periods during which the CPMS, was out-of-control, as specified in §63.8(c)(7), a statement that there were no periods during which the CMS was out-of-control during the reporting period.
- (4) For each deviation from an emission or operating limitation that occurs for an engine where the Permittee is not using a CMS to comply with the operating limitations, the Compliance report shall contain the information in Conditions V.D.5.e.(3)(a) through (d) and the information below:
[40 CFR 63.6650(d)]
- (a) The total operating time of the stationary RICE 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.
- (5) For each deviation from an emission or operating limitation

occurring for an engine where the Permittee is using a CMS to comply with the operating limitations, the Permittee shall include information in Conditions V.D.5.e.(3)(a) through (d) and the information below:.

[40 CFR 63.6650(e)]

- (a) The date and time that each malfunction started and stopped;
- (b) The date, time, and duration that each CMS was inoperative, except for zero (low-level) and high-level checks;
- (c) The date, time, and duration that each CMS was out-of-control, including the information in 40 CFR 63.8(c)(8);
- (d) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction or during another period;
- (e) A summary of the total duration of the deviation during the reporting period, and the total duration as a percent of the total source operating time during that reporting period;
- (f) A breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes;
- (g) A summary of the total duration of CMS downtime during the reporting period, and the total duration of CMS downtime as a percent of the total operating time of the stationary RICE at which the CMS downtime occurred during that reporting period;
- (h) An identification of each parameter and pollutant that was monitored at the stationary RICE;
- (i) A brief description of the stationary RICE;
- (j) A brief description of the CMS;
- (k) The date of the latest CMS certification or audit; and
- (l) A description of any changes in CMS, processes, or controls since the last reporting period.

6. Permit Shield

Compliance with the conditions of this Part shall be deemed compliance with 40 CFR Part 63.6590(a)(1), 63.6590(c)(1), 63.6603(a), 63.6603(d), 63.6603(e), 63.6604(a), 63.6605(b), 63.6612(a), 63.6615, 63.6625(a), 63.6625(b), 63.6625(e),

63.6625(f), 63.6625(g), 63.6625(h), 63.6625(i), 63.6625(j), 63.6630(a),
66.6630(e), 63.6640(a), 63.6640(c), 63.6640(f), 63.6645(a), 63.6645(g),
63.6645(h), 63.6650(a) through (e), 63.6650(h), 63.6655(a), 63.6655(b),
63.6655(d), 63.6655(e), and 63.6655(f)

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

VI. INTERNAL COMBUSTION ENGINE(S) SUBJECT TO NSPS SUBPART III

A. Applicability

1. This Section applies to compression ignition internal combustion engines (CI ICE) marked as Subject to NSPS 40 CFR 60 Subpart III on the ATO.
2. Compression ignition (CI) internal combustion engines (ICE) that commenced construction after July 11, 2005, where the stationary CI ICE are:
 - [40 CFR 60.4200(a)(2)]
 - a. Manufactured after April 1, 2006, and are not fire pump engines, or
 - [40 CFR 60.4200(a)(2)(i)]
 - b. Manufactured as a certified National Fire Protection Association (NFPA) fire pump engine after July 1, 2006.
 - [40 CFR 60.4200(a)(2)(ii)]
3. Any stationary CI ICE that are modified or reconstructed after July 11, 2005.
 - [40 CFR 60.4200(a)(3)]
4. Stationary CI ICE may be eligible for exemption from the requirements of NSPS 40 CFR 60 Subpart III as described in 40 CFR part 1068, subpart C (or the exemptions described in 40 CFR part 89, subpart J and 40 CFR part 94, subpart J, for engines that would need to be certified to standards in those parts), except that owners and operators, as well as manufacturers, may be eligible to request an exemption for national security.
 - [40 CFR 4200(d)]

B. General Requirements

1. Operating Requirements
 - a. The Permittee shall operate and maintain the CI-ICE to comply with the applicable emission standards in Condition VI.C.1 over the entire life of the engine.
 - [40 CFR 60.4206]
 - b. The Permittee shall operate and maintain the CI-ICE and any control device according to the manufacturer's emission-related written instructions, or demonstrate compliance in accordance with Condition VI.C.1.d.
 - [40 CFR 60.4211(a)(1), and 4211(g)]
 - c. The Permittee shall change only those emission-related settings that are permitted by the manufacturer, or demonstrate compliance in accordance with Condition VI.C.1.d.
 - [40 CFR 60.4211(a)(2), and -4211(g)]

- d. The Permittee shall meet the requirements of 40 CFR parts 89, 94 and/or 1068, as they apply.

[40 CFR 60.4211(a)(3)]

2. Fuel Requirements

The Permittee shall use diesel fuel that meets the requirements of 40 CFR 80.510(b) for non-road diesel fuel.

[40 CFR 60.4207(b)]

- a. Sulfur content; 15 ppm maximum; and
- b. A minimum cetane index of 40 or a maximum aromatic content of 35 volume percent.

3. If an engine is equipped with a diesel particulate filter to comply with the emission standards, the Permittee shall install, maintain, and operate the particulate filter in accordance with good air pollution control practices for minimizing emissions.

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

[Material permit conditions are indicated by underline and italics]

C. Non-Emergency Generators

1. Emission Limitations and Standards

The Permittee operating a new, modified or reconstructed non-emergency CI-ICE subject to this section shall comply with the emission standards identified as follows for the corresponding model year, horsepower (hp) and liters per cylinder (l/cyl) displacement:

[40 CFR 60.4204(e)]

- a. Pre-2007 model year with displacement of < 10 l/cyl shall comply with the emission standards in following table 1 of 40 CFR 60 Subpart IIII.

[40 CFR 60.4204(a) and Table 1 of 40 CFR Subpart IIII]

- b. 2007 and later model years with displacement < 10 l/cyl and maximum engine power ≤ 3,000 hp shall comply with the emission standards for new non-road compression ignition engines in 40 CFR 89.112, 40 CFR 89.113, 40 CFR 1039.101, 40 CFR 1039.102, 40 CFR 1039.104, 40 CFR 1039.105, 40 CFR 1039.107, and 40 CFR 1039.115, as applicable, for all pollutants, for the same model year and maximum engine power.

[40 CFR 60.4201(a) and 60.4204(b)]

- c. The Permittee operating a non-emergency CI engine that conducts performance tests in-use must meet the not-to-exceed (NTE) standards as indicated in 40 CFR 60.4212.

[40 CFR 60.4204(d)]

- d. A Permittee that does not install, configure, operate, and maintain the engine and control device according to the manufacturer's emission-related written instructions, or changes emission-related settings in a way that is not permitted by the manufacturer, must demonstrate compliance as follows:

[40 CFR 60.4211(g)]

- (1) A stationary CI internal combustion engine with maximum engine power less than 100 HP, the Permittee shall keep a maintenance plan and records of conducted maintenance to demonstrate compliance and shall, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, if the Permittee does not install and configure the engine and control device according to the manufacturer's emission-related written instructions, or changes the emission-related settings in a way that is not permitted by the manufacturer, the Permittee shall conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of such action.

[40 CFR 60.4211(g)(1)]

- (2) A stationary CI internal combustion engine greater than or equal to 100 HP and less than or equal to 500 HP, the Permittee shall keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, the Permittee shall conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after the Permittee changes emission-related settings in a way that is not permitted by the manufacturer.

[40 CFR 60.4211(g)(2)]

- (3) The Permittee of a stationary CI internal combustion engine greater than 500 HP, shall keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, the Permittee shall conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after the Permittee changes emission-related settings in a way that is not permitted by the manufacturer. The Permittee shall conduct subsequent performance testing every 8,760 hours of engine operation or 3 years, whichever comes first, thereafter to demonstrate compliance with the applicable emission standards.

[40 CFR 60.4211(g)(3)]

2. Compliance Requirements

A Permittee operating an engine subject to any emission standard specified in Condition VI.C.1 shall demonstrate compliance according to one of the methods specified in this Section as applicable.

- a. Pre-2007 model year with displacement < 30 l/cyl;
- (1) Purchasing an engine certified according to 40 CFR part 89 or 40 CFR part 94, as applicable, for the same model year and maximum engine power. The engine shall be installed and configured according to the manufacturer's specifications; or
[40 CFR 60.4211(b)(1)]
 - (2) Keeping records of performance test results for each pollutant for a test conducted on a similar engine. The test shall have been conducted using the same methods specified in Condition VI.C.1 and these methods must have been followed correctly; or
[40 CFR 60.4211(b)(2)]
 - (3) Keeping records of engine manufacturer data indicating compliance with the standards; or
[40 CFR 60.4211(b)(3)].
 - (4) Keeping records of control device vendor data indicating compliance with the standards; or
[40 CFR 60.4211(B)(4)]
 - (5) Conducting an initial performance test to demonstrate compliance with the emission standards according to the requirements specified in 40 CFR 60.4212, as applicable.
[40 CFR 60.4211(b)(5)]
- b. 2007 model year and later with displacement < 30 l/cyl;
[40 CFR 60.4211(c)]
- (1) Purchasing an engine certified to the applicable emission standards specified in Condition VI.C.1 for the same model year and maximum engine power; and
 - (2) The engine must be installed and configured according to the manufacturer's emission -related specifications.
- c. For any engine that the Permittee conducts an in-use performance test, the Permittee shall demonstrate compliance by;
[40 CFR 60.4211(d)]
- (1) Conducting an initial performance test to demonstrate initial compliance with the emission standards as specified in 40 CFR 60.4213.
 - (2) Establishing operating parameters to be monitored continuously to ensure the engine continues to meet the emission standards. The Permittee must petition the Director for approval of operating parameters to be monitored continuously. The petition must include the following information;
 - (a) Identification of the specific parameters that the Permittee proposes to monitor continuously; and

- (b) A discussion of the relationship between these parameters and NO_x and PM emissions, identifying how the emissions of these pollutants change with changes in these parameters, and how limitations on these parameters will serve to limit NO_x and PM emissions; and
 - (c) A discussion of how the Permittee will establish the upper and/or lower values for these parameters which will establish the limits on these parameters in the operating limitations; and
 - (d) A discussion identifying the methods and the instruments the Permittee will use to monitor these parameters, as well as the relative accuracy and precision of these methods and instruments; and
 - (e) A discussion identifying the frequency and methods for recalibrating the instruments the Permittee will use for monitoring these parameters.
- d. The Permittee using modified or reconstructed engine subject to an applicable emission standard(s) specified in Condition VI.C.1 shall demonstrate compliance by:
- (1) Purchase an engine certified to the applicable emission standard(s).
[40 CFR 60.4211(e)(1)]
 - (2) Conduct a performance test to demonstrate initial compliance with the applicable emission standard(s) according to the requirements specified in 40 CFR 60.4212. The test must be conducted within 60 days after the engine commences operation after the modification or reconstruction.
[40 CFR 60.4211(e)(2)]

3. Monitoring, Recordkeeping and Reporting Requirements

- a. If an engine is equipped with a diesel particulate filter to comply with the emission standards in Condition VI.C.1, the Permittee shall install a backpressure monitor on the diesel particulate filter that notifies the Permittee when the high backpressure limit of the engine is approached.
[40 CFR 60.4209(b) and A.A.C. R18-2-331.A.3.c]
[Material permit conditions are indicated by underline and italics]
- b. If an engine is equipped with a diesel particulate filter, the Permittee shall keep records of any corrective action taken after the backpressure monitor has notified the Permittee that the high backpressure limit of the engine is approached.
[40 CFR 60.4214(c)]
- c. A Permittee operating an engine that is a pre-2007 model year > 175 hp and not certified, must:
[40 CFR 60.4212(a)]

- (1) Submit an initial notification as required in 40 CFR 60.7(a)(1), including:

[40 CFR 60.4214(a)(1)]

 - (a) Name and address of the Permittee; and
 - (b) The address of the affected source; and
 - (c) Engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement; and
 - (d) Emission control equipment; and
 - (e) Fuel used.
- (2) Keep records of the following information:

[40 CFR 60.4214(a)(2)]

 - (f) All notifications submitted to comply with this NSPS 40 CFR 60 Subpart IIII and all documentation supporting any notification; and
 - (g) Maintenance conducted on the engine; and
 - (h) If the engine is certified, documentation from the manufacturer that the engine is certified to meet the applicable emission standards; or
 - (i) If the engine is not certified, documentation that the engine meets the emission standards.

D. Emergency Engines

1. Operating Requirements

- a. The Permittee shall install a non-resettable hour meter prior to startup of the engine.

[40 CFR 60.4209(a) and A.A.C. R18-2-331.A.3.c]
[Material permit conditions are indicated by underline and italics]

- b. The Permittee shall operate the emergency engines according to the requirements in Condition VI.D.1.b.(1) through (3). In order for the engines to be considered emergency stationary engine, any operation other than emergency operation, maintenance response, and operation in non-emergency situations for 50 hours per year. If the emergency engine is not operated in accordance with the requirements in Conditions below, the engine will not be considered an emergency engine and must meet all requirements for non-emergency engines.

[40 CFR 60.4211(f)]

- (1) There is no time limit on the use of emergency stationary ICE in emergency situations.

[40 CFR 60.4211(f)(1)]

- (2) The Permittee may operate the emergency stationary ICE for maintenance checks and readiness testing for a maximum of 100 hours per calendar year 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 associated with the engine. The Permittee may petition the Director for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the Permittee maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year.

[40 CFR 60.4211(f)(2)]

- (3) Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations.

[40 CFR 60.4211(f)(3)]

- c. If the Permittee does not install, configure, operate, and maintain the engine and control device according to the manufacturer's emission-related written instructions, or the Permittee changes emission-related settings in a way that is not permitted by the manufacturer, the Permittee shall demonstrate compliance as required in Condition VI.C.1.d.

[40 CFR 60.4211(g)]

2. Emission Limitations and Standards

a. Fire Pump Engines

The Permittee shall comply with the emission limits in Table 4 of 40 CFR Subpart IIII for fire pump engines:

[40 CFR 60.4205(c)]

b. Emergency Engines

- (1) Pre-2007 model year emergency stationary internal combustion engines with a displacement of less than 10 liters per cylinder that are not fire pump engines shall comply with the Table 1 of 40 CFR Subpart IIII

[40 CFR 60.4205(a)]

- (2) 2007 model year and later emergency internal combustion engines with a displacement of less than 30 liters per cylinder that are not fire pump engines shall comply with the appropriate emission limitation as follows:

[40 CFR 60.4205(b)]

- (a) 2007 model year and later engines with a maximum engine power less than or equal to 3,000 horsepower and a displacement of less than 10 liters per cylinder shall meet the emission standards specified below:

[40 CFR 60.4202(a)]

- (i) For engines with a maximum engine power less

than 50 horsepower:

[40 CFR 60.4202(a)(1)]

(a) 2007 model year engines shall meet the emission standards for new non-road compression ignition engines in 40 CFR 89.112 and 40 CFR 89.113, for all pollutants, for the same model year and maximum engine power, and

(b) 2008 model year and later engines shall meet the emission standards for new non-road compression ignition engines in 40 CFR 1039.104, 40 CFR 1039.105, 40 CFR 1039.107, 40 CFR 1039.115, and Table 2 to 40 CFR Part 60, Subpart III.

(ii) For engines with a maximum engine power greater than or equal to 50 horsepower, the Permittee shall meet the emission standards for new non-road compression ignition engines in 40 CFR 89.112 and 40 CFR 89.113, for all pollutants, for the same model year and maximum engine power.

[40 CFR 60.4202(a)(2)]

(3) 2007 model year and later engines shall meet the emission standards for new marine compression ignition engines in 40 CFR 94.8, as applicable, for all pollutants, for the same displacement and maximum engine power.

[40 CFR 60.4202(e)]

c. Emergency stationary internal combustion engines with a displacement of less than 30 liters per cylinder that conduct performance tests in-use shall meet the NTE standards as indicated in 40 CFR 60.4212.

[40 CFR 60.4205(e)]

d. Modified or Reconstructed Emergency CI ICE

Any modified or reconstructed emergency stationary internal combustion engine shall meet the emission standards applicable to the model year, maximum engine power, and displacement of the modified or reconstructed internal combustion engine that are specified in Conditions VI.D.2.a through c.

[40 CFR 60.4205(f)]

3. Compliance Determinations

a. General Requirements

The Permittee shall operate and maintain the control device according to the manufacturer's written instructions or procedures that are developed by the Permittee and approved by the engine manufacturer. A copy of the

instructions or procedures shall be kept on-site and made available to ADEQ upon request.

[40 CFR 60.4211(a) and A.A.C. R18-2-306.A.3]

b. Pre-2007 CI ICE

The Permittee of a pre-2007 model year stationary compression ignition internal combustion engine that is required to comply with the emission standards specified in Condition VI.D.2.b.(1), shall demonstrate compliance according to one of the methods specified below:

- (1) Purchasing an engine certified according to 40 CFR Part 89 or 40 CFR Part 94, as applicable, for the same model year and maximum engine power. The engine shall be installed and configured according to the manufacturer's specifications.
- (2) Keeping records of performance test results for each pollutant for a test conducted on a similar engine. The test shall have been conducted using the methods specified in this 40 CFR 60.4212 or 4213, and the methods shall have been followed correctly.
- (3) Keeping records of engine manufacturer data indicating compliance with the standards.
- (4) Keeping records of control device vendor data indicating compliance with the standards.
- (5) Conducting an initial performance test to demonstrate compliance with the emission standards according to the requirements specified in 40 CFR 60.4212, as applicable.

[40 CFR 60.4211(b)]

c. 2007 and Later CI ICE

For 2007 model year and later internal combustion engines that are required to comply with the emission standards specified in Condition VI.D.2.b.(2), the Permittee shall comply by purchasing an engine certified to the emission standards as applicable, for the same model year and maximum engine power. The engine shall be installed and configured according to the manufacturer's specifications.

[40 CFR 4211(c)]

d. 2007 and Later Fire Pump Engines

The Permittee of a 2007 model year and later stationary fire pump engines that is manufactured during or after the model year that applies to the fire pump engine power (EP) rating in the following table and that are required to comply with the emission standards specified in Condition VI.D.2.b.(1) shall comply by purchasing an engine certified to the emission standards in as applicable, for the same model year and National Fire Protection Association (NFPA) nameplate engine power. The engine shall be installed and configured according to the manufacturer's specifications.

[40 CFR 4211(c)]

Engine Power (EP) (horsepower)	Model Year
EP < 100	2011
100 ≤ EP < 175	2010
175 ≤ EP < 750	2009
EP ≥ 750	2008

- e. The Permittee shall maintain a copy of engine certifications or other documentation demonstrating that each engine complies with the applicable standards in this Permit, and shall make the documentation available to ADEQ upon request.

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

4. Monitoring, Recordkeeping, and Reporting Requirements

- a. If the Permittee elects to meet the emission limitations contained in Condition VI.D.2, the Permittee shall maintain records, including manufacturer specifications, demonstrating that the engine meets the horsepower and RPM specifications.

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

- b. Pre-2007 model year engines that are greater than 175 HP and are not certified shall meet the following requirements:

[40 CFR 60.4214(a)]

- (1) Submit an initial notification as required in 40 CFR 60.7(a)(1). The notification shall include the following:

[40 CFR 60.4214(a)(1)]

- (a) Name and address of the Permittee;
- (b) The address of the affected source;
- (c) Engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement;
- (d) Emission control equipment; and
- (e) Fuel used.

- (2) Keep records of the information the following:

[40 CFR 60.4214(a)(2)]

- (a) All notifications submitted to comply with this NSPS 40 CFR 60 Subpart IIII and all documentation supporting any notification.
- (b) Maintenance conducted on the engine.
- (c) If the stationary CI internal combustion engine is certified, documentation from the manufacturer that the

engine is certified to meet the emission standards.

- (d) If the stationary CI internal combustion is not a certified engine, documentation that the engine meets the emission standards.
- c. If the stationary CI internal combustion engine is an emergency stationary internal combustion engine, the Permittee is not required to submit an initial notification. Starting with the model years in the table below, if the emergency engine does not meet the standards applicable to non-emergency engines in the applicable model year, the Permittee shall keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The Permittee shall record the time of operation of the engine and the reason the engine was in operation during that time.
[40 CFR 60.4214(b)]
- d. If the stationary CI internal combustion engine is equipped with a diesel particulate filter, the Permittee shall keep records of any corrective action taken after the backpressure monitor has notified the Permittee that the high backpressure limit of the engine is approached.
[40 CFR 60.4214(c)]
- e. The Permittee shall maintain monthly records of engine operation. The records shall include the purpose of operation and the duration of time the engine was operated. The record shall identify whenever the operation of the engine was for emergency purposes.
[A.A.C. R18-2-306.A.3.c]

5. Testing Requirements

The Permittee of an internal combustion engine with a displacement of less than 30 liters per cylinder that conducts performance tests pursuant to this Permit shall do so according to 40 CFR 60.4212.

[40 CFR 60.4212]

6. Permit Shield

Compliance with the conditions of this Section shall be deemed compliance with 40 CFR 60.4202(a), 60.4205(d), 60.4205(e), 60.4202(e), 60.4205(a), 60.4205(b), 60.4205(c), 60.4205(f), 60.4206, 60.4207(b), 60.4209(a), 60.4211(a), 60.4211(b), 60.4211(c), 60.4211(d), 60.4211(f), 60.4211(g), 60.4212, 60.4213, 60.4214(a), 60.4214(c), and 60.4214(d).

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

VII. INTERNAL COMBUSTION SPARK IGNITION ENGINES SUBJECT TO 40 CFR 60 SUBPART JJJJ

A. Applicability

This Section is applicable to each spark ignition (SI) engine identified in the ATO as subject to New Source Performance Standards (NSPS) Subpart JJJJ.

B. Requirements

The Permittee shall follow all the applicable requirements set forth in 40 CFR 60 Subpart JJJJ.

C. Permit Shield

Compliance with the conditions of this Section shall be deemed compliance with 40 CFR 60Subpart JJJJ.

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

VIII. FUGITIVE DUST REQUIREMENTS

A. Applicability

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

B. Particulate Matter and Opacity

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

1. Emission Limitations/Standards

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

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

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

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

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

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

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

- (4) Take reasonable precautions, such as wetting, applying dust suppressants, or covering the load when transporting material

likely to give rise to airborne dust;

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

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

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

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

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

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

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

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

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

2. Air Pollution Control Requirements

Water, or an equivalent control, shall be used to control visible emissions from haul roads.

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

[Material Permit Condition is indicated by underline and italics]

3. Monitoring and Recordkeeping Requirements

- a. The Permittee shall maintain records of the dates on which any of the activities listed in Conditions VIII.B.1.(b)(1) through (8) were performed and the control measures that were adopted.

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

b. Opacity Monitoring Requirements

The Permittee shall conduct a monthly monitoring of visible emissions as per the periodic opacity monitoring requirements specified in Condition III.D.

C. Permit Shield

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

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

IX. 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. R18-2-101.108.

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

B. Particulate Matter and Opacity

1. Emission Limitations/Standards

a. Off-Road Machinery

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

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

b. Roadway and Site Cleaning Machinery

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

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

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

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

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

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

2. Recordkeeping Requirements

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.

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

3. Permit Shield

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

801, -802, and -804.

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

X. OTHER PERIODIC ACTIVITIES

C. Abrasive Blasting

1. Particulate Matter and Opacity

a. Emission Limitations/Standards

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

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

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

b. Opacity

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

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

2. Monitoring and Recordkeeping Requirement

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

- a. The date the project was conducted;
- b. The duration of the project; and
- c. Type of control measures employed.

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

3. Permit Shield

Compliance with this Part shall be deemed compliance with A.A.C. R18-2-702.B.3 and -726.

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

D. Use of Paints

1. Volatile Organic Compounds

a. Emission Limitations/Standards

While performing spray painting operations, the Permittee shall comply

with the following requirements:

- (1) The Permittee shall not conduct or cause to be conducted any spray painting operation without minimizing organic solvent emissions. Such operations, other than architectural coating and spot painting, shall be conducted in an enclosed area equipped with controls containing no less than 96 percent of the overspray.
[A.A.C.R18-2-727.A]
- (2) The Permittee or their designated contractor shall not either:
 - (a) Employ, apply, evaporate, or dry any architectural coating containing photochemically reactive solvents for industrial or commercial purposes; or
 - (b) Thin or dilute any architectural coating with a photochemically reactive solvent.
[A.A.C.R18-2-727.B]
- (3) For the purposes of Condition X.B.1.a.(2), a photochemically reactive solvent shall be any solvent with an aggregate of more than 20 percent of its total volume composed of the chemical compounds classified in Conditions X.B.1.a.(3)(a) through (c), or which exceeds any of the following percentage composition limitations, referred to the total volume of solvent:
 - (c) 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.
 - (d) A combination of aromatic compounds with eight or more carbon atoms to the molecule except ethylbenzene: 8 percent.
 - (e) A combination of ethylbenzene, ketones having branched hydrocarbon structures, trichloroethylene or toluene: 20 percent.
[A.A.C.R18-2-727.C]
- (4) Whenever any organic solvent or any constituent of an organic solvent may be classified from its chemical structure into more than one of the groups of organic compounds described in Conditions X.B.1.a.(3)(a) through (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

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

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

- (2) Architectural coating and spot painting projects shall be exempt from the recordkeeping requirements of Condition X.B.1.b(1).
[A.A.C. R18-2-306.A.3.c]

c. Permit Shield

Compliance with this Part shall be deemed compliance with A.A.C.R18-2-727.
[A.A.C.R18-2-325]

2. Opacity

a. Emission Limitation/Standard

The Permittee shall not cause, allow or permit visible emissions from painting operations in excess of 20% opacity, as measured by EPA Reference Method 9.
[A.A.C. R18-2-702.B]

b. Permit Shield

Compliance with the conditions of this Part shall be deemed compliance with A.A.C.R18-2-702.B.3.
[A.A.C. R18-2-325]

E. Demolition/Renovation - Hazardous Air Pollutants

1. Emission Limitation/Standard

The Permittee shall comply with all of the requirements of 40 CFR 61 Subpart M (National Emissions Standards for Hazardous Air Pollutants - Asbestos).
[A.A.C. R18-2-1101.A.8]

2. Monitoring and Recordkeeping Requirement

The Permittee shall keep all required records in a file. The required records shall include the "NESHAP Notification for Renovation and Demolition Activities" form and all supporting documents.
[A.A.C. R18-2-306.A.3.c]

3. Permit Shield

Compliance with the conditions of this Part shall be deemed compliance with



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

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

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**ATTACHMENT "C": ADDITIONAL REQUIREMENTS FOR SOURCES OPERATING
IN MARICOPA COUNTY**

I. APPLICABILITY

- A.** The provisions of this section are applicable to all air curtain incinerators operated inside Maricopa County. Above ground air curtain destructors are the only type of air curtain destructor allowed in Maricopa County

[Rule 314 § 201]

- B.** Whenever more than one Condition in this Attachment regulating the same emissions applies to any emissions unit, or whenever a Condition in this Attachment and a Condition in Attachment "B" regulating the same emissions applies to any emissions unit, the Condition or combination of Conditions resulting in the lowest emissions rate or lowest concentration of regulated air pollutants released to the atmosphere shall apply, unless otherwise specifically exempted or designated in the applicable permit Conditions.

[A.R.S. § 49-402(D)]

II. AIR CURTAIN INCINERATOR REQUIREMENTS

- A.** Prior to conducting an open outdoor fire in an air curtain destructor, the Permittee shall submit a burn plan for each burn site location to the Control Officer, and shall obtain a site-specific Burn Plan approved by the Control Officer.

[Rule 314 § 304 and 402.5]

- B.** Burn Plan Application and Conditions:

In order to use an air curtain destructor, the Permittee shall file with the Control Officer on a form prescribed by the Control Officer, a Burn Plan application and the complete application fee as described in Maricopa County Rule 280 (Fees). The Control Officer shall act on a Burn Plan application and shall notify the applicant within 14 calendar days of the filing of the completed application.

[Rule 314 § 406]

1. A separate, site-specific Burn Plan application is required for each burn site location not contiguous to the location.
2. A Burn Plan Application shall be site-specific and shall list the following, at a minimum:
 - a. Notification of intent to burn;
 - b. The anticipated dates and hours of the burn;
 - c. The type and quantity of fuel that will be used;
 - d. The type of material burned;
 - e. The legal location, to the nearest township, range and section or latitude and longitude, to the nearest degree minute, street address, or parcel number;
 - f. The Burn Plan posting; and

- c. There shall be at least 1,000 feet between any two air curtain destructors.
 - d. An air curtain destructor shall be located at least 500 feet from any residence or building structure.
 - e. An air curtain destructor shall be located at least 500 feet from any pipeline or fuel storage area.
 - f. An air curtain destructor shall be located at least 250 feet from any power lines.
 - g. Material that is not being worked or is being stockpiled to be burned at a later date by using an air curtain destructor shall be kept at least 75 feet from the air curtain destructor while the burn is taking place.
3. Operation of Blower
- a. The proper blower speed must be maintained according to manufacturer's specifications.
 - b. The blower must be operating when and as long as any material in the firebox is burning.
4. Loading of the Firebox
- a. When loading (feeding) the firebox, the material must not extend above the air curtain (blower airflow).
 - b. The loading of materials into the firebox shall be discontinued at a minimum of 2 hours prior to the end of the designated burning hours. The blower must continue to operate until the end of the burning hours or until combustion is completed.
 - c. Adequate measures shall be taken to assure that no emissions emanate from materials left in the firebox (i.e., when combustion is completed). All materials left in the firebox shall be extinguished with water or covered over with a minimum of 1 foot of mineral soil.
5. Firebox Clean-Out
- All materials removed from the firebox shall be completely extinguished and all reasonable precautions taken to control emissions.
6. Burning Hours for Air Curtain Destructors:
- The following burning hours apply:
- April - September 6 a.m. - 6 p.m.
 - October - March 10 a.m. - 5 p.m.

While complying with the above schedule, the permittee shall also obtain permission from the Control Officer on each day of burning. Burning using an air

curtain destructor is not authorized on weekends nor on holidays. Prohibited materials shall never be burned in an air curtain destructor.

E. Recordkeeping and Reporting Requirements

1. The following information shall be provided to the Control Officer for each time that open outdoor fire in an air curtain destructor. This information shall be provided on a daily basis either by writing, fax, or electronically and shall include:
 - a. The date of the burn; and
 - b. The type and quantity of fuel burned for each date open outdoor burning occurs; and
 - c. The windrow for each date that open outdoor burning occurs; and
 - d. The legal location, to the nearest township, range and section, or latitude and longitude, to the nearest degree minute, street address, or parcel number

F. Permit Shield

Compliance with the conditions of this Section shall be deemed compliance with Maricopa County rules 314 § 201, 301, 305.7, 401, 402.5, 406 and Appendix to Rule 314.

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

III. INTERNAL COMBUSTION ENGINES

A. Applicability

1. This rule applies to a spark-ignition engine or compression-ignition engine with a rated brake horsepower of greater than 250. This rule also applies to a combination of stationary RICE each with a rated bhp greater than 50 used at a source, whose maximum aggregate rated bhp is greater than 250.

[Rule 324 § 102.1]

2. In addition to this rule, a stationary RICE may be subject to New Source Performance Standards (NSPS) or National Emission Standards for Hazardous Air Pollutants (NESHAP). Whenever more than one provision in this rule applies to such engine or whenever a provision in this rule and a provision in the federal standards apply to such engine, the provision or combination of provisions resulting in the lowest rate of emissions shall apply, unless otherwise specifically exempted or designated.

[Rule 324 § 102.3]

3. An IC engine operated as a non-road IC engine is exempt from all of the requirements of this rule but shall comply with the following visible emissions standard:

[Rule 324 § 103.2 and Rule 300 §301]

The Permittee shall not discharge into the ambient air from any single source of emissions any air contaminant, other than uncombined water, in excess of 20 percent opacity for a period aggregating more than three minutes in any 60 minute

period.

4. A stationary RICE subject to the federal standards of performance set forth in 40 CFR Part 63, Subpart ZZZZ shall comply only with the Conditions III.E.1 and 2.
[Rule 324 § 106]
5. An emergency engine is a stationary RICE whose sole function is to provide back-up power when electric power from the local utility is interrupted or when operated solely for any of the reasons listed below. These engines shall be subject only to requirements under Conditions III.A.7, III.B.1, III.B.2, III.B.3, III.B.4, III.B.5, III.E.3 and III.E.4:
[Rule 324 § 104]
 - a. Used only for power when normal power service fails from the serving utility or if onsite electrical transmission or onsite power generation equipment fails.
 - b. Used only for the emergency pumping of water resulting from a flood, fire, lightning strikes, police action or for any other essential public services which affect public health and safety.
 - c. Used as the non-emergency engine when the non-emergency engine has failed, but only for such time as is needed to repair the non-emergency engine.
 - d. Used to operate standby emergency water pumps for fire control that activate when sensors detect low water pressure.
6. Following engines are termed as Low Usage Non-emergency Engines. These engines shall be subject only to requirements under Conditions III.A.7, III.B.1, III.B.2, III.B.3, III.B.4, III.B.5, III.E.3 and III.E.4:
[Rule 324 § 105]
 - a. Each engine with a rated bhp at or below 1000 that operates less than 200 hours per calendar year as evidenced by an installed non-resettable hour meter.
 - b. Each engine with a rated bhp above 1000 that operates less than 100 hours per calendar year as evidenced by an installed non-resettable hour meter.
7. If a stationary RICE must be removed from service because such engine does not comply with the emission limits listed in Section 300 of this rule, then the stationary RICE shall be removed from service no later than November 2, 2017. The stationary RICE that replaces such engine shall comply with all applicable provisions of this rule and shall comply with the emission standards in Condition III.C.2.
[Rule 324 § 401]

B. Requirement for all engines

1. Fuel Limitation

The Permittee shall comply with either of the following:

[Rule 324 § 301]

- a. Use any fuel that contains no more than 0.0015% sulfur by weight, alone or in combination with other fuels.
- b. Use any waste derived fuel gas that contains no more than 0.08% sulfur by weight, alone or in combination with other fuels.

2. Opacity Standard

The Permittee shall not discharge into the ambient air from any such engine any air contaminant, other than uncombined water, in excess of 20% opacity.

[Rule 324 § 303]

3. Except for those engines being removed from service under Condition III.A.7, the Permittee, shall install, operate, and maintain a non-resetting totalizing hour meter on each such engine no later than November 2, 2017.

[Rule 324 § 402]

4. An equivalent replacement engine or an identical replacement engine shall be treated as the original stationary RICE that it replaces for the purposes of compliance with this rule.

[Rule 324 § 306]

5. If a modification, including the contractual obligation to undertake and complete an order for an engine, is made to a stationary RICE, then such engine shall comply with all applicable provisions of this rule. The date of the modification shall be the trigger for when the modification is subject to the provisions of Section 304 of this rule. Whenever a provision in this rule and a provision in Section 304 of this rule apply to such engine, the provision or combination of provisions resulting in the lowest rate of emissions shall apply, unless otherwise specifically exempted or designated.

[Rule 324 § 307]

6. *The Permittee shall install, operate, and maintain a non-resetting totalizing hour meter. If the non-resetting totalizing hour meter is found to be malfunctioning, operation of the engine shall cease until corrective action(s) can be implemented or the function of the meter is restored.*

[Rule 324 § 308 and A.A.C. R 18-2-331.A.3.c]

[Material permit conditions are indicated by underline and italics]

C. Requirements for Engines other than emergency engines and limited use engines

1. Good Combustion Practices / Tuning Procedure:

The Permittee shall conduct preventative maintenance or tuning procedures as recommended by the engine manufacturer to ensure good combustion practices to minimize NO_x emissions. A handheld monitor may be used if so desired by the Permittee for measurement of NO_x and CO concentrations in the effluent stream after each adjustment is made; this may assist in determining that the proper adjustment has been made to minimize NO_x and CO emissions. A handheld monitor may be used by the Inspector to determine compliance with this Section. The Permittee shall include all of the following in the tuning procedures, if the engine is so equipped, and if such procedures are appropriate to the type of engine:

[Rule 324 § 302]

- a. Lubricating Oil and Filter: Change once every three months or after no more than 300 hours of operation, whichever occurs last.
- b. Inlet Air Filter: Clean once every three months or after no more than 300 hours of operation and replace every 1,000 hours of operation or every year, whichever occurs last.
- c. Fuel Filter: Clean once every year or replace (if cartridge type) once every 1,000 hours of operation, whichever occurs last.
- d. Check and adjust the following once every year or after no more than 1,000 hours of operation, whichever occurs last:
 - (1) Intake and exhaust valves
 - (2) Spark plugs (if so equipped)
 - (3) Spark timing and dwell or fuel injection timing (if adjustable), and
 - (4) Carburetor mixture (if adjustable).
- e. Spark Plugs and Ignition Points: Replace after 3,000 hours of operation or every year whichever occurs last
- f. Coolant: Change after 3,000 hours of operation or every year whichever occurs last.
- g. Exhaust System: Check for leaks and/or restrictions after 3,000 hours of operation or every year whichever occurs last.

2. Emission Standards for Non-Emergency Engines Rated 250 Bhp Or Greater

The Permittee shall comply with the emission standards in Table 1 or Table 2 of this rule.

[Rule 324 § 304]

TABLE 1- COMPRESSION-IGNITION ENGINES

ENGINES MANUFACTURED OR MODIFIED	RATED BHP	ENGINE REQUIREMENTS
Prior to October 22, 2003	250-399	770 ppm _{dv} or 10 g/bhp-hr. NO _x or turbocharger with aftercooler/intercooler or 4-degree injection timing retard
Prior to October 22, 2003	400 plus	550 ppm _{dv} or 7.2 g/bhp-hr. NO _x or turbocharger with aftercooler/intercooler or 4-degree injection timing retard
On or after October 22, 2003 but prior to July 11, 2005	>250	530 ppm _{dv} or 6.9 g/bhp-hr. NO _x or turbocharger with aftercooler/intercooler or 4-degree injection timing retard; 1,000 ppm _{dv} CO; 0.40 g/bhp-hr PM

TABLE 2 SPARK-IGNITION ENGINES

LEAN-BURN ENGINES				
MANUFACTURED OR MODIFIED	RATED BHP	OXIDES OF NITROGEN (NO _x)	VOLATILE ORGANIC COMPOUND (VOC)	CARBON MONOXIDE (CO)
Prior to October 22, 2003	>250	280 ppmdv or 4.0 g/bhp-hr	800 ppmdv or 5.0 g/bhp-hr	4,500 ppmdv
On or after October 22, 2003 but prior to June 12, 2006	>250	110 ppmdv or 1.5 g/bhp-hr	800 ppmdv or 5.0 g/bhp-hr	4,500 ppmdv
RICH-BURN ENGINES				
Prior to October 22, 2003	>250	280 ppmdv or 4.0 g/bhp-hr or three-way catalyst*	800 ppmdv or 5.0 g/bhp-hr or three-way catalyst*	4,500 ppmdv or three-way catalyst*
On or after October 22, 2003 but prior to June 12, 2006	>250	20 ppmdv or 0.30 g/bhp-hr or three-way catalyst*	800 ppmdv or 5.0 g/bhp-hr or three-way catalyst*	4,500 ppmdv or three-way catalyst*

*The three-way catalyst shall provide a minimum of 80% control efficiency for NO_x and CO for those engines fueled with natural gas, propane or gasoline. In addition, the three-way catalyst shall also provide a minimum of at least 50% control efficiency for VOC for those engines fueled by gasoline.

D. Compliance Determination

1. The Permittee shall perform emission testing using the applicable test methods listed in Section 503 of Maricopa County Rule 324 shall be performed upon the request of the Director.

[Rule 324 § 501.1.a]
2. The Permittee shall demonstrate compliance with the standards in Condition III.C.2, by one of the following:

[Rule 324 § 501.1.b]

 - a. A statement from the manufacturer that the engine meets the most stringent emissions standards found in this rule or 40 CFR Parts 89, 90, and 1039 applicable to the engine and its model year at the time of manufacture.
 - b. Emission testing using the applicable test methods listed in Section 503 of Maricopa County Rule 324 shall be performed upon the request of the Director.
3. The Permittee shall demonstrate compliance With 40 CFR Part 60.4213, for a stationary RICE with a displacement of greater than or equal to 30 liters per cylinder.

[Rule 324 § 501.1.c]
4. Testing for stationary RICE, if required, shall be completed under steady state conditions at either the maximum operating load or no less than 80% of the rated bhp. If the Permittee demonstrates to the Director that the engine cannot operate at these conditions, then emissions source testing shall be performed at the highest achievable continuous rated bhp or under the typical duty cycle or typical operational mode of the engine.

[Rule 324 § 501.5]

5. If the Director requests documentation of the sulfur content of the fuel to demonstrate the 0.0015% limit, the owner or operator shall submit one of the following:

[Rule 324 § 501.3]

- a. Fuel receipts, or
- b. Contract specifications, or
- c. Pipeline meter tickets, or
- d. Fuel supplier information, or
- e. Purchase records, or
- f. Test results of the fuel for sulfur content

The items listed above must provide accurate sulfur content values or be based on enforceable test methods as approved by the Director to determine the sulfur content.

E. Recordkeeping Requirements

1. The Permittee shall keep a record that includes an initial one time entry that lists the particular engine combustion type (compression-ignition or spark-ignition or rich burn, lean burn); manufacturer; model designation, rated bhp, serial number and where the engine is located on the site.

[Rule 324 § 502.1]

2. For a non-emergency engine,

- a. The Permittee shall maintain a monthly record for non-emergency engines which shall include:

[Rule 324 § 502.2]

- (1) Hours of operation; and
- (2) Type of fuel used, and
- (3) Documentation verifying compliance with sulfur fuel content according to Condition III.B.1.

- b. The Permittee shall maintain an annual record of the practices/procedure that are followed in order to comply with to Condition III.B.1.

[Rule 324 § 502.3]

3. For an Emergency Engine or a Low Usage Non-Emergency Engine, the Permittee shall keep record that includes:

[Rule 324 § 502.4]

- a. Monthly rolling twelve month total of hours of operation, including hours of operation for testing, reliability and maintenance; and
- b. Fuel type and sulfur content of fuel; and

- c. Explanation for the use of the engine if it is used as an emergency engine.
4. The Permittee shall retain all the above records for at least 5 years.
[Rule 324 § 502]

F. Permit Shield

Compliance with the conditions of this Section shall be deemed compliance with the Maricopa County Rules: 324 § 301, 302, 303, 304, 305, 306, 307, 401, 402, 501 and 502.
[A.A.C. R18-2-325]

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**ATTACHMENT "D": ADDITIONAL REQUIREMENTS FOR SOURCES OPERATING IN
PIMA COUNTY**

I. APPLICABILITY

- G.** The provisions of this section are applicable to all air curtain incinerators operated inside Pima County if the products of combustion are released through a stack, chimney, or equivalent.
- H.** Whenever more than one Condition in this Attachment regulating the same emissions applies to any emissions unit, or whenever a Condition in this Attachment and a Condition in Attachment "B" regulating the same emissions applies to any emissions unit, the Condition or combination of Conditions resulting in the lowest emissions rate or lowest concentration of regulated air pollutants released to the atmosphere shall apply, unless otherwise specifically exempted or designated in the applicable permit Conditions.
[A.R.S. § 49-402(D)]

II. AIR CURTAIN INCINERATORS REQUIREMENTS

A. Operating Limitations

1. Air curtain incinerators shall not be used within 500 feet of the nearest dwelling.
[P.C.C. 17.16.170.D]
2. The incinerator shall be operated only between the hours of official sunrise and sunset.
[P.C.C. 17.16.170.A]

B. Particulate Matter and Opacity

1. Emissions Limitations/Standards

- a. The Permittee shall not emit in any one hour particulate matter in excess of 0.08 grains per cubic foot based on dry flue gas at standard conditions corrected to 12 percent carbon dioxide.
[P.C.C. 17.16.170.C.1]
- b. The Permittee shall not cause, allow, or permit to be emitted into the atmosphere smoke, fumes, gases, particulate matter or other gas-borne material which exceeds twenty percent opacity except during the times specified in Condition II.B.1.c.
[P.C.C. 17.16.170.B]
- c. The Permittee shall be exempted from the above standard in the following circumstances:
[P.C.C. 17.16.170.E.2]

- (1) For a period once each day for the purpose of building a new fire but not to exceed 60 minutes
- (2) For an upset of operations not to exceed three minutes in any 60 minute period.

2. Recordkeeping Requirements

The Permittee of the incinerator shall record the daily charging rates and hours of operation.

[P.C.C. 17.16.170.F]

3. Test Procedures

The Permittee shall use the test methods in 40 CFR 60, Appendix A to demonstrate compliance with the emission standards in Condition II.B.1.a as follows:

[P.C.C. 17.16.170.G]

- a. Method 4 and Method 5 for the concentration of particulate matter and the associated moisture content. The sampling time for each run shall be at least 60 minutes and the minimum sample volume shall be 30.0 dry standard cubic feet, except that smaller sampling times or sample volumes, when necessitated by process variables or other factors, may be approved by the Director.
- b. Method 1 for sample and velocity traverses.
- c. Method 2 for velocity and volumetric flow rate.
- d. Method 3 for gas analysis and calculation of excess air, using the integrated sampling technique.

B. Permit Shield

Compliance with Conditions of this Section shall be deemed compliance with Pima County rules P.C.C. 17.16.170.A, B, C.1, D, E.2, F, and G.

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

III. OTHER SPECIFIC REQUIREMENTS

A. Fuel Requirements

The Permittee of any portable or stationary equipment which burns any material, except natural gas, shall keep complete records of the materials used as fuel.

[P.C.C. § 17.16.010.C]

B. Visibility Emission Requirements

1. The Permittee shall not cause or permit the effluent from a single emission point, multiple emission point, or fugitive emissions source to have an average optical density equal to or greater than the opacity limiting standards specified in Table 4 at the end of this Condition, or as otherwise specified in this permit, subject to the following provisions:

[P.C.C. § 17.16.040]

- a. Opacities (optical densities), as measured in accordance with Method 9, of an effluent shall be measured by a certified visible emissions evaluator with his natural eyes, approximately following the procedures which were used during his certification, or by an approved and precisely calibrated in-stack monitoring instrument.

- b. A violation of an opacity standard shall be determined by measuring and recording a set of consecutive, instantaneous opacities, and calculating the arithmetic average of the measurements within the set unless otherwise noted herein. The measurements shall be made at approximately fifteen-second intervals for a period of at least six minutes, and the number of required measurements shall be as specified in table below. Sets need not be consecutive in time, and in no case shall two sets overlap. If the average opacity of the set of instantaneous measurements exceeds the maximum allowed by any rule, this shall constitute a violation.

Type of Source	Instantaneous Opacity Measurements			Maximum Allowable Average Opacity, percent
	Required No. (For a Set)	Excluded No. (Highest Values)	No. to Use For Averaging	
Cold Diesel Engines ¹	25	0	25	60
Loaded Diesel Engines ²	26	1	25	60
Other Sources ³	25	0	25	20

¹ Applicable to the first 10 consecutive minutes after starting up a diesel engine.

² Applicable to a diesel engine being accelerated under load.

³ Any source not otherwise specifically covered within this table.

- a. The use of air or other gaseous diluents solely for the purpose of achieving compliance with an opacity standard is prohibited.
- b. When the presence of uncombined water is the only reason for failure of a source to otherwise meet the requirements of this article, this article shall not apply.
2. Visibility Limiting Standards
- a. The Permittee shall not cause, allow or permit operations or activities likely to result in excessive amounts of airborne dust without taking reasonable precautions to prevent excessive amounts of particulate matter from becoming airborne.
[P.C.C. § 17.16.050.A]
- b. Except for sources located within the boundaries of the Tohono O'Odham, Pasqua-Yaqui, and San Xavier Indian Reservations, opacity of an emission from any non-point source, as measured in accordance with the Arizona Testing manual, Reference Method 9, shall not exceed the following:
[P.C.C. § 17.16.050.B]
- (1) 20 percent for such non-point sources in Eastern Pima County,

east of the eastern boundary of the Tohono O'Odham Reservations.

- (2) 40 percent for such non-point sources in all other areas of Pima County.

C. The Permittee shall not cause or permit the airborne diffusion of visible emissions, including fugitive dust, beyond the property boundary line within which the emissions became airborne.

[Pima County SIP Rule 343]

1. In actual practice, the airborne diffusion of visible emissions across property lines shall be prevented by appropriately controlling the emissions at the point of discharge, or ceasing entirely the activity or operation which is causing or contributing to the emissions.
2. Condition III.C shall not apply when the naturally induced wind speed exceeds 25 miles per hour as estimated by a certified visible emission evaluator using the Beaufort Scale of Wind-Speed Equivalents, or as recorded by a U.S. Weather Bureau Section or a U.S. Government military installation.
3. The exception in Condition III.C.2 shall not apply to the demolition, destruction, transport, or pulverization of structures containing friable asbestos materials, and all dust producing activities associated with such sources shall be halted when the wind is causing or contributing visible emissions to cross beyond the property lines within which the emissions discharge.
4. Any disregard of, neglect of, or inattention to other controls required herein, during any time when Condition III.C.2 is in effect, shall automatically waive the exception in Condition III.C.2 and such relaxation of controls shall be a violation.

D. Permit Shield

Compliance with Conditions of this Section shall be deemed compliance with P.C.C. § 17.16.010, 040, 050 and SIP Rule 343.

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

**ATTACHMENT "E": ADDITIONAL REQUIREMENTS FOR SOURCES OPERATING
IN PINAL COUNTY**

I. APPLICABILITY

- A.** The provisions of this section are applicable to all air curtain incinerators operated inside Pinal County if the products of combustion are released through a stack, chimney, or equivalent.
- B.** Whenever more than one Condition in this Attachment regulating the same emissions applies to any emissions unit, or whenever a Condition in this Attachment and a Condition in Attachment "B" regulating the same emissions applies to any emissions unit, the Condition or combination of Conditions resulting in the lowest emissions rate or lowest concentration of regulated air pollutants released to the atmosphere shall apply, unless otherwise specifically exempted or designated in the applicable permit Conditions.
[A.R.S. § 49-402(D)]

II. AIR CURTAIN INCINERATORS

A. Operating Limitations

Air curtain incinerators shall not be used within 500 feet of the nearest dwelling.
[Rule 5-3-100-C]

B. Requirements for Particulate Matter

1. Emissions Limitations/Standards

- a.** The Permittee shall not emit in any one hour particulate matter in excess of 0.1 grains per cubic foot based on dry flue gas at standard conditions corrected to 12 percent carbon dioxide.
[Rule 5-3-100-B-1]

- b.** The Permittee shall not cause, allow or permit to be emitted into the atmosphere from any type of incinerator, smoke, fumes, gases, particulate matter or other gas-borne material which exceeds 20 percent opacity except during the times specified in Condition II.B.1.c.
[Rule 5-3-100-A]

- c.** The Permittee shall be exempted from the above standard in the following circumstances:

- (1) For a period once each day for the purpose of building a new fire but not to exceed 60 minutes
[Rule 5-3-100-D-2-a]

- (2) For an upset of operations not to exceed three minutes in any 60 minute period.
[Rule 5-3-100-D-2-b]

2. Recordkeeping Requirements

The Permittee of the incinerator shall record the daily charging rates and hours of operation.

Rule 5-3-100-E]

3. Test Procedures

- a. The Permittee shall use the test methods in 40 CFR 60, Appendix A to demonstrate compliance with the emission standards in Condition II.B.1.a as follows:

[Rule 5-3-100-F]

- (1) Method 5 for the concentration of particulate matter and the associated moisture content. The sampling time for each run shall be at least 60 minutes and the minimum sample volume shall be 30.0 dry standard cubic feet, except that smaller sampling times or sample volumes, when necessitated by process variables or other factors, may be approved by the Director.
- (2) Method 1 for sample and velocity traverses.
- (3) Method 2 for velocity and volumetric flow rate.
- (4) Method 3 for gas analysis and calculation of excess air, using the integrated sampling technique.

C. Permit Shield

Compliance with Conditions of this Section shall be deemed compliance with Pinal County rules 5-3-100-A, B1, C, D.2, E and F.

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